

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Marvell Semiconductor, Inc.,

Petitioner,

v.

Credo Technology Group Ltd.,

Patent Owner.

IPR2025-01218

U.S. Patent No. 10,877,233

**PETITIONER’S OPPOSITION TO PATENT OWNER’S REQUEST FOR
DISCRETIONARY DENIAL OF INSTITUTION**

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EXHIBIT LIST

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1001	U.S. Patent No. 10,877,233 to Dai, et al. (“the ’233 patent”)
1002	Certified Prosecution File History for the ’233 patent (“Prosecution History”)
1003	Declaration of Michael Shuo-wei Chen
1004	U.S. Patent No. 9,882,706 to Lugthart, et al. (“Lugthart”)
1005	U.S. Patent No. 7,233,617 to Gorecki (“Gorecki”)
1006	U.S. Patent No. 8,516,238 to Cornelius, et al. (“Cornelius”)
1007	Samaan, High-speed Serial Bus Repeater Primer (“Samaan”)
1008	Ars Technica, Why Thunderbolt cables will be expensive until 2013
1009	Intersil, ISL37231 [Datasheet]
1010	U.S. Patent Application Publication No. 2019/0028262 A1 to Kobayashi, et al. (“Kobayashi”)
1011	TE Connectivity, SFP+ High Speed Copper Cable Assemblies
1012	Cisco, Cisco 40GBASE QSFP Modules Data Sheet
1013	AppleInsider, Intel details Thunderbolt, says Apple has full year head start
1014	Macstories, Intel: Apple Transferring Thunderbolt Trademark To Us
1015	AnandTech, Intel’s Codename Light Peak Launches as Thunderbolt
1016	Ars Technica, The technology inside Apple’s \$50 Thunderbolt cable
1017	Gasca, et al., CMOS Continuous-Time Adaptive Equalizers for High-Speed Serial Links
1018	Declaration of June Munford re: Samaan
1019	Excerpts from 10G SFP+ Video
1020	Excerpts from Stauffer, High Speed Serdes Devices and Applications (“Stauffer”)
1021	PCI-SIG, PCI Express® Retimers vs. Redrivers An Eye-Popping Difference
1022	<i>Certain Active Electrical Cables and Components Thereof</i> , ITC Investigation 337-TA-1446, Exhibit 37 to Complaint, Credo’s Infringement Claim Chart Showing Molex’s Infringement of the ’233 Patent

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1023	<i>Certain Active Electrical Cables and Components Thereof</i> , ITC Investigation 337-TA-1446, Exhibit 40 to Complaint, Credo’s Infringement Claim Chart Showing TE Connectivity’s Infringement of the ’233 Patent
1024	<i>Certain Active Electrical Cables and Components Thereof</i> , ITC Investigation 337-TA-1446, Exhibit 65 to Complaint, Credo’s Domestic Industry Claim Chart for the ’233 Patent
1025	SFF-8431 Rev 4.1 + Addendum
1026	Texas Instruments Technical Article, How to Reduce Jitter and Improve Signal Integrity in Source and Sink System Designs Supporting HDMI 2.0
1027	Intel, Thunderbolt™ Networking Bridging and Routing Instructional White Paper
1028	Intel, PCI Express Ethernet Networking White Paper
1029	U.S. Patent No. 9,231,846 to Sinha, et al. (“Sinha”)
1030	<i>Reserved</i>
1031	U.S. Patent No. 8,787,430 to Rhagavan, et al. (“Raghavan”)
1032	<i>Reserved</i>
1033	Intel, PCI Express Architecture
1034	Internet Archive Capture, The Wayback Machine, Wikipedia, “PCI Express”
1035	Intel Website Search Results
1036	IAM – “IPBC Global 2025: Acting USPTO Director says IPR use needs to change”
1037	Internet Archive Capture, The Wayback Machine, Credo Webpage of Management Team, June 14, 2019, https://web.archive.org/web/20190614160800/https://www.credosemi.com/company/
1038	Credo “About” Webpage, https://credosemi.com/about-credo/
1039	LinkedIn profile of Credo President and CEO William (“Bill”) Brennan, https://www.linkedin.com/in/bill-brennan-a291367a/
1040	LinkedIn profile of Credo CTO Lawrence Cheng, https://www.linkedin.com/in/lawrence-cheng-9b721831/
1041	LinkedIn profile of Credo Chief Research and Development Officer Haoli Qian, https://www.linkedin.com/in/haoli-qian-1a50628/

