**UNITED STATES INTERNATIONAL TRADE COMMISSION**
**WASHINGTON, D.C.**

| | |
|---|---|
| **In the Matter of**<br><br>**CERTAIN DYNAMIC RANDOM ACCESS MEMORY (DRAM) DEVICES, PRODUCTS CONTAINING THE SAME, AND COMPONENTS THEREOF** | **Investigation No. 337-TA- _____** |

# COMPLAINT UNDER SECTION 337 OF THE TARIFF ACT OF 1930, AS AMENDED

**Complainant:**

Netlist, Inc.
111 Academy Way
Suite 100
Irvine, CA 92617

**Counsel for Complainant:**

Daniel E. Yonan
Donald R. Banowit
William H. Milliken
Richard M. Bemben
Lauren A. Watt
STERNE, KESSLER, GOLDSTEIN & FOX PLLC
1101 K Street NW, 10th Floor
Washington DC 20005
Tel.: (202) 371-2600

Jason Sheasby
Annita Zhong, PhD
Andrew Strabone
Lisa Glasser
IRELL & MANELLA LLP
1800 Avenue of the Stars, Suite 900
Los Angeles, CA 90067
Tel.: (310) 277-1010

**Proposed Respondents:**

Samsung Electronics Co., Ltd.
129 Samsung-ro, Yeongtong-gu,
Suwon, Gyeonggi-do, 443-742
Republic of Korea

Samsung Electronics America, Inc.
6625 Excellence Way
Plano, Texas 75023

Samsung Semiconductor, Inc.
6625 Excellence Way
Plano, Texas 75023

Google LLC
1600 Amphitheatre Parkway
Mountain View, California 94043

Super Micro Computer, Inc.
980 Rock Ave.
San Jose, California 95131

## TABLE OF CONTENTS

**Page**


I. INTRODUCTION ..... 1

II. COMPLAINANT ..... 4

III. RESPONDENTS ..... 6

A. Samsung Respondents ..... 6

B. Google ..... 7

C. Super Micro ..... 9

IV. THE TECHNOLOGY AND PRODUCTS AT ISSUE ..... 9

V. THE ASSERTED PATENTS AND NON-TECHNICAL DESCRIPTIONS OF THE INVENTIONS ..... 10

A. The ’366 and ’731 Patents: Memory Modules with Power Management/Signal Correction ..... 10

1. U.S. Patent No. 12,373,366 ..... 11

2. U.S. Patent No. 10,025,731 ..... 12

B. The ’608, ’523, and ’035 Patents: Memory Modules with Data Buffering ..... 13

1. U.S. Patent No. 10,268,608 ..... 13

2. U.S. Patent No. 10,217,523 ..... 14

3. U.S. Patent No. 9,824,035 ..... 16

C. U.S. Patent No. 12,308,087: High-Bandwidth Memory ..... 17

1. Identification and Ownership of the ’087 Patent ..... 17

2. Foreign Counterparts to the ’087 Patent ..... 18

3. Non-Technical Description of the ’087 Patent ..... 18

VI. LICENSES ..... 19

VII. RESPONDENTS’ INFRINGEMENT OF THE ASSERTED PATENTS ..... 19

A. Infringement of U.S. Patent No. 12,373,366 ..... 19

B. Infringement of U.S. Patent No. 10,025,731 ..... 19

C. Infringement of U.S. Patent No. 10,268,608 ..... 20

D. Infringement of U.S. Patent No. 10,217,523 ..... 20

E. Infringement of U.S. Patent No. 9,824,035 ..... 20

F. Infringement of U.S. Patent No. 12,308,087 ..... 20

G. Indirect Infringement ..... 21

VIII. SPECIFIC INSTANCES OF UNFAIR IMPORTATION AND SALE ..... 21

IX. HARMONIZED TARIFF SCHEDULE NUMBERS ..... 25

X. THE DOMESTIC INDUSTRY RELATING TO THE ASSERTED PATENTS ..... 25

A. Technical Prong ..... 25

B. Economic Prong ..... 26

1. Netlist's Domestic Activities ..... 26

2. Licensee SK hynix's Domestic Activities ..... 28

XI. RELATED LITIGATION ..... 30

A. '366 Patent ..... 30

B. '731 Patent ..... 30

C. '608 Patent ..... 31

D. '523 Patent ..... 32

E. '035 Patent ..... 33

F. '087 Patent ..... 33

XII. RELIEF REQUESTED ..... 34

## EXHIBIT LIST

| No. | Description |
|---|---|
| 1 | List of Exemplary Accused Products |
| 2 | U.S. Patent No. 12,373,366 |
| 3 | Assignment of U.S. Patent No. 12,373,366 as recorded in parent application 17/328,019 |
| 4 | U.S. Patent No. 10,025,731 |
| 5 | Assignment of U.S. Patent No. 10,025,731 as recorded in parent application 12/422,853 |
| 6 | U.S. Patent No. 10,268,608 |
| 7 | Assignment of U.S. Patent No. 10,268,608 as recorded in application 15/820,076 |
| 8 | U.S. Patent No. 10,217,523 |
| 9 | Assignment of U.S. Patent No. 10,217,523 as recorded in parent application 12/422,925 |
| 10 | U.S. Patent No. 9,824,035 |
| 11 | Assignment of U.S. Patent No. 9,824,035 as recorded in application 15/426,064 |
| 12 | U.S. Patent No. 12,308,087 |
| 13 | Assignment of U.S. Patent No. 12,308,087 as recorded in parent application 15/602,099 |
| 14 | List of Foreign and Domestic Counterparts to Asserted Patents |
| 15 | Public Version of List of Licensee(s) to One or More of the Asserted Patents (Redacted in Its Entirety) |
| 15C | Confidential Version of List of Licensee(s) to One or More of the Asserted Patents |
| 16 | Public Version of Infringement Chart for U.S. Patent No. 12,373,366 (Redacted in Its Entirety) |
| 16C | Confidential Version of Public Version of Infringement Chart for U.S. Patent No. 12,373,366 |
| 17 | Public Version of Infringement Chart for U.S. Patent No. 10,025,731 (Redacted in Its Entirety) |
| 17C | Confidential Version of Infringement Chart for U.S. Patent No. 10,025,731 |
| 18 | Public Version of Infringement Chart for U.S. Patent No. 10,268,608 (Redacted in Its Entirety) |
| 18C | Confidential Version of Infringement Chart for U.S. Patent No. 10,268,608 |

| No. | Description |
|---|---|
| 19 | Public Version of Infringement Chart for U.S. Patent No. 10,217,523 (Redacted in Its Entirety) |
| 19C | Confidential Version of Infringement Chart for U.S. Patent No. 10,217,523 |
| 20 | Public Version of Infringement Chart for U.S. Patent No. 9,824,035 (Redacted in Its Entirety) |
| 20C | Confidential Version of Infringement Chart for U.S. Patent No. 9,824,035 |
| 21 | Public Version of Infringement Chart for U.S. Patent No. 12,308,087 (Redacted in Its Entirety) |
| 21C | Confidential Version of Infringement Chart for U.S. Patent No. 12,308,087 |
| 22 | Samsung, DRAM Module, Memory Modules for Extensive Use (last visited Sept. 25, 2025), https://semiconductor.samsung.com/dram/module/. |
| 23 | List of DDR5 RDIMMs, SODIMMs and UDIMMs exported from Samsung website https://semiconductor.samsung.com/dram/module/. |
| 24 | Receipt of the Domestic Purchase of Accused DDR5 RDIMMs, Part Number M321R8GA0BB0-CQKDS. |
| 25 | Receipt of the Domestic Purchase of Accused DDR5 RDIMMs, Part Number M321R8GA0PB2-CCPWF. |
| 26 | Samsung, Innovative Memory Solution: Samsung's MCRDIMM Targets High-Performance Computing (June 16, 2024), https://semiconductor.samsung.com/news-events/tech-blog/innovative-memory-solution-samsungs-mcrdimm-targets-high-performance-computing/. |
| 27 | Receipt of the Domestic Purchase of Accused DDR5 MRDIMM, Part Number M327R8GA0EB0-CLVXB. |
| 28 | Samsung, HBM, Next-Level Performance (last visited Sept. 25, 2025), https://semiconductor.samsung.com/dram/hbm/. |
| 29 | List of HBM2/2E and HBM3/3E High Bandwidth Memory exported from Samsung website https://semiconductor.samsung.com/dram/hbm/. |
| 30 | Samsung, Samsung Electronics Presents Vision for AI Memory and Storage at FMS 2025, Samsung Tech Blog (Aug. 21, 2025), https://semiconductor.samsung.com/news-events/tech-blog/samsung-electronics-presents-vision-for-ai-memory-and-storage-at-fms-2025/. |
| 31 | Bruno Ferreira, Samsung Earns NVIDIA Certification for its HBM3 Memory - Stock Jumps 5% as Company Finally Catches Up to SK hynix and Micron in HBM3E Production, Tom's Hardware (Sept. 22, 2025), https://www.tomshardware.com/tech-industry/samsung-earns-nvidias-certification-for-its-hbm3-memory-stock-jumps-5-percent-as-company-finally-catches-up-to-sk-hynix-and-micron-in-hbm3e-production. |

