

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	20160.0039.NPUS00
		Application Number	<u>16/539,910</u>
Title of Invention	ACTIVE ETHERNET CABLE		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Remove Access Code ⁱ (if applicable)
201910155535.9	CN	2019-03-01	<u>008D</u>

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. ☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
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Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	20160.0039.NPUS00
		Application Number	16/539,910
Title of Invention	ACTIVE ETHERNET CABLE		

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.			
Applicant 1			
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.			
Clear			
☒ Assignee	☐ Legal Representative under 35 U.S.C. 117	☐ Joint Inventor	
☐ Person to whom the inventor is obligated to assign.		☐ Person who shows sufficient proprietary interest	
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:			
Name of the Deceased or Legally Incapacitated Inventor:			
If the Applicant is an Organization check here. ☒			
Organization Name	CREDO TECHNOLOGY GROUP LIMITED		
Mailing Address Information For Applicant:			
Address 1	Ugland House		
Address 2			
City	Grand Cayman	State/Province	
Country	KY	Postal Code	KY1-1104
Phone Number		Fax Number	
Email Address			
Additional Applicant Data may be generated within this form by selecting the Add button.			

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	20160.0039.NPUS00
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Assignee 1			
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.			
If the Assignee or Non-Applicant Assignee is an Organization check here. ☒			
Organization Name	CREDO TECHNOLOGY GROUP LIMITED		
Mailing Address Information For Assignee including Non-Applicant Assignee:			
Address 1	Ugland House		
Address 2			
City	Grand Cayman	State/Province	
Country ⁱ	KY	Postal Code	KY1-1104
Phone Number		Fax Number	
Email Address			
Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.			

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Daniel J. Krueger/		Date (YYYY-MM-DD)	2020-03-24	
First Name	Daniel J.	Last Name	Krueger	Registration Number	42771
Additional Signature may be generated within this form by selecting the Add button.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

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This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/539,910	08/13/2019	2633	785	20160.0039.NPUS00	20	3

CONFIRMATION NO. 8175

REPLACEMENT FILING RECEIPT



0000000115722638

63467

Ramey & Schwaller, LLP
Ramey & Schwaller
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

Date Mailed: 03/26/2020

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Yattung LAM, San Jose, CA;
Baohua CHEN, Xiamen City, CHINA;

Applicant(s)

CREDO TECHNOLOGY GROUP LIMITED, Grand Cayman, CAYMAN ISLANDS;

Assignment For Published Patent Application

CREDO TECHNOLOGY GROUP LIMITED, Grand Cayman, CAYMAN ISLANDS

Power of Attorney: The patent practitioners associated with Customer Number 63467

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)

CHINA 201910155535.9 03/01/2019 Access Code Provided

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 03/25/2020

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/539,910**

Projected Publication Date: 09/03/2020

Non-Publication Request: No

Early Publication Request: No

**** SMALL ENTITY ****

Title

ACTIVE ETHERNET CABLE

Preliminary Class

375

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign

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patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

CERTIFICATE OF AVAILABILITY OF A CERTIFIED PATENT DOCUMENT IN A DIGITAL LIBRARY

The International Bureau certifies that a copy of the patent application indicated below has been available to the WIPO Digital Access Service since the date of availability indicated, and that the patent application has been available to the indicated Office(s) as of the date specified following the relevant Office code:

Document details: Country/Office: CN

Filing date: 01 Mar 2019 (01.03.2019)

Application number: 2019101555359

Date of availability of document: 18 Mar 2020 (18.03.2020)

The following Offices can retrieve this document by using the access code:

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JP, KR, MA, NL, NO, NZ, SE, US

Date of issue of this certificate: 26 Mar 2020 (26.03.2020)

国家知识产权局

NATIONAL INTELLECTUAL PROPERTY ADMINISTRATION, PRC



证 明

本证明之附件是向本局提交的下列专利申请文件副本。

申 请 号：201910155535.9

申 请 类 型：发明专利

发 明 创 造 名 称：有源以太网电缆

申 请 日：2019 年 03 月 01 日

申 请 人：默升科技集团有限公司

发明人或设计人：Y·拉姆、B·陈

局长

申长雨

2020 年 03 月 18 日

权 利 要 求 书

1. 一种有源以太网电缆，包括：
连接在第一连接器和第二连接器之间的导电体，
5 所述第一连接器和第二连接器中的每一个适于适配到相应主机设备的以太网端口中，以从该主机设备接收将入站数据流传送到所述电缆的输入电信号，并向该主机设备提供传输来自所述电缆的出站数据流的输出电信号，
 所述第一连接器和第二连接器中的每一个包括相应的收发器，该收发器对所述输入电信号执行时钟和数据恢复，以提取和重新调制所述入站数据流，
10 以作为传送传输数据流的相应电传输信号经由所述导电体进行传输。
2. 如权利要求1所述的有源以太网电缆，其特征在于，用于所述第一连接器和第二连接器中的每一个的所述相应的收发器对所述相应的电传输信号执行时钟和数据恢复，以提取和重新调制所述传输数据流作为来自所述电缆的所述出站数据流。
- 15 3. 如权利要求2所述的有源以太网电缆，其特征在于，所述相应的收发器均采用固定的、与电缆无关的均衡参数，以用于以下各项中的每一项：重新调制所述传输数据流作为所述出站数据流；以及对所述输入电信号执行的时钟和数据恢复。
- 20 4. 如权利要求3所述的有源以太网电缆，其特征在于，所述相应的收发器均采用依赖于电缆的均衡参数，以用于以下各项中的至少一项：重新调制所述入站数据流用于传输、以及对所述电传输信号执行的时钟和数据恢复。
5. 如权利要求4所述的有源以太网电缆，其特征在于，所述依赖于电缆的均衡参数在使用所述以太网电缆期间进行适配。
- 25 6. 如权利要求4所述的有源以太网电缆，其特征在于，所述依赖于电缆的均衡参数在所述以太网电缆的正常使用期间是固定的，并且其中所述依赖于电缆的均衡参数是在所述以太网电缆的制造商测试期间确定的。
7. 如权利要求6所述的有源以太网电缆，其特征在于，所述入站数据流和所述出站数据流均具有50GBd的每通道码元率。
8. 一种通信方法，包括：在具有将第一连接器电连接到第二连接器的导



体对的网络电缆中：

利用所述第一连接器接收第一输入电信号，该第一输入电信号传送来自第一主机设备的第一入站数据流；

5 利用所述第一连接器中的第一收发器对所述第一输入电信号执行时钟和数据恢复，以提取所述第一入站数据流；

将所述第一入站数据流重新调制为由第一电传输信号在所述导体对中的第一导体对上传送的第一传输数据流；

利用所述第二连接器接收第二输入电信号，该第二输入电信号传送来自第二主机设备的第二入站数据流；

10 利用所述第二连接器中的第二收发器对所述第二输入电信号执行时钟和数据恢复，以提取所述第二入站数据流；以及

将所述第二入站数据流重新调制为由第二电传输信号在所述导体对中的第二导体对上传送的第二传输数据流。

9. 如权利要求8所述的通信方法，还包括：

15 利用所述第二收发器对所述第一电传输信号执行时钟和数据恢复，以提取所述第一传输数据流；

将所述第一传输数据流重新调制为由第二输出电信号传送到所述第二主机设备的第二出站数据流；

20 利用所述第一收发器对所述第二电传输信号执行时钟和数据恢复，以提取所述第二传输数据流；以及

将所述第二传输数据流重新调制为由第一输出电信号传送到所述第一主机设备的第一出站数据流。

25 10. 如权利要求9所述的通信方法，其特征在于，所述重新调制第一传输数据流、所述重新调制第二传输数据流、所述对第一输入电信号执行时钟和数据恢复、以及所述对第二输入电信号执行时钟和数据恢复均都采用固定的、与电缆无关的均衡参数。

11. 如权利要求10所述的通信方法，其特征在于，依赖于电缆的均衡参数用于以下各项中的至少一项：重新调制所述第一入站数据流、重新调制所述第二入站数据流、所述对第一电传输信号执行时钟和数据恢复、以及所述对



第二电传输信号执行时钟和数据恢复。

12. 如权利要求11所述的通信方法，其特征在于，所述依赖于电缆的均衡参数被自适应地更新。

13. 如权利要求11所述的通信方法，其特征在于，所述依赖于电缆的均衡参数在正常使用期间是固定的，并且其中所述方法还包括：在所述网络电缆的制造商测试期间确定所述依赖于电缆的均衡参数。

14. 如权利要求13所述的通信方法，其特征在于，所述第一入站数据流具有超过50 GBd的每通道码元率。

15. 一种电缆制造方法，包括：

10 将一组导体对的第一端和第二端分别连接到第一收发器和第二收发器，以用于将第一电传输信号从所述第一收发器传输到所述第二收发器，并将第二电传输信号从所述第二收发器传输到所述第一收发器；

将所述第一收发器封装到第一连接器中，该第一连接器被配置为将来自第一主机设备的网络接口端口的第一输入电信号耦合到所述第一收发器，并且将来自所述第一收发器的第一输出电信号耦合到所述第一主机设备的所述网络接口端口；以及

20 将所述第二收发器封装到第二连接器中，该第二连接器被配置为将来自第二主机设备的网络接口端口的第二输入电信号耦合到所述第二收发器，并且将来自所述第二收发器的第二输出电信号耦合到所述第二主机设备的所述网络接口端口，

所述第一收发器和所述第二收发器被配置为对所述第一输入电信号和所述第二输入电信号执行时钟和数据恢复，以分别提取和重新调制所述第一入站数据流和所述第二入站数据流，来作为传送第一传输数据流和第二传输数据流的所述第一电传输信号和所述第二电传输信号。

25 16. 如权利要求15所述的电缆制造方法，其特征在于，所述第一收发器和所述第二收发器被配置为对所述第二电传输信号和所述第一电传输信号执行时钟和数据恢复，以提取和重新调制所述第二传输数据流和所述第一传输数据流，来作为由来自所述电缆的所述第一输出电信号和所述第二输出电信号传送的所述第一出站数据流和所述第二出站数据流。



17. 如权利要求16所述的电缆制造方法，其特征在于，所述第一收发器和所述第二收发器均被配置为采用固定的、与电缆无关的均衡参数，用于对所述相应的输入电信号上进行时钟和数据恢复，并用于产生所述相应的输出电信号。

- 5 18. 如权利要求17所述的电缆制造方法，其特征在于，所述第一收发器和所述第二收发器均被配置为采用依赖于电缆的均衡参数来产生所述第一电传输信号和所述第二电传输信号，并用于对第所述二电传输信号和所述第一电传输信号进行的时钟和数据恢复。

- 10 19. 如权利要求18所述的电缆制造方法，其特征在于，所述第一收发器和所述第二收发器均被配置为在操作期间适配所述依赖于电缆的均衡参数。

20. 如权利要求18所述的电缆制造方法，其特征在于，所述第一收发器和所述第二收发器均被配置为在操作期间使用预设的依赖于电缆的均衡参数，并且其中所述方法还包括：测试经组装的电缆以确定所述依赖于电缆的均衡参数。

说明书

有源以太网电缆

5 背景技术

[0001] 电气和电子工程师协会(IEEE)标准协会出版了以太网IEEE标准 IEEE Std 802.3-2015, 这对于本申请所属领域的普通技术人员而言是熟知的。该以太网标准为通过同轴电缆、双轴电缆、双绞线电缆、光纤电缆和电子背板以各种信道信号星座在1Mb/s至100Gb/s的选定速度下的局域网(LAN)操作提供通用介质访问控制规范。随着对更高数据率的持续需求, 正在扩展该标准。即使均衡器被迫以更快的码元率操作, 对标准的这种扩展也必须考虑增加的信道衰减和色散。随着所提出的每通道比特率利用PAM4或更大的信号星座上升超过50Gbps, 提供确保始终如一的稳健性能的可负担且大规模制造的网络硬件变得越来越困难。

15

发明内容

[0002] 因此, 本文公开了架构和通信方法, 其使得大规模制造的电缆能够以高达26.5625GBd及更高的每通道PAM4码元率稳健地执行。一个说明性电缆实施例包括连接在第一连接器和第二连接器之间的导电体。第一连接器和第二连接器各自适于适配到相应主机设备的以太网端口中, 以从该主机设备接收将入站数据流传送到电缆的输入电信号, 并向该主机设备提供传来自电缆的出站数据流的输出电信号。第一连接器和第二连接器均包括相应的收发器, 其对输入电信号执行时钟和数据恢复, 以提取和重新调制入站数据流, 以作为传送传输数据流的相应电传输信号经由导电体进行传输。

25 [0003] 一种说明性通信方法实施例包括: 在具有将第一连接器连接到第二连接器的导体对的网络电缆中: 利用第一连接器接收传送来自第一主机设备的第一入站数据流的第一输入电信号; 利用第一连接器中的第一收发器对第一输入电信号执行时钟和数据恢复, 以提取第一入站数据流; 将第一入站数据流重新调制为由第一电传输信号在第一导体对上传送的第一传输数据流;



利用第二连接器接收传送来自第二主机设备的第二入站数据流的第二输入电信号；利用第二连接器中的第二收发器对第二输入电信号执行时钟和数据恢复，以提取第二入站数据流；以及将第二入站数据流重新调制为由第二电传输信号在第二导体对上传送的第二传输数据流。

- 5 **[0004]** 一种说明性电缆制造方法包括：将一组导体对的第一端和第二端分别连接到第一收发器和第二收发器，用于将第一电传输信号从第一收发器传输到第二收发器，并将第二电传输信号从第二收发器传输到第一收发器；将第一收发器封装到第一连接器中，该第一连接器被配置为将来自第一主机设备的网络接口端口的第一输入电信号耦合到第一收发器，并且将来自第一收发器的第一输出电信号耦合到第一主机设备的网络接口端口；以及将第二收发器封装到第二连接器中，该第二连接器被配置为将来自第二主机设备的网络接口端口的第二输入电信号耦合到第二收发器，并且将来自第二收发器的第二输出电信号耦合到第二主机设备的网络接口端口，第一收发器和第二收发器被配置为对第一输入电信号和第二输入电信号执行时钟和数据恢复，
- 10 以分别提取和重新调制第一入站数据流和第二入站数据流，来作为传送第一传输数据流和第二传输数据流的第一电传输信号和第二电传输信号。
- 15

- [0005]** 前述实施例中的每一个可以单独或组合地实现，并且可以以任何合适的组合来用以下特征中的一个或多个来实现：1. 用于第一连接器和第二连接器中的每一个的相应收发器对相应的电传输信号执行时钟和数据恢复，
- 20 以提取和重新调制传输数据流作为来自电缆的出站数据流。2. 各个收发器均采用固定的、与电缆无关的均衡参数，用于以下各项中的每一项：重新调制传输数据流作为出站数据流；以及对输入电信号执行的时钟和数据恢复。3. 各个收发器均采用依赖于电缆的均衡参数用于以下各项中的至少一项：重新调制入站数据流用于传输、以及对电传输信号执行的时钟和数据恢复。4. 在
- 25 使用电缆期间适配依赖于电缆的均衡参数。5. 所述依赖于电缆的均衡参数在电缆的正常使用期间是固定的。6. 所述依赖于电缆的均衡参数在电缆的制造商测试期间确定。7. 入站数据流和出站数据流均具有50Gbps或更高的每通道比特率。8. 利用第二收发器对第一电传输信号执行时钟和数据恢复，以提取第一传输数据流；利用第一收发器对第二电传输信号执行时钟和数据恢复，

以提取第二传输数据流。9. 将第一传输数据流重新调制为由第二输出电信号传送到第二主机设备的第二出站数据流；并且将第二传输数据流重新调制为由第一输出电信号传送到第一主机设备的第一出站数据流。10. 所述重新调制第一传输数据流、所述重新调制第二传输数据流、所述对第一输入电信号执行时钟和数据恢复、以及所述对第二输入电信号执行时钟和数据恢复均采用固定的、与电缆无关的均衡参数。11. 依赖于电缆的均衡参数用于以下各项中的至少一项：重新调制第一入站数据流、重新调制第二入站数据流、所述对第一电传输信号执行时钟和数据恢复、以及所述对第二电传输信号执行时钟和数据恢复。12. 在网络电缆的制造商测试期间确定所述依赖于电缆的均衡参数。13. 第一收发器和第二收发器被配置为对第二电传输信号和第一电传输信号执行时钟和数据恢复，以提取和重新调制第二传输数据流和第一传输数据流，来作为由来自电缆的第一输出电信号和第二输出电信号传送的第一出站数据流和第二出站数据流。14. 第一收发器和第二收发器均被配置为采用固定的、与电缆无关的均衡参数，用于对相应的输入电信号的时钟和数据恢复，并用于产生相应的输出电信号。15. 第一收发器和第二收发器均被配置为采用依赖于电缆的均衡参数来产生第一电传输信号和第二电传输信号，并用于对第二电传输信号和第一电传输信号的时钟和数据恢复。16. 第一收发器和第二收发器均被配置为在操作期间适配依赖于电缆的均衡参数。17. 第一收发器和第二收发器均被配置为在操作期间使用预设的依赖于电缆的均衡参数。18. 测试经组装的电缆以确定依赖于电缆的均衡参数。

附图说明

- [0006] 图1是说明性有源以太网电缆的立体图。
- [0007] 图2是说明性电缆的功能框图。
- 25 [0008] 图3是包括说明性电缆的通信链路的架构图。
- [0009] 图4是说明性多通道收发器中的接收器的框图。
- [0010] 图5是说明性多通道收发器中的发射器的框图。
- [0011] 图6是说明性电缆制造方法的流程图。
- [0012] 图7是说明性有源1：4分支电缆的立体图。

[0013] 图8是说明性1：4分支电缆的功能框图。

具体实施方式

[0014] 尽管在附图和以下描述中给出了特定实施例，但是请记住它们不
5 限制本公开。相反，它们为普通技术人员提供用于辨别包含在所附权利要求
书的范围内的替代形式、等效物和修改的基础。

[0015] 图1是说明性电缆的立体图，该电缆可用于在路由网络中的设备
之间提供高带宽通信链路。路由网络可以是或者包括例如互联网、广域网或
局域网。被链接的设备可以是计算机、交换机、路由器等。电缆包括经由电
10 线106电连接的第一连接器102和第二连接器104。电线106包括通常成对形式
的导电线，诸如具有双轴导体。双轴导体可以比作同轴导体，但其具有两个
内导体而不是一个。内导体可以用差分信号驱动，并且它们的共用屏蔽操作
用于减少与电缆中的其他双轴导体的串扰。根据性能标准，可以采用其他成
对或单端的导体实现。

15 [0016] 根据以太网标准，每个导体对可以提供差分信号的单向传输。为
了在甚至扩展的电缆长度(大于，例如，3米、6米或9米)上实现稳健的性能，
每个连接器102、104可以包括在每个方向上执行时钟和数据恢复(CDR)以及数
据流的重新调制的有源收发器。值得注意的是，收发器不仅会在出站数据流
离开电缆时对其执行CDR和重新调制，还会在进站数据流进入电缆时对其进
20 行CDR和重新调制。

[0017] 这里认识到，可以预期进站数据流符合相关标准，并且可以预期
进站数据流遍历网络接口端口的插座引脚和电缆组件的连接器插头引脚，基
本上没有经历劣化。然而，传送网络接口的电子制造商采用的调制质量和均
衡策略通常是未知的，并且标准的最低要求可能不足以在扩展的电缆长度上
25 传输，特别是如果接收网络接口的电子制造商与传送网络接口的电子制造商
不同。与传送网络接口一样，接收网络接口的电子制造商采用的均衡和解调
策略通常是未知的，并且可能无法应对由扩展的电缆长度上的信号传输引起
的衰减和干扰。通过执行进站数据流和出站数据流两者的CDR和重新调制，
可以在不考虑网络接口的电子制造商的情况下确保说明性电缆能够在扩展电

缆长度上的一致稳健的数据传输。

[0018] 图2是图1的说明性电缆的功能框图。连接器102包括插头202，其适于适配第一主机设备302(图3)中的符合标准的以太网端口，以接收入站数据流作为来自主机设备的输入电信号并提供出站数据流作为到主机设备的输出电信号。类似地，连接器104包括适配第二主机设备304的以太网端口的插头204。连接器102包括第一收发器206，用于对在连接器102处进入和离开电缆的数据流执行CDR和重新调制，并且连接器104包括第二收发器208，用于对在连接器104处进入和离开电缆的数据流执行CDR和重新调制。收发器206、208可以是安装在印刷电路板上并经由电路板迹线连接到插头引脚的集成电路。电线106的线可以焊接到印刷电路板上的相应焊盘。

[0019] 每个收发器206、208包括用于与主机设备通信的发射器和接收器组210以及用于经由沿电缆长度的导体对进行发送和接收的发射器和接收器组212。所图示的电缆支持四个双向通信通道LN0-LN3，每个双向通道由两个单向连接形成，每个单向连接具有差动驱动的双轴导体对(这里未示出屏蔽导体)。收发器可选地包括存储器214，用于在发射器和接收器组210、212之间提供先进先出(FIFO)缓冲。控制器216通过例如设置初始均衡参数并确保在使所述发射器和接收器能进入数据传输阶段之前跨所有通道和链路完成训练阶段来协调发射器和接收器的操作。

[0020] 在至少一些预期的实施例中，面向主机的发射器和接收器组210采用与电缆无关的固定均衡参数，即，它们不是在逐个电缆的基础上定制的。面向中心的发射器和接收器组212优选采用在逐个电缆的基础上定制的依赖于电缆的均衡参数。依赖于电缆的均衡参数可以是自适应或固定的，并且可以在电缆的制造商测试期间确定这些参数的初始值。均衡参数可以包括用于发射器中的预均衡器滤波器的滤波器系数值、以及用于接收器的增益和滤波器系数值。

[0021] 图2的说明性电缆可以是两个主机设备302、304之间的点对点通信链路的一部分，如图3的架构图所示。图3示出了使用用于开放系统互连的ISO/IEC模型(参见ISO/IEC 7498-1: 1994.1)的架构，以用于通过诸如由信道306表示的双轴导体对的物理介质上的通信。互连参考模型采用具有定义的功能

能和接口的层的层次结构，以促进由不同团队或供应商对兼容系统的设计和实现。虽然这不是要求，但预期分层结构中的较高层主要由在可编程处理器上操作的软件或固件来实现，而较低层可以实现为专用硬件。

5 **[0022]** 应用层308是模型中的最上层，并且它表示在不同系统上操作的用户应用或其他软件，这些用户应用或其他软件需要用于传递消息或数据的设施。表示层310向这样的应用提供一组应用编程接口(API)(其提供形式语法以及用于数据转换(例如，压缩)的服务)，建立通信会话，无连接通信模式以及协商以使应用软件能够识别可用的服务选项并从中选择。会话层312提供协调数据交换的服务，包括：会话同步、令牌管理、全双工或半双工模式实现
10 以及建立、管理和释放会话连接。在无连接模式下，会话层可以仅仅在会话地址和传输地址之间映射。