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1043	Non-Party Marvell Semiconductor, Inc.’s Motion to Disqualify, 337-TA-1446, Ex. 8 (public version)
1044	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-1446, Private Parties’ Ground Rule 5.3 Maximum Scope of the Investigation (Jul. 24, 2025)
1045	Executive Order 14179, “Removing Barriers to American Leadership in Artificial Intelligence” (Jan. 23, 2025)
1046	Office Management and Budget (OMB) Memorandum M-25-21 “Accelerating Federal Use of AI through Innovation, Governance, and Public Trust” (September 2025)
1047	Statement from U.S. Secretary of Commerce Howard Lutnick (Jun. 3, 2025)
1048	Memorandum to All PTAB Judges on Interim Processes from Coke Morgan Stewart (Mar. 26, 2025)
1049	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-3814, Amended Complaint (Mar. 18, 2025)
2001	Credo’s Corrected Unopposed Motion to Partially Terminate the Investigation by Withdrawing Allegations With Respect to U.S. Patent No. 10,877,233, 337-TA-1446
2002	Credo and Fish & Richardson P.C.’s Opposition to Non-Party Marvell Semiconductor, Inc.’s Motion to Disqualify, 337-TA-1446 (public version)
2003	<i>In re Certain Active Electrical Cables and Components Thereof</i> , Inv. No. 337-TA-3814, Complaint (Mar. 13, 2025)
2004	“Credo Introduces PAM4 DSP for High Performance Data Centers and Enterprise Networks,” March 17, 2021, https://credosemi.com/credo-introduces-pam4-dsp-for-high-performance-data-centers-and-enterprise-networks/
2005	“AEC Applications,” https://credosemi.com/products/hiwire-aec/applications/
2006	“Credo Introduces 800G HiWire ZeroFlap AECs to Support AI Backend Networks,” October 10, 2024, available at https://s205.q4cdn.com/511065572/files/doc_news/2024/10/credo-introduces-800g-hiwire-zeroflap-aecs-to-support-ai-backend-networks.pdf

Exhibit No.	Description
2007	“CREDO Receives Cabling Installation & Maintenance Innovators 2019 Gold Award for HiWire™ Active Electrical Cables (AEC),” October 1, 2019, https://credosemi.com/news/credo-receives-cabling-installation-maintenance-innovators-2019-gold-award-for-hiwire-active-electrical-cables-aec/
2008	“Credo Files AEC Patent Infringement Complaint Against Amphenol, Molex, TE Connectivity, and Volex with United States International Trade Commission,” March 13, 2025, https://investors.credosemi.com/news-events/news/news-details/2025/Credo-Files-AEC-Patent-Infringement-Complaint-Against-Amphenol-Molex-TE-Connectivity-and-Volex-with-United-States-International-Trade-Commission/default.aspx
2009	Order No. 21 Granting Corrected Motion to Terminate the Investigation by Withdrawing Allegations With Respect to U.S. Patent No. 10,877,233, 337-TA-1446

I. Introduction

Patent Owner Credo's request for discretionary denial is rife with inaccuracies and should be rejected. Petitioner Marvell is the true innovator in the field of active electrical cables (AECs), with early patents disclosing the technology. Years later, Credo actively recruited Marvell employees and began developing AEC products. Now, Credo falsely claims to have invented AECs and related technical advancements that were, in fact, pioneered by Marvell.

Credo complains that institution is a "waste of Board resources" because the '233 patent was withdrawn from the ITC, and because Credo has made "public" statements disavowing direct assertion of the '233 patent against Marvell. Request, 2 ("Petitioner Marvell by itself does not infringe the '233 Patent."). But Credo's argument ignores that it has not withdrawn the '233 patent from its district court cases. Although Credo has not named Marvell as a defendant in its lawsuits, it has pointed to Marvell's retimer chips as the core of the alleged infringement for the '233 patent.