| No. | Description |
|---|---|
| 32 | Samsung 12H HBM3e Reportedly Clears NVIDIA Tests After 18-Month Setback, HBM4 Reaches Final Phase, TrendForce (Sept. 22, 2025), https://www.trendforce.com/news/2025/09/22/news-samsung-12h-hbm3e-reportedly-clears-nvidia-tests-after-18-month-setback-hbm4-reaches-final-phase//. |
| 33 | Wayne Williams, Samsung HBM Roadmap Shows Google Could Become NVIDIA's Fiercest Competitor in AI by 2026, but I Wonder What's Happening to Microsoft, techradar (Feb. 11, 2025), https://www.techradar.com/pro/samsung-hbm-roadmap-shows-google-could-become-nvidias-fiercest-competitor-in-ai-by-2026-but-i-wonder-whats-happening-to-microsoft. |
| 34 | Olivia Melendez, Now GA: C4 VMs with Local SSD, bare metal, and largetr shapes, on Intel Xeon 6, Google Cloud (July 31, 2025), https://cloud.google.com/blog/products/compute/c4-vms-based-on-intel-6th-gen-xeon-granite-rapids-now-ga. |
| 35 | Super Micro AS -8126GS-TNMR Datasheet |
| 36 | Super Micro AS -8125GS-TNMR2 Datasheet |
| 37 | TechInsight's Analysis of AMD's MI300X Reveals Samsung HBM3, TechInsights (last visited Sept. 25, 2025), https://www.techinsights.com/blog/techinsights-analysis-amds-mi300x-reveals-samsung-hbm3. |
| 38 | AMD, AMD Instinct MI350 Series and Beyond: Accelerating the Future of AI and HPC (June 12, 2025), https://www.amd.com/en/blogs/2025/amd-instinct-mi350-series-and-beyond-accelerating-the-future-of-ai-and-hpc.html. |
| 39 | Super Micro Hyper SuperServer SYS-212HA-TN Datasheet |
| 40 | Dylan Dougherty, Supermicro Hyper SuperServer SYS-212HA-TN Review (Intel Xeon 6 6980P), StorageReview (Jan. 24, 2025), https://www.storagereview.com/review/supermicro-hyper-superserver-sys-212ha-tn-review-intel-xeon-6-6980p. |
| 41 | Anton Shilov, Micron Unveils MRDIMMs for Intel Xeon 6: Up to 256GB DDR5-8800 Modules, Toms Hardware (July 19, 2025), https://www.tomshardware.com/desktops/servers/micron-unveils-mrdimms-for-intel-xeon-6-up-to-256gb-ddr5-8800-modules. |
| 42 | Public Version of Domestic Industry Chart for U.S. Patent No. 12,373,366 (Redacted in Its Entirety) |
| 42C | Confidential Version of Domestic Industry Chart for U.S. Patent No. 12,373,366 |
| 43 | Public Version of Domestic Industry Chart for U.S. Patent No. 10,025,731 (Redacted in Its Entirety) |
| 43C | Confidential Version of Domestic Industry Chart for U.S. Patent No. 10,025,731 |

| No. | Description |
|---|---|
| 44 | Public Version of Domestic Industry Chart for U.S. Patent No. 10,268,608 (Redacted in Its Entirety) |
| 44C | Confidential Version of Domestic Industry Chart for U.S. Patent No. 10,268,608 |
| 45 | Public Version of Domestic Industry Chart for U.S. Patent No. 10,217,523 (Redacted in Its Entirety) |
| 45C | Confidential Version of Domestic Industry Chart for U.S. Patent No. 10,217,523 |
| 46 | Public Version of Domestic Industry Chart for U.S. Patent No. 9,824,035 (Redacted in Its Entirety) |
| 46C | Confidential Version of Domestic Industry Chart for U.S. Patent No. 9,824,035 |
| 47 | Domestic Industry Chart for U.S. Patent No. 12,308,087 (Redacted in Its Entirety) |
| 48 | Public Version of Declaration of Gail Sasaki |
| 48C | Confidential Declaration of Gail Sasaki |
| 49 | SK hynix, HPE Discovery 2025: SK Hynix Showcases Server and Storage Tech Strategies for Leading the AI Era (Jul. 9, 2025), https://news.skhynix.com/hpe-discover-2025/. |
| 50 | SK hynix, Inc. Consolidated Financial Statements, March 31, 2025 and 2024 |
| 51 | SK hynix's US Sales Make Up Over 70% in Q1 on Rising AI Demand, The Korea Herald (May 16, 2025), https://www.koreaherald.com/article/10488669. |
| 52 | Ahn Sung-mi, SK Hynix Racks Up 70% of Sales in US on AI Chip Boom, The Korea Herald (Aug. 17, 2025), https://www.koreaherald.com/article/10555331#:~:text=Updated%20:%20Aug.,as%20US%20tech%20giant%20Nvidia. |
| 53 | SK hynix FY2025 Q2 Earnings Report, July 24, 2025 |
| 54 | SK hynix Purdue West Lafayette Project Pamphlet |
| 55 | SK hynix Fact Sheet |
| 56 | National Institute of Standards and Technology, SK hynix (Indiana) (last accessed Sept. 26, 2025), https://www.nist.gov/chips/sk-hynix-indiana-west-lafayette. |
| 57 | Project Neuron, SK hynix West Lafayette (last accessed Sept. 27, 2025), https://neuron.prf.org. |
| 58 | Comments of SK hynix on the Department of Commerce Notice of Request for Information (RFI) on "Incentives, Infrastructure, and Research and Development Needs To Support a Strong Domestic Semiconductor Industry", Submitted March 25, 2022 |
| 59 | Public Version of License Agreement Between Netlist and SK hynix (redacted in its entirety) |

| No. | Description |
| --- | --- |
| 59C | Confidential License Agreement Between Netlist and SK hynix |

## APPENDIX LIST

| No. | Description |
|---|---|
| A | Prosecution History of U.S. Patent No. 12,373,366 |
| B | Prosecution History of U.S. Patent No. 10,025,731 |
| C | Prosecution History of U.S. Patent No. 10,268,608 |
| D | Prosecution History of U.S. Patent No. 10,217,523 |
| E | Prosecution History of U.S. Patent No. 9,824,035 |
| F | Prosecution History of U.S. Patent No. 12,308,087 |

## I. INTRODUCTION

1. Complainant Netlist, Inc. ("Complainant" or "Netlist") is an Irvine, California-based provider of memory solutions. Netlist is not a large company, but its technological contributions in the memory space have been massive. Its cutting-edge innovations form the basis of much of the memory technology found in servers and personal computers today. If you have ever accessed data from a cloud server, chances are you have benefitted from Netlist's technology.

2. For more than two decades, Netlist has developed and sold high-performance memory products to some of the world's largest computing companies. And, for almost that long, Netlist has had to contend with rampant infringement of its intellectual property.

3. Samsung (defined below) is a prime example. Samsung previously held a license to Netlist's patent portfolio. But, in 2020, Samsung breached the license agreement (as two separate California juries have confirmed) and has been using Netlist's patented technology without permission ever since. These are not mere allegations; not one but *two* Texas juries have adjudged Samsung a willful infringer and awarded Netlist nine-figure damages awards. Yet Samsung continues to ship billions of dollars' worth of infringing products into the United States. Meanwhile, Google (defined below) (with whom Netlist has been embroiled in infringement litigation for almost twenty years now) and Super Micro (defined below)—also apparently unconcerned by federal-court infringement judgments—continue to import Samsung's infringing memory products and implement them in their own products and services. Respondents apparently believe that it is easier to infringe than to pay Netlist a fair price for its technology.

4. Netlist thus respectfully files this Complaint under Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, to stop the unlawful importation into the United States, sale for importation into the United States, and/or sale within the United States after importation of

certain dynamic random access memory (DRAM) devices, products containing the same, and components thereof that infringe valid and enforceable patents owned by Netlist.

5. The proposed Respondents are Samsung Electronics Co., Ltd. ("SEC)"; Samsung Electronics America, Inc. ("SEA"); Samsung Semiconductor, Inc. ("SSI") (collectively, "Samsung" or the "Proposed Samsung Respondents"); Google LLC ("Google"); and Super Micro Computer, Inc. ("Super Micro") (all collectively, "Respondents").

6. This Complaint is based on Respondents' unlawful acts regarding certain DRAM devices, products containing the same, and components thereof. The Accused Products include the following:

- Samsung's DDR5 generation Dual In-line Memory Modules (DIMMs), including:
    - Registered Dual In-line Memory Module (RDIMM),
    - Multi-Ranked Buffered Dual In-Line Memory Module or Multiplexed Rank Dual In-line Memory Module (MCRDIMM/MRDIMM),
    - Small Outline Dual In-Line Memory Module (SODIMM), and
    - Un-buffered Dual In-Line Memory Module (UDIMM);
- Samsung's HBM2/2E, HBM3/3E, and HBM4/4E high bandwidth memory ("HBM") packages;
- products containing the same DIMM and HBM, including servers and storage systems, such as:
    - Google's fifth, sixth and seventh generation Tensor Processing Units (TPUs) utilizing Samsung HBMs,
    - Google's Google Cloud Platform (GCP) virtual machines and cloud storage services utilizing Samsung DIMMs and HBMs,
    - Super Micro's servers and computing systems utilizing Samsung's HBMs, such as Super Micro's H13 and H14 GPU-optimized servers utilizing with AMD's Instinct accelerators and Samsung's HBM3/3E high bandwidth memory, and

- Super Micro's servers and computing systems utilizing Samsung's DDR5 DIMMs, such as Super Micro's X14 servers utilizing Intel's Xeon® 6 6900P series processors and Samsung/s DDR5 RDIMMs and MRDIMMs; and

- components thereof, including power management integrated circuits (PMIC), registered clock driver (RCD) chips, DRAM chips, DRAM dies, interface dies, data buffers, temperature sensors, printed circuit boards, and serial presence detect (SPD) circuits.

