PUBLIC VERSION

[redacted]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CIRRUS LOGIC, INC. and
OMNIVISION TECHNOLOGIES, INC.
,
Petitioner,
v.

GREENTHREAD LLC,
Patent Owner.

Case No. IPR2024-00021
Patent No. 11,121,222

PETITIONER'S RESPONSIVE POST-HEARING BRIEF CONCERNING BOARD-ORDERED DISCOVERY

I. INTRODUCTION

The Board ordered GlobalFoundries U.S., Inc. ("GF"), Cirrus Logic, Inc. ("CL"), and OmniVision Technologies, Inc. ("OV") (collectively, "Petitioner") to produce sales and indemnification agreements with Intel concerning the Intel Accused Products ("IAPs"), as well as "[d]ocuments sufficient to show the asserted privity relationship between Petitioner and Intel, including any new declaration(s)." Through declarations and depositions, Petitioner has confirmed that Petitioner has not provided any IAPs (or any component thereof) to Intel. Petitioner does not have any sales or indemnification agreements with Intel or indemnity obligations to Intel for the IAPs. Not surprisingly, Intel neither sought indemnity from Petitioner nor contacted any Petitioner regarding *Greenthread, LLC v. Intel Corp.*, 6:22-cv-105 (W.D. Tex.) ("Intel Litigation"). No Petitioner either controlled or was in a position to control Intel's defense. Indeed, each Petitioner was not even aware of the Intel Litigation until PO filed complaints against CL and OV. Thus, Petitioner is not in privity with Intel, and the IPR petition is not time-barred.

PO now retracts its allegations that Petitioner sold the IAPs to Intel but critiques Petitioner's investigation regarding unidentified components of IAPs. PO's criticisms are rooted in unsubstantiated allegations, not Petitioner's investigations of the relationship with Intel. In the Intel Litigation, PO accused Intel's processors and flash memories and provided detailed teardowns of Intel's products. Neither the

infringement contentions nor the teardown charts prepared by PO for the Intel Litigation refer to any products or components of the IAP that are supplied by any Petitioner. Devoid of any basis to allege privity between Petitioner and Intel based on the IAPs, PO now attempts to base its privity theory on unnamed and unidentified components that were somehow supplied by Petitioner to Intel. Even though Intel never sought indemnity from Petitioner for such unidentified components, PO argues that Petitioner tied itself legally to Intel due to the Intel Litigation. Notably, PO fails to provide any facts to suggest that Petitioner is in privity with Intel. PO's allegations are purely conjectural, and PO fails to offer any legitimate basis to conclude that Petitioner would be in privity with Intel.

When the Board asked PO what discovery it sought to substantiate its privity theory, PO stated that "no additional discovery is needed." *E.g.*, IPR2024-00017, Ex. 3011. Nonetheless, the Board stepped in to address the Director's concerns and ordered Petitioner to provide relevant documents, and if none existed, to provide a declaration to that effect. Petitioner complied with the Board's Order and made declarants available for deposition. During the depositions, PO did not identify any components that Petitioner allegedly provides to Intel or share the so called "parts list" with the witnesses. Instead, the deposition transcripts reveal mere attempts to suggest uncertainty in Petitioner's ability to prove a negative, i.e., that Petitioner has no relationship with Intel concerning the IAPs or the Intel Litigation.

Petitioner respectfully submits that the factual record is sufficiently complete to establish that there is simply no basis for PO's privity arguments.

II. LEGAL STANDARD

"[T]he standards for the privity inquiry must be grounded in due process." *WesternGeco LLC v. ION Geophysical Corp.*, 889 F.3d 1308, 1319 (Fed. Cir. 2018). A prior litigant may be a privy to a petitioner if the petitioner had a full and fair opportunity to litigate the validity of the patent in the prior litigant's lawsuit, or if the petitioner is serving as a proxy of the prior litigant. *Id.*

III. PETITIONER IS NOT IN PRIVITY WITH INTEL[1]

The discovery provided by Petitioner, in compliance with the Board's order, confirms that Petitioner was never in privity with Intel.

A. Petitioner has not supplied the IAPs to Intel

No Petitioner has supplied any IAPs. Ex. 2021, 5-9. The IAPs consist of certain Intel processors and flash memory products. Petitioner's witnesses testified that Petitioner has never supplied any IAPs to Intel. Because PO cannot dispute that testimony, it now argues that it never made those allegations to begin with.