The '233 patent issued as a result of a clear and material error by the Examiner who failed to consider critical prior art, including U.S. Patent No. 9,882,706 ("Lugthart"), which is not only central to patentability, but is *Marvell's own patent*. Because the Examiner missed critical prior art, Credo secured claims that should never have issued and has weaponized those claims in its litigation

campaign that effectively targets Marvell and its products by proxy through suing Marvell's customers.

Credo's "settled expectations" arguments are also unavailing. The '233 patent issued less than five years ago—short of the threshold set by the Director. Credo's contradictory positions across related IPRs further undermine its arguments: for the '233 patent, Credo argues for denial because it is no longer asserted in the ITC; but for the '252 and '111 patents, Credo argues for denial because they are asserted in the ITC. Credo cannot have it both ways.

II. Background

Marvell and its subsidiaries are the true innovators behind active electrical cables ("AECs"), which incorporate active components into transceiver assemblies at each end of an electrical cable. This innovation extends range and provides high-speed connectivity in data centers. For example, Marvell's wholly-owned subsidiaries ClariPhy and Inphi filed for patents on technologies necessary for AECs starting by at least 2014. *See, e.g.*, Ex-1004 (U.S. Patent 9,882,706 ("Lugthart")). These patents describe AECs with active transceiver assemblies at each end (*id.*, 6:65-7:3, Figs. 1A-4B), along with various details for equalization in the transmitter and receiver (*id.*, 9:10-15 ("The receive path equalizer 21 can be used to provide signal equalization to compensate for transmission line losses on the line side, and the first and second transmit path equalizers 11 a, 11 b can be

used to provide signal equalization to compensate for transmission line losses on the host side”), 22:40-49, 23:59-24:2; 29:21-28, Figs. 1A-4B.

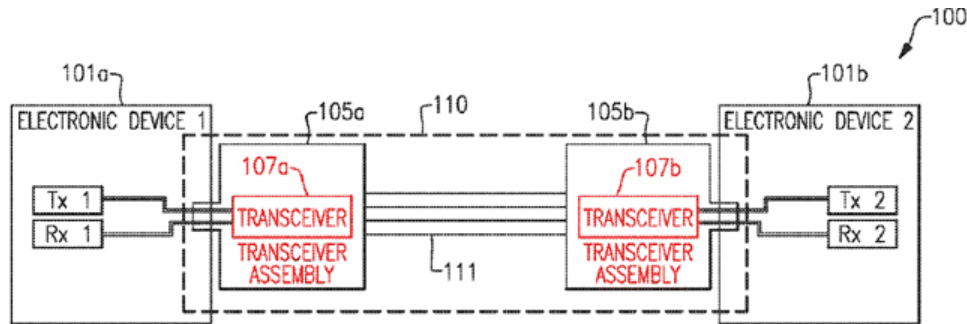


FIG. 2A

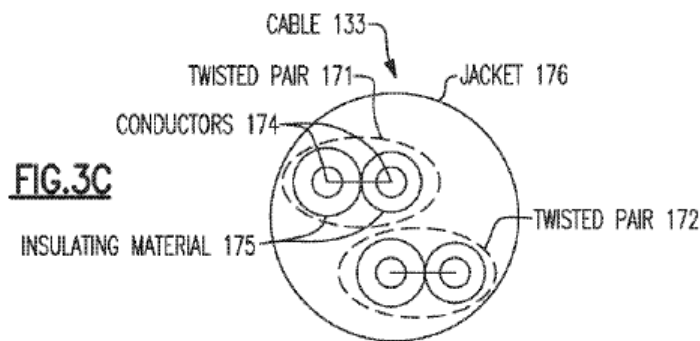


FIG. 3C

Years later, in 2018-2019, Credo filed for patents directed to the use of equalization in AECs. Since then, Credo has claimed to have invented the AEC, taking credit for Marvell’s advancements. Ex-1038 (Credo website) (“Credo invented the Active Electrical Cable (AEC)”); Ex-2003, 10 (“Credo is the original pioneer in active electrical cables (‘AEC’)”); Request, 1-5.