7. The Accused Products infringe one or more claims of the following Netlist patents (the "Asserted Patents"):

| Asserted Patent | Claims Asserted Against Respondents (independent claims in bold) |
|---|---|
| **Memory Modules with Power Management/Signal Correction** | |
| U.S. Patent No. 12,373,366 | **1**, 2, 11, 12, 14, 15, 16 |
| U.S. Patent No. 10,025,731 | **1**, 2, 3, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18 |
| **Memory Modules with Data Buffering** | |
| U.S. Patent No. 10,268,608 | **1**, 2, 3, 4, 5 |
| U.S. Patent No. 10,217,523 | **1**, 15, 17, 18 |
| U.S. Patent No. 9,824,035 | 2, 6 |
| **High-Bandwidth Memory** | |
| U.S. Patent No. 12,308,087 | **1**, 2, 5, 7, 8, **13**, 17, 18, **20**, 22, **23** |

8. To stop Respondents' unlawful acts, Netlist requests a limited exclusion order under 19 U.S.C. § 1337(d)(1) and permanent cease-and-desist orders under 19 U.S.C. § 1337(f).

9. Netlist further seeks the imposition of a bond upon importation of infringing products during the 60-day Presidential review period pursuant to 19 U.S.C. § 1337(j).

10. As set forth in Section X of this Complaint, a domestic industry pursuant to 19 U.S.C. § 1337(a)(2)–(3) exists based on the investments made by Netlist and its licensee SK hynix Inc. ("SK hynix") domestically in relation to products that are protected by the Asserted Patents.

## II. COMPLAINANT

11. Netlist is a corporation organized and existing under the laws of the State of Delaware, having a principal place of business at 111 Academy Way, Suite 100, Irvine, CA 92617.

12. Since its founding in 2000, Netlist has been a leading provider of high-performance modular memory subsystems to the world's premier OEMs in the server, high-performance computing, and communications markets. Netlist's technology enables users to derive useful information from vast amounts of data in a shorter period of time. These capabilities will become increasingly valuable as the volume of data continues to dramatically increase.

13. Netlist's technology integrates intelligence features, including innovations in load reduction and rank multiplexing, with memory raw material—DRAM and NAND—to make memory perform at higher speeds with higher capacity and lower power.

14. Netlist has a long history of being the first to market with disruptive new products. For example, Netlist invented and introduced the first load-reduced dual in-line memory module ("LRDIMM"), HyperCloud®, which utilized Netlist's patented distributed buffer architecture and patented signal correction technology. Netlist was also the first to include NAND flash in a Dual Inline Memory Module with its NVvault® NVDIMM. As part of the development of the NVDIMM products, Netlist invented on-module power management technology that utilizes a power management integrated circuit (PMIC).

15. Netlist's innovations in load reduction and power management were far ahead of their time. Years after Netlist invented the technology, the industry adopted Netlist's distributed buffer architecture for DDR4 generation LRDIMMs, the predominant high-end server memory module for the past several years. That same architecture is also used in DDR5 generation MRDIMMs. Netlist's power management technology, meanwhile, is now used in *all* DDR5 DIMMs.

16. The inventions claimed in the Asserted Patents are therefore embodied in the accused DDR5 DIMMs of Respondents (discussed in more detail below), as well as DDR5 DIMMs manufactured and sold by Netlist and its licensee SK hynix (domestic industry products, also addressed in more detail below).

17. Netlist has also developed and patented innovative solutions used in "high bandwidth memory," or HBM. HBM, in contrast to conventional memory modules, includes memory device packages comprising stacks of multiple memory dies that transmit data through the stacks using interconnects (or "vias"). Netlist invented memory packages that allow for high bandwidth while mitigating load issues, thus maintaining optimal performance. Netlist's HBM technology is particularly useful for servers that handle large amounts of data. The patented technology is embodied in the HBM memory offered by Netlist's licensee SK hynix, as well as HBM memory sold and used by Respondents. These products are addressed in more detail below.

18. Netlist has secured multiple jury verdicts confirming the commercial success of its inventions, including two against Samsung. In 2023, a jury in the Eastern District of Texas found that Samsung willfully infringed five Netlist patents and that the patents were not invalid and awarded Netlist $303.15 million in damages. *See Netlist, Inc. v. Samsung Elecs. Co. et al.*, No. 2:21-cv-463-JRG, Dkt. No. 479 at 7 (E.D. Tex. Apr. 21, 2023). In 2024, a jury found that Samsung willfully infringed three Netlist patents (including the '608 patent asserted here) and that the patents were not invalid and awarded Netlist $118 million in damages. *See Netlist, Inc. v. Samsung Elecs. Co. et al.*, No. 2:22-cv-293-JRG, Dkt. No. 847 at 7 (E.D. Tex. Nov. 22, 2024). Yet Samsung has continued its infringing conduct.

19. Additionally, the Patent Trial and Appeal Board has confirmed the validity of the asserted claims of three of the Asserted Patents. *See Micron Tech., Inc. et al. v. Netlist, Inc.*,

IPR2022-00236, Paper 34 at 43–46 (P.T.A.B. June 20, 2023) (confirming the validity of claims 2 and 6 of the ’035 patent); *Samsung Elecs. Co. v. Netlist, Inc.*, IPR2022-00063, Paper 53 at 58 (P.T.A.B. May 3, 2023) (confirming the validity of all claims of the ’523 patent), *aff’d*, No. 23-2133, Dkt. No. 44 (Fed. Cir. Mar. 5, 2025); *Samsung Elecs. Co. v. Netlist, Inc.*, IPR2023-00847, Paper 42 at 73 (P.T.A.B. Dec. 10, 2024) (confirming the validity of claims 1–5 of the ’608 patent), *appeal docketed*, No. 25-1378 (Fed. Cir. Jan. 21, 2025).

20. The claim charts submitted with this Complaint rely in part on functionality contained within certain standards issued by the JEDEC Solid State Technology Association. However, Netlist is not relying on essentiality to the standard to establish infringement by the proposed Respondents. In particular, the JEDEC standard does not require all limitations of any one of the Asserted Claims. Accordingly, none of the Asserted Claims is standard-essential. Rather, Netlist anticipates that its infringement positions will be further confirmed by evidence obtained though discovery from Respondents that is otherwise not publicly available.

## III. RESPONDENTS

### A. Samsung Respondents

21. On information and belief, SEC is a corporation organized and existing under the laws of the Republic of Korea, with its principal place of business at 129 Samsung-ro, Yeongtong-gu, Suwon, Gyeonggi-do, 443-742, Republic of Korea. On information and belief, SEC is the worldwide parent corporation for SEA and SSI.

22. On information and belief, SEA is a corporation organized and existing under the laws of the State of New York. Defendant SEA maintains facilities at 6625 Excellence Way, Plano, Texas 75023. SEA is a wholly owned subsidiary of SEC.

23. On information and belief, SSI is a corporation organized and existing under the laws of the State of California. On information and belief, Defendant SSI maintains facilities at

6625 Excellence Way, Plano, Texas 75023. On information and belief, SSI is a wholly owned subsidiary of SEA.

24. On information and belief, the Samsung Respondents import into the United States, sell for importation into the United States, and/or sell within the United States after importation certain DRAM devices, products containing the same, and components thereof (discussed in more detail below) that infringe one or more of the Asserted Patents. The Samsung Respondents are not licensed to any of the Asserted Patents.

25. Samsung and Netlist were initially partners under a 2015 Joint Development and License Agreement ("JDLA"). On information and belief, Samsung used Netlist's technologies to develop products both in mature markets such as DDR4 memory modules and markets for current and emerging generations of DRAM technologies, including DDR5 and HBM. Under the JDLA, Samsung was obligated to supply Netlist certain memory products at competitive prices. Samsung, however, did not honor its promises and repeatedly failed to fulfill Netlist's orders. So Netlist terminated the JDLA on July 15, 2020. A federal district court in the Central District of California has confirmed that Samsung breached the JDLA and therefore that Netlist's termination was valid. *Netlist, Inc. v. Samsung Elecs. Co.*, No. 8:20-cv-993, Dkt. No. 766 (C.D. Cal. Mar. 24, 2025).[1] That decision is on appeal to the Ninth Circuit (case number 25-5531).

26. The litigation history between Netlist and Samsung as it relates to the Asserted Patents is described further in Section XI.

**B. Google**

27. On information and belief, Google LLC is a wholly-owned subsidiary of Alphabet, Inc., and a Delaware limited liability company with a principal place of business at 1600

[1] This ruling is res judicata unless and until overturned on appeal.

Amphitheatre Parkway, Mountain View, California 94043.

28. On information and belief, Google imports the Accused Products through a variety of channels and uses them in various Google products and services, including in its data storage facilities and servers (discussed in more detail below). Google is not licensed to any of the Asserted Patents.

