



US009210362C1

(12) **EX PARTE REEXAMINATION CERTIFICATE** (12885th)
United States Patent
Reddy et al.

(10) **Number:** **US 9,210,362 C1**(45) **Certificate Issued:** **Apr. 1, 2025**(54) **WIDEBAND TUNER ARCHITECTURE****H04N 21/454** (2011.01)**H04N 21/61** (2011.01)(71) Applicant: **MaxLinear, Inc.**, Carlsbad, CA (US)(52) **U.S. Cl.**(72) Inventors: **Madhukar Reddy**, Carlsbad, CA (US);
Curtis Ling, Carlsbad, CA (US); **Tim Gallagher**, Carlsbad, CA (US)CPC **H04N 21/4263** (2013.01); **H04B 1/0014**
(2013.01); **H04N 5/455** (2013.01); **H04N 5/50**
(2013.01); **H04N 21/4382** (2013.01); **H04N**
21/4383 (2013.01); **H04N 21/454** (2013.01);
H04N 21/6143 (2013.01); **H04N 21/6193**
(2013.01)(73) Assignee: **ENTROPIC COMMUNICATIONS,**
LLC, New York, NY (US)(58) **Field of Classification Search**

None

See application file for complete search history.

Reexamination Request:

No. 90/019,255, Sep. 20, 2023

Reexamination Certificate for:Patent No.: **9,210,362**Issued: **Dec. 8, 2015**Appl. No.: **14/614,543**Filed: **Feb. 5, 2015**(56) **References Cited**

To view the complete listing of prior art documents cited during the proceeding for Reexamination Control Number 90/019,255, please refer to the USPTO's Patent Electronic System.

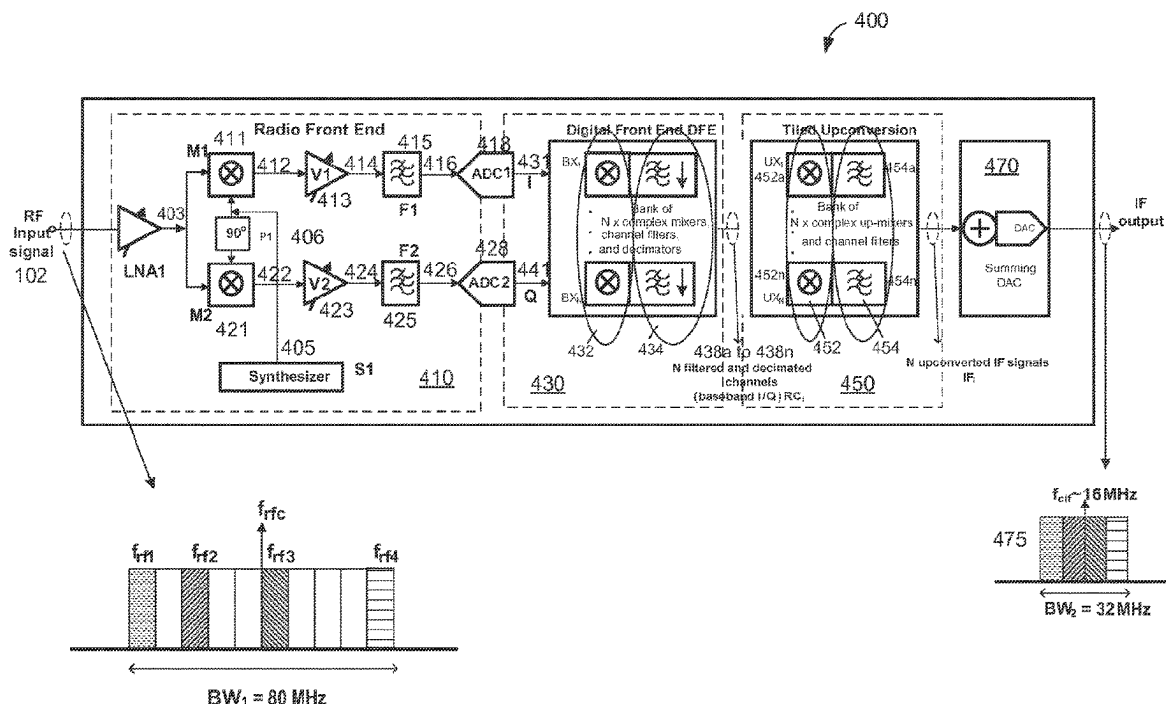
Primary Examiner — Angela M Lie**Related U.S. Application Data**

(63) Continuation of application No. 13/962,871, filed on Aug. 8, 2013, now Pat. No. 9,100,622, which is a continuation of application No. 12/762,900, filed on Apr. 19, 2010, now Pat. No. 8,526,898.

(60) Provisional application No. 61/170,526, filed on Apr. 17, 2009.