Credo also systematically and strategically recruited Marvell employees, underscoring Credo’s reliance on Marvell’s expertise and institutional knowledge, rather than its own technical innovation. Despite employing numerous former

Marvell employees (Ex-1037)—including Credo’s President and CEO (Ex-1039), Credo’s Head of Research and Development (Ex-1041), numerous former Marvell/Inphi engineers (Ex-1040, Ex-1042), and Credo’s General Counsel (formerly Marvell’s General Counsel) (Ex-1043)—Credo failed to disclose Marvell’s prior art on AECs to the Patent Office. Instead, Credo submitted an IDS with tangential references from unrelated proceedings. As a result, the ’233 patent was allowed after the first Office Action, without ever considering Marvell’s AEC art. *See* Ex-1002, 000663–672.

Marvell initiated this IPR to resolve critical issues that impact the marketplace. Certainty regarding the validity of the ’233 patent is essential to providing clarity to customers, partners, and industry decision-makers. Uncertainty over these claims would stall investment and development in AI infrastructure, leaving buyers and innovators hesitant to move forward. Prompt resolution in this already-pending IPR will provide a faster and more efficient path to clarity than protracted, additional litigation. For these reasons and as detailed in Section III below, Board review is necessary to rectify these errors and ensure only valid, truly innovative claims remain in force.

III. Institution is Warranted Due to Material Examiner Error and the Strong Technical Merits of the Petition

A. The Examiner Materially Erred By Overlooking Material Prior Art and Treating Well-Known Limitations As Patentable

As explained above, Credo failed to present critical prior art during prosecution. As a result, the Examiner committed clear material error by allowing the '233 patent without considering important prior art for AECs, including foundational AEC art from Marvell.

The file history shows several errors by the Examiner. The '233 patent was allowed on the first action, with the Examiner simply stating that “the prior art does not teach or suggest” the limitation involving “first and second DRR devices providing pre-equalization of the electrical transit signals using transmit filter coefficient values stored in nonvolatile memories.” Ex-1002, 000563–571. Notably, the Examiner cited no prior art and provided no analysis to support this conclusion; nor did the Examiner explain what art had been reviewed. *Id.*

After the Applicant filed a Request for Continued Examination and submitted a new IDS referencing additional Office communications, the Examiner merely repeated the same unsubstantiated conclusion in a second Notice of Allowance—again with no discussion of prior art, no reference to the newly submitted IDS, and no substantive analysis of the limitations. Ex-1002, 000591–

595; 000663–672. Instead, the Examiner stated that “[n]o new art is cited” and “no change is seen” from the first Notice of Allowance. *Id.* (emphasis added).

This record reveals that the Examiner did not conduct a meaningful search or consider the full scope of pertinent art. For example, the Examiner concluded that the prior art lacked pre-equalization values stored in nonvolatile memories, without ever searching for “non-volatile memory.” Ex-1002, 000582-588; 000679-000680. The Examiner also cited a lack of disclosure for re-modulation, without ever searching for “modulation.” *Id.* Had the Examiner performed a proper search, the prior art—including Lugthart and other references now relied on in the Petition—would have been found and would have demonstrated that every claimed feature was already well known in the art. This constitutes reversible error, as Patent Office policy and the Board’s decisions require a thorough and complete search of prior art for every claim limitation to determine patentability. MPEP §§904-904.04; 35 U.S.C. § 102(a); *Ex Parte* Daniel James Brown and Diana Jordan, Appeal No. 2017-005003, Decision at 7 (PTAB Mar. 5, 2018) (“reversible error” to not search a claim limitation).

The materiality of this error is further underscored by the fact that Credo’s Chinese counterpart application was rejected by the Chinese Patent Office based on U.S. Patent No. 9,337,993 (“Lugthart-993”)—a reference closely related to the Lugthart patent relied upon here—which rendered the claims obvious in

combination with other prior art. Pet. 16; CN112117606A File History, 1-4, 8.