29. Google was previously a customer of Netlist. Between 2003 and 2006, Netlist contracted with Google to build memory modules according to Netlist's proprietary designs. Between 2006 and 2007, Google and Netlist engaged in a series of meetings in which Google was presented with Netlist's rank multiplication (DxD) and load reduction DIMM (LRD) designs. In 2007, Google asked Netlist to assemble custom memory modules at Netlist's manufacturing facility. In 2008, rather than entering a license agreement with Netlist, Google chose to take the designs Netlist presented and source them from different contractors. At this time, Netlist informed Google that it had reason to believe that Google was using Netlist's technology in its servers. Google responded by filing a declaratory judgment lawsuit. *Google Inc. v. Netlist, Inc.*, No. 4:08-cv-04144-SBA (N.D. Cal. Aug. 29, 2008).

30. Netlist subsequently sued Google for infringement of U.S. Patent No. 7,619,912. Case No. 3:09-cv-5718 (N.D. Cal.). Specifically, Netlist accused Google of selling, offering to sell, making, and/or using computer memory modules that incorporate Netlist's patented technology, including certain DDR4 DIMMS that Google purchased from Samsung for use in Google's server computers. The case is currently stayed pending resolution of *Netlist, Inc. v. Samsung Elecs. Co.*, *Ltd. et al.*, No. 2:22-cv-293-JRG, pending in the Eastern District of Texas.

31. Netlist also brought claims for infringement of the '523 patent against Google in the District of Delaware as counterclaims in a declaratory judgment action originally brought by

Samsung. *Samsung Electronics Co., Ltd. et al. v. Netlist, Inc.*, No. 1:21-cv-01453-JLH (D. Del. Oct. 15, 2021). That case is currently stayed pending resolution of the action in the Central District of California involving the JDLA between Samsung and Netlist (which, as noted above, is currently on appeal to the Ninth Circuit).

32. The litigation history between Netlist and Google as it relates to the Asserted Patents is described further in Section XI.

### C. Super Micro

33. On information and belief, Super Micro Computer, Inc. is a corporation organized and existing under the laws of Delaware that maintains an established place of business at 980 Rock Ave., San Jose, CA 95131.

34. On information and belief, Super Micro imports into the United States, sells for importation into the United States, and/or sells within the United States after importation the Accused Products through a variety of channels and in various Super Micro products, including its servers and storage systems (discussed in more detail below). Super Micro is not licensed to any of the Asserted Patents.

## IV. THE TECHNOLOGY AND PRODUCTS AT ISSUE

35. The technology at issue generally relates to memory used in computer systems. Many commercial computing products utilize memory modules. A memory module is a printed circuit board that contains, among other components, multiple individual memory devices (such as DRAM packages or portions thereof) designed to interact with a host's memory controller external to the memory module. Modern memory modules often adopt the form of DIMMs. The memory devices on the memory module are typically arranged in "ranks," which are accessible by a processor or memory controller of the host system. A memory module is typically installed into a memory slot on a computer motherboard.

36. Memory modules are designed for, among other things, use in servers such as those supporting cloud-based computing and other data-intensive applications, as well as in consumer applications such as PCs and laptops. Memory modules are typically characterized by, among other things, the generation of DRAM on the module (e.g., DDR5, DDR4, DDR3) and the type of module (e.g., UDIMM, SODIMM, RDIMM, LRDIMM, MRDIMM).

37. High bandwidth memory device packages are computer memory interfaces that vertically stack DRAM dies to achieve higher speeds and reduce power consumption. The DRAM dies in the memory stack are attached to one another and to the base die (also called a control die) via die interconnects, often in the form of through-silicon-vias ("TSVs").

38. Pursuant to Commission Rules §§ 210.10(b)(1) and 210.12(a)(12), the categories of Accused Products are dynamic random access memory (DRAM) devices used in computing systems. DRAM is used as the primary working memory in computers and other devices, such as servers, desktops, and mobile phones, to temporarily store data and instructions that the processor needs for quick access during operation. Specifically these devices are DDR5 generation DIMMs and high bandwidth memory (HBM).

## V. THE ASSERTED PATENTS AND NON-TECHNICAL DESCRIPTIONS OF THE INVENTIONS[2]

### A. The '366 and '731 Patents: Memory Modules with Power Management/Signal Correction

39. The '366 and '731 Patents relate to power-management and signal-correction features, respectively, used in certain DDR5 generation DIMMs.

---

[2] All non-technical descriptions of the patents herein are presented to give a general background of those patents. These statements are not intended to be used nor should they be used for purposes of patent claim construction. Netlist provides these statements subject to and without waiver of its right to argue that no claim construction is necessary, or that claim terms should be construed in a particular way under claim interpretation jurisprudence and the relevant evidence.

### 1. U.S. Patent No. 12,373,366

#### a. Identification and Ownership of the ’366 Patent

40. The ’366 Patent was duly and lawfully issued by the U.S. Patent and Trademark Office on July 29, 2025.

41. The ’366 Patent issued from Application No. 17/582,797, filed January 24, 2022. The ’366 Patent is entitled to a priority date of June 1, 2007.

42. The ’366 Patent is set to expire on June 2, 2028.

43. The ’366 Patent is titled “Memory With On-Module Power Management” and names Chi-She Chen, Jeffrey C. Solomon, Scott H. Milton, and Jayesh Bhakta as inventors.

44. A true and correct copy of the ’366 Patent is attached as Exhibit 2.

45. A true and correct copy of the patent assignment record for the ’366 Patent, from the named inventors ultimately to Netlist, is attached as Exhibit 3.

46. A true and correct copy of the prosecution history of the ’366 Patent is included as Appendix A.

#### b. Foreign Counterparts to the ’366 Patent

47. Exhibit 14 lists each foreign patent, each foreign or domestic patent application (not already issued as a patent), and each foreign or domestic patent application that has been denied, abandoned, or withdrawn, if any, corresponding to the ’366 Patent, with an indication of the prosecution status of each such patent application.

48. No other foreign or domestic patents or applications corresponding to the ’366 Patent have been filed, abandoned, withdrawn, or rejected.

#### c. Non-Technical Description of the ’366 Patent

49. The ’366 Patent discloses and claims memory modules with on-module power management that enables the high-speed data communications that are achieved in modern DDR5

memory modules. The claimed modules contain an arrangement of data lines and associated circuitry that allow for significant improvements in bandwidth and performance. To accommodate increased data rates, the claimed modules contain circuitry that allows for power management on the memory modules themselves (as opposed to on the motherboard on which the memory modules are mounted). This on-module power management results in more precise voltage control and increased energy efficiency, which is critical in modern computing systems.

### 2. U.S. Patent No. 10,025,731

#### a. Identification and Ownership of the ’731 Patent

50. The ’731 Patent was duly and lawfully issued by the U.S. Patent and Trademark Office on July 17, 2018.

51. The ’731 Patent issued from Application No. 14/715,491, filed May 18, 2015. The ’731 Patent is entitled to a priority date of April 14, 2008.

52. The ’731 Patent is set to expire on June 30, 2029.

53. The ’731 Patent is titled “Memory Module and Circuit Providing Load Isolation and Noise Reduction” and names Hyun Lee, Jayesh R. Bhakta, Jeffrey C. Solomon, Mario Jesus Martinez, and Chi-She Chen as inventors.

54. A true and correct copy of the ’731 Patent is attached as Exhibit 4.

55. A true and correct copy of the patent assignment record for the ’731 Patent, from the named inventors ultimately to Netlist, is attached as Exhibit 5.

56. A true and correct copy of the prosecution history of the ’731 Patent is included as Appendix B.

#### b. Foreign Counterparts to the ’731 Patent

57. Exhibit 14 lists each foreign patent, each foreign or domestic patent application (not already issued as a patent), and each foreign or domestic patent application that has been denied,

abandoned, or withdrawn, if any, corresponding to the ’731 Patent, with an indication of the prosecution status of each such patent application.

58. No other foreign or domestic patents or applications corresponding to the ’731 Patent have been filed, abandoned, withdrawn, or rejected.

#### c. Non-Technical Description of the ’731 Patent

59. The ’731 Patent discloses and claims a memory module that includes signal correction circuits, each including at least one programmable impedance mismatch circuit, to correct signals transmitted to and from the module’s memory devices. The claimed correction circuitry can reduce signal noise due to impedance mismatch in the system, enabling the claimed memory modules to provide stable, reliable signals at high data rates.

### B. The ’608, ’523, and ’035 Patents: Memory Modules with Data Buffering

60. The ’608, ’523, and ’035 Patents relate to data buffering arrangements that improve memory module performance and reliability and are used in DDR5 generation MRDIMMs.

#### 1. U.S. Patent No. 10,268,608

#### a. Identification and Ownership of the ’608 Patent

61. The ’608 Patent was duly and lawfully issued by the U.S. Patent and Trademark Office on April 23, 2019.

62. The ’608 Patent issued from Application No. 15/820,076, filed November 21, 2017. The ’608 Patent is entitled to a priority date of July 27, 2012.

63. The ’608 Patent is set to expire on July 27, 2033.

64. The ’608 Patent is titled “Memory Module with Timing-Controlled Data Paths in Distributed Data Buffers” and names Hyun Lee and Jayesh R. Bhakta as inventors.