(51) **Int. Cl.****H04B 1/16** (2006.01)**H04B 1/00** (2006.01)**H04N 5/455** (2006.01)**H04N 5/50** (2006.01)**H04N 21/426** (2011.01)**H04N 21/438** (2011.01)(57) **ABSTRACT**

A wideband receiver system comprises a mixer module, a wideband analog-to-digital converter (ADC) module, and digital circuitry. The mixer module is configured to down-convert a plurality of frequencies that comprises a plurality of desired television channels and a plurality of undesired television channels. The wideband ADC module is configured to digitize the swatch of frequencies comprising the plurality of desired television channels and the plurality of undesired television channels. The digital circuitry is configured to select the desired plurality of television channels from the digitized plurality of frequencies, and output the selected plurality of television channels to a demodulator as a digital datastream.



1

2

**EX PARTE
REEXAMINATION CERTIFICATE**

NO AMENDMENTS HAVE BEEN MADE TO
THE PATENT

5

AS A RESULT OF REEXAMINATION, IT HAS BEEN
DETERMINED THAT:

The patentability of claims **1-20** is confirmed.

10

* * * * *



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.
90/019,255	09/20/2023	9210362	189005.TR003	5785
153979	7590	02/10/2025		
Arch & Lake LLP 203 North LaSalle Street, Suite 2100 Chicago, IL 60601			EXAMINER LIE, ANGELA M	
			ART UNIT	PAPER NUMBER
			3992	
			MAIL DATE	DELIVERY MODE
			02/10/2025	PAPER

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.



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

DO NOT USE IN PALM PRINTER

(THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS)

Haynes and Boone, LLP
2801 N. Harwood St.
Suite 2300
Dallas TX 75201

***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/019,255 .

PATENT UNDER REEXAMINATION 9210362 .

ART UNIT 3992 .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Notice of Intent to Issue Ex Parte Reexamination Certificate	Control No. 90/019,255	Patent Under Reexamination 9210362	
	Examiner ANGELA M LIE	Art Unit 3992	AIA (First Inventor to File) Status No

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

1. ☒ Prosecution on the merits is (or remains) closed in this *ex parte* reexamination proceeding. This proceeding is subject to reopening at the initiative of the Office or upon petition. *Cf.* 37 CFR 1.313(a). A Certificate will be issued in view of
 - (a) ☒ Patent owner's communication(s) filed: 9/30/2024.
 - (b) ☐ Patent owner's failure to file an appropriate timely response to the Office action mailed: ____.
 - (c) ☐ Patent owner's failure to timely file an Appeal Brief (37 CFR 41.31).
 - (d) ☐ The decision on appeal by the ☐ Board of Patent Appeals and Interferences ☐ Court dated ____
 - (e) ☐ Other: ____.
 2. The Reexamination Certificate will indicate the following:
 - (a) Change in the Specification: ☐ Yes ☒ No
 - (b) Change in the Drawing(s): ☐ Yes ☒ No
 - (c) Status of the Claim(s):
 - (1) Patent claim(s) confirmed: 1-20.
 - (2) Patent claim(s) amended (including dependent on amended claim(s)): ____
 - (3) Patent claim(s) canceled: ____.
 - (4) Newly presented claim(s) patentable: ____.
 - (5) Newly presented canceled claims: ____.
 - (6) Patent claim(s) ☐ previously ☐ currently disclaimed: ____
 - (7) Patent claim(s) not subject to reexamination: ____.
 3. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on ____.
 4. ☒ Note the attached statement of reasons for patentability and/or confirmation. Any comments considered necessary by patent owner regarding reasons for patentability and/or confirmation must be submitted promptly to avoid processing delays. Such submission(s) should be labeled: "Comments On Statement of Reasons for Patentability and/or Confirmation."
 5. ☐ Note attached NOTICE OF REFERENCES CITED (PTO-892).
 6. ☐ Note attached LIST OF REFERENCES CITED (PTO/SB/08 or PTO/SB/08 substitute).
 7. ☐ The drawing correction request filed on ____ is: ☐ approved ☐ disapproved.
 8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have
 - ☐ been received.
 - ☐ not been received.
 - ☐ been filed in Application No. ____.
 - ☐ been filed in reexamination Control No. ____.
 - ☐ been received by the International Bureau in PCT Application No. ____.
- * Certified copies not received: ____.
9. ☐ Note attached Examiner's Amendment.
 10. ☐ Note attached Interview Summary (PTO-474).
 11. ☐ Other: ____.

All correspondence relating to this reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Office action.

/ANGELA M LIE/
Primary Examiner, Art Unit 3992

cc: Requester (if third party requester)

U.S. Patent and Trademark Office
PTOL-469 (Rev. 08-13)

Notice of Intent to Issue Ex Parte Reexamination Certificate

Part of Paper No. 20241016

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Statement of Reasons for Patentability and/or Confirmation

Claims 1-20 are confirmed.