The Chinese application has not overcome this rejection and remains pending.

The prior art relied upon in the current Petition provides precisely the type of pertinent disclosures the Examiner did not consider during prosecution. Petition's primary reference Lugthart was never made of record or cited by the Examiner during prosecution.¹ None of the Petition's other primary references—Gorecki, Cornelius, and Samaan—were cited by the Examiner or submitted by the Applicant during prosecution. As detailed throughout the Petition, these references disclose each limitation that the Examiner believed was missing, and collectively, they render every challenged claim unpatentable.

¹ In the Request for Continued Examination, the Applicant submitted a "Non-Final Office Action" from a different patent application, in which a different Examiner rejected unrelated claims over "Lugthart-993." Ex-1002, 000591–595, 000651. The Applicant did not submit Lugthart-993 itself in the IDS, and the Examiner did not cite this reference during prosecution. As previously noted, the Examiner stated that "[n]o new art is cited" in the second Notice of Allowance. Ex-1002, 000663–672. Accordingly, Lugthart-993 was never made of record in the '233 patent prosecution. Likewise, Lugthart-706 was never made of record. Neither reference appears on the face of the '233 patent.

The Board's review is essential to correct this material error. Only by considering the overlooked prior art and applying established standards of novelty and non-obviousness can the integrity of the patent system be maintained. The Petition provides the thorough prior art analysis that was missing from prosecution and is necessary for a fair, accurate assessment of the '233 patent's validity.

B. The IPR Directly Remedies the Examiner's Material Error

This Petition squarely addresses the Examiner's oversight by presenting invalidity Grounds 1-3 based on Lugthart and Ground 4 based on Cornelius prior art that the Examiner never considered. Pet. 16. The Lugthart grounds, when considered together, teach each limitation of the challenged claims. Likewise, the Cornelius ground also teaches each of these limitations.

Credo alleges that the contentions in the Petition "rely on expert testimony to gap-fill prior art disclosures in addressing limitation [1.e]." Request, 7. However, the brief does not provide any detailed explanation or analysis supporting the claim that the Petition overly relied on expert testimony. In any event, Credo's conclusory allegation is incorrect. As explained below and in more detail in the Petition, the prior art teaches limitation [1.e] as well as other limitations with solid support.

With respect to the Lugthart-706 grounds, Lugthart teaches an AEC with every limitation of the independent claims. For Lugthart, the reference discloses

an active electrical cable with transceivers at both ends, each capable of multiplexing and de-multiplexing signal data. Pet. 23. Its transmitting-side transceiver uses an FIR filter to perform pre-equalization on signals before transmission, directly compensating for channel losses. *Id.* at 33-37. To the extent Credo disputes certain aspects, Gorecki provides additional teachings for storing preset equalizer coefficients in non-volatile memory—a routine, well-known technique. *Id.* at 38.

The Cornelius-based ground reflects the Intel-Apple collaboration on Thunderbolt. Cornelius, an Intel reference, teaches an active cable with CDR circuitry that “retime[s] data” and performs pre-equalization on the transmitting side. Pet. 60-61. Samaan, an Apple reference, further describes retimer implementation details, including clock and data recovery and FIR filters used for pre-equalization. *Id.* at 63, 66-68, 86. Gorecki teaches storing equalizer coefficients in non-volatile memory. *Id.* at 86.

The Petition’s grounds directly remedy the material error made during examination by supplying the rigorous prior art review that was lacking. Institution is necessary to ensure that the ’233 patent undergoes a complete and proper patentability analysis in light of the full, pertinent prior art record.