GF: GF is a leading semiconductor foundry specializing in manufacturing integrated circuits designed by other companies. Ex. 2080 (Ng Decl.), ¶3. GF's

[1] PO alleges that Petitioner is in privity with [redacted], but PO presents no basis for its allegations. Petitioner is not in privity with [redacted].

witness, Mr. Ng, confirmed that GF has never manufactured or sold any IAPs to Intel. Ex. 2080 (Ng Decl.), ¶8; Ex. 2083 (Ng Tr.), 45:20-46:2. Mr. Ng further explained that GF lacks the process technology to manufacture Intel processors and flash memories enumerated in PO's infringement contentions. Ex. 2083 (Ng Tr.), 15:12-15, 48:11-17. Because GF lacks the process technology to manufacture the IAPs, GF cannot possibly manufacture those products.

CL: Likewise, CL's witness, Ms. Leach, confirmed that CL has never sold any IAPs to Intel. Ex. 2081 (Leach Decl.), ¶6; Ex. 2084 (Leach Tr.), 22:8-23:20, 43:14-22, 45:1-8, 66:11-68:8, 69:8-70:18.

OV: OV's General Counsel, Mr. Cleary, confirmed that OV does not design and is not involved in the design of processors or flash memory products, and has

never sold any IAPs to Intel. Ex. 2082 (Cleary Decl.), ¶¶ 7-8. OV has not made any sales to Intel since 2020. Ex. 2085 (Cleary Tr.), 10:22-11:1, 27:19-28:8. OV has only supplied image sensors to Intel. Ex. 2085 (Cleary Tr.), 25:6-11.

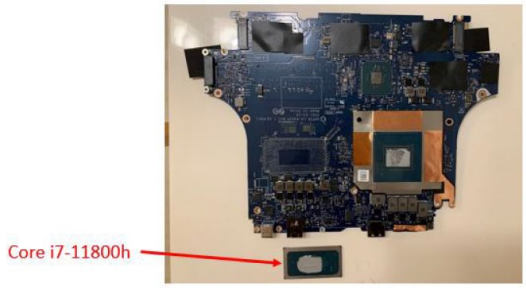
Faced with the weight of the evidence, PO does not and cannot dispute that Petitioner does not supply the IAPs to Intel. Instead, PO claims that it has never accused Petitioner of selling the IAPs to Intel in the first place. Paper 89 ("Br."), 7 ("All these declarants 'confirmed' was that Petitioners do not sell the Intel Accused Products (IAPs) *to* Intel, something that PO has never alleged."). PO now states that "PO has never accused CL—or OV/GF—of selling the literal, actual IAPs *to* Intel."). Br. at 8. To the contrary, the record indisputably demonstrates that PO had repeatedly and unambiguously accused Petitioner of supplying the IAPs to Intel. *See, e.g.*, Paper 44 (POR), 53-54 ("GF products, such as accused Intel or Samsung chips, may actually be Licensees' products, not just components"); IPR2024-00001, Paper 83 (2025 Director Review Request), 10 ("PO produced evidence that tends to show that GF fabricated Intel chips that were accused (or could have been accused) in the *Intel/Dell/Sony litigation*").

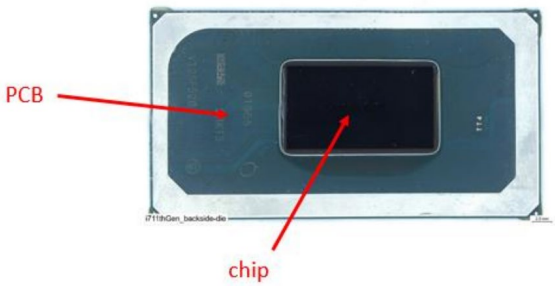
B. Petitioner has not supplied any components of the IAPs to Intel

Changing its course, PO now resorts to speculating that Petitioner may have supplied some unnamed components of products accused in Intel Litigation, Br. at 8, and conjures a "parts list for the IAPs," Br. at 10. Notably, PO neither identifies

any components of the IAPs that are provided by the Petitioner, nor does it share the so called "parts list." This is clearly a red herring. Each Petitioner has stated under penalty of perjury and under oath that it has not supplied any components of the IAPs. Ex. 2080 (Ng Decl.), ¶8; Ex. 2083 (Ng Tr.), 15:16-18, 48:11-17; Ex. 2081 (Leach Decl.), ¶6; Ex. 2084 (Leach Tr.), 43:22-45:8, 70:5-18 Ex. 2082 (Cleary Decl.), ¶¶7, 12; Ex. 2085 (Cleary Tr.), 34:5-35:12.