[0023] 传输层314为多路复用、端到端序列控制、错误检测、分段、分块(blocking)、级联、各个连接上的流控制(包括挂起/恢复)、以及实现端到端服务质量规范提供服务。传输层314的重点是端到端性能/行为。网络层316提供路由服务，确定用于进行端到端连接的链路，并在必要时充当中继服务以
15 将这些链路耦合在一起。数据链路层318用作到物理连接的接口，提供跨物理连接的定界、同步、序列和流控制。它也可以检测并可选地校正跨物理连接发生的错误。物理层322提供机械、电、功能和程序手段来激活、维持和去激活信道306，并使用信道306用于在物理介质上的比特传输。

20 **[0024]** 数据链路层318和物理层322被IEEE标准802.3-2015稍微细分和修改，IEEE标准802.3-2015在数据链路层318中提供媒体访问控制(MAC)子层320以定义与物理层322的接口，包括帧结构和传输语法。在物理层322内，该标准提供了各种可能的细分，诸如图3中所示的细分，其包括可选的调解子层324、物理编码子层(PCS)326、前向纠错(FEC)子层328、物理媒体附件(PMA)
25 子层330、物理媒体从属(PMD)子层332和自动协商(AN)子层334。

[0025] 可选的调解子层324仅在为MAC子层320和PCS子层326定义的接口之间映射。PCS子层326提供加扰/解扰、数据编码/解码(具有能够实现时钟恢复和比特错误检测的传输码)、块和码元重新分配、PCS对准标记插入/移除以及块级别通道同步和抗扭斜(deskew)。为了通过物理层322的部件实现比特

误码率估计，PCS对准标记通常包括从通道中的直到并包括先前PCS对准标记的先前比特导出的比特交叉奇偶校验(BIP)值。

[0026] FEC子层328提供例如里德-所罗门(Reed-Solomon)编码/解码，其跨通道分布具有受控冗余性的数据块以实现纠错。在一些实施例中(例如，根据IEEE Std 802.3的第91条或提议的第134条)，FEC子层328修改通道的数量(第91条提供20到4通道转换)。

[0027] PMA子层330提供通道重新映射、码元编码/解码、成帧和八比特/码元同步。PMD子层332指定发射/接收的信道信号与对应的比特(或数字码元)流之间的收发器转换。可选的AN子层334被示为PMD子层332的内部元件，并且其实现通信信道的初始启动，以在进入正常操作阶段之前进行自动协商阶段和链路训练阶段。自动协商阶段使端节点能够交换关于其能力的信息，并且训练阶段使得端节点能够以对抗信道非理想性的方式适配发射侧和接收侧均衡滤波器两者。插座336还被示为PMD子层332的一部分以表示物理网络接口端口。

[0028] 连接器102、104具有插头202、204，插头202、204与两个主机设备302、304的插座336配合。在每个连接器内，收发器可以实现面向主机的物理层322A、面向中心的物理层322B、以及将两个物理层桥接在一起的数据链路层340。关于子层的操作的更多信息以及节点和通信介质之间的连接的电气和物理规范(例如，引脚布局、线路阻抗、信号电压和时序)、以及通信介质本身的电气和物理规范(例如，铜缆中的导体布置、衰减限制、传播延迟、信号偏斜)可以在当前的以太网标准中找到，并且任何这样的细节都应该被认为是本领域普通技术人员的知识范围内。

[0029] MAC、调解、PCS、FEC、PMA和PMD子层可以作为专用集成电路来实现，以实现高速率处理和数据传输。接收器和发射器组210、212可以实现PMA和PMD子层。图4和图5是说明性接收器和说明性发射器的框图，其可以是组210、212的一部分。

[0030] 在图4中，接收器400接收模拟电信号(CH_IN)并将其提供给低噪声放大器(LNA)402。LNA 402提供高输入阻抗以最小化信道负载并放大接收的电信号以驱动连续时间线性均衡器(CTLE)滤波器404的输入。CTLE 404提

供连续时间滤波以对信号频谱进行整形，以减小信道脉冲响应的长度，同时最小化前导码元间干扰(ISI)。决策反馈均衡器(DFE)406对经滤波的信号进行操作以校正尾随ISI并检测每个被传送的信道比特或码元，由此产生经解调的数字数据流。一些实施例采用过采样。时钟和数据恢复(CDR)电路408从经滤波的信号和/或数字数据流中提取时钟信号，并将其提供给DFE 406以控制样本和码元检测定时。串并转换电路410将数字数据流比特或码元分组为块，以使得能够使用较低的时钟速率用于随后的芯片上操作。码元或数据块放置在数字接收总线(RXD)上，以便由发射器重新发送到远程端节点。

[0031] 虽然某些预期的电缆实施例不支持自动协商，但是其他预期的实施例确实支持根据以太网标准的自动协商。当得到支持时，自动协商可以由发明人 Yifei Dai, Haoli Qian 和 Jeff Twombly 于2017年3月8日提交的题为“以太网链路扩展方法和设备”的国际专利申请PCT/CN2017/075961中所描述的那样实现。检测器或包信息提取器442监视接收信号以检测自动协商阶段的结束和/或训练阶段帧的开始。

[0032] 在训练阶段，滤波器适配电路440测量DFE 406中的决策元件的输入和输出之间的误差，根据关于自适应滤波的文献中的公知技术采用该误差，以确定对CTLE滤波器404、DFE 406和发送滤波器506中的系数的调整(下面进一步讨论)，并确定是否已实现收敛。包括发送滤波器系数调整和收敛状态的本地生成的信息(LOCAL_INFO)被提供给在数据通道上以反向通信的本地发射器500。如下文中讨论的，本地发射器通过反向信道将发送滤波器调整和收敛状态传送到CH_IN信号的源。在那种情况下，接收到的信号包括来自CH_IN信号的源的反向信道信息。分组信息提取器442检测反向信道信息(BACK_INFO)并将其传递给本地发射器。一旦实现收敛，接收器400就准备好开始正常操作。

[0033] 在图5中，发射机500接收信道比特或码元的块，以便传输到CH_IN信号的源(图4)。在正常操作期间，多路复用器502将来自远程源(在TXD总线上接收)的信道比特或码元的块提供给并行到串行(P2S)电路504。P2S电路将块转换为数字数据流。发送滤波器506，也称为预加强滤波器，将数字数据流转换为具有频谱整形的模拟电信号，以对抗信道劣化。驱动器508放大

模拟电信号以驱动信道输出(CH_OUT)节点。

[0034] 如果支持，则自动协商阶段可以如Y.Dai等人所阐述的那样实现。在训练阶段期间，多路复用器502阻挡来自TXD总线的信息，取而代之向P2S电路504提供来自训练控制器540的训练帧。训练控制器540基于从本地接收器5400接收的收敛状态和发送滤波器系数调整(LOCAL_INFO)来生成训练帧。也就是说，除了训练模式之外，训练帧还包括要由信道的远程端使用的反向信道信息。应注意，即使在本地接收器指示已经发生滤波器收敛之后，训练控制器540也可以延长训练阶段以协调跨通道和沿着信道的每个链路的训练阶段定时。训练帧包括由当前以太网标准(IEEE Std 802.3)的相关部分指定的训练序列。

[0035] 训练控制器540还接收由本地接收器从所接收的由本地端节点发送的训练帧中提取的反向信道信息(BACK_INFO)。训练控制器将相应的调整应用于发送滤波器506的系数。在训练阶段结束时，多路复用器502开始将TXD块转发到P2S电路504。

[0036] 图6是说明性电缆制造方法的流程图。它开始于框602，通常通过将导线端部焊接到安装有收发器的电路板的焊盘上，来将导体对的端部连接到第一收发器和第二收发器。该步骤和随后的步骤可以由自动化制造/测试设备执行。在框604中，设备将每个收发器封装到用于网络电缆的相应端部连接器中。连接器适于与主机设备的网络接口端口配合，并包括与端口中的匹配插座电连接的插头。

[0037] 在框606中，设备测试电缆以验证是否符合性能规范并确定依赖于电缆的均衡参数以供面向中心的发射器和接收器组212使用。在框608中，设备使收发器将均衡参数(包括依赖于电缆的参数和与电缆无关的参数)存储在非易失性存储器中。然后可以将电缆封装并销售给期望在由一系列不同制造商制造的主机设备之间具有稳健性能的客户。

[0038] 尽管在前面的描述中使用了双端电缆，但是所公开的原理也适用于其他电缆设计，包括图7和图8的1: 4分支电缆设计。图7是具有第一连接器102的分支电缆的立体图，该分支电缆可以被设计用于发送和接收200Gbps以太网数据流，例如，以50Gbps的4个通道的形式，每个通道使用26.5625 GBd



下的PAM4。四根电线906每个可以携带1个50Gbps的通道或2个25Gbps的通道，每个通道使用26.5625GBd下的PAM4或26.5625GBd下的不归零(NRZ)信令。连接器802-808中的每一个可以被设计用于发送和接收50Gbps以太网数据流。这种分支电缆可用于链接设计用于不同代的以太网标准的主机设备。作为另一

5 示例，第一连接器可以被设计用于发送和接收400Gbps(8个50Gbps PAM4的通道)，而其余连接器中的每一个可以被设计用于发送和接收100Gbps(4个25Gbps NRZ的通道)。

[0039] 图8示出了1: 4分支电缆的框图。在图8的示例中，连接器102支持4个通道，而其他连接器802-808中的每一个支持一个通道。因此，连接器

10 802-808包括收发器905，每个收发器905具有由面向主机的发射器和接收器组910以及面向中心的发射器和接收器组912支持的单个面向主机的通道和单个面向中心的通道。虽然这里没有明确示出，但是面向主机的发射器和接收器组910可以包括“变速箱”功能，其将1个PAM4码元通道转换成2个NRZ码元通道，反之亦然。FIFO缓冲器914将面向主机和面向中心的组桥接在一起，并

15 且发射器和接收器组的操作由控制器916协调。

[0040] 对本领域技术人员来说，一旦完全了解以上公开内容，则众多其替代形式、等效物和修改方案将变得显而易见。旨在将权利要求书解释为涵盖包含在所附权利要求书的范围内的所有这些替代形式、等效物和修改方案。

说明书附图

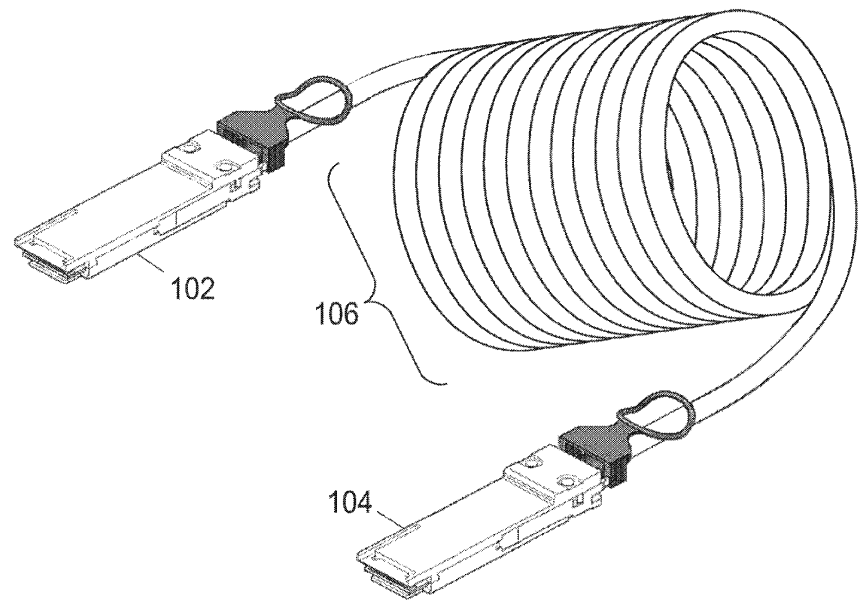


图 1

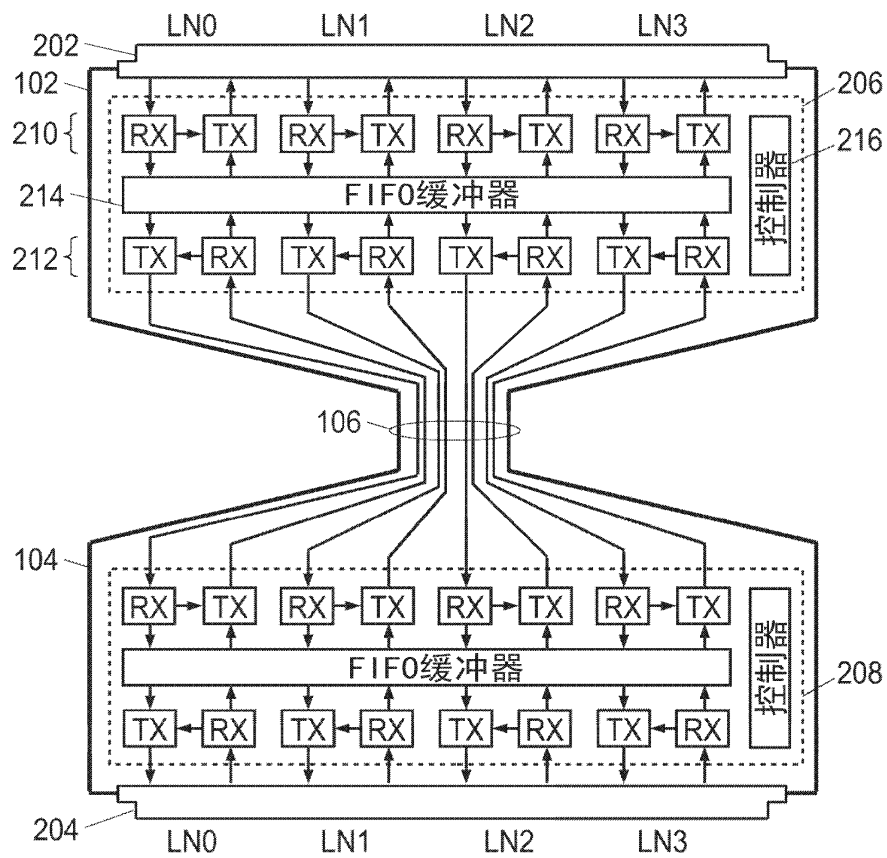


图 2

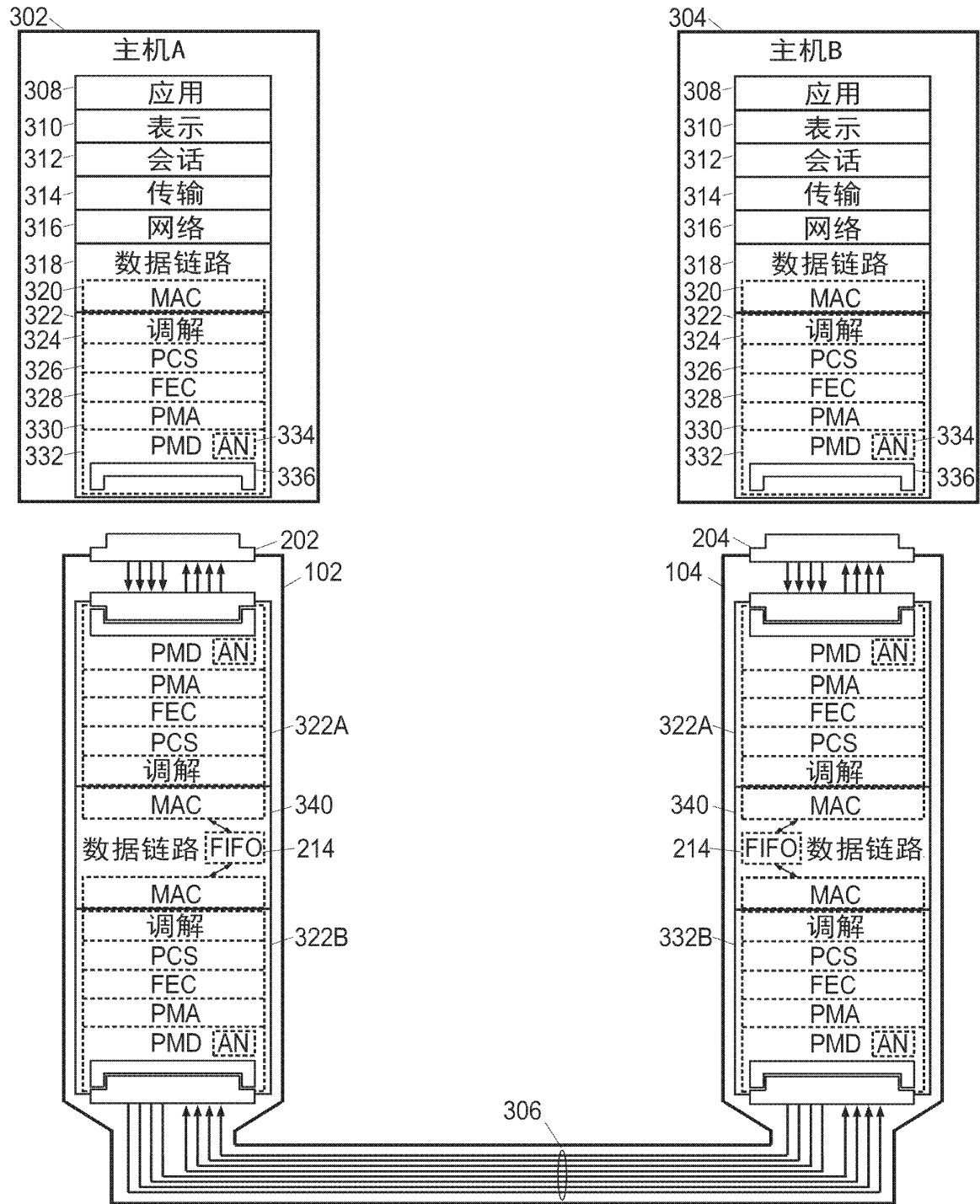


图 3

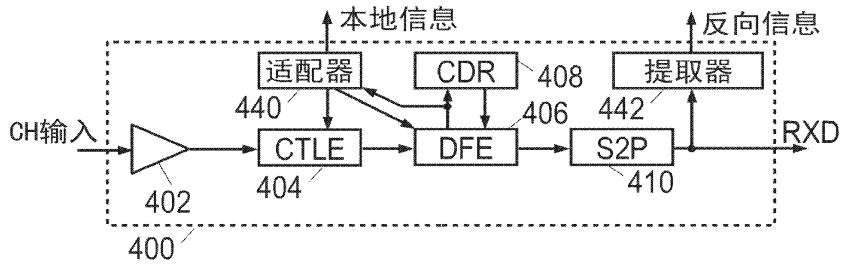


图 4

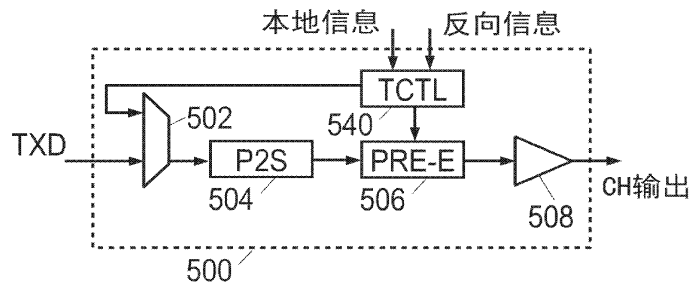


图 5

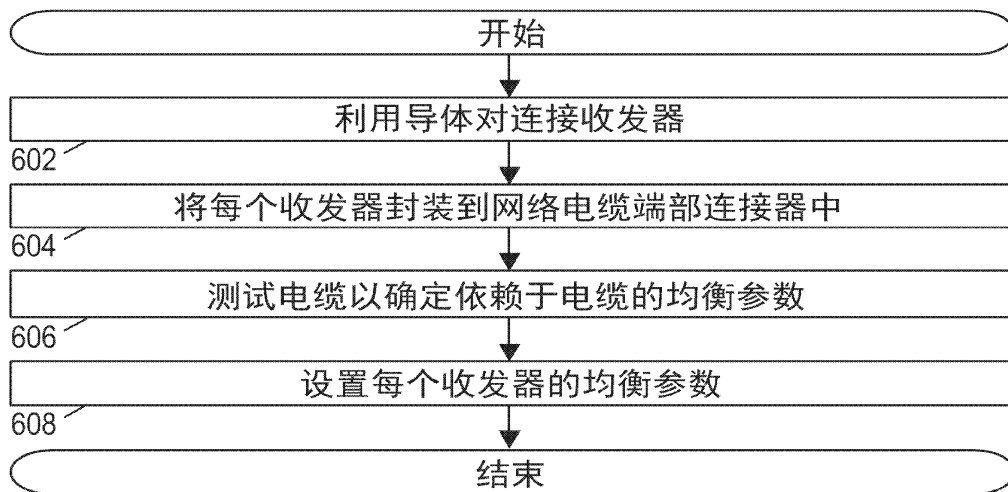


图 6

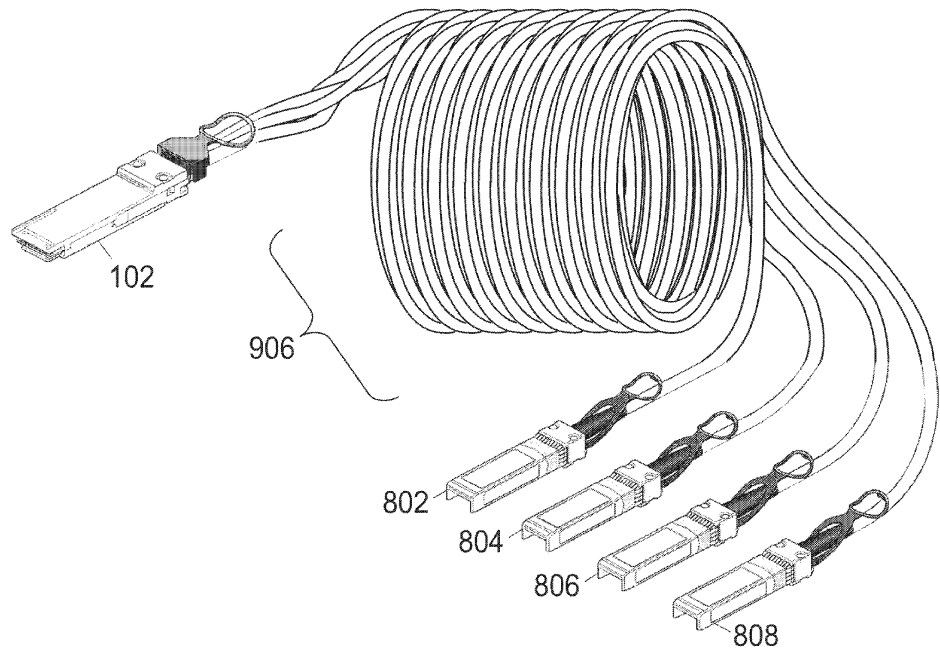


图 7

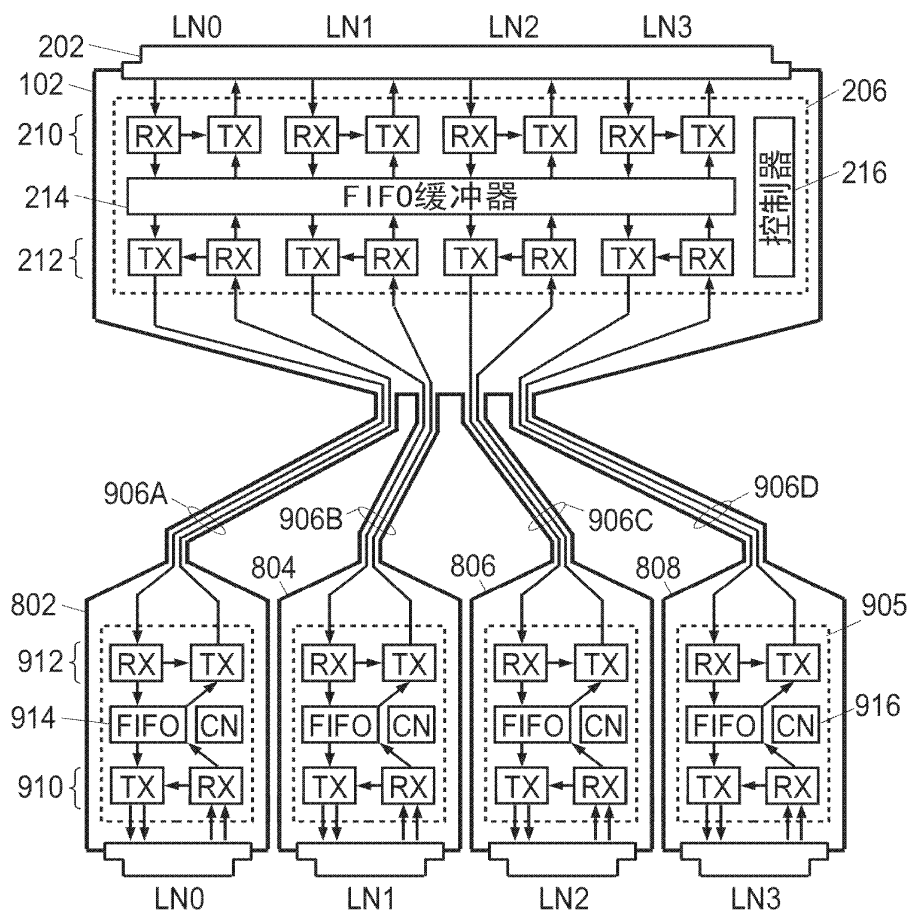


图 8

To: uspto@rameyfirm.com,wramey@rameyfirm.com,tevenbly@rameyfirm.com
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Application	Document	Mailroom Date	Attorney Docket No.
16539910	APP.FILE.REC	03/26/2020	20160.0039.NPUS00