IV. There Are No Settled Expectations That Warrant Denial Because the '233 Patent Issued Less Than Five Years Ago

Credo cannot claim “settled expectations” for the '233 patent, which issued less than five years ago, on December 29, 2020. The Director’s decisions uniformly reject discretionary denial based on settled expectations for patents less than six years old. *Berkshire Hathaway Energy v. Birchtech*, IPR2025-00274, Paper 23, at 3 (Dir. July 2, 2025) (no “strong settled expectations” for 2019 and 2020 patents); *Cambridge Indus. USA v. Applied Optoelectronics*, IPR2025-00434, Paper 11, at 2-3 (Dir. June 26, 2025) (no settled expectations for 2019 and 2020 patents); *Webgroup Czech Republic v. Dish Technologies*, IPR2025-00467, Paper 14, at 2 (Dir. July 16, 2025) (no settled expectations for 2019 and 2021 patents); *Zhuhai CosMX Battery Co. v. Ningde Amperex Technology*, IPR2025-00385, Paper 9, at 2 (Dir. July 2, 2025) (no settled expectations for 2021 patent).

Credo’s argument that there is no “bright-line rule on when settled expectations become settled” is unavailing. Request, 8. Recent PTAB precedent has established a settled expectations period of ***at least six years*** post-issuance. *Shenzhen Tuozhu Technology Co., Ltd. v. Stratasys, Inc.*, IPR2025-00438, Paper 10 at 2 (Jul. 17, 2025) (no “strong settled expectations” where patent was in force under five years); *Kahoot! AS v. Interstellar, Inc.*, IPR2025-00696, Paper 12 at 2 (Jul. 31, 2025) (“strong settled expectations” where patent was “in force ***for over***

six years”) (emphasis added). Credo’s cited decision in *Dabico Airport Solutions Inc v. HydraFacial LLC* involved a patent that was “in force almost *eight years*.” IPR2025-00408, Paper 21 at 3 (June 18, 2025). The Director further recognized that 35 U.S.C. § 286, which specifies a six-year damages period, “align[ed] with other approaches to settled expectations and incentives.” *Id.* at 3; *see iRhythm Technologies v. Welch Allyn*, IPR2025-00363, Paper 10, at 3 (Dir. Jun. 6, 2025) (“settled” over 12 years); *see also Intel v. Proxense*, IPR2025-00327, Paper 12, at 2-3 (Dir. Jun. 26, 2025) (“settled” over 9 years). None of these authorities support “settled expectations” for the ’233 patent, which issued less than five years before the Petition was filed.

Further, Credo’s statement that it “has invested in, relied on, and commercialized the challenged patents for half a decade” is irrelevant to the settled expectation analysis. Request, 8. Credo has not cited any authority supporting the application of settled expectations in circumstances where the patent is less than six years old and the dispute involves direct industry competitors rather than non-practicing entities.

Moreover, Marvell is an active competitor in the AEC market and filed this Petition with diligence and before being sued for patent infringement, in line with Patent Office guidance favoring early PTAB review and before any litigation involving the ’233 patent. *See* Ex-1036, 000002 (“[W]e want to incentivize these

early [post-grant review] challenges . . . wait[ing] until . . . sued for infringement . . . is not what the AIA intended.”).

V. Credo’s Statement that Marvell Does Not Infringe the ’233 Patent Does Not Warrant Denying Institution

Credo contends that institution is unnecessary, arguing: “Credo has publicly stated that Petitioner Marvell by itself does not infringe the ’233 Patent. Given these circumstances, neither Marvell nor its customers face any further risk of infringing the ’233 Patent, and it would be a waste of Board time and resources to proceed with this IPR.” Request, 2. Credo further asserts: “[b]ecause Credo has never asserted the ’233 Patent against Marvell and has withdrawn its ’233 patent infringement allegations against Marvell’s customers in the ITC Investigation, it would be a waste of Board resources to proceed with this IPR.” Request, 1. In the related ITC investigation, Credo similarly noted: “Credo has not accused Marvell of violating Section 337 or infringing any of the Asserted Patents . . . Marvell does not make active electrical cable (“AEC”) systems (the accused products), and Marvell’s parts have many uses other than AEC systems. There simply is no legal threat to Marvell.” Ex-2002, 7-8.

But Credo has not withdrawn its infringement allegations in district court, and has refused to confirm that its public statements evidence a covenant not to sue Marvell and its customers on the ’233 patent. Credo has not taken any action to

dismiss with prejudice its claims for infringement based on the '233 patent in the two pending cases against Marvell's customers. *See Credo Semiconductor Inc. v. Molex, LLC*, Case No. 1:25-cv-00316 (D. Del.); *Credo Semiconductor Inc. v. TE Connectivity PLC*, Case No. 2:25-cv-00297 (E.D. Tex.).