PO's own infringement contentions from the Intel Litigation confirm that IAPs do not have any components that are supplied by the Petitioner. Exhibits to those contentions demonstrate that, as part of the Intel Litigation, PO procured a wide variety of Intel processors and flash memories and conducted detailed teardown analyses of those products, i.e., PO disassembled those products and analyzed the internal structure of the IAPs. Ex. 2021, 48-112. For example, Exhibit A-1 demonstrates that PO procured a Dell laptop, extracted the Intel processor (i.e., Core i7) and disassembled it to analyze the components of the Intel processor:





Ex. 2021, 53, 53. In Exhibit A-2, PO analyzed another Intel processor and stated that the Intel SRK02 Core i7 (Tiger Lake) "was built on 300 mm wafer using Intel's third

generation 10 nm FinFET . . . CMOS process." Ex. 2021, 77. PO's infringement contentions also confirm that PO was accusing the structure of an L2 cache, which is part of the integrated circuit that forms the Intel processor, and not any component that can be supplied to Intel by third parties, such as Petitioner. Ex. 2021, 54-55, 61-65. In short, PO's own infringement contentions from the Intel Ligation confirm that PO was aware that the accused Intel processors are a single chip and do not contain any components that are supplied by any third parties, much less Petitioner. Otherwise, PO would have eagerly identified such components and suppliers of such components in its infringement contentions.

Mirroring the Intel processors, PO stated in its infringement contentions that ***Intel*** designs and fabricates the accused flash memory products. Specifically, PO alleged that "flash memory products [are] designed or manufactured (in whole or in part) by Intel" and excerpted the image below stating that "exemplary product was manufactured by Intel and bears Intel die marks." Ex. 2021, 8.

Figure 1.1.2: Die markings (optical), 16 nm MLC NAND flash memory of IMFT

Ex. 2021, 8. PO stated that flash memory products manufactured by Intel "have the same or similar structures, features, or functionalities as" the Micron NAND flash

memory analyzed in Exhibits B-1 through B-6 and statements in these exhibits were equally applicable to Intel memory products. Ex. 2021, 8. Exhibit B-1 provides a teardown of a flash memory and demonstrates that the flash memory is a single die that does not incorporate any components supplied by Petitioner to Intel. Ex. 2021, 114-17.

Each witness from Petitioner provided a declaration and then testified during deposition that Petitioner does not provide any components that are part of the IAPs.

GF: Mr. Ng's testimony confirms that GF does not and cannot provide any components that are included in the IAPs. The IAP processors are manufactured as one piece of silicon (e.g., a 300 mm wafer) which does not have any components from third parties. Specifically, Mr. Ng testified that "[p]rocessor is one piece. So either you make it or you don't, so there are no different parts of it." Ex. 2083 (Ng Tr.), 16:1-3. As Mr. Ng explained, none of these products can be incorporated into an IAP because they are not designed to be components of a microprocessor or flash memory. Ex. 2083 (Ng Tr.), 16:1-3, 48:5-17. Nor can any other products made by GF be a component of an IAP. Indeed, GF simply lacks the process technology to manufacture any components of the IAPs. Ex. 2083 (Ng Tr.), 15:16-18, 48:11-17.

CL: Ms. Leach confirmed that CL has never sold any component of the IAPs to Intel. Ex. 2084 (Leach Tr.), 43:14-45:8, 70:5-18; Ex. 2081 (Leach Decl.), ¶6. As PO appears to admit, audio chips are used alongside processors, but they are separate components and not integrated into processors or flash memory. IPR2024-00001, Paper 83 (2025 Director Review Request), 3 ("CL collaborates with Intel to manufacture audio chips that are compatible with Intel's processors for use in laptops."). Thus, PO's argument that CL's audio amps and DACs could be included in Intel's product is erroneous.

OV: Mr. Cleary also repeatedly explained that PO's components argument is misguided because OV supplied image sensors, which cannot function within a processor or flash memory device. Ex. 2085 (Cleary Tr.), 25:6-11, 27:10-13, 36:2-3, 45:22-46:4, 50:14-52:1. An image sensor must receive light, and as such, would not be a component of a processor or flash memory. *Id.* at 51:6-12. As PO appears to admit, image sensors are separate components and not integrated into processors or flash memory. IPR2024-00001, Paper 83 (2025 Director Review Request), 10 ("PO produced evidence that tends to show that OV sold image sensor chips (directly or indirectly) to Intel for use in Intel's camera systems.").