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Applicant : Yattung LAM

Art Unit : 2633

Serial No. : 16/539,910

Examiner : HA, DAC V

Filed : August 13, 2019

Conf. No. : 8175

Title : ACTIVE ETHERNET CABLE

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401 Dulany Street
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RESPONSE TO EX PARTE QUAYLE OF MARCH 11, 2020

This paper is submitted in response to the above-identified office action.

Remarks/Arguments begin on page 2 of this paper.

Applicant : Yattung LAM
Serial No. : 16/539,910
Filed : August 13, 2019
Page : 2 of 2

Attorney's Docket No.: 20160.0039.NPUS00

REMARKS

Claims 1-20 remain pending, and have been allowed subject to correction of a certain informality. In particular, the office noted that it had not received a certified copy of the priority application CN201910155535.9 filed 2019-03-01.

After receiving the office action, applicant submitted an electronic retrieval request, and on 2020-03-26, the patent office electronically retrieved a copy of the priority application. Applicant respectfully submits that the application is now in condition for allowance.

Respectfully submitted,

/Dan Krueger/

Date: 2020-04-21

Electronic Acknowledgement Receipt	
EFS ID:	39222406
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	21-APR-2020
Filing Date:	13-AUG-2019
Time Stamp:	16:45:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		2020-04-21_C039RQ_Final_Response.pdf	114637	yes	2
			0a0328c300becc97f09e8e3c64225282bea7f87b		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Response after Ex Parte Quayle Action	1	1
	Applicant Arguments/Remarks Made in an Amendment	2	2
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HA, DAC V

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 06/04/2020

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175

TITLE OF INVENTION: ACTIVE ETHERNET CABLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	09/04/2020

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If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

63467 7590 06/04/2020
Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175

TITLE OF INVENTION: ACTIVE ETHERNET CABLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$500	\$0.00	\$0.00	\$500	09/04/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
HA, DAC V	2633	375-220000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 _____

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

2 _____

3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175
63467	7590	06/04/2020	EXAMINER	
Ramey & Schwaller, LLP			HA, DAC V	
5020 Montrose Blvd.			ART UNIT	PAPER NUMBER
Suite 800			2633	
Houston, TX 77006			DATE MAILED: 06/04/2020	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.** Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/539,910	Applicant(s) LAM et al.	
	Examiner DAC V HA	Art Unit 2633	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/21/20.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-20 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
Certified copies:
a) ☒ All b) ☐ Some *c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/DAC V HA/ Primary Examiner, Art Unit 2633	
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Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Allowable Subject Matter

2. Claims 1-20 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:

The present invention relates particularly to Ethernet Cable. Prior art of record (closest reference – Lett – U S2016/0197434), taking individually or collectively, fails to suggest a motivation for incorporating in an Ethernet cable, as claimed as a whole, including claimed subject matter “An active Ethernet cable that comprises:

electrical conductors connected between a first connector and a second connector,

each of the first and second connectors being adapted to fit into an Ethernet port of a corresponding host device to receive from that host device an electrical input signal conveying an inbound data stream to the cable and to provide to that host device an electrical output signal conveying an outbound data stream from the cable,

each of the first and second connectors including a respective transceiver that performs clock and data recovery on the electrical input signal to extract and re-modulate the inbound data stream for transit via the electrical conductors as a respective electrical transit signal conveying a transit data stream” in independent claim 1 and similar claimed subject matter in corresponding independent claims 8, 15 (claims

2-7, 9-14, 16-20 depend therefrom.) Thus, claims 1-20 are allowed over prior art of record.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAC V HA whose telephone number is (571)272-3040. The examiner can normally be reached on 7-3:30 M-F.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Ahn can be reached on 571-272-3044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 16/539,910
Art Unit: 2633

Page 4

/DAC V HA/
Primary Examiner, Art Unit 2633

<i>Search Notes</i> 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

CPC - Searched*		
Symbol	Date	Examiner
H04L 12/2801; H04L 25/4917; H04L 25/03885	03/06/2020	DH
Update	05/22/2020	DH

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
BRS and Inventor's search	03/06/2020	DH
PLUS	03/06/2020	DH
NPL	03/06/2020	DH
Update	05/22/2020	DH

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	PGPUB	03/06/2020	DH
	Udgate	05/22/2020	DH

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Issue Classification 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

CPC						
Symbol					Type	Version
H04L		12		2801	F	2013-01-01
H04L		25		03885	I	2013-01-01
H04L		25		4917	I	2013-01-01

CPC Combination Sets					
Symbol				Type	Version

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/DAC V HA/ Primary Examiner, Art Unit 2633	25 May 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Issue Classification 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

INTERNATIONAL CLASSIFICATION			
CLAIMED			
H01R		13	52
NON-CLAIMED			

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/DAC V HA/ Primary Examiner, Art Unit 2633	25 May 2020	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	2

Issue Classification 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		10		19										
	2		11		20										
	3		12												
	4		13												
	5		14												
	6		15												
	7		16												
	8		17												
	9		18												

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 20	
/DAC V HA/ Primary Examiner, Art Unit 2633 (Primary Examiner) _____ (Date) 25 May 2020		O.G. Print Claim(s) 1	O.G. Print Figure 2

EAST Search History**EAST Search History (Prior Art)**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	6018	(h04L12/2801 H04L25/4917 h04L25/03885).cpc.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:46
S2	21	((yattung near1 lam) (baohua near1 chen)).in.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:46
S4	0	S2 and ethernet.clm.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:48
S5	2	S2 and cable.clm.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:48
S6	1632	(ethernet near2 cable).ab,clm.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:01
S7	1501	S6 and (ethernet near2 cable).clm.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:01
S8	224	S7 and (ethernet near2 cable).ab.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:01
S9	45	S8 and ((ethernet near2 cable) same transceiv\$4)	US-PGPUB; USPAT	OR	ON	2020/03/04 12:02
S10	6018	(h04L12/2801 H04L25/4917 h04L25/03885).cpc.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:02
S11	3	S9 and S10	US-PGPUB; USPAT	OR	ON	2020/03/04 12:02

S12	42	S9 not S11	US-PGPUB; USPAT	OR	ON	2020/03/04 12:09
S13	158	S8 and ((ethernet near2 cable) with (coupl\$4 connect))	US-PGPUB; USPAT	OR	ON	2020/03/04 12:15
S14	120	S13 not S9	US-PGPUB; USPAT	OR	ON	2020/03/04 12:16
S15	0	S14 and (cdr (clock near3 recover\$4))	US-PGPUB; USPAT	OR	ON	2020/03/04 12:17
S16	16	S14 and (ethernet near2 cable).ti.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:19
S17	11	("2017/0346200").URPN.	USPAT	OR	ON	2020/03/04 12:21
S18	104	S14 not S16	US-PGPUB; USPAT	OR	ON	2020/03/04 12:23
S19	66	S8 not S13	US-PGPUB; USPAT	OR	ON	2020/03/04 12:33
S20	15	S19 and ((ethernet near2 cable) with (standard\$5))	US-PGPUB; USPAT	OR	ON	2020/03/04 12:34
S21	2	("9322704" "7401985").pn.	US-PGPUB; USPAT	OR	ON	2020/03/04 13:30
S22	77	("7401985").URPN.	USPAT	OR	ON	2020/03/04 13:31
S23	78	("20010035994" "20020018609" "20020044746" "20020049879" "20020063935" "20020114590" "20020136510" "20020149821" "20020159725" "20020160656" "20030016920" "20030021580" "20030034963" "20030208779"	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/04 13:31

		"20030223756" "20040008996" "20040076119" "20040141695" "20040184746" "20040208600" "20040263941" "20050036746" "20050053340" "20050063707" "20050063711" "20050078916" "20050105910" "20050105915" "20050180700" "20050238358" "20050249477" "20050286593" "20050286893" "20060008276" "20060036788" "20060045437" "20060049936" "20060067690" "20060077778" "20060083518" "20060088251" "20060093280" "20060142744" "4427879" "4768188" "4902092" "5337398" "5497187" "5515467" "5530787" "5631988" "5668419" "5732176" "5926303" "6036654" "6179627" "6217231" "6220873" "6267606" "6446867" "6458619" "6461059" "6478625" "6502997" "6540412" "6607307" "6758693" "6774348" "6793539" "6905257" "6914637" "6941395" "6952395" "6965722" "7065604" "7088518" "7162130" "7217022").PN.				
S24	1	S21 and (modulat\$5 clock\$4)	US- PGPUB; USPAT	OR	ON	2020/03/04 13:46
S25	381	cable.ab. and cable.clm. and (ethernet near1 port)	USPAT	OR	ON	2020/03/04 13:56
S26	372	S25 and (transceiv\$4 transmit\$4 receiv\$4)	USPAT	OR	ON	2020/03/04 13:56
S27	7	S26 and (cdr (clock near3 recover\$4))	US- PGPUB; USPAT	OR	ON	2020/03/04 13:56
S29	4	S27 and modulat\$4	US- PGPUB; USPAT	OR	ON	2020/03/04 13:57
S30	142	S26 and modulat\$4	US- PGPUB; USPAT	OR	ON	2020/03/04 13:57

S31	500	(active with ethernet with cable)	US-PGPUB; USPAT	OR	ON	2020/03/04 13:58
S32	7	S25 and S31	US-PGPUB; USPAT	OR	ON	2020/03/04 13:58
S33	217	S31 and (transceiv\$4 transmit\$4 receiv\$4)	USPAT	OR	ON	2020/03/04 13:59
S34	55	S33 and (ethernet near1 port)	USPAT	OR	ON	2020/03/04 13:59
S36	48	S34 not S32	US-PGPUB; USPAT	OR	ON	2020/03/04 14:01
S37	500	(active with ethernet with cable)	US-PGPUB; USPAT	OR	ON	2020/03/05 07:53
S38	200	S37 and modulat\$4	US-PGPUB; USPAT	OR	ON	2020/03/05 07:53
S39	11	S38 and (cdr (clock near3 recover\$4))	US-PGPUB; USPAT	OR	ON	2020/03/05 07:53
S41	8639810	s "37"(ethernet with cable).clm.	US-PGPUB; USPAT	OR	ON	2020/03/05 16:32
S42	500	(active with ethernet with cable)	US-PGPUB; USPAT	OR	ON	2020/03/05 16:32
S43	67	S42 and (ethernet with cable).clm.	US-PGPUB; USPAT	OR	ON	2020/03/05 16:32
S44	706	(ethernet with (link cable)) same (electrica\$4 near2 conduct\$4)	US-PGPUB; USPAT	OR	ON	2020/03/06 13:34
S45	458	S44 and (connect\$4 with (transceiv\$4 transmit\$4 receiv\$4))	US-PGPUB; USPAT	OR	ON	2020/03/06 13:34

S46	24	S45 and (cdr (clock near3 recover\$4))	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S47	24	S46 and modulat\$4	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S48	6020	(h04L12/2801 H04L25/4917 h04L25/03885).cpc.	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S49	0	S47 and S48	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S50	81	S45 and (ethernet with (link cable)) .clm.	US-PGPUB; USPAT	OR	ON	2020/03/06 13:40
S51	75	S50 not S47	US-PGPUB; USPAT	OR	ON	2020/03/06 13:41
S52	50	S51 and (pair with (wire twist\$4 conduct\$4))	US-PGPUB; USPAT	OR	ON	2020/03/06 13:42
S53	24	("2014/0258742").URPN.	USPAT	OR	ON	2020/03/06 13:43
S54	244	g02b6/36.cpc.	USPAT	OR	ON	2020/03/06 13:56
S55	0	S44 and S54	USPAT	OR	ON	2020/03/06 13:56
S56	9	S54 and ethernet	USPAT	OR	ON	2020/03/06 13:56
S57	89	("20020031955" "20020048990" "20030031025" "20030157842" "20030199192" "20030222786" "20040038564" "20040160774" "20050037672" "20050224585" "20060134996" "20060162947" "20060232385" "20070105453" "20070116411" "20070190863" "20080020658" "20080122579"	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/06 13:57

		"20090042431" "20090269973" "20100079248" "20100098425" "20110043333" "20110116748" "20120058689" "20120064750" "20130052860" "20140035755" "20160020975" "20170293102" "3960428" "4761720" "4837488" "5159316" "5666453" "5741152" "5764043" "5888100" "6002331" "6080007" "6099345" "6244908" "6280232" "6394853" "6524128" "6532328" "6558204" "6577243" "6790096" "6798183" "6811445" "6975242" "7049937" "7080945" "7081808" "7168994" "7221284" "7335066" "7374458" "7547150" "7549886" "7556536" "7651361" "7760094" "7772975" "7782202" "7910833" "7910834" "7920764" "7940182" "7960648" "7965186" "7972183" "8043124" "8210755" "8264355" "8277260" "8465317" "8606972" "8611234" "8620123" "8702453" "8747141" "9196975" "9230416" "9577904" "9810859" "9952258" "9995432").PN.				
S58	17	S57 and ethernet	USPAT	OR	ON	2020/03/06 13:57
S59	22	((yattung near1 lam) (baohua near1 chen)).in.	US- PGPUB; USPAT	OR	ON	2020/05/21 10:12
S60	0	S59 and ethernet.clm.	US- PGPUB; USPAT	OR	ON	2020/05/21 10:12
S61	2	S59 and cable.clm.	US- PGPUB; USPAT	OR	ON	2020/05/21 10:13
S62	25	("2014/0258742").URPN.	USPAT	OR	ON	2020/05/21 10:14
S63	0	("2018/0241579").URPN.	USPAT	OR	ON	2020/05/21 10:28

S64	0	("2016/0197434").URPN.	USPAT	OR	ON	2020/05/21 10:29
S65	0	("2016/0099861").URPN.	USPAT	OR	ON	2020/05/21 10:29
S66	6	("2010/0267283").URPN.	USPAT	OR	ON	2020/05/21 10:29

5/25/2020 10:48:40 AM

C:\Users\dha\Documents\EAST\Workspace2\16539910.wsp



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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BIB DATA SHEET

CONFIRMATION NO. 8175

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
16/539,910	08/13/2019	375	2633	20160.0039.NPUS00		
APPLICANTS CREDO TECHNOLOGY GROUP LIMITED, Grand Cayman, CAYMAN ISLANDS; INVENTORS Yattung LAM, San Jose, CA; Baohua CHEN, Xiamen City, CHINA; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** CHINA 201910155535.9 03/01/2019 ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** ** SMALL ENTITY ** 03/25/2020						
Foreign Priority claimed ☒ Yes ☐ No 35 USC 119(a-d) conditions met ☒ Yes ☐ No Verified and /DAC V HA/ Acknowledged Examiner's Signature		☐ Met after Allowance Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 4	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
ADDRESS Ramey & Schwaller, LLP 5020 Montrose Blvd. Suite 800 Houston, TX 77006 UNITED STATES						
TITLE ACTIVE ETHERNET CABLE						
FILING FEE RECEIVED 785	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

To: uspto@rameyfirm.com,wramey@rameyfirm.com,tevenbly@rameyfirm.com
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 63467

Jun 04, 2020 04:33:43 AM

Dear PAIR Customer:

Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 63467 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Disclaimer:

The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16539910	NOA	06/04/2020	20160.0039.NPUS00

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM



UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY.DOCKET NO./TITLE	REQUEST ID
16/539,910	08/13/2019	CREDO TECHNOLOGY GROUP LIMITED	20160.0039.NPUS00	114619

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 06/18/2020 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

☒ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be notification of loss of entitlement to small or micro entity status, as applicable.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Daniel J. Krueger/
Name:	Daniel J. Krueger
Registration Number:	42771

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:
Yattung LAM et al.

U.S. Application No. 16/539,910

Filed: August 13, 2019

Title: ACTIVE ETHERNET CABLE

Atty. Docket No. 20160.0039.NPUS00

Confirmation No.: 8175

Examiner: Ha, Dac V

Group Art Unit: 2633

ENTITY STATUS CHANGE AND SUBMISSION OF CORRECTIVE FEE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

In connection with the above-captioned patent application, this letter serves as a Notification of Loss of Entitlement to Small Entity Status.

A review of the fee payment history in connection with the subject application indicates that the filing, search and examination fees were inadvertently paid at a small entity rate instead of the large entity fee, thus creating an outstanding shortage of \$935. Applicant respectfully submits the remaining fees as required for a large entity. Please charge our credit card for the fees set forth above. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 60-2539 (20160.0039.NPUS00).

Respectfully submitted,

Date: June 18, 2020

/Daniel J. Krueger/
Registration No. 42,771
Attorney for Applicant
Ramey & Schwaller, LLP
5020 Montrose Blvd, Suite 800
Houston, TX 77006
Tel 713-426-3923x304
docketing@rameyfirm.com

Electronic Patent Application Fee Transmittal				
Application Number:		16539910		
Filing Date:		13-Aug-2019		
Title of Invention:		ACTIVE ETHERNET CABLE		
First Named Inventor/Applicant Name:		Yattung LAM		
Filer:		Daniel Joseph Krueger/Shanay Hines		
Attorney Docket Number:		20160.0039.NPUS00		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
PROCESSING FEE FOR PROVIS. APPLICATIONS	1807	1	50	50
SUBMISSION AFTER FINAL REJECTION	1809	1	840	840
PRINTED COPY OF PATENT - NO COLOR	8001	15	3	45
Total in USD (\$)				935

Electronic Acknowledgement Receipt	
EFS ID:	39767786
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	18-JUN-2020
Filing Date:	13-AUG-2019
Time Stamp:	23:02:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$935
RAM confirmation Number	E20206HN02546536
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	20160-0039-NPUS00_Entity- Status-Change-and- Corrective_Fee.pdf	111571	no	1
			14367668a683e3a113e5f07d0617ca4732ddfffb		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	33434	no	2
			a155de1e207837a83d213f064e8c8b2f41285ab8		
Warnings:					
Information:					
Total Files Size (in bytes):			145005		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00

CONFIRMATION NO. 8175

63467

Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

PUBLICATION NOTICE



OC000000119661624

Title:ACTIVE ETHERNET CABLE

Publication No.US-2020-0280458-A1

Publication Date:09/03/2020

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <https://portal.uspto.gov/pair/PublicPair>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PART B – FEE(S) TRANSMITTAL

Complete and send this form, together with the applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By fax, send to: (571) 273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

Shanay Hines	(Typed or printed name)
/Shanay Hines/	(Signature)
September 3, 2020	(Date)

APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175

TITLE OF INVENTION:

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
16/539,910	Undiscounted	\$1,000			\$1,000	09/04/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
HA, DAC V	2633	375-220000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363)

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1. Ramey & Schwaller LLP
2. Daniel J. Krueger
- 3.