To date, Credo has offered a covenant not to sue Marvell directly for infringement of the '233 patent, but has not provided any covenant that would extend to Marvell's customers or cover claims of infringement based on products supplied by Marvell.

VI. Inter Partes Review Is An Appropriate Use of the Board's Resources in View of Compelling National Security, Economic, and Public Interest Considerations

Credo asserts that the '233 patent covers high-speed cables essential for artificial intelligence data centers (Request, 4-5), yet its litigation strategy against Marvell's customers in the ITC and two district courts is aimed at suppressing competition among leading U.S. AEC suppliers—threatening artificial intelligence infrastructure essential to national security and economic growth. The imperative to support national security and economic interests far outweigh any argument for discretionary denial.

A. National Policy Demands Patent Review for AI Leadership

Executive Order 14179 calls for the U.S. to “sustain and enhance America's global AI dominance” for economic competitiveness and national security. Ex-

1045, 000001. OMB Memorandum M-25-21 instructs agencies to “remove barriers to innovation” and speed AI deployment. Ex-1046, 000001-2, 000005. The Commerce Department recognizes AI’s critical national security role and has committed to identifying vulnerabilities and threats to these systems. Ex-1047, 000001-2. The ’233 patent, as asserted, directly conflicts with these goals by hindering market access and innovation in foundational technologies needed for AI leadership.

B. The ’233 Patent Targets Foundational AI Technologies

Credo asserts the ’233 patent against AECs, which are a backbone of high-speed, energy-efficient data center connectivity. Ex-2003, ¶¶18-21, 42; Ex-1049 (accusing AECs); Ex-1044, 000001 (withdrawing claims 7, 14, and 20 for the ’233 patent). It is undisputed that AECs are indispensable for scaling modern, AI-driven networks and offer substantial cost and power savings over alternatives. Request, 4-5; Ex-2003, ¶¶1-19; Ex-2003, 3; Ex-2004, 1-2. Credo’s aggressive assertion threatens access to these critical technologies.

C. National Security and Economic Interests Strongly Favor Institution

The Director’s March 26, 2025 memorandum confirms “[c]ompelling economic... or national security interests” weigh against discretionary denial. Ex-1048, 000002. PTAB review is essential to prevent unpatentable claims from

bottlenecking economic progress and hampering AI infrastructure. *Cuozzo Speed Techs., L.L.C. v. Lee*, 579 U.S. 261, 279-80 (2016); *Thryv, Inc. v. Click-To-Call Techs., LP*, 590 U.S. 45, 54 (2020).

The '233 patent was asserted not only against Marvell's products but broadly across numerous companies building out the U.S. AEC industry—directly targeting components foundational to national AI infrastructure. Ex-2003, ¶¶2, 14-21. Credo's actions threaten to inflate costs and restrict the availability of crucial AECs.

The Director should deny the Request and the Board should review the petition on the merits, allowing the Office to fulfill its mandate to remove barriers to responsible AI deployment and to uphold U.S. technological leadership.

VII. Conclusion

Petitioner Marvell respectfully requests that Patent Owner's discretionary denial request be denied.

Respectfully submitted,

SHEPPARD, MULLIN,
RICHTER & HAMPTON LLP

/Harper Batts/

Harper Batts (Reg. No. 56,160)
Attorney for Petitioner

CERTIFICATE OF COMPLIANCE

This Petitioner's Opposition Brief to Patent Owner's Request for Discretionary Denial of Institution of *Inter Partes* Review complies with the limitation of 20 pages, as counted using the Microsoft Word software that was used to prepare this paper, in accordance with the Interim Director Discretionary Process III.C.iii.

Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on November 13, 2025, true and correct copies of the Petitioner's Opposition Brief to Patent Owner's Request for Discretionary Denial of Institution of *Inter Partes* Review and Exhibits 1036-1049 were served in their entirety via email on all parties to this proceeding at the addresses indicated:

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