65. A true and correct copy of the ’608 Patent is attached as Exhibit 6.

66. A true and correct copy of the patent assignment record for the ’608 Patent, from the named inventors ultimately to Netlist, is attached as Exhibit 7.

67. A true and correct copy of the prosecution history of the ’608 Patent is included as Appendix C.

**b. Foreign Counterparts to the ’608 Patent**

68. Exhibit 14 lists each foreign patent, each foreign or domestic patent application (not already issued as a patent), and each foreign or domestic patent application that has been denied, abandoned, or withdrawn, if any, corresponding to the ’608 Patent, with an indication of the prosecution status of each such patent application.

69. No other foreign or domestic patents or applications corresponding to the ’608 Patent have been filed, abandoned, withdrawn, or rejected.

**c. Non-Technical Description of the ’608 Patent**

70. The ’608 Patent discloses and claims memory modules that include “isolation devices” (also called “data buffers” or “buffer circuits”). These buffer circuits electrically isolate the on-module memory devices (e.g., DRAM) from the memory controller, which enables additional memory devices to be included on the memory module (higher capacity) without sacrificing signal integrity or data speed. The innovative arrangement of components and on-board intelligence in the claimed memory modules allows the modules to manage the timing of read and write operations in newer-generation systems with higher memory operating speeds and greater memory density.

**2. U.S. Patent No. 10,217,523**

**a. Identification and Ownership of the ’523 Patent**

71. The ’523 Patent was duly and lawfully issued by the U.S. Patent and Trademark Office on February 26, 2019.

72. The ’523 Patent issued from Application No. 14/229,844, filed March 29, 20140. The ’523 Patent is entitled to a priority date of April 14, 2008.

73. The ’523 Patent is set to expire on October 9, 2029.

74. The ’523 Patent is titled “Multi-Mode Memory Module with Data Handlers” and names Hyun Lee, Soonju Choi, and Jayesh R. Bhakta as inventors.

75. A true and correct copy of the ’523 Patent is attached as Exhibit 8.

76. A true and correct copy of the patent assignment record for the ’523 Patent, from the named inventors ultimately to Netlist, is attached as Exhibit 9.

77. A true and correct copy of the prosecution history of the ’523 Patent is included as Appendix D.

**b. Foreign Counterparts to the ’523 Patent**

78. Exhibit 14 lists each foreign patent, each foreign or domestic patent application (not already issued as a patent), and each foreign or domestic patent application that has been denied, abandoned, or withdrawn, if any, corresponding to the ’523 Patent, with an indication of the prosecution status of each such patent application.

79. No other foreign or domestic patents or applications corresponding to the ’523 Patent have been filed, abandoned, withdrawn, or rejected.

**c. Non-Technical Description of the ’523 Patent**

80. The ’523 Patent discloses and claims a novel architecture for memory modules that support two modes of operation (e.g., a testing mode and a normal operation mode). The claimed modules utilize a data module (or buffer) and a separate control module. When the module operates in testing mode, the data module isolates the memory devices and the memory controller and provides data patterns, and the control module provides address and control signals. Separating

the control and data handling makes the system more modular (and thus more flexible) than prior-art testing approaches and also allows for placing the components of the data module close to the memory devices that read and write the data, which enhances the reliability of the testing functionality.

### 3. U.S. Patent No. 9,824,035

#### a. Identification and Ownership of the ’035 Patent

81. The ’035 Patent was duly and lawfully issued by the U.S. Patent and Trademark Office on November 21, 2017.

82. The ’035 Patent issued from Application No. 15/426,064, filed February 7, 2017. The ’035 Patent is entitled to a priority date of July 27, 2012.

83. The ’035 Patent is set to expire on July 27, 2033.

84. The ’035 Patent is titled “Multi-mode memory module with timing-controlled data paths in distributed data buffers” and names Hyun Lee and Jayesh R. Bhakta as inventors.

85. A true and correct copy of the ’035 Patent is attached as Exhibit 10.

86. A true and correct copy of the patent assignment record for the ’035 Patent, from the named inventors ultimately to Netlist, is attached as Exhibit 11.

87. A true and correct copy of the prosecution history of the ’035 Patent is included as Appendix E.

#### b. Foreign Counterparts to the ’035 Patent

88. Exhibit 14 lists each foreign patent, each foreign or domestic patent application (not already issued as a patent), and each foreign or domestic patent application that has been denied, abandoned, or withdrawn, if any, corresponding to the ’035 Patent, with an indication of the prosecution status of each such patent application.

89. No other foreign or domestic patents or applications corresponding to the ’035 Patent have been filed, abandoned, withdrawn, or rejected.

#### c. Non-Technical Description of the ’035 Patent

90. The ’035 Patent discloses and claims memory modules that include “isolation devices” (also called “data buffers” or “buffer circuits”). The buffer circuits electrically isolate the on-module memory devices (e.g., DRAM) from the memory module’s data input/output pins, which enables additional memory devices to be included on the memory module (higher capacity) without sacrificing signal integrity or speed. The innovative arrangement of components and on-board intelligence in the claimed memory modules allows the modules to manage the timing of read and write operations in newer-generation systems with higher memory operating speeds and greater memory density.

### C. U.S. Patent No. 12,308,087: High-Bandwidth Memory

#### 1. Identification and Ownership of the ’087 Patent

91. The ’087 Patent was duly and lawfully issued by the U.S. Patent and Trademark Office on May 20, 2025.

92. The ’087 Patent issued from Application No. 17/694,649, filed March 14, 2022. The ’087 Patent is entitled to a priority date of November 3, 2010.

93. The ’087 Patent is set to expire on November 3, 2031.

94. The ’087 Patent is titled “Memory package having stacked array dies and reduced driver load” and names Hyun Lee and as the inventor.

95. A true and correct copy of the ’087 Patent is attached as Exhibit 12.

96. A true and correct copy of the patent assignment record for the ’087 Patent, from the named inventors ultimately to Netlist, is attached as Exhibit 13.

97. A true and correct copy of the prosecution history of the ’087 Patent is included as Appendix F.

**2. Foreign Counterparts to the ’087 Patent**

98. Exhibit 14 lists each foreign patent, each foreign or domestic patent application (not already issued as a patent), and each foreign or domestic patent application that has been denied, abandoned, or withdrawn, if any, corresponding to the ’087 Patent, with an indication of the prosecution status of each such patent application.

99. No other foreign or domestic patents or applications corresponding to the ’087 Patent have been filed, abandoned, withdrawn, or rejected.

**3. Non-Technical Description of the ’087 Patent**

100. The ’087 patent discloses and claims an innovative arrangement of stacked dies and interconnects used in Netlist’s HBM technology. Conventional DRAM packages often consist of a single silicon chip (or “die”) housed in a plastic or ceramic “package.” To increase the capacity of individual memory devices, memory makers began “stacking” multiple dies in a single DRAM package where each DRAM interfaces with an external device (such as a host) through external connections such as long, dangling wires along the peripheral of the DRAM circuit. But the high electrical load resulting from such external connections negatively affected performance. Internal connections such as TSVs helped reduce load, but that still did not allow for high memory capacity at high speed. To overcome that problem, Netlist devised an innovative arrangement of stacked dies and interconnects that allows the memory to operate at high bandwidth while mitigating load issues and thus maintaining optimal performance. Netlist’s HBM technology is particularly useful for servers that handle large amounts of data.

## VI. LICENSES

101. An identification of licensee(s) to one or more of the Asserted Patents is provided in confidential Exhibit 15C.

## VII. RESPONDENTS' INFRINGEMENT OF THE ASSERTED PATENTS

102. As discussed above, the Accused Products are certain DRAM devices, products containing the same, and components thereof that infringe one or more claims of the Asserted Patents. An exemplary list of the Accused Products that practice at least one claim from one or more of the Asserted Patents is provided as Exhibit 1.[3] Representative claim charts, attached as Exhibits 16–21, demonstrate that the Accused Products practice at least one claim of each of the Asserted Patents.

### A. Infringement of U.S. Patent No. 12,373,366

103. Respondents infringe, either literally or under the doctrine of equivalents, at least claims 1, 2, 11, 12, 14, 15, and 16 of the '366 Patent by importing the Accused Products, selling the Accused Products for importation, and/or selling the Accused Products within the United States after importation.

104. Exemplary claim charts comparing independent claim 1 of the '366 Patent to representative Accused Products are attached as Exhibit 16.

### B. Infringement of U.S. Patent No. 10,025,731

105. Respondents infringe, either literally or under the doctrine of equivalents, at least claims 1–3, 6–18 of the '731 Patent by importing the Accused Products, selling the Accused Products for importation, and/or selling the Accused Products within the United States after importation.

[3] Samples of the Accused Products will be produced during the course of the investigation.

106. Exemplary claim charts comparing independent claim 1 of the ’731 Patent to representative Accused Products are attached as Exhibit 17C.

**C. Infringement of U.S. Patent No. 10,268,608**

107. Respondents infringe, either literally or under the doctrine of equivalents, at least claims 1–5 of the ’608 Patent by importing the Accused Products, selling the Accused Products for importation, and/or selling the Accused Products within the United States after importation.

108. Exemplary claim charts comparing independent claim 1 of the ’608 Patent to representative Accused Products are attached as Exhibit 18C.