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

Credo Technology Group Limited

(B) RESIDENCE: (CITY and STATE or COUNTRY)

Grand Cayman, CAYMEN ISLANDS

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government4a. Fees Submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment (Please first reapply any previously paid fee shown above):

- ☒ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change of Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27.
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid Certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken as a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken as a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Daniel J. Krueger/

Date September 3, 2020

Typed or printed name Daniel Krueger

Registration No. 42771

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	40465645
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	03-SEP-2020
Filing Date:	13-AUG-2019
Time Stamp:	14:00:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	ptol85b.pdf	330136	no	2
			d5c66542b69e4caa6436c2363ac58f59e3119497		

Warnings:

Information:	
Total Files Size (in bytes):	330136
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REQUEST FOR REFUND

Reference # (Patent #, Application #, Trademark Serial #, Registration #, etc.)		Title of Invention or Mark Information	
16/539,910		ACTIVE ETHERNET CABLE	
Attorney Docket # (if applicable)	Payment Date (mm/dd/yyyy)	Refund Request Amount	
20160.0039.NPUS00	09/02/2020	\$ 1,000.00	
Refund Option (Select one)			
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	United States	77006
Email Address (You will receive an acknowledgment of receipt only if you provide a valid email address)		Phone Number
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Daniel Krueger		42771
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/Daniel Krueger/		06/12/2020

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Electronic Acknowledgement Receipt	
EFS ID:	40468021
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	03-SEP-2020
Filing Date:	13-AUG-2019
Time Stamp:	15:51:03
Application Type:	Utility under 35 USC 111(a)

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Refund Request	Refund_Request_Form_.pdf	682980	no	1
			7f38ff40f475443d0c45785d46b36c656e20b198		

Warnings:

Information:					
2	Miscellaneous Incoming Letter	Fee_Transaction_ID_.pdf	110903	no	1
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16539910	NTC.PUB	09/03/2020	20160.0039.NPUS00

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	10/13/2020	10805103	20160.0039.NPUS00	8175

63467 7590 09/23/2020
Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Yattung LAM, San Jose, CA;
CREDO TECHNOLOGY GROUP LIMITED, Grand Cayman, CAYMAN ISLANDS;
Baohua CHEN, Xiamen City, CHINA;

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Application	Document	Mailroom Date	Attorney Docket No.
16539910	ISSUE.NTF	09/23/2020	20160.0039.NPUS00

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16539910
	Filing Date	2019-08-13
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	DAC V HA
	Attorney Docket Number	20160.0039.NPUS00

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		16539910
	Filing Date		2019-08-13
	First Named Inventor	Yattung LAM	
	Art Unit	2633	
	Examiner Name	DAC V HA	
	Attorney Docket Number	20160.0039.NPUS00	

1	Non-Final Office Action in U.S. Application 16/541,094 dated September 9, 2020
2	Corresponds to U.S. Application no. 16/698,935 dated November 27, 2019
3	Corresponds to U.S. Application no. 16/541,094 dated August 14, 2019
4	Corresponds to U.S. Application no. 16/693,144 dated November 22, 2019

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16539910
	Filing Date	2019-08-13
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	DAC V HA
	Attorney Docket Number	20160.0039.NPUS00

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Dan Krueger/	Date (YYYY-MM-DD)	2020-09-24
Name/Print	Daniel J. Krueger	Registration Number	42771

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/541,094	08/14/2019	Yattung LAM	20160.0036.NPUS00	7679
63467	7590	09/09/2020	EXAMINER	
Ramey & Schwaller, LLP			WANG, TED M	
5020 Montrose Blvd.				
Suite 800				
Houston, TX 77006				
			ART UNIT	PAPER NUMBER
			2633	
			NOTIFICATION DATE	DELIVERY MODE
			09/09/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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uspto@rameyfirm.com
wramey@rameyfirm.com

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Response to Election Requirement

2. Applicant's proposed election without traverse of Group I, Species I.A (claims 1-9, 14-18 and 21) in the reply filed on 6/1/2020 was withdrawn. The new election Group I (claims 1-21) was elected without traverse after Applicant initiated interview dated 8/31/2020.

Foreign Priority

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in China on 03/01/2019. It is noted, however, that applicant has not filed a certified copy of the 201910155916.7 application as required by 37 CFR 1.55.

Claim Rejections - 35 USC § 102

4. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

6. Claims 1-4, 14 and 15 are rejected under 35 U.S.C. 102(a)(1) as being anticipated by Lugthart et al. (US 9,337,993).

- With regard claim 1, Lugthart et al. discloses an active 1:N breakout cable (Fig.16 elements 1011 and 1012 and Fig.17A elements 1100 and col.49 lines 23-40) that comprises:

a unary end connector (Fig.17A element 1101, QSFP, 1104 and 1105, 1112 and col.49 lines 35-48, where examiner considers elements 1104, 1105 and 1112 as part of the unary end connector) connected by electrical conductors to each of N split end connectors, N being an integer greater than 1 (Fig.17A elements 1103a-1103d, SFP+, and col.49 lines 27-31, where N=4),

the unary end connector being adapted to fit into a network interface port of a primary host device (Fig.17A element 1101, QSFP interface and col.49 lines 41-48) to provide output PAM4 electrical signals (col.50 lines 8-22, 23-50 and Fig.1C and col.11 lines 45-50, where the unary end of cable 1104 at the second TRANSCEIVER 1112 OUTPUT provides PAM4 electrical signals) that convey a multi-lane outbound data stream to the primary host device (Fig.17A elements 1123a-1123d and 1124a-1124d and col.50 lines 29-50) and to accept input PAM4 electrical signals (col.49 line 49 - col.50 line 7 and Fig.1C and col.11 lines 45-50, where the unary end of cable 1104 at the first TRANSCEIVER 1111 OUTPUT provides PAM4 electrical signals) that convey multi-lane inbound data stream from the primary host device (Fig.17A elements 1123a-1123d and 1124a-1124d and col.50 lines 29-50), and

- each of the split end connectors being adapted to fit into a network interface port of a secondary host device (Fig.16 elements 1001, 1041a-1041d and Fig.17A 1103a-1103d and col.50 lines 8-50) to provide output NRZ electrical signals that convey a split portion of the inbound data stream to that secondary host device (col.50 lines 8-22, 23-50 and Fig.1C and col.11 lines 45-50, where the split portion of cable 1106a-1106d at the second TRANSCEIVER 1112 OUTPUT provides NRZ electrical signals) and to accept input NRZ electrical signals (col.50 lines 8-22, 23-50 and Fig.1C and col.11 lines 45-50, where the split portion of cable 1106a-1106d at the second TRANSCEIVER 1112 INPUT provides NRZ electrical signals) that convey a split portion of the outbound data stream from that secondary host device (Fig.17A elements 1123a-1123d and 1124a-1124d and col.50 lines 29-50).
- With regard claim 2, Lugthart et al. further discloses wherein the unary end connector (Fig.17A element 1101, QSFP, 1104 and 1105, 1112 and col.49 lines 35-48, where examiner considers elements 1104, 1105 and 1112 as part of the unary end connector) includes a transceiver (Fig.17A element 1112) that performs clock and data recovery (col.50 lines 25-27 and Fig.1C element 22a-22b and col.10 lines 52-54) on the input PAM4 electrical signals (col.11 lines 41-50) to extract and re-modulate the inbound data stream as diverging transit signals (where the diverging signal is considered as the signals 1123a-1123d been converted by the transceiver 1112, col.50 lines 23-50) that transport the split portions of the inbound data stream via the electrical conductors to the split end connectors (Fig.17A elements 1103a-1103d), and wherein the

- transceiver performs clock and data recovery (col.50 lines 33-50 and Fig.1C element 12a-12d and col.10 lines 40-60) on converging transit signals (where the converging signal is considered as the signals from the 1124a-1124d to be converted by the transceiver 1112, col.50 lines 23-50) to extract and remodulate the outbound data stream as said output PAM4 electrical signals (col.10 line 61 – col.11 line 14, where the transceiver (para.50 lines 23-33) as shown in Fig.1C converts the NRZ signal to PAM4 signals (4:1 multiplexing operation to data transmitted over the primary cable 1104)(col.50 lines 23-33)).
- With regard claim 3, Lugthart et al. further discloses wherein the diverging transit signals (where the diverging signal is considered as the signals 1123a-1123d been converted by the transceiver 1112, col.50 lines 23-50) and the converging transit signals (where the converging signal is considered as the signals from the 1124a-1124d to be converted by the transceiver 1112, col.50 lines 23-50) are NRZ electrical signals (col.50 lines 8-22, 23-50 and Fig.1C and col.11 lines 45-50, where the split portion of cable 1106a-1106d at the second TRANSCEIVER 1112 INPUT/OUTPUT provides NRZ electrical signals).
 - With regard claim 4, Lugthart et al. further discloses wherein the transceiver in the unary end connector further performs forward error correction when extracting the outbound data stream (Fig.1C elements 15a-15d and 25a-25d).
 - With regard claim 14, Lugthart et al. discloses cable manufacturing method that comprises:
 - packaging a transceiver (Fig.17a element 1112) into a unary end connector (Fig.17A element 1101, QSFP, 1104 and 1105, 1112 and col.49 lines

35-48, where examiner considers elements 1104, 1105 and 1112 as part of the unary end connector) that is adapted to mate with a network interface port of a primary host device (Fig.17A element 1101 QSFP), the transceiver being configured to provide output PAM4 electrical signals that convey a multi-lane outbound data stream to the primary host device (col.10 line 61 – col.11 line 14, where the transceiver (para.50 lines 23-33) as shown in Fig.1C converts the NRZ signal to PAM4 signals (4:1 multiplexing operation to data transmitted over the primary cable 1104)(col.50 lines 23-33)) and to accept input PAM4 electrical signals that convey multi-lane inbound data stream from the primary host device (col.49 line 49 - col.50 line 7 and Fig.1C and col.11 lines 45-50, where the unary end of cable 1104 at the first TRANSCEIVER 1111 OUTPUT provides PAM4 electrical signals); and

connecting each of N split end connectors (Fig.17A elements 1103a-1103d) to the unary end connector (Fig.17A element 1101, QSFP, 1104 and 1105, 1112 and col.49 lines 35-48) with electrical conductors, where N is an integer greater than one (Fig.17A elements 1106a-1106d), and where each of the split end connectors is adapted to mate with a network interface port of a secondary host device (Fig.17A elements 1103a-1103d and Fig.16 elements 1021a-1021d and col.49 lines 23-40) to provide output NRZ electrical signals that convey a split portion of the inbound data stream to that secondary host device (Fig.17A elements 1123a-1123d, where the NRZ signal is considered as the signals 1123a-1123d been converted by the transceiver 1112, col.50 lines 23-50) and to accept input NRZ electrical signals that convey a split portion of the

outbound data stream from that secondary host device (Fig.17A elements 1124a-1124d, where the NRZ signal is considered as the signals from the 1124a-1124d to be converted by the transceiver 1112, col.50 lines 23-50),

the transceiver in the unary end connector (Fig.17A element 1101, QSFP, 1104 and 1105, 1112 and col.49 lines 35-48, where examiner considers elements 1104, 1105 and 1112 as part of the unary end connector) includes a transceiver (Fig.17A element 1112) that performs clock and data recovery (col.50 lines 25-27 and Fig.1C element 22a-22b and col.10 lines 52-54) on the input PAM4 electrical signals (col.11 lines 41-50) to extract and re-modulate the inbound data stream as diverging transit signals (where the diverging signal is considered as the signals 1123a-1123d been converted by the transceiver 1112, col.50 lines 23-50) that transport the split portions of the inbound data stream via the electrical conductors to the split end connectors (Fig.17A elements 1103a-1103d), and wherein the transceiver performs clock and data recovery (col.50 lines 33-50 and Fig.1C element 12a-12d and col.10 lines 40-60) on converging transit signals (where the converging signal is considered as the signals from the 1124a-1124d to be converted by the transceiver 1112, col.50 lines 23-50) to extract and remodulate the outbound data stream as said output PAM4 electrical signals (col.10 line 61 – col.11 line 14, where the transceiver (para.50 lines 23-33) as shown in Fig.1C converts the NRZ signal to PAM4 signals (4:1 multiplexing operation to data transmitted over the primary cable 1104)(col.50 lines 23-33)).

- With regard claim 15, Lugthart et al. further discloses wherein the diverging transit signals (where the diverging signal is considered as the signals 1123a-1123d been converted by the transceiver 1112, col.50 lines 23-50) and the converging transit signals (where the converging signal is considered as the signals from the 1124a-1124d to be converted by the transceiver 1112, col.50 lines 23-50) are NRZ electrical signals (col.50 lines 8-22, 23-50 and Fig.1C and col.11 lines 45-50, where the split portion of cable 1106a-1106d at the second TRANSCEIVER 1112 INPUT/OUTPUT provides NRZ electrical signals).

Claim Rejections - 35 USC § 103

7. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this title, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 19-21 are rejected under 35 U.S.C. 103 as being unpatentable over Lugthart et al. (US 9,337,993).

- With regard claim 19, Lugthart et al. discloses cable manufacturing method that comprises:

packaging a transceiver (Fig.17A element 1112) into N split end connectors (Fig.17A elements 1103a-1103d) adapted to mate with a network interface port of a secondary host device (Fig.16 elements 1001), where N is an integer greater than one (Fig.16 elements 1001 and col.49 lines 23-26, where $N=4$), and where the transceiver in the split end connectors is configured to provide output NRZ electrical signals that convey a split portion of a multi-lane inbound data stream to that secondary host device and to accept input NRZ electrical signals that convey a split portion of a multi-lane outbound data stream from that secondary host device (col.50 lines 8-22, 23-50 and Fig.1C and col.11 lines 45-50, where the split portion of cable 1106a-1106d at the second TRANSCEIVER 1112 INPUT/OUTPUT provides NRZ electrical signals that provided by elements 1124a-1124d); and connecting each of the split end connectors to a unary end connector (Fig.17A element 1101) via electrical conductors (Fig.17A element 1104, 1106a-1106d),

the unary end connector (Fig.17A element 1101) being adapted to mate with a network interface port of a primary host device (Fig.16 element 1003 and col.49 lines 23-26) to provide output PAM4 electrical signals (col.50 lines 8-22, 23-50 and Fig.1C and col.11 lines 45-50, where the unary end of cable 1104 at the second TRANSCEIVER 1112 OUTPUT provides PAM4 electrical signals) that convey the outbound data stream to the primary host device (Fig.17A elements 1123a-1123d and 1124a-1124d and col.50 lines 29-50) and to accept input PAM4 electrical signals (col.49 line 49 - col.50 line 7 and Fig.1C and col.11 lines 45-50, where the unary end of cable 1104 at the first TRANSCEIVER 1111

OUTPUT provides PAM4 electrical signals) that convey the inbound data stream from the primary host device (Fig.17A elements 1123a-1123d and 1124a-1124d and col.50 lines 29-50),

the transceiver (Fig.17A element 1112) in split end connectors (Fig.17A elements 1103a-1103d) being configured to perform clock and data recovery on the input NRZ electrical signals (col.50 lines 33-50 and Fig.1C element 12a-12d and col.10 lines 40-60) to extract and remodulate the split portion of the outbound data stream as converging transit signals (where the converging signals are considered as the signals at element 1104 that been converted by the transceiver 1112 from NRZ to PAM4 (Fig.1C element 40 and col.10 lines 40-60) from elements 1106a-1106d, col.50 lines 23-50) that transport the split portions of the outbound data stream via the electrical conductors (Fig.17A element 1104) to the unary end connector (Fig.17A element 1101), and being further configured to perform clock and data recovery (col.50 lines 25-27 and Fig.1C element 22a-22b and col.10 lines 52-54) on diverging transit signals (where the diverging signal is considered as the signal at element 1104 that to be converted by the transceiver 1112 from PAM4 to NRZ signals (Fig.1C element 40 and col.10 lines 40-60) at element 1106a-1106d, col.50 lines 23-50) to extract and re-modulate the split portion of the inbound data stream as said output NRZ electrical signals (col.10 line 61 – col.11 line 14, where the transceiver 1112 (para.50 lines 23-33) as shown in Fig.1C converts the PAM4 signal to NRZ

signals (4:1 multiplexing operation to data transmitted over the primary cable 1104)(col.50 lines 23-33)).

Lugthart et al. discloses all of the subject matter as described in the above paragraph except for specifically teaching a transceiver into each of N split end connectors.

However, Lugthart et al. further teaches a transceiver (Fig.17A element 1112 and Fig.1C and col.50 lines 25-50) comprising multiple transmit paths (Fig.1C element 40, EGRESS/TRANMIT, where the first transmit path equalizer 11a receives a first host side differential transmit signal TXA+, TXA-, the second transmit path equalizer 11b receives a second differential transmit signal TXB+, TXB-, the third transmit path equalizer 11c receives a third differential transmit signal TXC+, TXC-, and the fourth transmit path equalizer 11d receives a fourth differential transmit signal TXD+, TXD-) and receiving paths (Fig.1C element 40, INGRESS/RECEIVE, where the first receive path equalizer 21a receives a first line side differential receive signal RX1+, RX1-, and the second receive path equalizer 21b receives a second line side differential receive signal RX2+, RX2-.)

Lugthart et al. discloses all of the subject matter as described in the above paragraph except for specifically teaching a transceiver into each of N split end connectors. It would have been obvious to one having ordinary skill in the art at the time before the effective filing date of the claimed invention to make the transceiver (Fig.17A element 1112) to many separated transceivers (by separating the first transmit path circuit TXA+ & TXA-, 11a-15a, 16, 17a and TX1+ & TX1- and first receive path circuit RX1+ & RX1-, 21a-25a, 26, 27a, RXA+

- &RXA- as that of the first separated transceiver, the second transmit path circuit TXB+ & TXB-, 11b-15b, 16, 17b and TX2+ & TX2- and second receive path circuit RX2+ & RX2-, 21b-25b, 26, 27b, RXB+ & RXB- as that of the separated second transceiver, ...etc.), since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 1 t.
- With regard claim 20, Lugthart et al. further teaches wherein the diverging transit signals (where the diverging signal is considered as the signal at element 1104 that to be converted by the transceiver 1112 from PAM4 to NRZ signals (Fig.1C element 40 and col.11 lines 45-50) at element 1106a-1106d, col.50 lines 23-50) and the converging transit signals (where the converging signals are considered as the signals at element 1104 that been converted by the transceiver 1112 from NRZ to PAM4 (Fig.1C element 40 and col.11 lines 45-50) from elements 1106a-1106d, col.50 lines 23-50) are PAM4 electrical signals.
 - With regard claim 21, Lugthart et al. further teaches packaging a transceiver (Fig.17A element 1111) in the unary end connector (Fig.17A 1101 QSFP), the transceiver in the unary end connector being configured to perform clock and data recovery on the input PAM4 electrical signals (col.49 line 59 – col.50 line 5 and Fig.1C element 22a-22b and col.11 lines 45-50) to extract and re-modulate (Fig.1C element 21a-27a/21b-27b) the inbound data stream as the diverging transit signals (Fig.1C elements RXA+/RXA- to RXD+/RXD-) that transport the split portions of the inbound data stream (Fig.1C elements RXA+/RXA- to RXD+/RXD-) via the electrical conductors (Fig.17A elements 1106a-1106d) to

the split end connectors (Fig.17A elements 1103a-1103d), and being further configured to perform clock and data recovery (col.49 line 59 – col.50 line 5 and Fig.1C element 12a-12d) on the converging transit signals (Fig.1C elements TXA+/TXA- TO TXD+/TXD-) to extract and re-modulate the outbound data stream (Fig.1C elements 11a-11d, 12a-12d, 15a-15d, 16, 17a-17b and 14a-14b) as said output PAM4 electrical signals (Fig.1C elements TX1+/TX1- to TX2+/TX2- and col.11 lines 45-50).

Allowable Subject Matter

9. Claims 5-13 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to overcome the objection(s) set forth in this Office action and rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicants. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicants in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure

relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted M. Wang whose telephone number is 571-272-3053. The examiner can normally be reached on M-F, 7:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Ahn can be reached on 571-272-3044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Ted M Wang/
Primary Examiner, Art Unit 2633

Notice of References Cited	Application/Control No. 16/541,094		Applicant(s)/Patent Under Reexamination LAM et al.	
	Examiner TED M WANG		Art Unit 2633	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-9337993-B1	05-2016	Lugthart; Marcel Louis	H04L7/0054	1/1
	B					
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<i>Search Notes</i> 	Application/Control No. 16/541,094	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner TED M WANG	Art Unit 2633

CPC - Searched*		
Symbol	Date	Examiner
H04B 1/38, 004	08/31/2020	TW
H04L 7/0016	08/31/2020	TW

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

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Search Notes		
Search Notes	Date	Examiner
EAST - USPGPUB, USPAT, USOCR, EPO, JPO, DERWENT, IBM_TDB, see attached search report	08/31/2020	TW
ODP - searched and reviewed from PALM and EAST	08/31/2020	TW

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

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<i>Index of Claims</i> 	Application/Control No. 16/541,094	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner TED M WANG	Art Unit 2633

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS										
☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	04/28/2020	08/31/2020							
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	2	÷	✓							
	3	÷	✓							
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16541094
	Filing Date	2019-08-14
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	Wang, Ted M
	Attorney Docket Number	20160.0036.NPUS00

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	1	2018161273	WO	A1	2018-09-13	CREDO TECHNOLOGY GROUP LTD.		
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16541094
	Filing Date	2019-08-14
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	Wang, Ted M
	Attorney Docket Number	20160.0036.NPUS00

1	ExParte Quayle Action received March 11, 2020 in U.S. Application no. 16/539,910
2	Management Data Input/Output. (2018, November 25). Wikipedia. Retrieved January 23, 2019, from https://en.wikipedia.org/wiki/Management_Data_Input/Output .
3	QSFP-DD MSA - QSFP-DD Hardware Specification for QSFP Double Density 8X Pluggable Transceiver Rev 4.0 Candidate. August 15, 2018.

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EXAMINER SIGNATURE

Examiner Signature	/TED M WANG/	Date Considered	08/20/2020
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16541094
Filing Date	2019-08-14
First Named Inventor	Yattung LAM
Art Unit	2633
Examiner Name	Wang, Ted M
Attorney Docket Number	20160.0036.NPUS00

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Dan Krueger/	Date (YYYY-MM-DD)	2020-06-01
Name/Print	Dan Krueger	Registration Number	42771

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	WANG, Ted M.
	Attorney Docket Number	20160.0036.NPUS00

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T ⁵

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16541094
	Filing Date	2019-08-14
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	WANG, Ted M.
	Attorney Docket Number	20160.0036.NPUS00

1	Notice of Allowance dated June 24, 2020 for Application no. 16/539,910
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If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/TED M WANG/	Date Considered	08/20/2020
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16541094
Filing Date	2019-08-14
First Named Inventor	Yattung LAM
Art Unit	2633
Examiner Name	WANG, Ted M.
Attorney Docket Number	20160.0036.NPUS00

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Dan Krueger/	Date (YYYY-MM-DD)	2020-08-20
Name/Print	Daniel Krueger	Registration Number	42771

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	40664640
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	24-SEP-2020
Filing Date:	13-AUG-2019
Time Stamp:	22:02:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	SB08.pdf	612354	no	4
			999a4d587191730849bccfcf0e055f3bfff766b3		

Warnings:

Information:					
2	Other Reference-Patent/App/Search documents	2020-09-09_16541094_NFOA.pdf	1024671	no	26
			9cb6818d41e7c60bb03414e0fc0c548babe86c6		
Warnings:					
Information:					
Total Files Size (in bytes):			1637025		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	16/539,910
Filing Date	August 13, 2019
First Named Inventor	Yattung LAM
Art Unit	2633
Examiner Name	DAC HA
Attorney Docket Number	20160.0039.NPUS00

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. **Submission required under 37 CFR 1.114** Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

ii. ☐ Other _____

b. ☒ Enclosed

i. ☐ Amendment/Reply

iii. ☒ Information Disclosure Statement (IDS)

ii. ☐ Affidavit(s)/ Declaration(s)

iv. ☐ Other _____

2. Miscellaneous

a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

b. ☐ Other _____

3. Fees

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

a. ☐ The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. _____

i. ☒ RCE fee required under 37 CFR 1.17(e)

ii. ☐ Extension of time fee (37 CFR 1.136 and 1.17)

iii. ☐ Other _____

b. ☐ Check in the amount of \$ _____ enclosed

c. ☒ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature	/Daniel J. Krueger/	Date	2020-09-25
Name (Print/Type)	Daniel J. Krueger	Registration No.	42771

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature	_____	Date	_____
Name (Print/Type)	_____	Date	_____

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Instruction Sheet for RCEs

(not to be submitted to the USPTO)

NOTES:

An RCE is not a new application, and filing an RCE will not result in an application being accorded a new filing date.