Despite PO's extensive familiarity with the IAPs—having conducted a

detailed teardown analysis—PO is unable to specify which components, if any, might have been supplied by Petitioner. Petitioner's investigations and the declarations confirm what PO has known all along—the Petitioner does not provide any components to Intel that are integrated into the IAPs.

C. Petitioner lacks any agreements with Intel regarding the IAPs

Since Petitioner has not supplied any IAPs (or components thereof) to Intel, there are no agreements pertaining to the IAPs, as confirmed by Petitioner's investigations. Ex. 2080 (Ng Decl.), ¶8; Ex. 2084 (Leach Tr.), 55:17-56:5; Ex. 2081 (Leach Decl.), ¶6; Ex. 2082 (Cleary Decl.), ¶¶8, 12. Agreements concerning products other than the IAPs are irrelevant and not subject to the Board's Order. Paper 83, 6 n.6.

D. Petitioner neither controlled nor was in a position to control Intel's defense in its litigation with PO

Because Petitioner has not supplied any IAPs (or any components thereof) to Intel, Intel never contacted Petitioner to request indemnification about the Intel Litigation. Petitioner's declarants confirmed that Intel did not make any indemnity demands to any Petitioner. Ex. 2080 (Ng Decl.), ¶¶11-12; Ex. 2083 (Ng Tr.), 49:6-21; Ex. 2081 (Leach Decl.), ¶¶7, 9; Ex. 2084 (Leach Tr.), 62:8-21; Ex. 2082 (Cleary Decl.), ¶¶ 9, 11, 12. Lack of demand from Intel simply underscores the fact that Petitioner has not supplied the IAPs (or any components thereof). If Intel believed that Petitioner supplied any of the accused technology, Intel would have been highly

motivated to ask Petitioner to indemnify Intel for those claims.

Lacking any relationship with Intel pertaining to the IAPs, Petitioner did not have any reason to track the Intel Litigation. The declarants testified that each Petitioner learned about the Intel Litigation with PO only after PO filed complaints against CL and OV. Ex. 2081 (Leach Decl.), ¶8; Ex. 2082 (Cleary Decl.), ¶¶9, 10; Ex. 2080 (Ng Decl.), ¶¶10-11.

Thus, Petitioner neither controlled nor was in a position to control Intel's defense in the Intel Litigation.

IV. PO'S ARGUMENTS ARE MERITLESS

A. Petitioner's declarations are not attorney argument

Contrary to PO's assertion, Petitioner's declarations are not mere attorney argument. After preparing the declarations with the assistance of counsel, Petitioner's witnesses signed their declarations "under penalty of perjury that the foregoing is true and correct." Ex. 2083 (Ng Tr.), 11:6-17; Ex. 2080 (Ng Decl.), ¶13; Ex. 2084 (Leach Tr.), 11:4-12:7, 71:13-72:4, 73:11-20; Ex. 2081 (Leach Decl.), ¶11; Ex. 2085 (Cleary Tr.), 8:15-9:1; Ex. 2082 (Cleary Decl.), ¶13; *cf. Hart v. Hairston*, 343 F.3d 762, 765 (5th Cir. 2003) (holding that "a signed declaration under penalty of perjury that 'the foregoing is true and correct'" is competent summary judgment evidence). Petitioner's witnesses then provided testimony under oath regarding their declarations and their investigation about their employer's relationship with Intel.

PO fails to point out any inconsistency or error in these declarations or in the testimony beyond simple speculation of what could have been done.

B. Petitioner's declarants provided declarations based on complete knowledge of the relationship with Intel

PO's claim that the declarants "admitted they were not knowledgeable about—and had not investigated—many of the key issues addressed by the Board" is simply incorrect. Each witness possesses knowledge, based on their investigation and personal knowledge, about their employer's relationship with Intel.