The following is an Examiner's statement of reasons for patentability and/or confirmation of the claims found patentable in this reexamination proceeding:

Regarding claims 1 and 11, the cited prior art of record fails to teach the system and method as disclosed in claims 1 and 11, comprising a mixer module configured to downconvert a plurality of frequencies that comprises a plurality of desired television channels and a plurality of undesired television channels and analog-to-digital converter digitizing plurality of frequencies comprising the plurality of desired and undesired channels (thus multiple channels are inputted to the mixer and outputted) and a digital circuit (interpreted as element 230 in Figure 2 and also described in column 5, lines 49-60) to select plurality of desired television channels from the digitized plurality of frequencies and output the selected plurality of television channels to a demodulator as a digital stream.

With respect to claims 2-10 and 12-20, those claims are also allowed by the virtue of their dependency on claims 1 and 11 respectively.

Any comments considered necessary by Patent Owner regarding the above statement must be submitted promptly to avoid processing delays. Such submission by

the Patent Owner should be labeled: "Comments on Statement of Reasons for Patentability and/or Confirmation" and will be placed in the reexamination file.

Response to Patent Owner Arguments

Koperda's declaration filed on September 30th, 2024 has been fully considered.

In addition, the arguments submitted by the Patent Owner on the same day, have also been considered. The Examiner has found the assertion on page 11 of the remarks stating that "*a POSITA would recognize that Gomez's system output only a single channel of interest*" and the Declaration on pages 9 and 10 discussing outputting a single channel of interest, persuasive as the claim language requires "*plurality of desired television channels and a plurality of undesired television channels*".

Accordingly, the Examiner withdraw the rejections and has confirmed the claims.

NOTICE RE PATENT OWNER'S CORRESPONDENCE ADDRESS

Effective May 16, 2007, 37 CFR 1.33(c) has been revised to provide that: The Patent owner's correspondence address for all communications in an ex parte reexamination is designated as the correspondence address of the patent.

Revisions and Technical Corrections Affecting Requirements for Ex Parte Reexamination, 72 FR 18892 (April, 16, 2007) (Final Rule)

The correspondence address for any pending reexamination proceeding not having the same correspondence address as that of the patent is, by way of this revision to 37 CFR 1.33(c), automatically changed to that of the patent file as of the effective date.

This change is effective for any reexamination proceeding which is pending before the Office as of May 16, 2007, including the present reexamination proceeding, and to any reexamination proceeding which is filed after that date.

Parties are to take this change into account when filing papers, and direct communications accordingly.

In the event the patent owner's correspondence address listed in the papers (record) for the present proceeding is different from the correspondence address of the patent, it is strongly encouraged that the patent owner affirmatively file a Notification of Change of Correspondence Address in the reexamination proceeding and/or the patent (depending on which address patent owner desires), to conform the address of the proceeding with that of the patent and to clarify the record as to which address should be used for correspondence.

Telephone Numbers for reexamination inquiries:

Reexamination	(571) 272-7703
Central Reexam Unit (CRU)	(571) 272-7705
Reexamination Facisimile Transmission No.	(571) 273-9900

Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that

reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.550(a)).

Extension of time in reexamination proceedings are provided for in 37 CFR 1.550(c).

After the filing of a request for reexamination by a third party requester, any document filed by either the patent owner or the third party requester must be served on the other party (or parties where two or more third-party-requester proceedings are merged) in the reexamination proceeding in the manner provided in 37 CFR 1.248. See 37 CFR 1.550(f).

Litigation Reminder

The patent owner is reminded of the continued responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP § 2207, 2282 and 2286.

Correspondence

All correspondence relating to this *ex parte* reexamination proceeding should be directed:

Patent Center: Please use Patent Center
(<https://www.uspto.gov/patents/apply/patent-center>) to file and manage your applications and requests.

By Mail to: Mail Stop *Ex Parte* Reexam
Central Reexamination Unit
Commissioner for Patents
United States Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By hand: Customer Service Window
Knox Building
501 Dulany Street
Alexandria, VA 22314

Patent Center

The USPTO is retiring EFS-Web and Private Pair, effective 15 November

2023. Please use Patent Center (<https://www.uspto.gov/patents/apply/patent-center>) to file and manage your applications and requests. Visit the EFS-Web and Private PAIR Retirement (<https://www.uspto.gov/patents/efs-web-and-private-pair-be-retired>) and Patent Center Information pages for more information.

Patent Center has 100% of the functionality of EFS-Web and Private PAIR, and is available to all users for electronic filing and management of patent applications. Attend a transition to Patent Center Training session (<https://www.uspto.gov/about-us/events/patent-center>) to learn more about filing and managing patent applications.

Any inquiry concerning this communication should be directed to the Central Reexamination Unit at telephone number 571-272-7705.

/ANGELA M LIE/
Primary Examiner, Art Unit 3992

Conferees:

/LUKE S WASSUM/
Primary Examiner, Art Unit 3992

/ALEXANDER J KOSOWSKI/
Supervisory Patent Examiner, Art Unit 3992