Filing Qualifications:

The application must be a utility or plant application filed on or after June 8, 1995. The application cannot be a provisional application, a utility or plant application filed before June 8, 1995, a design application, or a patent under reexamination. See 37 CFR 1.114(e).

Filing Requirements:

Prosecution in the application must be closed. Prosecution is closed if the application is under appeal, or the last Office action is a final action, a notice of allowance, or an action that otherwise closes prosecution in the application (e.g., an Office action under *Ex parte Quayle*). See 37 CFR 1.114(b).

A submission and a fee are required at the time the RCE is filed. If reply to an Office action under 35 U.S.C. 132 is outstanding (e.g., the application is under final rejection), the submission must meet the reply requirements of 37 CFR 1.111. If there is no outstanding Office action, the submission can be an information disclosure statement, an amendment, new arguments, or new evidence. See 37 CFR 1.114(c). The submission may be a previously filed amendment (e.g., an amendment after final rejection).

WARNINGS:

Request for Suspension of Action:

All RCE filing requirements must be met before suspension of action is granted. A request for a suspension of action under 37 CFR 1.103(c) does not satisfy the submission requirement and does not permit the filing of the required submission to be suspended.

Improper RCE will NOT toll Any Time Period:

Before Appeal - If the RCE is improper (e.g., prosecution in the application is not closed or the submission or fee has not been filed) and the application is not under appeal, the time period set forth in the last Office action will continue to run and the application will be abandoned after the statutory time period has expired if a reply to the Office action is not timely filed. No additional time will be given to correct the improper RCE.

Under Appeal - If the RCE is improper (e.g., the submission or the fee has not been filed) and the application is under appeal, the improper RCE is effective to withdraw the appeal. Withdrawal of the appeal results in the allowance or abandonment of the application depending on the status of the claims. If there are no allowed claims, the application is abandoned. If there is at least one allowed claim, the application will be passed to issue on the allowed claim(s). See MPEP 1215.01.

See MPEP 706.07(h) for further information on the RCE practice.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:		16539910		
Filing Date:		13-Aug-2019		
Title of Invention:		ACTIVE ETHERNET CABLE		
First Named Inventor/Applicant Name:		Yattung LAM		
Filer:		Daniel Joseph Krueger/Shanay Hines		
Attorney Docket Number:		20160.0039.NPUS00		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
PETITION FEE- 37 CFR 1.17(H) (GROUP III)	1464	1	140	140
RCE- 1ST REQUEST	1801	1	1300	1300
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1440



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

Decision Date : September 25, 2020

In re Application of :

Yattung LAM

DECISION ON PETITION

UNDER CFR 1.313(c)(2)

Application No : 16539910

Filed : 13-Aug-2019

Attorney Docket No : 20160.0039.NPUS00

This is an electronic decision on the petition under 37 CFR 1.313(c)(2), filed September 25, 2020, to withdraw the above-identified application from issue after payment of the issue fee.

The petition is **GRANTED**.

The above-identified application is withdrawn from issue for consideration of a submission under 37 CFR 1.114 (request for continued examination). See 37 CFR 1.313(c)(2).

Petitioner is advised that the issue fee paid in this application cannot be refunded. If, however, this application is again allowed, petitioner may request that it be applied towards the issue fee required by the new Notice of Allowance.

Telephone inquiries concerning this decision should be directed to the Patent Electronic Business Center (EBC) at 866-217-9197.

This application file is being referred to Technology Center AU 2633 for processing of the request for continuing examination under 37 CFR 1.114 .

Office of Petitions

Electronic Acknowledgement Receipt	
EFS ID:	40669675
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	25-SEP-2020
Filing Date:	13-AUG-2019
Time Stamp:	16:27:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$1440
RAM confirmation Number	E20209OG27137047
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Quick Path Information Disclosure Statement	QPIDS_form.pdf	188653	no	2
			19e34d9968ee4c8eed431dacee8b639806cd073d		
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	SB08_quick_path.pdf	612389	no	4
			909a2bdfce38335d8a9c4fc0be8fe05538ebb55b5		
Warnings:					
Information:					
3	Petition automatically granted by EFS	petition-request.pdf	31450	no	2
			a3989023830a374c552307d8b973d808ce2eb114		
Warnings:					
Information:					
4	Request for Continued Examination (RCE)	Final_RCE.pdf	196297	no	3
			6e490134d46fc79cdbe90d29a54c6e7de0670033		
Warnings:					
This is not a USPTO supplied RCE SB30 form.					
Information:					
5	Fee Worksheet (SB06)	fee-info.pdf	32202	no	2
			b1edb2f50cdf70cf148401dc5f2912024a1466f8		
Warnings:					
Information:					
Total Files Size (in bytes):			1060991		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

CERTIFICATION AND REQUEST FOR CONSIDERATION OF AN INFORMATION DISCLOSURE STATEMENT FILED AFTER PAYMENT OF THE ISSUE FEE UNDER THE QPIDS PROGRAM	
Non-Provisional Application Number: 16/539,910	Filing Date: August 13, 2019
First Named Inventor: HA, DAC V	Title of Invention: ACTIVE ETHERNET CABLE
THE UNDERSIGNED HEREBY CERTIFIES AND REQUESTS THE FOLLOWING FOR THE ABOVE-IDENTIFIED APPLICATION. 1. Consideration is requested of the information disclosure statement (IDS) submitted herewith, which is being filed after payment of the issue fee. 2. Check the box next to the appropriate selection: ☐ Each item of information contained in the IDS was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(1). OR ☒ No item of information contained in the IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the IDS. See 37 CFR 1.97(e)(2). OR ☐ See attached certification statement in compliance with 37 CFR 1.97(e). 3. Please charge the IDS fee set forth in 37 CFR 1.17(p) to Deposit Account No. _____. 4. A Petition to Withdraw from Issue After Payment of the Issue Fee (37 CFR 1.313(c)(2)), including the petition fee set forth in 37 CFR 1.17(h), is submitted herewith as a Web-based ePetition. WARNING: Do <u>not</u> submit the petition as a follow-on paper via EFS-Web. Submit the petition as a Web-based ePetition by signing on to EFS-Web as a registered user, selecting the radio button next to "Existing application/patent," and then selecting the radio button next to "ePetition (for automatic processing and immediate grant, if all petitions requirements are met)." Failure to use the Web-based ePetition interface will result in automatic entry of the RCE. 5. A request for continued examination (RCE) under 37 CFR 1.114 and the RCE fee under 37 CFR 1.17(e) are submitted herewith. 6. The RCE will be treated as a "conditional" RCE. In the event the examiner determines that any item of information contained in the IDS necessitates the reopening of prosecution in the application, the undersigned understands that (i) the RCE will be processed and treated as an RCE under 37 CFR 1.114 and therefore (ii) the IDS fee under 37 CFR 1.17(p) will be returned in accordance with 37 CFR 1.97(b)(4). In the event that no item of information in the IDS necessitates reopening prosecution, the undersigned understands that the RCE will not be processed and the RCE fee under 37 CFR 1.17(e) will be returned. 7. This certification and request is being filed as a Web-based ePetition and is not accompanied by an amendment to the application. Inclusion of an amendment will result in automatic entry of the RCE.	
Signature /Daniel J. Krueger/	Date September 25, 2020
Name (Print/Typed) Daniel J. Krueger	Practitioner Registration Number (If applicable) 42771
Note: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required in accordance with 37 CFR 1.33 and 11.18. Please see 37 CFR 1.4(d) for the form of the signature. If necessary, submit multiple forms for more than one signature, see below.*	
☐ *Total of _____ forms are submitted.	

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16539910
	Filing Date	2019-08-13
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	DAC V HA
	Attorney Docket Number	20160.0039.NPUS00

U.S. PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1	9337993	B1	2016-05-10	Lugthart et al.			
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1	20200280329	A1	2020-09-03	Brennan et al.			
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	111641090	CN	A	2020-09-08	Credo Tech Group Ltd	corresponds with US publication no. 2020280329A1	
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NON-PATENT LITERATURE DOCUMENTS							Remove	
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T ⁵

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If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

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	First Named Inventor	Yattung LAM
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	Examiner Name	DAC V HA
	Attorney Docket Number	20160.0039.NPUS00

CERTIFICATION STATEMENT

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OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Daniel J. Krueger/	Date (YYYY-MM-DD)	2020-09-25
Name/Print	Daniel J. Krueger	Registration Number	42771

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Doc Code: PET.AUTO Document Description: Petition automatically granted by EFS-Web		PTO/SB/140 U.S. Patent and Trademark Office Department of Commerce
Electronic Petition Request	PETITION TO WITHDRAW AN APPLICATION FROM ISSUE AFTER PAYMENT OF THE ISSUE FEE UNDER 37 CFR 1.313(c)	
Application Number	16539910	
Filing Date	13-Aug-2019	
First Named Inventor	Yattung LAM	
Art Unit	2633	
Examiner Name	DAC HA	
Attorney Docket Number	20160.0039.NPUS00	
Title	ACTIVE ETHERNET CABLE	
An application may be withdrawn from issue for further action upon petition by the applicant. To request that the Office withdraw an application from issue, applicant must file a petition under this section including the fee set forth in § 1.17(h) and a showing of good and sufficient reasons why withdrawal of the application from issue is necessary. APPLICANT HEREBY PETITIONS TO WITHDRAW THIS APPLICATION FROM ISSUE UNDER 37 CFR 1.313(c). A grantable petition requires the following items: (1) Petition fee; and (2) One of the following reasons: (a) Unpatentability of one or more claims, which must be accompanied by an unequivocal statement that one or more claims are unpatentable, an amendment to such claim or claims, and an explanation as to how the amendment causes such claim or claims to be patentable; (b) Consideration of a request for continued examination in compliance with § 1.114 (for a utility or plant application only); or (c) Express abandonment of the application. Such express abandonment may be in favor of a continuing application, but not a CPA under 37 CFR 1.53(d).		
Petition Fee		
☐ Small Entity		
☐ Micro Entity		
☒ Regular Undiscounted		
Reason for withdrawal from issue		



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175
63467	7590	10/05/2020	EXAMINER	
Ramey & Schwaller, LLP			HA, DAC V	
5020 Montrose Blvd.			ART UNIT	
Suite 800			PAPER NUMBER	
Houston, TX 77006			2633	
			NOTIFICATION DATE	DELIVERY MODE
			10/05/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

tevenbly@rameyfirm.com
uspto@rameyfirm.com
wramey@rameyfirm.com

Notification of Reopening of Prosecution Due to Consideration of an Information Disclosure Statement Filed After Mailing of a Notice of Allowance	Application No. 16/539,910		Applicant(s) LAM et al.	
	Examiner DAC V HA		Art Unit 2633	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☐ Information disclosure statement (IDS) filed on or before payment of the issue fee.*

- (a) One or more items of information contained in the IDS submitted on _____ has necessitated prosecution of the above-identified application to be reopened.
- (b) The application is withdrawn from issue.
- (c) The Notice of Allowability, PTOL-37, mailed by the Office on _____ is withdrawn.
- (d) An Office action will follow in due course.
- (e) If the issue fee has been submitted on or subsequent to the filing of the IDS, and the application is subsequently again found allowable, the applicant may request that the previously paid issue fee be reapplied toward the issue fee that is then due. See MPEP 1306.

** Examiner Note: Please (i) fill out your name and contact info below; (ii) post this notification to your Technology Center Director for signature; (iii) send a courtesy e-mail to your Director and Supervisory Patent Examiner (SPE); and, (iv) select "Quick Path IDS Reopen Prosecution" for the Correspondence Type in the OC **Name Your Official Correspondence** menu.*

2. ☐ Information disclosure statement (IDS) filed after payment of the issue fee.*

- (a) One or more items of information contained in the IDS submitted on _____ has necessitated prosecution of the above-identified application to be reopened.
- (b) The Request for Continued Examination (RCE) under 37 CFR 1.114 filed together with the IDS has been entered.
- (c) An Office action will follow in due course.

** Examiner Note: Please (i) fill out your name and contact info below; (ii) post this notification to your TC QPIDS POC for "approval" (visit <http://ptoweb.uspto.gov/patents/pai/qpids.html> for a listing of TC QPIDS POCs); (iii) send a courtesy e-mail to your TC QPIDS POC; and, (iv) select "Quick Path IDS Examiner-directed entry of RCE" for the Correspondence Type in the OC **Name Your Official Correspondence** menu.*

3. ☒ Information disclosure statement (IDS) filed after payment of the issue fee - Quick Path IDS submission is non-compliant (e.g., the submission included an amendment to the application, the submission failed to provide an authorization to charge a deposit account and/or such account was insufficient for payment of the IDS fee, etc.).*

- (a) The Request for Continued Examination (RCE) under 37 CFR 1.114 filed together with the IDS has been automatically entered.
- (b) An Office action will follow in due course.

** Examiner Note: Please (i) fill out your name and contact info below; (ii) post this notification to your TC QPIDS POC for "approval" (visit <http://ptoweb.uspto.gov/patents/pai/qpids.html> for a listing of TC QPIDS POCs); (iii) send a courtesy e-mail to your TC QPIDS POC; and, (iv) select "Quick Path IDS Examiner-directed entry of RCE" for the Correspondence Type in the OC **Name Your Official Correspondence** menu.*

Telephone Contacts
 Telephone inquiries with regard to this communication should be directed to DAC V HA at (571)272-3040. In his/her absence, calls may be directed to Sam Ahn at 571-272-3044

Attachment(s)
☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16539910
	Filing Date	2019-08-13
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	DAC V HA
	Attorney Docket Number	20160.0039.NPUS00

U.S. PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1	9337993	B1	2016-05-10	Lugthart et al.			
If you wish to add additional U.S. Patent citation information please click the Add button.							Add	
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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear		
	1	20200280329	A1	2020-09-03	Brennan et al.			
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²ⁱ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	111641090	CN	A	2020-09-08	Credo Tech Group Ltd	corresponds with US publication no. 2020280329A1	
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T ⁵

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16539910
Filing Date	2019-08-13
First Named Inventor	Yattung LAM
Art Unit	2633
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4	Corresponds to U.S. Application no. 16/693,144 dated November 22, 2019

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/DAC V HA/	Date Considered	10/01/2020
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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Daniel J. Krueger/	Date (YYYY-MM-DD)	2020-09-25
Name/Print	Daniel J. Krueger	Registration Number	42771

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Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)

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U.S.PATENTS							Remove	
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U.S.PATENT APPLICATION PUBLICATIONS							Remove	
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
	1	20200280329	A1	2020-09-03	Brennan et al.			
If you wish to add additional U.S. Published Application citation information please click the Add button.							Add	
FOREIGN PATENT DOCUMENTS							Remove	
Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²ⁱ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1	111641090	CN	A	2020-09-08	Credo Tech Group Ltd	corresponds with US publication no. 2020280329A1	
If you wish to add additional Foreign Patent Document citation information please click the Add button.							Add	
NON-PATENT LITERATURE DOCUMENTS							Remove	
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T ⁵

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16539910
Filing Date	2019-08-13
First Named Inventor	Yattung LAM
Art Unit	2633
Examiner Name	DAC V HA
Attorney Docket Number	20160.0039.NPUS00

1	Non-Final Office Action in U.S. Application 16/541,094 dated September 9, 2020
2	Corresponds to U.S. Application no. 16/698,935 dated November 27, 2019
3	Corresponds to U.S. Application no. 16/541,094 dated August 14, 2019
4	Corresponds to U.S. Application no. 16/693,144 dated November 22, 2019

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/DAC V HA/	Date Considered	10/01/2020
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16539910
Filing Date	2019-08-13
First Named Inventor	Yattung LAM
Art Unit	2633
Examiner Name	DAC V HA
Attorney Docket Number	20160.0039.NPUS00

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Dan Krueger/	Date (YYYY-MM-DD)	2020-09-24
Name/Print	Daniel J. Krueger	Registration Number	42771

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

To: uspto@rameyfirm.com,wramey@rameyfirm.com,tevenbly@rameyfirm.com
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 63467

Oct 06, 2020 04:07:06 AM

Dear PAIR Customer:

Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 63467 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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The list of documents shown below is provided as a courtesy and is not part of the official file wrapper. The content of the images shown in PAIR is the official record.

Application	Document	Mailroom Date	Attorney Docket No.
16539910	Q.DEC.REOPEN	10/05/2020	20160.0039.NPUS00
	1449	10/05/2020	20160.0039.NPUS00
	1449	10/05/2020	20160.0039.NPUS00

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If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
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Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	16/539,910
Filing Date	August 13, 2019
First Named Inventor	Yattung LAM
Art Unit	2633
Examiner Name	DAC HA
Attorney Docket Number	20160.0039.NPUS00

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. **Submission required under 37 CFR 1.114** Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

a. ☒ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

ii. ☐ Other _____

b. ☒ Enclosed

i. ☐ Amendment/Reply

iii. ☐ Information Disclosure Statement (IDS)

ii. ☐ Affidavit(s)/ Declaration(s)

iv. ☒ Other Outstanding RCE fee

2. Miscellaneous

a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

b. ☐ Other _____

3. Fees

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

a. ☒ The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. 60-2539.

i. ☒ RCE fee required under 37 CFR 1.17(e)

ii. ☐ Extension of time fee (37 CFR 1.136 and 1.17)

iii. ☐ Other _____

b. ☐ Check in the amount of \$ _____ enclosed

c. ☐ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature	/Daniel J. Krueger/	Date	2020-10-07
Name (Print/Type)	Daniel J. Krueger	Registration No.	42771

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature		Date	
Name (Print/Type)			

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Instruction Sheet for RCEs

(not to be submitted to the USPTO)

NOTES:

An RCE is not a new application, and filing an RCE will not result in an application being accorded a new filing date.

Filing Qualifications:

The application must be a utility or plant application filed on or after June 8, 1995. The application cannot be a provisional application, a utility or plant application filed before June 8, 1995, a design application, or a patent under reexamination. See 37 CFR 1.114(e).

Filing Requirements:

Prosecution in the application must be closed. Prosecution is closed if the application is under appeal, or the last Office action is a final action, a notice of allowance, or an action that otherwise closes prosecution in the application (e.g., an Office action under *Ex parte Quayle*). See 37 CFR 1.114(b).

A submission and a fee are required at the time the RCE is filed. If reply to an Office action under 35 U.S.C. 132 is outstanding (e.g., the application is under final rejection), the submission must meet the reply requirements of 37 CFR 1.111. If there is no outstanding Office action, the submission can be an information disclosure statement, an amendment, new arguments, or new evidence. See 37 CFR 1.114(c). The submission may be a previously filed amendment (e.g., an amendment after final rejection).

WARNINGS:

Request for Suspension of Action:

All RCE filing requirements must be met before suspension of action is granted. A request for a suspension of action under 37 CFR 1.103(c) does not satisfy the submission requirement and does not permit the filing of the required submission to be suspended.

Improper RCE will NOT toll Any Time Period:

Before Appeal - If the RCE is improper (e.g., prosecution in the application is not closed or the submission or fee has not been filed) and the application is not under appeal, the time period set forth in the last Office action will continue to run and the application will be abandoned after the statutory time period has expired if a reply to the Office action is not timely filed. No additional time will be given to correct the improper RCE.

Under Appeal - If the RCE is improper (e.g., the submission or the fee has not been filed) and the application is under appeal, the improper RCE is effective to withdraw the appeal. Withdrawal of the appeal results in the allowance or abandonment of the application depending on the status of the claims. If there are no allowed claims, the application is abandoned. If there is at least one allowed claim, the application will be passed to issue on the allowed claim(s). See MPEP 1215.01.

See MPEP 706.07(h) for further information on the RCE practice.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal				
Application Number:		16539910		
Filing Date:		13-Aug-2019		
Title of Invention:		ACTIVE ETHERNET CABLE		
First Named Inventor/Applicant Name:		Yattung LAM		
Filer:		Daniel Joseph Krueger/Shanay Hines		
Attorney Docket Number:		20160.0039.NPUS00		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
PETITION FEE- 37 CFR 1.17(H) (GROUP III)	1464	1	140	140
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
RCE- 1ST REQUEST	1801	1	1360	1360
Total in USD (\$)				1500

Electronic Acknowledgement Receipt	
EFS ID:	40787829
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	07-OCT-2020
Filing Date:	13-AUG-2019
Time Stamp:	21:08:10
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$1500
RAM confirmation Number	E202007L08453891
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	2020-10-07_Fee_Transmittal_Form_.pdf	242211	no	2
			63f7be0b5457dec7804523b9e437bfc38f5eb5e		
Warnings:					
Information:					
2	Request for Continued Examination (RCE)	2020-10-07_Final_RCE_0.pdf	197848	no	3
			96999c86cd18eaa9fd3947f6be31d28cdd7955e7		
Warnings:					
This is not a USPTO supplied RCE SB30 form.					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32253	no	2
			c0116db62af3f185801b50557ad157604697087a		
Warnings:					
Information:					
Total Files Size (in bytes):			472312		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

Under the Paperwork Reduction Act of 1995 no persons are required to respond to a collection of information unless it displays a valid OMB control number

FEE TRANSMITTAL		Complete if known	
		Application Number	16539910
		Filing Date	08-13-2019
☐ Applicant asserts small entity status. See 37 CFR 1.27.		First Named Inventor	Yattung LAM
☐ Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.		Examiner Name	HA, DAC V
		Art Unit	2633
TOTAL AMOUNT OF PAYMENT	(\$)	Practitioner Docket No.	20160.0039.NPUS00

METHOD OF PAYMENT (check all that apply)
☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 60-2539 Deposit Account Name: Ramey & Schwaller

For the above-identified deposit account, the Director is hereby authorized to (check all that apply):

☒ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**
☐ Charge any additional fee(s) or underpayment of fee(s) under 37 CFR 1.16 and 1.17 ☐ Credit any overpayment of fee(s)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES** (U = undiscounted fee; S = small entity fee; M = micro entity fee)

Application Type	FILING FEES			SEARCH FEES			EXAMINATION FEES			Fees Paid (\$)
	U (\$)	S (\$)	M (\$)	U (\$)	S (\$)	M (\$)	U (\$)	S (\$)	M (\$)	
Utility	320	160*	80	700	350	175	800	400	200	
Design	220	110	55	160	80	40	640	320	160	
Plant	220	110	55	440	220	110	660	330	165	
Reissue	320	160	80	700	350	175	2,320	1,160	580	
Provisional	300	150	75	0	0	0	0	0	0	

* The \$160 small entity status filing fee for a utility application is further reduced to \$80 for a small entity status applicant who files the application via EFS-Web.