**D. Infringement of U.S. Patent No. 10,217,523**

109. Respondents infringe, either literally or under the doctrine of equivalents, at least claims 1, 15, 17, and 18 of the ’523 Patent by importing the Accused Products, selling the Accused Products for importation, and/or selling the Accused Products within the United States after importation.

110. Exemplary claim charts comparing independent claim 1 of the ’523 Patent to representative Accused Products are attached as Exhibit 19C.

**E. Infringement of U.S. Patent No. 9,824,035**

111. Respondents infringe, either literally or under the doctrine of equivalents, at least claims 2 and 6 of the ’035 Patent by importing the Accused Products, selling the Accused Products for importation, and/or selling the Accused Products within the United States after importation.

112. Exemplary claim charts comparing dependent claim 2 of the ’035 Patent to representative Accused Products are attached as Exhibit 20C.

**F. Infringement of U.S. Patent No. 12,308,087**

113. Respondents infringe, either literally or under the doctrine of equivalents, at least claims 1, 2, 5, 7, 8, 13, 17, 18, 20, 22, and 23 of the ’087 Patent by importing the Accused Products,

selling the Accused Products for importation, and/or selling the Accused Products within the United States after importation.

114. Exemplary claim charts comparing independent claim 1 of the ’087 Patent to representative Accused Products are attached as Exhibit 21.

### G. Indirect Infringement

115. On information and belief, Respondents also indirectly infringe the Asserted Patents by inducing and contributing to infringement. On information and belief, Respondents have actual knowledge of the Asserted Patents, including through at least the filing of this Complaint and actions in the U.S. District Court for the Eastern District of Texas and the U.S. District Court for the District of Delaware that involve the Asserted Patents.

116. On information and belief, Respondents knowingly and intentionally induce users of one or more of the Accused Products to directly infringe one or more claims of the Asserted Patents by encouraging, instructing, and aiding one or more persons in the United States to make, use (including testing), sell, or offer to sell one or more of the Accused Products, during or after such article’s importation into the United States, in a manner that directly infringes the Asserted Patents.

117. On information and belief, Respondents contribute to the infringement of the Asserted Patents by offering to sell, selling, or importing a patented component, material, or apparatus used to practice a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in an act of infringement and not a staple article or commodity of commerce suitable for substantial non-infringing uses.

## VIII. SPECIFIC INSTANCES OF UNFAIR IMPORTATION AND SALE

118. On information and belief, the Accused Products are manufactured overseas and then sold for importation into the United States by Respondents or on their behalf, imported into

the United States by Respondents or on their behalf, and/or sold after importation by Respondents or on their behalf.

119. The Accused Samsung Products include the following:

- Samsung's DDR5 generation DIMMs, including:
  - Registered Dual In-line Memory Modules (RDIMMs),
  - Multi-Ranked Buffered Dual In-Line Memory Module or Multiplexed Rank Dual In-line Memory Module (MCRDIMM/MRDIMM),
  - Small Outline Dual In-Line Memory Module (SODIMM), and
  - Un-buffered Dual In-Line Memory Module (UDIMM); and
- Samsung's HBM2/2E, HBM3/3E, and HBM4/4E high bandwidth memory packages.

120. On information and belief, the Samsung Respondents sell the accused DIMMs through a variety of channels, including their own website. *See, e.g.*, Exhibit 22. On information and belief, none of the Samsung DIMMs are manufactured in the United States.

121. A list of currently available DDR5 RDIMMs, SODIMMs and UDIMMs, exported from the above-referenced Samsung website is attached hereto as Exhibit 23.

122. Exhibits 24 and 25 include receipts for the domestic purchase of accused DDR5 RDIMMs, part numbers M321R8GA0BB0-CQKDS and M321R8GA0PB2-CCPWF, respectively. The purchased DDR5 RDIMMs are labeled as being made in the Philippines and Korea, respectively. *Id.* The order and shipping paperwork indicate that the products were shipped to an address within the United States, demonstrating that the Samsung Respondents import the product, sell it for importation, and/or sell it within the United States after importation. *Id.*

123. On information and belief, Samsung introduced its Multi-Ranked Buffered Dual In-Line Memory Module (MCRDIMM), a DDR5 MRDIMM product for high-performance computing applications, in June 2024. *See* Exhibit 26.

124. Exhibit 27 includes a receipt for the domestic purchase of an accused DDR5 MRDIMM, part number M327R8GA0EB0-CLVXB. The purchased DDR5 MRDIMM is labeled as being made in Korea. *Id.* The order and shipping paperwork indicate that the product was shipped to an address within the United States, demonstrating that the Samsung Respondents import the product, sell it for importation, and/or sell it within the United States after importation. *Id.*

125. On information and belief, the Samsung Respondents sell the accused HBMs in bulk directly to manufacturers of high-performance computing components like GPUs and servers, through a variety of channels, including their own website. *See, e.g.*, Exhibit 28. On information and belief, none of the Samsung HBMs are manufactured in the United States.

126. A list of currently available HBM2/2E and HBM3/3E high bandwidth memory exported from the above-referenced Samsung website is attached as Exhibit 29.

127. On information and belief, Samsung displayed its HBM4/4E product at the Future Memory & Storage (FMS) event held August 5–7, 2025 at the Santa Clara Convention Center in San Jose, California. *See* Exhibit 30.

128. On information and belief, Samsung HBM3/3E and HBM4/4E are currently undergoing qualification tests with Nvidia in Santa Clara, CA, and it was reported earlier this month that Samsung's 12-layer HBM3E passed NVIDIA qualification tests. *See, e.g.*, Exhibit 31; Exhibit 32.

129. Google imports the Accused Products directly or indirectly from Samsung and uses them in various Google products and services, including in its data storage facilities and servers. For example, on information and belief, Google's fifth, sixth and seventh generation Tensor Processing Units (TPUs) utilize Samsung's accused HBM2, HBM2E, HBM3E and HBM4 high

bandwidth memory packages. *See* Exhibit 33 ("Google is expected to become the second-largest buyer of HBM" from Samsung, "driven by its investment in Tensor Processing Units (TPUs)"). In addition, on information and belief, the Google Cloud Platform (GCP) virtual machine services utilize Intel Xeon 6 processors in its compute-optimized C4 virtual machine series, which use Samsung's accused DDR5 RDIMMs and MRDIMMs. *See* Exhibit 34. On information and belief, Google purchases these Accused Products from Samsung, imports them, and uses them in these Google products and services.

130. Super Micro imports the Accused Products directly or indirectly from Samsung and incorporates them in various Super Micro products, including its servers and storage systems. For example, on information and belief, Super Micro's H13 and H14 GPU-optimized servers can be configured with AMD's Instinct accelerators (MI300X/MI325X/MI350X), which include Samsung's HBM3 and HBM3E high bandwidth memory. *See* Exhibit 35 (AS -8126GS-TNMR Datasheet); Exhibit 36 (AS -8125GS-TNMR2 Datasheet); Exhibit 37 ("Samsung's HBM3 memory" is "integrated into AMD's MI300X AI accelerator"); Exhibit 38 ("AMD Instinct MI350X and MI355X GPUs" use "288GB HBM3E" from "Samsung Electronics"). In addition, on information and belief, Super Micro's Hyper SuperServer SYS-212HA-TN with Intel's Xeon® 6 6900 series processors can be configured with Samsung DDR5 RDIMM or Samsung DDR5 MRDIMM. *See* Exhibit 39 (Hyper SuperServer SYS-212HA-TN Datasheet); Exhibit 40 (product uses "Intel® Xeon® 6900 series processors"); Exhibit 41 (noting that "[u]pcoming MRDIMMs" from Samsung "are set to be compatible with Intel's Xeon 6 platforms"). On information and belief, Super Micro purchases these accused products from Samsung, imports them, and uses them in these Super Micro products.

## IX. HARMONIZED TARIFF SCHEDULE NUMBERS

131. The Accused Products are classified under at least the following subheadings of the Harmonized Tariff Schedule of the United States: 8473.30.11.40 and 8542.32.00.36. These classifications are exemplary in nature and not intended to restrict the scope of any exclusion order or other remedy ordered by the Commission.

## X. THE DOMESTIC INDUSTRY RELATING TO THE ASSERTED PATENTS

132. A domestic industry, as set forth in 19 U.S.C. § 1337(a)(2) and defined by 19 U.S.C. § 1337(a)(3), exists for the following Netlist and SK hynix products, which are protected by the Asserted Patents:

| Asserted Patent | Existing Domestic Industry Products |
|---|---|
| ’366 Patent | • Netlist’s DDR5 VLP RDIMM<br>• Netlist’s Lightning DDR5 RDIMM<br>• SK hynix’s RDIMM/MRDIMM |
| ’731 Patent | • Netlist’s DDR5 VLP RDIMM<br>• Netlist’s Lightning DDR5 RDIMM<br>• SK hynix’s RDIMM/MRDIMM |
| ’608 Patent | • SK hynix’s MRDIMM |
| ’035 Patent | • SK hynix’s MRDIMM |
| ’523 Patent | • SK hynix’s MRDIMM |
| ’087 Patent | • SK hynix’s HBM |

### A. Technical Prong

133. A list of Domestic Industry Products that practice at least one claim from one or more of the Asserted Patents is shown in the table above. Representative claim charts, attached as

Exhibits 42–47, demonstrate that the Domestic Industry Products practice at least one claim of each of the Asserted Patents.[4]

134. Samples of the Domestic Industry Products will be produced during the course of the investigation.

**B. Economic Prong**

135. For each of the Asserted Patents, there is a domestic industry pursuant to 19 U.S.C. § 1337(a)(3)(A), (B), and (C) based on the continuing significant domestic investment in plant, equipment, labor, and capital by Netlist and/or its licensee SK hynix, as well as the continuing substantial domestic investment in exploitation of the Asserted Patents through research, development, and engineering. Netlist has invested tens of millions of dollars since 2021 on developing and creating the Domestic Industry Products, bringing them to market, and sustaining their success through continuous technological development. Similarly, SK hynix has significant investments in the United States, including at least labor and facility costs.[5]

**1. Netlist's Domestic Activities**

136. Netlist has made, and continues to make, significant and substantial investments in connection with technology and articles that practice the Asserted Patents, including the Domestic Industry Products. Indeed, an administrative law judge has twice previously concluded that Netlist established a domestic industry based on its significant domestic investments in the United States. *See Certain Memory Modules & Components Thereof*, Inv. No. 337-TA-1089, Initial Determination at 139–56 (Oct. 19, 2019); *Certain Memory Modules & Components Thereof*, Inv.