GF: Mr. Ng has comprehensive knowledge of GF's relationship with Intel, based on his responsibilities at GF. Ex. 2083 (Ng Tr.), 32:14-21; Ex. 2080 (Ng Decl.), ¶¶4-5, 11. Mr. Ng was the Intel account manager between 2022 to 2024. Ex. 2083 (Ng Tr.), 12:10-16. Mr. Ng testified that, if GF supplied any products to Intel, he would know in view of his role at GF. Ex. 2083 (Ng Tr.), 12:10-16. He also testified that he would have been aware if Intel had requested indemnification from GF. Ex. 2080 (Ng Decl.), ¶11. Although Sean Chen of GF is presently responsible for the Intel account, Ex. 2083 (Ng Tr.), 17:7-18:4, Mr. Ng remains knowledgeable about the Intel relationship because Mr. Chen reports to Mr. Ng, and the two work closely together. Ex. 2083 (Ng Tr.), 21:10-22:6.

In view of his personal knowledge, Mr. Ng did not need to perform any further investigation within GF or contact Intel. Ex. 2083 (Ng Tr.), 13:20-14:4, 14:17-15:1.

[redacted] Thus, Mr. Ng had no reason to contact Intel, distributors, or other GF employees when preparing his declaration. [redacted] Likewise, in response to PO's questions about Mr. Chen, Mr. Ng testified that he did not need to confer with Mr. Chen because Mr. Chen reports to him and Mr. Ng is still knowledgeable about the Intel account. Ex. 2083 (Ng Tr.), 21:10-16. When asked whether Mr. Ng checked with other GF entities, he testified that there was no need because he was aware of all business that GF conducts with Intel. Ex. 2083 (Ng Tr.), 28:2-29:3. [redacted]

The fact that PO quibbles about Mr. Ng's use of the word "unaware" as opposed to "has never" in his declaration simply underscores the weakness of PO's arguments. Mr. Ng clarified that what he means by "unaware" is that "GF doesn't make or sell any of these components [of the IAPs]." Ex. 2083 (Ng Tr.), 13:13-15; *see also id.*, 44:7-14.

CL: CL's witness, Ms. Leach, is the manager of sales administration, and

manages all of the in-house sales systems and CL's relationships with its distributors and third-party sales representatives. Ex. 2084 (Leach Tr.), 13:1-12; Ex. 2081 (Leach Decl.), ¶¶2-3. To prepare her declaration, Ms. Leach reviewed CL's systems for all of the billing records to Intel. Ex. 2084 (Leach Tr.), 22:14-23:20, 32:15-18. Based on her investigation, Ms. Leach did not need to perform any further investigation. CL's sales systems even include information about the sales activities of CL's resellers. Ex. 2084 (Leach Tr.), 47:1-4. Ex. 2084 (Leach Tr.), 36:11-16.

OV: Mr. Cleary is OV's General Counsel and has served in this role at all relevant times to PO's privity allegations. Mr. Cleary would be personally involved in any indemnification or other arrangement in which OV would exert or delegate control of a litigation defense, and affirmatively stated that no such arrangement exists with Intel. Ex. 2082 (Cleary Decl.), ¶¶ 11, 12. Mr. Cleary also searched the appropriate databases within the company and conferred with the Chief Financial Officer of OV to verify that there were no sales whatsoever to Intel since 2020 as part of his investigation. Ex. 2085 (Cleary Tr.), 9:15-11:1. PO's arguments that further searching should have occurred belies common sense as OV image sensors cannot function within the IAPs. *Id.* at 35:9-36:3, 51:6-12.

C. Petitioner did not need to provide additional documentary evidence

Beyond the declarations and witness testimony through depositions, Petitioner

did not need to provide any other evidence to prove the negative. Contrary to PO's assertion, Petitioner did not need to produce any purchase orders or billing records, none of which concerned the IAPs (or components thereof).

D. Even if Petitioner were to indemnify Intel for non-IAP products, Petitioner would not be in privity with Intel

A prior litigant may be a privy to a petitioner if the petitioner had a full and fair opportunity to litigate the validity of the patent in the prior litigant's lawsuit, or if the petitioner is serving as a proxy of the prior litigant. *WesternGeco LLC*, 889 F.3d at 1319. As discussed above, Petitioner did not receive notice or have the opportunity to litigate in Intel's prior case, and Petitioner is not acting as a proxy for Intel.

V. CONCLUSION

Petitioner has demonstrated beyond dispute that it is not in privity with Intel. Therefore, Petitioner's IPR petition is not time-barred.

Date: August 26, 2025

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §42.6(e), I certify that on August 26, 2025, Petitioner's Responsive Post-Hearing Brief Concerning Board-Ordered Discovery was served by email on the following counsel for Patent Owner:

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