2. EXCESS CLAIM FEES

Fee Description	Undiscounted Fee (\$)	Small Entity Fee (\$)	Micro Entity Fee (\$)
Each claim over 20 (including Reissues)	100	50	25
Each independent claim over 3 (including Reissues)	480	240	120
Multiple dependent claims	860	430	215
Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
-20 or HP = _____ x _____ = _____			
HP = highest number of total claims paid for, if greater than 20.			
Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
-3 or HP = _____ x _____ = _____			
HP = highest number of independent claims paid for, if greater than 3.			

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$420 (\$210 for small entity) (\$105 for micro entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____ - 100 = _____	_____ / 50 = _____	_____ (round up to a whole number) x _____	_____ = _____	_____

4. OTHER FEE(S)

Non-English specification, \$140 fee (\$70 for small entity) (\$35 for micro entity)

Non-electronic filing fee under 37 CFR 1.16(t) for a utility application, \$400 fee (\$200 small or micro entity)

Other (e.g., late filing surcharge): QPIDS Program and RCE fee \$1,500

SUBMITTED BY

Signature	/Dan Krueger/	Registration No. (Attorney/Agent) 42771	Telephone
Name (Print/Type)	Daniel Krueger	Date	10-07-2020

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



United States Patent and Trademark Office

Office of the Chief Financial Officer

September 15, 2020

RAMEY & SCHWALLER LLP
Attn: DANIEL KRUEGER
5020 MONTROSE BLVD,
STE 800
HOUSTON, TX 77006

Dear Sir/Madam,

The United States Patent and Trademark Office (USPTO) has reviewed your refund request for Reference Number **16539910** - Refund Request ID **REFND-20200908-27518**. Below is the current status of your refund request assigned to the following processing area: Patent Publication Branch

Fcc code	Decision	Decision Reason(s)	Refund Amount
1501	Approved	Duplicate Payment	\$1,000.00

Generally, approved refunds will be issued in the form that the original payment was provided. You will receive a separate decision letter for any additional fee codes assigned to other processing areas, if applicable. Decisions may be subject to change if an error is identified.

For questions related to this decision, contact Kimberly House at (703) 756-1568 or kimberly.terrell@USPTO.GOV.

Thank you,
Refund Branch



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175
63467	7590	10/29/2020	EXAMINER	
Ramey & Schwaller, LLP 5020 Montrose Blvd. Suite 800 Houston, TX 77006			HA, DAC V	
			ART UNIT	PAPER NUMBER
			2633	
			NOTIFICATION DATE	DELIVERY MODE
			10/29/2020	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

tevenbly@rameyfirm.com
uspto@rameyfirm.com
wramey@rameyfirm.com

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention.

3. Claim(s) 1, 2, 8, 9, 15, 16 is/are rejected under 35 U.S.C. 102(a)(1) as being anticipated by Lugthart et al. (US 9,337,993) (hereafter Lugthart).

Re claim 1, Lugthart discloses:

“electrical conductors connected between a first connector and a second connector,

each of the first and second connectors being adapted to fit into an Ethernet port of a corresponding host device to receive from that host device an electrical input signal conveying an inbound data stream to the cable and to provide to that host device an electrical output signal conveying an outbound data stream from the cable,” (Fig. 2A, elements 111, 105a, 105b; col. 14, lines 3-16; col. 15, line 64 to col. 16, line 5; Fig. 1A, col. 8, line 15 to col. 9, line 5)

“each of the first and second connectors including a respective transceiver that performs clock and data recovery on the electrical input signal to extract and re-modulate the inbound data stream for transit via the electrical conductors as a respective electrical transit signal conveying a transit data stream” (Fig. 1A, col. 7, line 49 to col. 9, line 51; col. 12, line 56 to col. 13, line 24; col. 15, lines 35-47; col. 21, lines 33-56; col. 29, line 38 to col. 30, line 29; wherein each of the respective transceiver is capable of receiving and transmit signal from and to the host as well as to the line side; the transceiver is adapted to condition, among other thing, the received signal for appropriate transmission to the other end).

Re claim 2, Lugthart further discloses “wherein the respective transceiver for each of the first and second connectors performs clock and data recovery on the respective electrical transit signal to extract and re-modulate the transit data stream as the outbound data stream from the cable” in Fig. 1A, 2A; col. 7, lines 18-26; col. 7, line 49 to col. 9, line 51).

Re claim 8, Lugthart discloses:

“receiving with the first connector a first electrical input signal conveying a first inbound data stream from a first host device;” (Fig. 1C; col. 10, line 40 to col. 11, line 14; Fig. 2A; col. 15, lines 3-16; and the assembly 105a teaches the claimed “first connector”);

“performing clock and data recovery on the first electrical input signal with a first transceiver in the first connector to extract the first inbound data stream;” (col. 7, line 49 to col. 8, line 2; Fig. 1A, 1C, elements 12a-d);

“re-modulating the first inbound data stream as a first transit data stream conveyed by a first electrical transit signal over a first of the conductor pairs;” (Fig. 1A, 1C, 2A; col. 8, lines 32-36; col. 9, lines 33-51; col. 12, line 56 to col. 13, line 24);

“receiving with the second connector a second electrical input signal conveying a second inbound data stream from a second host device;” (Fig. 1C; col. 10, line 40 to col. 11, line 14; Fig. 2A; col. 15, lines 3-16; in this case, data is going from Device 2 to Device 1 and assembly 105b teaches the claimed “second connector”)

performing clock and data recovery on the second electrical input signal with a second transceiver in the second connector to extract the second inbound data stream;” (col. 7, line 49 to col. 8, line 2; Fig. 1A, 1C, elements 12a-d)

“re-modulating the second inbound data stream as a second transit data stream conveyed by a second electrical transit signal over a second of the conductor pairs” (Fig. 1A, 1C, 2A; col. 8, lines 32-36; col. 9, lines 33-51; col. 12, line 56 to col. 13, line 24).

Re claim 9, Lugthart further discloses:

“performing clock and data recovery on the first electrical transit signal with the second transceiver to extract the first transit data stream;

re-modulating the first transit data stream as a second outbound data stream conveyed by a second electrical output signal to the second host device;” (Fig. 1A; col. 9, lines 6-51; Fig. 1C, 2A; col. 11, lines 14-65; Note: this is the case when the assembly 105b receives signal from the assembly 105a);

“performing clock and data recovery on the second electrical transit signal with the first transceiver to extract the second transit data stream;

and re-modulating the second transit data stream as a first outbound data stream conveyed by a first electrical output signal to the first host device” (Fig. 1A; col. 9, lines 6-51; Fig. 1C, 2A; col. 11, lines 14-65; in this case, the assembly 105a receives signal from the assembly 105b).

Re claim 15, Lugthart discloses:

“connecting a first end and a second end of a set of conductor pairs to a first transceiver and a second transceiver, respectively, to transport a first electrical transit signal from the first transceiver to the second transceiver and a second electrical transit signal from the second transceiver to the first transceiver;” (Fig. 2A; col. 14, lines 3-16)

“packaging the first transceiver into a first connector configured to couple a first electrical input signal from a network interface port of a first host device to the first transceiver and a first electrical output signal from the first transceiver to the network interface port of the first host device; (Fig. 2A, 1A, 1C; col. 7, line 63 to col. 8, line 21; col. 11, lines 16-28);

“packaging the second transceiver into a second connector configured to couple a second electrical input signal from a network interface port of a second host device to the second transceiver and a second electrical output signal from the second transceiver to the network interface port of the second host device (Fig. 2A, 1A, 1C; col. 7, line 63 to col. 8, line 21; col. 11, lines 16-28; wherein operation of the second assembly 105b is the same with that of assembly 105a),

“the first and second transceivers being configured to perform clock and data recovery on the first and second electrical input signal to extract and remodulate the first and second inbound data streams respectively as the first and second electrical transit signals conveying first and second transit data streams” (col. 7, line 49 to col. 8, line 2; Fig. 1A, 1C, elements 12a-d; 1A, 1C, 2A; col. 8, lines 32-36; col. 9, lines 33-51; col. 12, line 56 to col. 13, line 24).

Re claim 16, Lugthart further discloses:

“wherein the first and second transceivers are configured to perform clock and data recovery on the second and first electrical transit signals to extract and re-modulate the second and first transit data streams as first and second outbound data streams conveyed by the first and second electrical output signals from the cable” (Fig. 1A; col. 9, lines 6-51; Fig. 1C, 2A; col. 11, lines 14-65).

Allowable Subject Matter

4. Claims 3-7, 10-14, 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAC V HA whose telephone number is (571)272-3040. The examiner can normally be reached on 7-3:30 M-F.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Ahn can be reached on 571-272-3044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DAC V HA/
Primary Examiner, Art Unit 2633

<i>Search Notes</i> 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

CPC - Searched*		
Symbol	Date	Examiner
H04L 12/2801; H04L 25/4917; H04L 25/03885	03/06/2020	DH
Update	05/22/2020	DH
Update	10/22/2020	DH

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
BRS and Inventor's search	03/06/2020	DH
PLUS	03/06/2020	DH
NPL	03/06/2020	DH
Update	05/22/2020	DH
Supplemental IDS	09/25/2020	DH

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<i>Search Notes</i> 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	PGPUB	03/06/2020	DH
	Udpate	05/22/2020	DH
	Update	10/22/2020	DH

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	6,018	(h04L12/2801 H04L25/4917 h04L25/03885).cpc.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:46
S2	21	((yattung near1 lam) (baohua near1 chen)).in.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:46
S4	0	S2 and ethernet.clm.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:48
S5	2	S2 and cable.clm.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:48
S6	1,632	(ethernet near2 cable).ab,clm.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:01
S7	1,501	S6 and (ethernet near2 cable).clm.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:01
S8	224	S7 and (ethernet near2 cable).ab.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:01
S9	45	S8 and ((ethernet near2 cable) same transceiv\$4)	US-PGPUB; USPAT	OR	ON	2020/03/04 12:02
S10	6,018	(h04L12/2801 H04L25/4917 h04L25/03885).cpc.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:02
S11	3	S9 and S10	US-PGPUB; USPAT	OR	ON	2020/03/04 12:02
S12	42	S9 not S11	US-PGPUB; USPAT	OR	ON	2020/03/04 12:09
S13	158	S8 and ((ethernet near2 cable) with (coupl\$4 connect))	US-PGPUB; USPAT	OR	ON	2020/03/04 12:15
S14	120	S13 not S9	US-PGPUB; USPAT	OR	ON	2020/03/04 12:16

S15	0	S14 and (cdr (clock near3 recover\$4))	US-PGPUB; USPAT	OR	ON	2020/03/04 12:17
S16	16	S14 and (ethernet near2 cable).ti.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:19
S17	11	("2017/0346200").URPN.	USPAT	OR	ON	2020/03/04 12:21
S18	104	S14 not S16	US-PGPUB; USPAT	OR	ON	2020/03/04 12:23
S19	66	S8 not S13	US-PGPUB; USPAT	OR	ON	2020/03/04 12:33
S20	15	S19 and ((ethernet near2 cable) with (standard\$5))	US-PGPUB; USPAT	OR	ON	2020/03/04 12:34
S21	2	("9322704" "7401985").pn.	US-PGPUB; USPAT	OR	ON	2020/03/04 13:30
S22	77	("7401985").URPN.	USPAT	OR	ON	2020/03/04 13:31
S23	78	("20010035994" "20020018609" "20020044746" "20020049879" "20020063935" "20020114590" "20020136510" "20020149821" "20020159725" "20020160656" "20030016920" "20030021580" "20030034963" "20030208779" "20030223756" "20040008996" "20040076119" "20040141695" "20040184746" "20040208600" "20040263941" "20050036746" "20050053340" "20050063707" "20050063711" "20050078916" "20050105910" "20050105915" "20050180700" "20050238358" "20050249477" "20050286593" "20050286893" "20060008276" "20060036788" "20060045437" "20060049936" "20060067690" "20060077778" "20060083518" "20060088251" "20060093280" "20060142744" "4427879" "4768188" "4902092" "5337398" "5497187" "5515467" "5530787" "5631988" "5668419" "5732176" "5926303" "6036654" "6179627" "6217231" "6220873" "6267606" "6446867"	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/04 13:31

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S24	1	S21 and (modulat\$5 clock\$4)	US- PGPUB; USPAT	OR	ON	2020/03/04 13:46
S25	381	cable.ab. and cable.clm. and (ethernet near1 port)	USPAT	OR	ON	2020/03/04 13:56
S26	372	S25 and (transceiv\$4 transmit\$4 receiv\$4)	USPAT	OR	ON	2020/03/04 13:56
S27	7	S26 and (cdr (clock near3 recover\$4))	US- PGPUB; USPAT	OR	ON	2020/03/04 13:56
S29	4	S27 and modulat\$4	US- PGPUB; USPAT	OR	ON	2020/03/04 13:57
S30	142	S26 and modulat\$4	US- PGPUB; USPAT	OR	ON	2020/03/04 13:57
S31	500	(active with ethernet with cable)	US- PGPUB; USPAT	OR	ON	2020/03/04 13:58
S32	7	S25 and S31	US- PGPUB; USPAT	OR	ON	2020/03/04 13:58
S33	217	S31 and (transceiv\$4 transmit\$4 receiv\$4)	USPAT	OR	ON	2020/03/04 13:59
S34	55	S33 and (ethernet near1 port)	USPAT	OR	ON	2020/03/04 13:59
S36	48	S34 not S32	US- PGPUB; USPAT	OR	ON	2020/03/04 14:01
S37	500	(active with ethernet with cable)	US- PGPUB; USPAT	OR	ON	2020/03/05 07:53
S38	200	S37 and modulat\$4	US- PGPUB; USPAT	OR	ON	2020/03/05 07:53
S39	11	S38 and (cdr (clock near3 recover\$4))	US- PGPUB; USPAT	OR	ON	2020/03/05 07:53

S41	8,639,810	s "37"(ethernet with cable).clm.	US-PGPUB; USPAT	OR	ON	2020/03/05 16:32
S42	500	(active with ethernet with cable)	US-PGPUB; USPAT	OR	ON	2020/03/05 16:32
S43	67	S42 and (ethernet with cable).clm.	US-PGPUB; USPAT	OR	ON	2020/03/05 16:32
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S45	458	S44 and (connect\$4 with (transceiv\$4 transmit\$4 receiv\$4))	US-PGPUB; USPAT	OR	ON	2020/03/06 13:34
S46	24	S45 and (cdr (clock near3 recover\$4))	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S47	24	S46 and modulat\$4	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S48	6,020	(h04L12/2801 H04L25/4917 h04L25/03885).cpc.	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S49	0	S47 and S48	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S50	81	S45 and (ethernet with (link cable)) .clm.	US-PGPUB; USPAT	OR	ON	2020/03/06 13:40
S51	75	S50 not S47	US-PGPUB; USPAT	OR	ON	2020/03/06 13:41
S52	50	S51 and (pair with (wire twist\$4 conduct\$4))	US-PGPUB; USPAT	OR	ON	2020/03/06 13:42
S53	24	("2014/0258742").URPN.	USPAT	OR	ON	2020/03/06 13:43
S54	244	g02b6/36.cpc.	USPAT	OR	ON	2020/03/06 13:56
S55	0	S44 and S54	USPAT	OR	ON	2020/03/06 13:56
S56	9	S54 and ethernet	USPAT	OR	ON	2020/03/06 13:56
S57	89	("20020031955" "20020048990" "20030031025" "20030157842"	US-PGPUB;	OR	ON	2020/03/06 13:57

		"20030199192" "20030222786" "20040038564" "20040160774" "20050037672" "20050224585" "20060134996" "20060162947" "20060232385" "20070105453" "20070116411" "20070190863" "20080020658" "20080122579" "20090042431" "20090269973" "20100079248" "20100098425" "20110043333" "20110116748" "20120058689" "20120064750" "20130052860" "20140035755" "20160020975" "20170293102" "3960428" "4761720" "4837488" "5159316" "5666453" "5741152" "5764043" "5888100" "6002331" "6080007" "6099345" "6244908" "6280232" "6394853" "6524128" "6532328" "6558204" "6577243" "6790096" "6798183" "6811445" "6975242" "7049937" "7080945" "7081808" "7168994" "7221284" "7335066" "7374458" "7547150" "7549886" "7556536" "7651361" "7760094" "7772975" "7782202" "7910833" "7910834" "7920764" "7940182" "7960648" "7965186" "7972183" "8043124" "8210755" "8264355" "8277260" "8465317" "8606972" "8611234" "8620123" "8702453" "8747141" "9196975" "9230416" "9577904" "9810859" "9952258" "9995432").PN.	USPAT; USOCR			
S58	17	S57 and ethernet	USPAT	OR	ON	2020/03/06 13:57
S59	22	((yattung near1 lam) (baohua near1 chen)).in.	US- PGPUB; USPAT	OR	ON	2020/05/21 10:12
S60	0	S59 and ethernet.clm.	US- PGPUB; USPAT	OR	ON	2020/05/21 10:12
S61	2	S59 and cable.clm.	US- PGPUB; USPAT	OR	ON	2020/05/21 10:13
S62	25	("2014/0258742").URPN.	USPAT	OR	ON	2020/05/21 10:14
S63	0	("2018/0241579").URPN.	USPAT	OR	ON	2020/05/21 10:28
S64	0	("2016/0197434").URPN.	USPAT	OR	ON	2020/05/21 10:29

S65	0	("2016/0099861").URPN.	USPAT	OR	ON	2020/05/21 10:29
S66	6	("2010/0267283").URPN.	USPAT	OR	ON	2020/05/21 10:29
S67	2	("9337993" "20200280329").pn.	US- PGPUB; USPAT	OR	ON	2020/10/01 10:00
S68	2	(h04L12/2801 H04L25/4917 h04L25/03885).cpcc.	US- PGPUB; USPAT	OR	ON	2020/10/21 11:20
S69	2	("9337993" "20200280329").pn.	US- PGPUB; USPAT	OR	ON	2020/10/22 09:45
S70	1	S69 and (re-modulat\$5 remodulat\$4)	US- PGPUB; USPAT	OR	ON	2020/10/22 09:45
S71	2	S69 and ethernet	US- PGPUB; USPAT	OR	ON	2020/10/22 09:46
S72	2	("9337993" "20200280329").pn.	US- PGPUB; USPAT	OR	ON	2020/10/22 12:50
S73	2	S72 and ethernet	US- PGPUB; USPAT	OR	ON	2020/10/22 12:50
S74	2	S73 and interface	US- PGPUB; USPAT	OR	ON	2020/10/22 12:50
S75	2	S72 and equali\$6	US- PGPUB; USPAT	OR	ON	2020/10/22 13:23
S76	11,420	ethernet and (cdr (clock near3 recover\$4))	US- PGPUB; USPAT	OR	ON	2020/10/22 13:31
S77	300	S76 and (host\$4 same equali\$6)	US- PGPUB; USPAT	OR	ON	2020/10/22 13:32
S78	84	S77 and (equali\$6 with (fix\$4 known preset prestor\$4 independen\$4))	US- PGPUB; USPAT	OR	ON	2020/10/22 13:33
S79	6,257	(h04L12/2801 H04L25/4917 h04L25/03885).cpcc.	US- PGPUB; USPAT	OR	ON	2020/10/22 13:33
S80	8	S78 and S79	US- PGPUB; USPAT	OR	ON	2020/10/22 13:33

10/23/2020 1:50:42 PM
C:\Users\dha\Documents\EAST\Workspace2\16539910.wsp

To: uspto@rameyfirm.com,wramey@rameyfirm.com,tevenbly@rameyfirm.com
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 63467

Oct 29, 2020 04:07:36 AM

Dear PAIR Customer:

Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 63467 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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Application	Document	Mailroom Date	Attorney Docket No.
16539910	CTNF	10/29/2020	20160.0039.NPUS00

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If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

AMENDMENT OF THE CLAIMS

Please amend the claims to read as provided below:

1. – 2. (Canceled)

3. (Currently amended) An active Ethernet cable that comprises:

electrical conductors connected between a first connector and a second connector,
each of the first and second connectors being adapted to fit into an Ethernet port of a
corresponding host device to receive from that host device an electrical input signal
conveying an inbound data stream to the cable and to provide to that host device an
electrical output signal conveying an outbound data stream from the cable,
each of the first and second connectors including a respective transceiver that
performs clock and data recovery on the electrical input signal to extract and re-
modulate the inbound data stream for transit via the electrical conductors as a
respective electrical transit signal conveying a transit data stream,
the respective transceiver for each of the first and second connectors performing clock
and data recovery on the respective electrical transit signal to extract and re-
modulate the transit data stream as the outbound data stream from the cable, and
~~The active Ethernet cable of claim 2, wherein~~ the respective transceivers each employ
employing fixed, cable-independent, equalization parameters for each of: the
remodulation of the transit data stream as the outbound data stream, and the clock
and data recovery performed on the electrical input signal.

4. (Original) The active Ethernet cable of claim 3, wherein the respective transceivers each employ cable-dependent equalization parameters for at least one of: the remodulation of the inbound data stream for transit, and the clock and data recovery performed on the electrical transit signal.

5. (Original) The active Ethernet cable of claim 4, wherein said cable-dependent equalization parameters adapt during usage of the Ethernet cable.

6. (Original) The active Ethernet cable of claim 4, wherein said cable-dependent equalization parameters are fixed during normal usage of the Ethernet cable, and wherein said cable-dependent equalization parameters are determined during manufacturer-testing of the Ethernet cable.

7. (Original) The active Ethernet cable of claim 6, wherein the inbound data stream and the outbound data stream each have a per-lane symbol rate in excess of 50 GBd.