---

[4] The Domestic Industry Products are protected by additional claims of the Asserted Patents, and Netlist may establish the technical prong of the domestic industry requirement through claims other than those explicitly charted.

[5] Netlist expects that SK hynix will cooperate with third-party discovery seeking information related to the domestic industry.

No. 337-TA-1023, Initial Determination at 153–65 (Nov. 14, 2017). Those investments related to earlier-generation Netlist products that were the foundation for the technologies claimed in several of the Asserted Patents here.

**a. Significant Investment in Facilities**

137. Netlist has spent, and continues to spend, significant sums on facility costs for engineering, sales, and marketing activities related to the Domestic Industry Products. Netlist's facility costs since 2021 have accounted for millions of dollars in expenses. Detailed confidential information about Netlist's significant investments per Domestic Industry product is set forth in Confidential Exhibit 48C, Declaration of Gail Sasaki.

**b. Significant Employment of Labor**

138. Netlist has spent, and continues to spend, significant sums on domestic labor related to the Domestic Industry Products. For example, since 2021, Netlist has employed engineering, sales, and marketing employees who have contributed to the development and sale of the Domestic Industry Products. Netlist's sales and marketing expenditures since 2021 have accounted for millions of dollars in expenses. Detailed confidential information about Netlist's significant investments per Domestic Industry product is set forth in Confidential Exhibit 48C, Declaration of Gail Sasaki.

**c. Substantial Investment in Patent Exploitation**

139. The expenditures described above with respect to facilities and labor can also be described as Netlist's U.S. investments in research and development and engineering of the Domestic Industry Products. The allocated costs relate to Netlist's efforts to design and develop the Domestic Industry Products as well as research and establish a market for the Domestic Industry Products and Netlist's patented technology that the products contain.

### 2. Licensee SK hynix's Domestic Activities

140. SK hynix offers for sale in the United States HBMs, MRDIMMs, and RDIMMs. At the HPE Discover conference held in Las Vegas from June 23–26, 2025, SK hynix displayed its 12-layer HBM4 and 12-layer HBM3E products as well as its RDIMM and MRDIMM technology. Exhibit 49.

141. The United States is a significant market for SK hynix. In the first three months of FY 2025, SK hynix reported 12.8 trillion won ($9.1 billion) in revenue in the United States, which was 72.5% of its revenue worldwide during that period. Exhibit 50 at 42; Exhibit 51; *see also* Exhibit 52 (reporting $20.02 billion domestic revenue from January to June 2025).

142. A significant portion of SK hynix's revenues is attributable to products that practice at least one of the Asserted Patents, which are licensed to SK hynix. In second quarter of FY 2025, SK hynix reported that 77% of its revenue was from sales of DRAM, a significant portion of which was HBM sales. Exhibit 53 at 15. SK hynix has stated that, moving forward, it expects that HBM sales will double year over year. *Id*. at 11.

143. SK hynix has spent, and continues to spend, significant sums on domestic labor and capital related to the Domestic Industry Products. SK hynix has represented that it employs over 7,000 people in the U.S. Exhibit 54. This is about 15% of its total employees worldwide. Exhibit 55 (46,863 employees total).

144. SK hynix has spent, and continues to spend, significant sums on domestic facilities and equipment related to the Domestic Industry Products. SK hynix maintains several facilities in the United States, including an R&D and sales facility in San Jose, CA and sales offices in Seattle, WA; Austin, TX; Houston, TX; and Raleigh, NC. Exhibit 55.

145. SK hynix also announced in 2024 that it will invest $3.87 billion in a chip packaging facility in West Lafayette, Indiana, which would be slated for operation in 2028. Exhibit

56. With the new facility, SK hynix plans to establish HBM production lines and advanced packaging R&D facilities. *Id.*; *see also* Exhibit 57. SK hynix was also awarded up to $458 million in direct funding and access to proposed loans of $500 million as part of the CHIPS and Science Act for its investment to build a production base for semiconductor packaging in Indiana. Exhibit 56. The new facility is expected to create approximately 1,000 jobs in addition to hundreds of construction jobs. *Id*.

146. As part of the process for receiving funding under the CHIPS program, SK hynix submitted statements to the Department of Commerce in which it represented that (i) "SK hynix 'upstream' activities in the U.S. semiconductor ecosystem resulted in, on an annual average between 2016 and 2020, ~$9 billion in sales activity and ~$5 billion in GDP, and supported more than 46,000 jobs in the United States" and that (ii) "on an annual average between 2016 and 2020, SK hynix products enabled 'downstream' activities that resulted in $116 billion economic activity and $70 billion in GDP, and supported more than 696,000 jobs in the United States." Exhibit 58 at 2 (DOC submission).

* * *

147. The foregoing domestic investments are significant and substantial under Section 337, both in absolute terms and relative to Netlist's overall operations. The domestic investments and activities are also vital to Netlist's domestic business with respect to the Domestic Industry Products and represent significant added value. The domestic investments of SK hynix are likewise significant and substantial in both absolute and relative terms and vital to SK hynix's domestic business with respect to the Domestic Industry Products and represent significant added value.

148. Complainant's licensing agreement with SK hynix is attached as Exhibit 59C.

## XI. RELATED LITIGATION

### A. ’366 Patent

149. On July 28, 2025, Netlist filed a complaint in the U.S. District for the Eastern District of Texas, Civil Action No. 2:25-cv-00748, alleging infringement of the ’366 Patent against the Proposed Samsung Respondents and Avnet, Inc. The case is in the initial stages.

150. On July 28, 2025, Netlist filed a complaint in the U.S. District Court for the Eastern District of Texas, Civil Action No. 2:25-cv-00749, alleging infringement of the ’366 Patent against Micron Technology, Inc., Micron Semiconductor Products, Inc., and Micron Technology Texas LLC (collectively, “Micron”), and Avnet, Inc. The case is in the initial stages.

151. On July 29, 2025, Micron filed a complaint against Netlist in the U.S. District Court for the District of Delaware, Civil Action No. 1:25-cv-00942, seeking a declaratory judgment of non-infringement of the ’366 Patent. The case is in the initial stages.

### B. ’731 Patent

152. On May 19, 2025, Netlist filed a complaint in the U.S. District Court for the Eastern District of Texas, Civil Action No. 2:25-cv-00557, alleging infringement of the ’731 Patent against the Proposed Samsung Respondents and Avnet, Inc. The case was consolidated with Civil Action No. 2:25-cv-00558, to include Micron and Avnet, Inc. The case is in its initial stages.

153. On July 10, 2025, Micron filed a complaint against Netlist in the U.S. District Court for the District of Delaware, Civil Action No. 1:25-cv-00863, seeking a declaratory judgment of non-infringement of the ’731 Patent against Netlist. The case is in the initial stages.

154. On August 29, 2025, SEC filed a petition for *inter partes* review of the ’731 Patent, IPR2025-01431. The case is in its initial stages.

### C. ’608 Patent

155. On April 28, 2021, Netlist filed a complaint in the U.S. District Court for the Western District of Texas, Civil Action No. 6-21-cv-00431, alleging infringement of the ’608 Patent against Micron. The case was transferred to the Austin Division of the Western District of Texas and was assigned case number 22-cv-00136. The case was stayed on May 11, 2022, pending multiple *inter partes* review. It remains stayed pending the appeal of the final written decisions issued in those proceedings, including IPR2022-00847.

156. On December 23, 2021, Micron filed a petition for *inter partes* review of the ’608 Patent, IPR2022-00237. The Board denied institution.

157. On August 1, 2022, Netlist filed a complaint in the U.S. District Court for the Eastern District of Texas, Civil Action No. 2:22-cv-00293, alleging infringement of the ’608 Patent against Proposed Samsung Respondents. The case was consolidated with Civil Action No. 2:22-cv-00294, to include Micron. A jury verdict was entered in favor of Netlist on November 22, 2024 finding claims of the ’608 patent infringed and not invalid. The jury awarded $12,000,000 in damages for infringement of the ’608 Patent. The Court entered judgment on the verdict on December 2, 2024.