8. – 9. (Canceled)

10. (Currently amended) A communication method that comprises, in a network cable having conductor pairs electrically connecting a first connector to a second connector:
receiving with the first connector a first electrical input signal conveying a first inbound data stream from a first host device;
performing clock and data recovery on the first electrical input signal with a first transceiver in the first connector to extract the first inbound data stream;
re-modulating the first inbound data stream as a first transit data stream conveyed by a first electrical transit signal over a first of the conductor pairs;
receiving with the second connector a second electrical input signal conveying a second inbound data stream from a second host device;
performing clock and data recovery on the second electrical input signal with a second transceiver in the second connector to extract the second inbound data stream;
re-modulating the second inbound data stream as a second transit data stream conveyed by a second electrical transit signal over a second of the conductor pairs;
performing clock and data recovery on the first electrical transit signal with the second transceiver to extract the first transit data stream;
re-modulating the first transit data stream as a second outbound data stream conveyed by a second electrical output signal to the second host device;

performing clock and data recovery on the second electrical transit signal with the first transceiver to extract the second transit data stream; and
re-modulating the second transit data stream as a first outbound data stream
conveyed by a first electrical output signal to the first host device,

~~The communication method of claim 9,~~ wherein said re-modulating the first transit data stream, said re-modulating the second transit data stream, said performing clock and data recovery on the first electrical input signal, and said performing clock and data recovery on the second electrical input signal, each employ fixed, cable-independent, equalization parameters.

11. (Original) The communication method of claim 10, wherein cable-dependent equalization parameters are employed for at least one of: re-modulating the first inbound data stream, re-modulating the second inbound data stream, said performing clock and data recovery on the first electrical transit signal, and said performing clock and data recovery on the second electrical transit signal.

12. (Original) The communication method of claim 11, wherein said cable-dependent equalization parameters are adaptively updated.

13. (Original) The communication method of claim 11, wherein said cable-dependent equalization parameters are fixed during normal usage, and wherein the method further comprises: determining said cable-dependent equalization parameters during manufacturer-testing of the network cable.

14. (Original) The communication method of claim 13, wherein the first inbound data stream has a per-lane symbol rate in excess of 50 GBd.

15. – 16. (Canceled)

17. (Currently amended) A cable manufacturing method that comprises:
connecting a first end and a second end of a set of conductor pairs to a first transceiver and a second transceiver, respectively, to transport a first electrical

transit signal from the first transceiver to the second transceiver and a second electrical transit signal from the second transceiver to the first transceiver;
packaging the first transceiver into a first connector configured to couple a first electrical input signal from a network interface port of a first host device to the first transceiver and a first electrical output signal from the first transceiver to the network interface port of the first host device; and
packaging the second transceiver into a second connector configured to couple a second electrical input signal from a network interface port of a second host device to the second transceiver and a second electrical output signal from the second transceiver to the network interface port of the second host device,
the first and second transceivers being configured to perform clock and data recovery on the first and second electrical input signal to extract and re-modulate the first and second inbound data streams respectively as the first and second electrical transit signals conveying first and second transit data streams, configured to perform clock and data recovery on the second and first electrical transit signals to extract and re-modulate the second and first transit data streams as first and second outbound data streams conveyed by the first and second electrical output signals from the cable, and
~~The cable manufacturing method of claim 16, wherein the first and second transceivers are~~ each configured to employ fixed, cable-independent, equalization parameters for clock and data recovery on the respective electrical input signals and for generating the respective electrical output signals.

18. (Original) The cable manufacturing method of claim 17, wherein the first and second transceivers are each configured to employ cable-dependent equalization parameters for generating the first and second electrical transit signals and for clock and data recovery on the second and first electrical transit signals.

19. (Original) The cable manufacturing method of claim 18, wherein the first and second transceivers are each configured to adapt the cable-dependent equalization parameters during operation.

20. (Original) The cable manufacturing method of claim 18, wherein the first and second transceivers are each configured to use preset cable-dependent equalization parameters during operation, and wherein the method further comprises: testing an assembled cable to determine the cable-dependent equalization parameters.

Serial No.: 16/539910
Filing Date: 2018-08-13
Confirmation: 8175
Atty Docket: 20160.0039.npUS00
1st Inventor: Yattung Lam
Title: Active Ethernet Cable
Examiner: Dac V Ha
Art Unit: 2633

REPLY TO NON-FINAL OFFICE ACTION OF 2020-10-29

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 23313-1450

Dear Sir or Madam:

This paper is filed in response to the above-identified office action. Please reconsider the rejections in light of the following:

An Amendment of the Claims begins on page 2.

Remarks begin on page 7.

Electronic Acknowledgement Receipt	
EFS ID:	41260251
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	01-DEC-2020
Filing Date:	13-AUG-2019
Time Stamp:	14:05:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		C039RNF.pdf	146141	yes	8
			2658a35c9ae535e35857ecb9f9c722129f1a1005		

	Multipart Description/PDF files in .zip description		
	Document Description	Start	End
	Applicant Arguments/Remarks Made in an Amendment	7	8
	Amendment Copy Claims/Response to Suggested Claims	2	6
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
Warnings:			
Information:			
Total Files Size (in bytes):		146141	
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.			

REMARKS

Status of the Claims

Claims 1-20 were pending. Claims 1-2, 8-9, and 15-16 are canceled herein. Claims 3, 10, and 17 are amended. No new claims are added. Claims 3-7, 10-14, and 17-20 are now pending.

Rejections Under 35 USC § 102

Claims 1-2, 8-9, and 15-16 stand rejected under 35 USC § 102 as being anticipated by US9337993 ("Lugthart"). These claims have been canceled.

Allowable Subject Matter

Claims 3-7, 10-14, and 17-20 were objected to as being dependent upon rejected base claims, but indicated to be allowable if rewritten to correct this dependency while retaining the limitations of their base and any intervening claims. Claim 3, 10, and 17 have been amended accordingly, and applicant respectfully submits that the claims are now in condition for allowance.

No Disclaimer

Although alterations were made to the claims in the present application and/or characterizations of claim scope and the referenced art, no acquiescence, disclaimer, or estoppel is intended or should be inferred thereby. Nor should any estoppel or acquiescence be inferred from any statement of reasons for allowance by the examiner nor any failure by applicant to specifically comment thereon. Applicant does not concede that the previously pending claims are not patentable over the cited references, and expressly reserves the right to later submit additional or alternative arguments of patentability in support of the previous or pending claims. Amendments were only made to expedite prosecution of the application, and should not prejudice the future presentation or assertion of claims relating to the same or similar subject matter.

Conclusion

The examiner is encouraged to contact the undersigned attorney if an interview might prove helpful to the examination process.

Respectfully submitted,

/Dan Krueger/

2020-12-01

Daniel J. Krueger

Date

Reg. No. 42,771

713-449-9669

dan@rameyfirm.com

Attorney for Applicant

Ramey & Schwaller LLP
5020 Montrose Blvd # 800
Houston TX 77006
713-426-3923 x304

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16539910
	Filing Date	2019-08-13
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	HA, Dac V
	Attorney Docket Number	20160.0039.NPUS00

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	1	20200280329	A1	2020-09-03	Lam et al		
	2	20200280458	A1	2020-09-03	Lam et al		
	3	20150334186	A1	2015-11-19	Chen		
	4	20140086264	A1	2014-03-27	Lusted		
	5	20140146833	A1	2014-05-29	Lusted		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		16539910	
	Filing Date		2019-08-13	
	First Named Inventor	Yattung LAM		
	Art Unit	2633		
	Examiner Name	HA, Dac V		
	Attorney Docket Number	20160.0039.NPUS00		

	6	20130343400	A1	2013-12-26	Lusted	
	7	20070237464	A1	2007-10-11	Aronson	

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Notice of Allowance dated October 15, 2020 for U.S. Application 16/698,935	
	2	Supplemental Notice of Allowance dated November 6, 2020 for U.S. Application 16/698,935	

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16539910
	Filing Date	2019-08-13
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	HA, Dac V
	Attorney Docket Number	20160.0039.NPUS00

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16539910
	Filing Date	2019-08-13
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	HA, Dac V
	Attorney Docket Number	20160.0039.NPUS00

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Dan Krueger/	Date (YYYY-MM-DD)	2020-12-02
Name/Print	Daniel Krueger	Registration Number	42771

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/698,935	Applicant(s) DAI et al.	
	Examiner ANDREW JORDAN	Art Unit 2883	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the filing of 4/24/20.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-20 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
Certified copies:
a) ☐ All b) ☐ Some *c) ☒ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/ANDREW JORDAN/ Primary Examiner, Art Unit 2883	
--	--

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

DETAILED ACTION

This is an AIA application.

The effective filing date of this AIA application is seen as July 1, 2019, the date of the earliest priority application (CHINA 201910542576.3).

The claims originally filed **November 27, 2019** are entered, currently outstanding, and subject to examination.

This action is in response to the original filing of the same date.

Claims 1-20 are currently pending.

No claims have been withdrawn.

No claims have been cancelled.

Claims 1-20 are currently outstanding and subject to examination.

This is a notice of allowability and is the first action on the merits.

Allowable subject matter is indicated below.

Often, in the substance of the action below, formal matters are addressed first,

claim rejections second, and any response to arguments third.

Special Definitions for Claim Language - MPEP § 2111.01(IV)

No special definitions are seen as present in the specification regarding the language used in the claims. Consequently, the words and phrases of the claims are given their plain meaning.

If special definitions are present, Applicant should bring those to the attention of the examiner and the prosecution history with its next response.

Claims Allowed

Claims 1-20 are allowed.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

The prior art does not teach or suggest

first and second DRR devices providing pre-equalization of the electrical transit signals using transmit filter coefficient values stored in nonvolatile memories as set forth in the claimed combination of independent claim(s) 1, 8, and 15.

Applicant's other applications are seen as providing the closest prior art. However, while limited by the enabling disclosure of the specification as originally filed and the confines of teachings and substance therein, Applicant's active Ethernet cable appears to have elements new to the art.

Any comments considered necessary by applicant must be submitted no later than

the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant's publication is not yet published and so is not cited.

The projected publication date is January 7, 2021.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited references have elements related to Applicant's disclosure and/or claims or are otherwise associated with the other cited references, particularly with respect to active Ethernet cables and related equalization systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW JORDAN whose telephone number is (571) 270-1571. The examiner can normally be reached on most days 1000-1800 PACIFIC TIME ZONE (messages are returned).

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas (Tom) Hollweg can be reached on 571-270-1739. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair-my.uspto.gov/pair/PrivatePair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew Jordan/
Primary Examiner, Art Unit 2883
V: (571) 270-1571 (Pacific time)
F: (571) 270-2571
October 10, 2020

Notice of References Cited	Application/Control No. 16/698,935		Applicant(s)/Patent Under Reexamination DAI et al.	
	Examiner ANDREW JORDAN		Art Unit 2883	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-20200280329-A1	09-2020	LAM; Yattung	H04B1/38	1/1
*	B	US-20200280458-A1	09-2020	LAM; Yattung	H04L25/4917	1/1
*	C	US-20150334186-A1	11-2015	Chen; Shidong	H04N7/183	348/143
*	D	US-20140086264-A1	03-2014	Lusted; Kent C.	H04L69/14	370/470
*	E	US-20140146833-A1	05-2014	Lusted; Kent C.	H04L12/413	370/437
*	F	US-20130343400-A1	12-2013	Lusted; Kent C.	H04L12/413	370/419
*	G	US-20070237464-A1	10-2007	Aronson; Lewis B.	G02B6/4416	385/89
	H					
	I					
	J					
	K					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)

Approved for use through 11/30/2020. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
	Filing Date	2019-11-22
	First Named Inventor	Yifei DAI
	Art Unit	
	Examiner Name	
	Attorney Docket Number	20160.0038.NPUS00

U.S.PATENTS							Remove	
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
/AJ/	1	9322704	B1	2016-04-26	Neveux			
	2	7401985	B2	2008-07-22	Aronson, et al			
If you wish to add additional U.S. Patent citation information please click the Add button.							Add	
U.S.PATENT APPLICATION PUBLICATIONS							Remove	
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²ⁱ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
/AJ/	1	2018161273	WO	A1	2018-09-13	Credo Technology Group Ltd.		
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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2019-11-22
First Named Inventor	Yifei DAI	
Art Unit		
Examiner Name		
Attorney Docket Number		20160.0038.NPUS00

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
/AJ/	1	Rumer, B. (2001, February 1). Fighting Jitter in Fibre-Channel Designs. EE Times. Retrieved January 23, 2019, from https://www.eetimes.com/document.asp?doc_id=1277249# .	
	2	Management Data Input/Output. (2018, November 25). Wikipedia. Retrieved January 23, 2019, from https://en.wikipedia.org/wiki/Management_Data_Input/Output .	
	3	QSFP-DD MSA - QSFP-DD Hardware Specification for QSFP Double Density 8X Pluggable Transceiver Rev 4.0 Candidate. August 15, 2018.	
	4	40 Gigabit Ethernet, 40G QSFP+, 40GBASE-LR4, 40G-BASE-SR4, CFP module, CXP Transceiver, MPO MTP Fiber on May 25, 2015 [http://www.cables-solutions.com/guide-to-40-gigabit-ethernet-options.html]	
	5	IEEE P802.3cd/D1.2, 3rd February 2017 (Amendment of IEEE Std 802.3-2015 as amended) IEEE Draft Standard for Ethernet Amendment: Media Access Control Parameters for 50 Gb/s, 100 Gb/s and 200 Gb/s Operation.	

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/ANDREW JORDAN/ (10/03/2020)	Date Considered	
--------------------	------------------------------	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number		
Filing Date		2019-11-22
First Named Inventor	Yifei DAI	
Art Unit		
Examiner Name		
Attorney Docket Number		20160.0038.NPUS00

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Dan Krueger/	Date (YYYY-MM-DD)	2019-11-27
Name/Print	Dan Krueger	Registration Number	42771

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/698,935	Applicant(s) DAI et al.	
	Examiner ANDREW JORDAN	Art Unit 2883	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the filing of 10/21/20.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 1-20 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
Certified copies:
a) ☐ All b) ☐ Some *c) ☒ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: CN 2019 1054 2576.3 .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/ANDREW JORDAN/ Primary Examiner, Art Unit 2883	
--	--

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

DETAILED ACTION

This is an AIA application.

The effective filing date of this AIA application is seen as July 1, 2019, the date of the earliest priority application (CHINA 201910542576.3).

The claims originally filed **November 27, 2019** are entered, currently outstanding, and subject to examination.

This action is in response to the RCE filing of October 21, 2020.

Claims 1-20 are currently pending.

No claims have been amended.

No claims have been withdrawn.

No claims have been cancelled.

Claims 1-20 are currently outstanding and subject to examination.

This is a notice of allowability and is the second action on the merits.

Allowable subject matter is indicated below.

Often, in the substance of the action below, formal matters are addressed first, claim rejections second, and any response to arguments third.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under Ex Parte Quayle, 25 USPQ 74, 453 OG 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on October 21, 2020 has been entered.

***MPEP § 2001.06(b)
Information Relating to or From
Copinging United States Patent Applications [R-08.2017]***

The individuals covered by 37 CFR 1.56 have a duty to bring to the attention of the examiner, or other Office official involved with the examination of a particular application, information within their knowledge as to other copending United States applications which are "material to patentability" of the application in question. This may include providing the identification of pending or abandoned applications filed by at least one of the inventors or assigned to the same assignee as the current application that disclose similar subject matter that are not otherwise identified in the current application. As set forth by the court in *Armour & Co. v. Swift & Co.*, 466 F.2d 767, 779, 175 USPQ 70, 79 (7th Cir. 1972):

[W]e think that it is unfair to the busy examiner, no matter how diligent and well informed he may be, to assume that he retains details of every pending file in his mind when he is reviewing a particular application . . . [T]he applicant has the burden of presenting the examiner with a complete and accurate record to support the allowance of letters patent.

See also MPEP § 2004, paragraph 9.

Accordingly, the individuals covered by 37 CFR 1.56 cannot assume that the examiner of a particular application is necessarily aware of other applications which are "material to patentability" of the application in question, but must instead bring such other applications to the attention of the examiner. See *Regeneron Pharm., Inc. v. Merus B.V.*, 144 F. Supp. 3d 530, 560 (S.D.N.Y. 2015), and *Dayco Prod., Inc. v. Total Containment, Inc.*, 329 F.3d 1358, 1365-69, 66 USPQ2d 1801, 1806-08 (Fed. Cir. 2003). For example, if a particular inventor has different applications pending which disclose similar subject matter but claim patentably indistinct inventions, the existence of other applications must be disclosed to the examiner of each of the involved applications. Similarly, the prior art references from one application must be made of record in another subsequent application if such prior art references are "material to patentability" of the subsequent application. See *Dayco Prod.*, 329 F.3d at 1369, 66 USPQ2d at 1808.

If the application under examination is identified as a continuation, divisional, or continuation-in-part of an earlier application, the examiner will consider the prior art properly cited in the earlier application. See MPEP § 609 and MPEP § 719.05, subsection (II)(A), example J. The examiner must indicate in the first Office action whether the prior art in a related earlier application has been reviewed. Accordingly, no separate citation of

the same prior art need be made in the later application, unless applicant wants a listing of the prior art printed on the face of the patent.

Special Definitions for Claim Language - MPEP § 2111.01(IV)

No special definitions are seen as present in the specification regarding the language used in the claims. Consequently, the words and phrases of the claims are given their plain meaning. MPEP §§ 2173.01, 2173.05(a), and 2111.01.

If special definitions are present, Applicant should bring those to the attention of the examiner and the prosecution history with its next response.

To date, Applicant has provided no indication of special definitions.

Claims Allowed

Claims 1-20 are allowed.

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

The prior art does not teach or suggest

first and second DRR devices providing pre-equalization of the electrical transit signals using transmit filter coefficient values stored in nonvolatile memories as set forth in the claimed combination of independent claim(s) 1, 8, and 15.

No change is seen from the notice of allowance issued October 15, 2020.

Applicant's other applications are seen as providing the closest prior art. However, while limited by the enabling disclosure of the specification as originally filed and the

confines of substance therein, Applicant's active Ethernet cable appears to have elements new to the art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Applicant's publication is not yet published and so is not cited.

The projected publication date is January 7, 2021.

No new art is cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW JORDAN whose telephone number is (571) 270-1571. The examiner can normally be reached on most days 1000-1800 PACIFIC TIME ZONE (messages are returned).

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

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/Andrew Jordan/
Primary Examiner, Art Unit 2883
V: (571) 270-1571 (Pacific time)
F: (571) 270-2571
November 3, 2020

Doc code: IDS

PTO/SB/08a (01-10)

Doc description: Information Disclosure Statement (IDS) Filed

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16698935
	Filing Date	2019-11-27
	First Named Inventor	Yifei DAI
	Art Unit	2883
	Examiner Name	Jordan, Andrew
	Attorney Docket Number	20160.0038.NPUS00

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear		
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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ²ⁱ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T ⁵
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NON-PATENT LITERATURE DOCUMENTS							Remove	
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.						T ⁵

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16698935
Filing Date	2019-11-27
First Named Inventor	Yifei DAI
Art Unit	2883
Examiner Name	Jordan, Andrew
Attorney Docket Number	20160.0038.NPUS00

/AJ/	1	Ex Parte Quayle Action received March 11, 2020 for U.S. Application no. 16/539,910
/AJ/	2	Notice of Allowance received June 4, 2020 for U.S. Application no. 16/539,910
/AJ/	3	Restriction Requirement received May 1, 2020 for U.S. Application no. 16/541,094
/AJ/	4	Non Final Office Action received September 9, 2020 for U.S. Application no. 16/541,094
/AJ/	5	Notification of Reopening of Prosecution Due to Consideration of Information Disclosure Statement Filed After Mailing of a Notice of Allowance received October 5, 2020 for U.S. Application no. 16/539,910

If you wish to add additional non-patent literature document citation information please click the Add button

EXAMINER SIGNATURE

Examiner Signature	/ANDREW JORDAN/ (11/02/2020)	Date Considered	
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¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

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	First Named Inventor	Yifei DAI
	Art Unit	2883
	Examiner Name	Jordan, Andrew
	Attorney Docket Number	20160.0038.NPUS00

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See attached certification statement.

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☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Daniel Krueger/	Date (YYYY-MM-DD)	2020-10-21
Name/Print	Daniel Krueger	Registration Number	42771

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt	
EFS ID:	41280100
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	02-DEC-2020
Filing Date:	13-AUG-2019
Time Stamp:	21:35:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	SB08_SIDS.pdf	612228	no	5
			4cdfcea60d9032d3d7a10d17e975f32b45b93387		

Warnings:

Information:					
2	Other Reference-Patent/App/Search documents	2020-10-15_20160-0038-NPUS00_NOA_clt.pdf	419480	no	10
			3db5b4f279da020a06f5e1cefa721df2ac96c4bd8		
Warnings:					
Information:					
3	Other Reference-Patent/App/Search documents	2020-11-06_16698935_Notice-Allowance_clt.pdf	457942	no	11
			e6921f43eb5691cf475adae065e95022ea4fbf65		
Warnings:					
Information:					
Total Files Size (in bytes):			1489650		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 16/539,910		Filing Date 08/13/2019		☐ To be Mailed		
ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO										
APPLICATION AS FILED - PART I										
		(Column 1)	(Column 2)							
FOR		NUMBER FILED	NUMBER EXTRA	RATE (\$)		FEE (\$)				
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A	N/A						
☐ SEARCH FEE (37 CFR 1.16(k), (l), or (m))		N/A	N/A	N/A						
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A	N/A						
TOTAL CLAIMS (37 CFR 1.16(j))		minus 20 =	*	x \$100 =						
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*	x \$460 =						
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).								
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))										
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL						
APPLICATION AS AMENDED - PART II										
		(Column 1)	(Column 2)	(Column 3)						
AMENDMENT	12/01/2020	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)			
	Total (37 CFR 1.16(i))	* 11	Minus	** 20	= 0	x \$100 =		0		
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0	x \$480 =		0		
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))									
					TOTAL ADD'L FEE		0			
AMENDMENT		(Column 1)	(Column 2)	(Column 3)						
		CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)		ADDITIONAL FEE (\$)			
	Total (37 CFR 1.16(i))	*	Minus	**	=	x \$0 =				
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x \$0 =				
	☐ Application Size Fee (37 CFR 1.16(s))									
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
					TOTAL ADD'L FEE					
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.					SLIE					
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".					/KAREN L VESTAL/					
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".										
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.										

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

63467 7590 01/06/2021
Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

EXAMINER

HA, DAC V

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 01/06/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175

TITLE OF INVENTION: ACTIVE ETHERNET CABLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$1000.00	\$200	04/06/2021

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

63467 7590 01/06/2021
Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175

TITLE OF INVENTION: ACTIVE ETHERNET CABLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$1000.00	\$200	04/06/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
HA, DAC V	2633	375-220000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175
63467	7590	01/06/2021	EXAMINER	
Ramey & Schwaller, LLP			HA, DAC V	
5020 Montrose Blvd.			ART UNIT	PAPER NUMBER
Suite 800			2633	
Houston, TX 77006			DATE MAILED: 01/06/2021	

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.** Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 16/539,910	Applicant(s) LAM et al.	
	Examiner DAC V HA	Art Unit 2633	AIA (FITF) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/01/20.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☒ The allowed claim(s) is/are 3-7, 10-14 and 17-20. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov**.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:
a) ☐ All b) ☐ Some *c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)	5. ☐ Examiner's Amendment/Comment
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.	6. ☒ Examiner's Statement of Reasons for Allowance
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.	7. ☐ Other _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.	

/DAC V HA/ Primary Examiner, Art Unit 2633	
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Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Allowable Subject Matter

2. Claims 3-7, 10-14, 17-20 are allowed.
3. The following is a statement of reasons for the indication of allowable subject matter:

Applicant amended the claims in according to the office action dated 10/29/20. Upon further consideration and comparison with prior art of record (closest reference – Lugthart et al. – US 9,337,993), applicant's REMARKS filed on 12/01/20 is agreed to. Thus, amended claims 3-7, 10-14, 17-20 are allowed over prior art of record.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAC V HA whose telephone number is (571)272-3040. The examiner can normally be reached on 7-3:30 M-F.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Ahn can be reached on 571-272-3044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see [https://ppair-](https://ppair-my.uspto.gov/pair/PrivatePair)

[my.uspto.gov/pair/PrivatePair](https://ppair-my.uspto.gov/pair/PrivatePair). Should you have questions on access to the Private

PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DAC V HA/
Primary Examiner, Art Unit 2633

Issue Classification 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

CPC						
Symbol					Type	Version
H04L		12		2801	F	2013-01-01
H04L		25		4917	I	2013-01-01
H04L		25		03885	I	2013-01-01

CPC Combination Sets					
Symbol				Type	Version

NONE (Assistant Examiner)		Total Claims Allowed: 14	
/DAC V HA/ Primary Examiner, Art Unit 2633 (Primary Examiner)		19 December 2020 (Date)	O.G. Print Claim(s) 1
			O.G. Print Figure 2

Issue Classification 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

INTERNATIONAL CLASSIFICATION			
CLAIMED			
H01R		13	52

NON-CLAIMED			

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 14	
/DAC V HA/ Primary Examiner, Art Unit 2633 (Primary Examiner) _____ (Date) 19 December 2020		O.G. Print Claim(s) 1	O.G. Print Figure 2

Issue Classification 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	3	10	14												
2	4	11	17												
3	5	12	18												
4	6	13	19												
5	7	14	20												
6	10														
7	11														
8	12														
9	13														

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 14	
/DAC V HA/ Primary Examiner, Art Unit 2633 (Primary Examiner) _____ (Date) 19 December 2020		O.G. Print Claim(s) 1	O.G. Print Figure 2

<i>Search Notes</i> 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

CPC - Searched*		
Symbol	Date	Examiner
H04L 12/2801; H04L 25/4917; H04L 25/03885	03/06/2020	DH
Update	05/22/2020	DH
Update	10/22/2020	DH
Update	12/19/2020	DH

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
BRS and Inventor's search	03/06/2020	DH
PLUS	03/06/2020	DH
NPL	03/06/2020	DH
Update	05/22/2020	DH
Supplemental IDS	09/25/2020	DH
Update	12/19/2020	DH

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<i>Search Notes</i> 	Application/Control No. 16/539,910	Applicant(s)/Patent Under Reexamination LAM et al.
	Examiner DAC V HA	Art Unit 2633

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
	PGPUB	03/06/2020	DH
	Udpate	05/22/2020	DH
	Update	10/22/2020	DH
	Update	12/19/2020	DH

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	2	("9337993" "20200280329").pn.	US-PGPUB; USPAT	OR	ON	2020/12/19 08:59
L2	22	("9337993").URPN.	USPAT	OR	ON	2020/12/19 08:59
L3	2	("9742689").URPN.	USPAT	OR	ON	2020/12/19 10:00
L4	37	("20030048858" "20040139220" "20060244505" "20070046335" "20070195911" "20070252631" "20080175586" "20080304608" "20090154467" "20100258952" "20110299858" "20120082466" "20120155527" "20130229211" "20140043079" "20140191788" "20140362869" "20150028929" "20150071651" "6215793" "6603754" "6909980" "7095803" "7650526" "8013653" "8108710" "8286022" "8351559" "8451883" "8494038" "8532139" "8736321" "8855179" "9300444" "9337993" "9379878" "9571308").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2020/12/19 10:00
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S2	21	((yattung near1 lam) (baohua near1 chen)).in.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:46
S4	0	S2 and ethernet.clm.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:48
S5	2	S2 and cable.clm.	US-PGPUB; USPAT	OR	ON	2020/03/03 16:48
S6	1,632	(ethernet near2 cable).ab,clm.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:01
S7	1,501	S6 and (ethernet near2 cable).clm.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:01

S8	224	S7 and (ethernet near2 cable).ab.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:01
S9	45	S8 and ((ethernet near2 cable) same transceiv\$4)	US-PGPUB; USPAT	OR	ON	2020/03/04 12:02
S10	6,018	(h04L12/2801 H04L25/4917 h04L25/03885).cpc.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:02
S11	3	S9 and S10	US-PGPUB; USPAT	OR	ON	2020/03/04 12:02
S12	42	S9 not S11	US-PGPUB; USPAT	OR	ON	2020/03/04 12:09
S13	158	S8 and ((ethernet near2 cable) with (coupl\$4 connect))	US-PGPUB; USPAT	OR	ON	2020/03/04 12:15
S14	120	S13 not S9	US-PGPUB; USPAT	OR	ON	2020/03/04 12:16
S15	0	S14 and (cdr (clock near3 recover\$4))	US-PGPUB; USPAT	OR	ON	2020/03/04 12:17
S16	16	S14 and (ethernet near2 cable).ti.	US-PGPUB; USPAT	OR	ON	2020/03/04 12:19
S17	11	("2017/0346200").URPN.	USPAT	OR	ON	2020/03/04 12:21
S18	104	S14 not S16	US-PGPUB; USPAT	OR	ON	2020/03/04 12:23
S19	66	S8 not S13	US-PGPUB; USPAT	OR	ON	2020/03/04 12:33
S20	15	S19 and ((ethernet near2 cable) with (standard\$5))	US-PGPUB; USPAT	OR	ON	2020/03/04 12:34
S21	2	("9322704" "7401985").pn.	US-PGPUB; USPAT	OR	ON	2020/03/04 13:30
S22	77	("7401985").URPN.	USPAT	OR	ON	2020/03/04 13:31
S23	78	("20010035994" "20020018609" "20020044746" "20020049879" "20020063935" "20020114590"	US-PGPUB;	OR	ON	2020/03/04 13:31

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S24	1	S21 and (modulat\$5 clock\$4)	US- PGPUB; USPAT	OR	ON	2020/03/04 13:46
S25	381	cable.ab. and cable.clm. and (ethernet near1 port)	USPAT	OR	ON	2020/03/04 13:56
S26	372	S25 and (transceiv\$4 transmit\$4 receiv\$4)	USPAT	OR	ON	2020/03/04 13:56
S27	7	S26 and (cdr (clock near3 recover\$4))	US- PGPUB; USPAT	OR	ON	2020/03/04 13:56
S29	4	S27 and modulat\$4	US- PGPUB; USPAT	OR	ON	2020/03/04 13:57
S30	142	S26 and modulat\$4	US- PGPUB; USPAT	OR	ON	2020/03/04 13:57
S31	500	(active with ethernet with cable)	US- PGPUB; USPAT	OR	ON	2020/03/04 13:58

S32	7	S25 and S31	US-PGPUB; USPAT	OR	ON	2020/03/04 13:58
S33	217	S31 and (transceiv\$4 transmit\$4 receiv\$4)	USPAT	OR	ON	2020/03/04 13:59
S34	55	S33 and (ethernet near1 port)	USPAT	OR	ON	2020/03/04 13:59
S36	48	S34 not S32	US-PGPUB; USPAT	OR	ON	2020/03/04 14:01
S37	500	(active with ethernet with cable)	US-PGPUB; USPAT	OR	ON	2020/03/05 07:53
S38	200	S37 and modulat\$4	US-PGPUB; USPAT	OR	ON	2020/03/05 07:53
S39	11	S38 and (cdr (clock near3 recover\$4))	US-PGPUB; USPAT	OR	ON	2020/03/05 07:53
S41	8,639,810	s "37"(ethernet with cable).clm.	US-PGPUB; USPAT	OR	ON	2020/03/05 16:32
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S43	67	S42 and (ethernet with cable).clm.	US-PGPUB; USPAT	OR	ON	2020/03/05 16:32
S44	706	(ethernet with (link cable)) same (electrica\$4 near2 conduct\$4)	US-PGPUB; USPAT	OR	ON	2020/03/06 13:34
S45	458	S44 and (connect\$4 with (transceiv\$4 transmit\$4 receiv\$4))	US-PGPUB; USPAT	OR	ON	2020/03/06 13:34
S46	24	S45 and (cdr (clock near3 recover\$4))	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S47	24	S46 and modulat\$4	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S48	6,020	(h04L12/2801 H04L25/4917 h04L25/03885).cpc.	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35
S49	0	S47 and S48	US-PGPUB; USPAT	OR	ON	2020/03/06 13:35

S50	81	S45 and (ethernet with (link cable)) .clm.	US-PGPUB; USPAT	OR	ON	2020/03/06 13:40
S51	75	S50 not S47	US-PGPUB; USPAT	OR	ON	2020/03/06 13:41
S52	50	S51 and (pair with (wire twist\$4 conduct\$4))	US-PGPUB; USPAT	OR	ON	2020/03/06 13:42
S53	24	("2014/0258742").URPN.	USPAT	OR	ON	2020/03/06 13:43
S54	244	g02b6/36.cpc.	USPAT	OR	ON	2020/03/06 13:56
S55	0	S44 and S54	USPAT	OR	ON	2020/03/06 13:56
S56	9	S54 and ethernet	USPAT	OR	ON	2020/03/06 13:56
S57	89	("20020031955" "20020048990" "20030031025" "20030157842" "20030199192" "20030222786" "20040038564" "20040160774" "20050037672" "20050224585" "20060134996" "20060162947" "20060232385" "20070105453" "20070116411" "20070190863" "20080020658" "20080122579" "20090042431" "20090269973" "20100079248" "20100098425" "20110043333" "20110116748" "20120058689" "20120064750" "20130052860" "20140035755" "20160020975" "20170293102" "3960428" "4761720" "4837488" "5159316" "5666453" "5741152" "5764043" "5888100" "6002331" "6080007" "6099345" "6244908" "6280232" "6394853" "6524128" "6532328" "6558204" "6577243" "6790096" "6798183" "6811445" "6975242" "7049937" "7080945" "7081808" "7168994" "7221284" "7335066" "7374458" "7547150" "7549886" "7556536" "7651361" "7760094" "7772975" "7782202" "7910833" "7910834" "7920764" "7940182" "7960648" "7965186" "7972183" "8043124" "8210755" "8264355" "8277260" "8465317" "8606972" "8611234" "8620123" "8702453" "8747141" "9196975"	US-PGPUB; USPAT; USOCR	OR	ON	2020/03/06 13:57

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S59	22	((yattung near1 lam) (baohua near1 chen)).in.	US-PGPUB; USPAT	OR	ON	2020/05/21 10:12
S60	0	S59 and ethernet.clm.	US-PGPUB; USPAT	OR	ON	2020/05/21 10:12
S61	2	S59 and cable.clm.	US-PGPUB; USPAT	OR	ON	2020/05/21 10:13
S62	25	("2014/0258742").URPN.	USPAT	OR	ON	2020/05/21 10:14
S63	0	("2018/0241579").URPN.	USPAT	OR	ON	2020/05/21 10:28
S64	0	("2016/0197434").URPN.	USPAT	OR	ON	2020/05/21 10:29
S65	0	("2016/0099861").URPN.	USPAT	OR	ON	2020/05/21 10:29
S66	6	("2010/0267283").URPN.	USPAT	OR	ON	2020/05/21 10:29
S67	2	("9337993" "20200280329").pn.	US-PGPUB; USPAT	OR	ON	2020/10/01 10:00
S68	2	(h04L12/2801 H04L25/4917 h04L25/03885).cpcc.	US-PGPUB; USPAT	OR	ON	2020/10/21 11:20
S69	2	("9337993" "20200280329").pn.	US-PGPUB; USPAT	OR	ON	2020/10/22 09:45
S70	1	S69 and (re-modulat\$5 remodulat\$4)	US-PGPUB; USPAT	OR	ON	2020/10/22 09:45
S71	2	S69 and ethernet	US-PGPUB; USPAT	OR	ON	2020/10/22 09:46
S72	2	("9337993" "20200280329").pn.	US-PGPUB; USPAT	OR	ON	2020/10/22 12:50
S73	2	S72 and ethernet	US-PGPUB; USPAT	OR	ON	2020/10/22 12:50

S74	2	S73 and interface	US-PGPUB; USPAT	OR	ON	2020/10/22 12:50
S75	2	S72 and equal\$6	US-PGPUB; USPAT	OR	ON	2020/10/22 13:23
S76	11,420	ethernet and (cdr (clock near3 recover\$4))	US-PGPUB; USPAT	OR	ON	2020/10/22 13:31
S77	300	S76 and (host\$4 same equal\$6)	US-PGPUB; USPAT	OR	ON	2020/10/22 13:32
S78	84	S77 and (equal\$6 with (fix\$4 known preset prestor\$4 independen\$4))	US-PGPUB; USPAT	OR	ON	2020/10/22 13:33
S79	6,257	(h04L12/2801 H04L25/4917 h04L25/03885).cpc.	US-PGPUB; USPAT	OR	ON	2020/10/22 13:33
S80	8	S78 and S79	US-PGPUB; USPAT	OR	ON	2020/10/22 13:33
S81	2	("9337993" "20200280329").pn.	US-PGPUB; USPAT	OR	ON	2020/12/19 08:18
S82	2	S81 and ethernet	US-PGPUB; USPAT	OR	ON	2020/12/19 08:18
S83	25	((yattung near1 lam) (baohua near1 chen)).in.	US-PGPUB; USPAT	OR	ON	2020/12/19 08:18
S84	4	S83 and cable.clm.	US-PGPUB; USPAT	OR	ON	2020/12/19 08:18
S85	7	("20200280329" "20200280458" "20150334186" "20140086264" "20140146833" "20130343400" "20070237464").pn.	US-PGPUB; USPAT	OR	ON	2020/12/19 08:22
S86	17	("2007/0237464").URPN.	USPAT	OR	ON	2020/12/19 08:24
S87	1,777	(ethernet near2 cable).ab,clm.	US-PGPUB; USPAT	OR	ON	2020/12/19 08:26
S88	1,632	S87 and (ethernet near2 cable).clm.	US-PGPUB; USPAT	OR	ON	2020/12/19 08:26

S89	244	S88 and (ethernet near2 cable).ab.	US-PGPUB; USPAT	OR	ON	2020/12/19 08:26
S90	48	S89 and ((ethernet near2 cable) same transceiv\$4)	US-PGPUB; USPAT	OR	ON	2020/12/19 08:26

12/19/2020 10:10:40 AM

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Doc code: IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16539910
	Filing Date	2019-08-13
	First Named Inventor	Yattung LAM
	Art Unit	2633
	Examiner Name	HA, Dac V
	Attorney Docket Number	20160.0039.NPUS00

U.S.PATENTS							Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	
	1						
If you wish to add additional U.S. Patent citation information please click the Add button.							Add
U.S.PATENT APPLICATION PUBLICATIONS							Remove
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	
	1	20200280329	A1	2020-09-03	Lam et al		
	2	20200280458	A1	2020-09-03	Lam et al		
	3	20150334186	A1	2015-11-19	Chen		
	4	20140086264	A1	2014-03-27	Lusted		
	5	20140146833	A1	2014-05-29	Lusted		

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16539910
Filing Date	2019-08-13
First Named Inventor	Yattung LAM
Art Unit	2633
Examiner Name	HA, Dac V
Attorney Docket Number	20160.0039.NPUS00

6	20130343400	A1	2013-12-26	Lusted
7	20070237464	A1	2007-10-11	Aronson

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² i	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							

If you wish to add additional Foreign Patent Document citation information please click the Add button.

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Notice of Allowance dated October 15, 2020 for U.S. Application 16/698,935	
	2	Supplemental Notice of Allowance dated November 6, 2020 for U.S. Application 16/698,935	

If you wish to add additional non-patent literature document citation information please click the Add button.

EXAMINER SIGNATURE

Examiner Signature	/DAC V HA/	Date Considered	12/19/2020
--------------------	------------	-----------------	------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16539910
Filing Date	2019-08-13
First Named Inventor	Yattung LAM
Art Unit	2633
Examiner Name	HA, Dac V
Attorney Docket Number	20160.0039.NPUS00

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**
(Not for submission under 37 CFR 1.99)

Application Number	16539910
Filing Date	2019-08-13
First Named Inventor	Yattung LAM
Art Unit	2633
Examiner Name	HA, Dac V
Attorney Docket Number	20160.0039.NPUS00

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Dan Krueger/	Date (YYYY-MM-DD)	2020-12-02
Name/Print	Daniel Krueger	Registration Number	42771

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

To: uspto@rameyfirm.com,wramey@rameyfirm.com,tevenbly@rameyfirm.com
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 63467

Jan 06, 2021 04:09:26 AM

Dear PAIR Customer:

Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 63467 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

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Application	Document	Mailroom Date	Attorney Docket No.
16539910	NOA	01/06/2021	20160.0039.NPUS00
	1449	01/06/2021	20160.0039.NPUS00

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor: Yattung LAM

U.S. Application No. 16/539,910

Filed: August 13, 2019

Title: Active Ethernet Cable

Atty. Docket No. 20160.0039.NPUS00

Confirmation No.: 8175

Examiner: HA, DAC V

Group Art Unit: 2633

SUBMISSION OF ISSUE FEE

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

A review of the fee payment history in connection with the subject application indicates that the issue fee was paid on September 03, 2020 for \$1,000.00 prior to the USPTO fee increase, thus creating an outstanding shortage of \$200.00. Applicant respectfully submits the remaining \$200.00 issue fee as required. Please charge our deposit account for the \$200.00 issue fee set forth above. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 60-2539 (20160.0039.NPUS00).

Respectfully submitted,

Date: April 6, 2021

/Daniel J. Krueger/
Registration No. 42,771
Attorney for Applicant
Ramey & Schwaller, LLP
5020 Montrose Blvd, Suite 800
Houston, TX 77006
Tel 713-426-3923x304
docketing@rameyfirm.com

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

63467 7590 01/06/2021
Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

Shanay Hines	(Typed or printed name)
/Shanay Hines/	(Signature)
April 6, 2021	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175

TITLE OF INVENTION: ACTIVE ETHERNET CABLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$1000.00	\$200	04/06/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
HA, DAC V	2633	375-220000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Ramey & Schwaller, LLP

2 Daniel J. Krueger

3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Credo Technology Group Limited

Grand Cayman, Cayman Islands

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 60-2539

5. Change in Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Daniel J. Krueger/

Date April 6, 2021

Typed or printed name Daniel J. Krueger

Registration No. 42,771

Electronic Acknowledgement Receipt	
EFS ID:	42374523
Application Number:	16539910
International Application Number:	
Confirmation Number:	8175
Title of Invention:	ACTIVE ETHERNET CABLE
First Named Inventor/Applicant Name:	Yattung LAM
Customer Number:	63467
Filer:	Daniel Joseph Krueger/Shanay Hines
Filer Authorized By:	Daniel Joseph Krueger
Attorney Docket Number:	20160.0039.NPUS00
Receipt Date:	06-APR-2021
Filing Date:	13-AUG-2019
Time Stamp:	10:34:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	2021-04-06_SubmissionIssueFe e.pdf	110449 4a404c278f51ed8df18bb19dbad75e1abb4 dafc7	no	1

Warnings:

Information:					
2	Issue Fee Payment (PTO-85B)	2021-04-06_16539910_Issue_Fee_20160-0039-NPUS00_.pdf	876642 3f737e0731a795dff8efd2fb37e48f6361c26c2d	no	1
Warnings:					
Information:					
Total Files Size (in bytes):			987091		
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.					



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :C46167

Sale Accounting Date:04/07/2021

Sale Item Reference Number

16539910

Effective Date

04/06/2021

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I202147932433497	1501	UTILITY APPL ISSUE FEE	\$1,000.00	Sale
I202147932433497	1501	UTILITY APPL ISSUE FEE	\$200.00	Deposit Account

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

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CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

63467 7590 01/06/2021
Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

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Certificate of Mailing or Transmission

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Shanay Hines	(Typed or printed name)
/Shanay Hines/	(Signature)
April 6, 2021	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	08/13/2019	Yattung LAM	20160.0039.NPUS00	8175

TITLE OF INVENTION: ACTIVE ETHERNET CABLE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$1000.00	\$200	04/06/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
HA, DAC V	2633	375-220000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 or more recent) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Ramey & Schwaller, LLP

2 Daniel J. Krueger

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3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

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(A) NAME OF ASSIGNEE

Credo Technology Group Limited

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Grand Cayman, Cayman Islands

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

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- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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Authorized Signature /Daniel J. Krueger/

Date April 6, 2021

Typed or printed name Daniel J. Krueger

Registration No. 42,771



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/539,910	05/18/2021	11012252	20160.0039.NPUS00	8175

63467 7590 04/28/2021
Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Yattung LAM, San Jose, CA;
CREDO TECHNOLOGY GROUP LIMITED, Grand Cayman, CAYMAN ISLANDS;
Baohua CHEN, Xiamen City, CHINA;

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To: uspto@rameyfirm.com,wramey@rameyfirm.com,tevenbly@rameyfirm.com
From: PAIR_eOfficeAction@uspto.gov
Cc: PAIR_eOfficeAction@uspto.gov
Subject: Private PAIR Correspondence Notification for Customer Number 63467

Apr 29, 2021 04:29:34 AM

Dear PAIR Customer:

Ramey & Schwaller, LLP
5020 Montrose Blvd.
Suite 800
Houston, TX 77006
UNITED STATES

The following USPTO patent application(s) associated with your Customer Number, 63467 , have new outgoing correspondence. This correspondence is now available for viewing in Private PAIR.

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Application	Document	Mailroom Date	Attorney Docket No.
16539910	ISSUE.NTF	04/28/2021	20160.0039.NPUS00

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If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov with 'e-Office Action' on the subject line or call 1-866-217-9197 during the following hours:

Monday - Friday 6:00 a.m. to 12:00 a.m.

Thank you for prompt attention to this notice,

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PATENT APPLICATION INFORMATION RETRIEVAL SYSTEM