158. On April 27, 2023, SEC filed a petition for *inter partes* review of the ’608 Patent in accordance with 37 C.F.R. § 42.107(a), IPR2023-00847. The Board found claims 1–5 of the patent not unpatentable under 35 U.S.C. § 103. On January 21, 2025, SEC appealed that decision to the U.S. Court of Appeals for the Federal Circuit, No. 25-1375.

159. On January 10, 2024, Micron filed a petition for *inter partes* review of the ’608 Patent in accordance with 37 C.F.R. § 42.107(a), IPR2024-00370. The Board denied institution.

160. On August 14, 2025, an anonymous party filed a request for *ex parte* reexamination of the ’608 patent. The PTO has not yet acted on the request.

### D. ’523 Patent

161. On March 17, 2020, Netlist filed a complaint in the U.S. District Court for the Western District of Texas, Civil Action No. 6-20-cv-00194, alleging infringement of the ’523 Patent against SK hynix America Inc. and SK hynix. The parties later settled and the case was dismissed.

162. On June 15, 2020, Netlist filed a complaint in the U.S. District Court for the Western District of Texas, Civil Action No. 6-20-cv-00525, alleging infringement of the ’523 Patent against SK hynix America Inc. and SK hynix. The parties later settled and the case was dismissed.

163. On August 21, 2020, SK hynix America Inc. and SK hynix filed a petition for *inter partes* review of the ’523 Patent, IPR2020-01421. The Board granted institution, the parties later settled, and the proceeding was dismissed.

164. On January 15, 2021, SEC and SSI filed a complaint against Netlist in the U.S. District Court for the District of Delaware, Civil Action No. 1-21-cv-01453, seeking a declaratory judgment of non-infringement of the ’523 Patent, unenforceability due to inequitable conduct and unclean hands, and breach of contract. Netlist asserted counterclaims of infringement against Samsung and later filed an amended answer that added counterclaims for patent infringement against Google LLC and Alphabet Inc. The case was stayed on December 1, 2023 and remains stayed.

165. On October 15, 2021, SEC filed a petition for *inter partes* review of the ’523 Patent, IPR2022-00063. The Board found claims 1–34 not unpatentable under 35 U.S.C. § 103. On July 10, 2023, SEC appealed that decision to the U.S. Court of Appeals for the Federal Circuit. The Federal Circuit summarily affirmed the Board’s decision on March 5, 2025. No. 23-2133, Dkt. No. 44.

**E. ’035 Patent**

166. On April 28, 2021, Netlist filed a complaint in the U.S. District Court for the Western District of Texas, Civil Action No. 22-cv-00136, alleging infringement of the ’035 Patent against Micron. The case was transferred from Civil Action No. 6-21-cv-00431. The case was stayed on May 11, 2022 pending multiple *inter partes* review proceedings and remains stayed pending the appeal of final written decisions issued in *inter partes* proceedings on other asserted patents.

167. On December 23, 2021, Micron filed a petition for *inter partes* review of the ’035 Patent, IPR2022-00236. The Board found claims 1, 10–13, and 21 of the ’035 patent unpatentable under 35 U.S.C. § 103 and claims 2, 6, and 22 not unpatentable. The Petitioners filed a request for rehearing, which was granted. In the rehearing Order, the Board found that claim 22 was unpatentable. Neither party appealed the Board’s decision.

**F. ’087 Patent**

168. On May 19, 2025, Netlist filed a complaint in the U.S. District Court for the Eastern District of Texas, Civil Action No. 2:25-cv-00552, alleging infringement of the ’087 patent against Micron. The case was terminated on May 22, 2025.

169. On May 19, 2025, Netlist filed a complaint in the U.S. District Court for the Eastern District of Texas, Civil Action No. 2:25-cv-00553, alleging infringement of the ’087 patent against the Proposed Samsung Respondents. The case was terminated on May 22, 2025.

170. On May 19, 2025, Netlist filed a Complaint in the U.S. District Court for Eastern District of Texas, Civil Action No. 2:25-cv-00557, alleging infringement of the ’087 patent against the Proposed Samsung Respondents. The case is in the initial stages.

171. On May 19, 2025, Netlist filed a Complaint in the U.S. District Court for Eastern District of Texas, Civil Action No. 2:25-cv-00558, alleging infringement of the ’087 patent against Micron. The case is in the initial stages.

172. On May 20, 2025, the Proposed Samsung Respondents filed a complaint against Netlist in the U.S. District Court for the District of Delaware, Civil Action No. 1:25-cv-00626, seeking a declaratory judgment of non-infringement of the ’087 Patent. The case is in the initial stages. The Proposed Samsung Respondents have moved for leave to file an amended complaint to add declaratory judgment claims against the ’366 Patent and ’731 Patent. That motion is currently pending.

173. On May 20, 2025, Micron filed a complaint against Netlist in the U.S. District Court for the District of Delaware, Civil Action No. 1:25-cv-00629, seeking a declaratory judgment of non-infringement of the ’087 Patent. The case is in the initial stages.

174. On August 25, 2025, SEC filed a petition for *inter partes* review of the ’087 Patent, IPR2025-01402. The case is in the initial stages.

175. On August 25, 2025, SEC filed a petition for post grant review of the ’087 Patent, PGR2025-00071. The case is in the initial stages.

176. Netlist has not previously litigated the Asserted Patents before any other court or agency.

## XII. RELIEF REQUESTED

177. Netlist respectfully requests that the Commission:

(a) Institute an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, with respect to Respondents’ violations of that section based on the importation into the United States, sale for importation, and/or sale within the United States

after importation of DRAM devices, products containing the same, and components thereof that infringe one or more claims of the Asserted Patents;

(b) Schedule and conduct a hearing pursuant to Section 337(c) for the purposes of (i) receiving evidence and hearing argument concerning whether there has been a violation of Section 337, and (ii) following the hearing, determining that there has been a violation of Section 337;

(c) Issue a permanent limited exclusion order pursuant to 19 U.S.C. § 1337(d) forbidding entry into the United States of DRAM devices, products containing the same, and components thereof that infringe one or more claims of the Asserted Patents and are manufactured, imported, sold for importation, and/or sold after importation by or on behalf of Respondents, their subsidiaries, related companies, and agents;

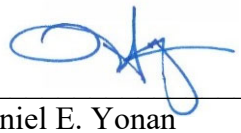
(d) Issue permanent cease-and-desist orders pursuant to 19 U.S.C. § 1337(f) prohibiting Respondents, their domestic subsidiaries, related companies, and agents from engaging in the importation, sale for importation, marketing and/or advertising, distribution, offering for sale, sale, use after importation, sale after importation, and other transfer within the United States (except for exportation) of DRAM devices, products containing the same, and components thereof that infringe one or more claims of the Asserted Patents;

(e) Impose a bond pursuant to 19 U.S.C. § 1337(j) on the importation of any DRAM devices, products containing the same, and components thereof that infringe one or more claims of the Asserted Patents during the 60-day Presidential review period; and

(f) Issue such other and further relief as the Commission deems just and proper under the law, based on the facts determined by the Investigation and the authority of the Commission.

Dated: September 29, 2025

Respectfully submitted,



Daniel E. Yonan
Donald R. Banowit
William H. Milliken
Richard M. Bemben
Lauren A. Watt
Sterne, Kessler, Goldstein & Fox PLLC
1101 K Street NW, 10th Floor
Washington DC 20005
Tel.: (202) 371-2600

Jason Sheasby
Annita Zhong, PhD
Andrew Strabone
Lisa Glasser
Irell & Manella LLP
1800 Avenue of the Stars, Suite 900
Los Angeles, CA 90067
Tel.: (310) 277-1010

*Counsel for Complainant Netlist, Inc.*

**UNITED STATES INTERNATIONAL TRADE COMMISSION**
**WASHINGTON, D.C.**

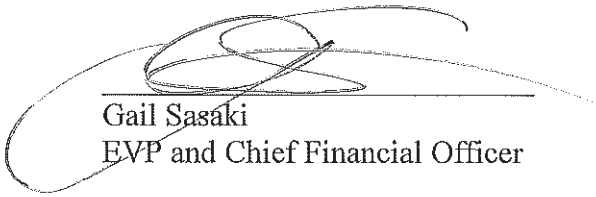
| | |
|---|---|
| **In the Matter of**<br><br>**CERTAIN DYNAMIC RANDOM ACCESS MEMORY (DRAM) DEVICES, PRODUCTS CONTAINING THE SAME, AND COMPONENTS THEREOF** | **Investigation No. 337-TA- _____** |

## VERIFICATION OF COMPLAINT

I, Gail Sasaki, am Executive Vice President and Chief Financial Officer of Netlist, Inc., and am authorized to execute this verification of the accompanying Complaint under Section 337 of the Tariff Act of 1390, as Amended, on behalf of Complainant Netlist, Inc. In accordance with Commission Rules 210.4 and 210.12(a), under penalty of perjury, I declare that:

1. I have read the Complaint and am familiar with the allegations and statements contained therein.
2. To the best of my knowledge, information, and belief founded after reasonable inquiry under the circumstances, the allegations and statements made in the Complaint are well grounded in fact and are warranted by existing law or a good faith argument for the extension, modification, or reversal of existing law.
3. The allegations and other factual contentions in the Complaint have evidentiary support or are likely to have evidentiary support after a reasonable opportunity for further investigation or discovery.
4. This Complaint is not being filed for any improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of litigation.

Executed on September 29, 2025



Gail Sasaki
EVP and Chief Financial Officer