

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

EIREOG INNOVATIONS LTD.,

Plaintiff,

v.

LENOVO GROUP LIMITED,

Defendant.

Case No. 2:24-cv-00239-JRG

JURY TRIAL DEMANDED

**AMENDED COMPLAINT FOR PATENT INFRINGEMENT
AGAINST LENOVO GROUP LIMITED**

This is an action for patent infringement arising under the Patent Laws of the United States of America, 35 U.S.C. § 1 *et seq.*, in which Plaintiff Eireog Innovations Limited (“Plaintiff” or “Eireog”) makes the following allegations against Defendant Lenovo Group Limited (“Defendant” or “Lenovo”):

INTRODUCTION

1. This complaint arises from Lenovo’s unlawful infringement of the following United States patents owned by Plaintiff, which relate to improvements in processing devices and systems: United States Patent Nos. 9,436,626 (“the ’626 Patent”), 9,442,870 (“the ’870 Patent”), 8,504,777 (“the ’777 Patent”), 8,117,399 (“the ’399 Patent”), and 9,335,805 (“the ’805 Patent”) (collectively, the “Asserted Patents”).

PARTIES

2. Plaintiff Eireog Innovations Limited is a private company limited by shares organized and existing under the laws of Ireland, with its principal place of business at The Hyde Building, Suite 23, The Park, Carrickmines, Dublin 18, Ireland. Eireog is the sole owner by

assignment of all rights, title, and interest in the Asserted Patents, including the right to recover damages for past, present, and future infringement.

3. Defendant Lenovo Group Limited is a foreign company organized and existing under the laws of China, with its headquarters at 23rd Floor, Lincoln House, Taikoo Place, 979 King's Road, Quarry Bay, Hong Kong S.A.R. of China. Lenovo does business in Texas and in the Eastern District of Texas, directly or through intermediaries, such as its wholly-owned subsidiaries. Lenovo is responsible for importing, making, marketing, distributing, offering for sale, and/or selling Lenovo-branded servers, workstations, laptops, and desktops in the United States (directly or through its wholly-owned subsidiaries), including in this District.

4. Lenovo induces its subsidiaries, affiliates, retail partners, and customers in the making, using, selling, offering for sale, and/or importing throughout the United States, including within this District, infringing products (such as Lenovo-branded servers, workstations, laptops, and desktops) and placing such products into the stream of commerce via established distribution channels knowing or understanding that such products would be sold and used in the United States, including in the Eastern District of Texas. Lenovo purposefully directs the Accused Products into established distribution channels within this District and the U.S. nationally. For example, Lenovo sells and offers to sell the Accused Products through its website, Lenovo.com, which may be accessed throughout the United States, the State of Texas, and this District. Additionally, Lenovo has authorized sellers and sales representatives that offer for sale and sell the Accused Products throughout the State of Texas and to consumers throughout this District, such as: Best Buy, 422 West Loop 281, Suite 100, Longview, Texas 75605; Costco Wholesale, 3650 West University Drive, McKinney, Texas 75071; Office Depot, 422 West Loop

281, Suite 300, Longview, Texas 75605; Target, 3092 North Eastman Road, Suite 100, Longview, Texas 75605; and Wal-Mart, 1701 East End Boulevard North, Marshall, Texas 75670.

5. Lenovo maintains a corporate presence in the United States via at least its wholly-owned subsidiaries, including Lenovo (United States) Inc. (“Lenovo US”) and Lenovo Global Technology (United States) Inc. (“Lenovo Tech.”).

6. Lenovo US is a corporation organized and existing under the laws of Delaware, with a corporate headquarters located at 1009 Think Place, Morrisville, NC 27560. Lenovo US is registered to do business in the State of Texas and may be served through CT Corporation System, 1999 Bryan St., Ste. 900, Dallas, TX 75201.

7. Lenovo Tech. is a corporation organized and existing under the laws of Delaware, with a corporate headquarters located at 1009 Think Place, Morrisville, NC 27560. Lenovo Tech. is registered to do business in the State of Texas and may be served through CT Corporation System, 1999 Bryan St., Ste. 900, Dallas, TX 75201.

8. Lenovo and its U.S.-based subsidiaries (which act as part of a global network of sales and manufacturing subsidiaries) operate as agents of one another and vicariously as parts of the same business group to work in concert together. For example, in its 2022/23 Annual Report, Lenovo describes itself and its subsidiaries as follows:

Lenovo Group Limited (the “Company”) and its subsidiaries (together, the “Group”) develop, manufacture and market reliable, high-quality, secure and easy-to-use technology products and services. Its product lines include legendary Think-branded commercial personal computers and Idea-branded consumer personal computers, as well as servers, workstations, and a family of mobile internet devices, including tablets and smartphones.

Ex. 1 at 192. Lenovo identifies U.S.-based subsidiaries (including but not limited to Lenovo US and Lenovo Tech.) in its list of “principal subsidiaries.” *Id.* at 279, 281. Lenovo describes its “principal subsidiaries” as follows:

The following includes the principal subsidiaries directly or indirectly held by the Company and, in the opinion of the directors, are significant to the results of the year or form a substantial portion of the net assets of the Group. The directors consider that giving details of other subsidiaries would result in particulars of excessive length.

Id. at 276. Lenovo identifies its 2023 “percentage of issued share capital held” for Lenovo US and Lenovo Tech. as “100%.” *Id.* at 279, 281. Further, Lenovo identifies the “principal activities” for Lenovo US as “[d]istribution of IT products” and the “principal activities” for Lenovo Tech. as “[p]rovision of IT services and distribution of IT products.” *Id.* As such, Lenovo US and Lenovo Tech. are agents of Lenovo. At the direction and control of Lenovo, U.S.-based subsidiaries (including but not limited to Lenovo US and Lenovo Tech.) make, use, import, offer to sell, and/or sell Lenovo-branded servers, workstations, laptops, and desktops that infringe the Asserted Patents, including in the State of Texas and this District.

9. Lenovo, alone and through its U.S.-based subsidiaries (such as Lenovo US and Lenovo Tech.), places such infringing products into the stream of commerce via established distribution channels knowing or understanding that such products would be sold and used in the United States, including in the Eastern District of Texas. Lenovo has derived substantial revenue from infringing acts in the United States, including from the sale and use of infringing products. *See Ex. 1* at 225 (showing revenues for “Americas”).

JURISDICTION AND VENUE

10. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has original subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

11. This Court has personal jurisdiction over Lenovo in this action because Lenovo has committed acts within Texas (and this District) giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over Lenovo would not

offend traditional notions of fair play and substantial justice. Lenovo, directly and/or through subsidiaries or intermediaries, has committed and continues to commit acts of infringement in this District by, among other things, making, using, importing, offering to sell, and/or selling products that infringe the Asserted Patents. Courts in Texas have concluded that Lenovo is subject to personal jurisdiction in the State of Texas. *See ACQIS LLC v. Lenovo Grp. Ltd.*, 572 F. Supp. 3d 291, 307 (W.D. Tex. 2021) (“this Court finds that the exercise of personal jurisdiction over [Lenovo Group Limited] is both reasonable and fair.”); *see also AX Wireless LLC v. Lenovo Grp. Ltd.*, No. 2:22-cv-00280-RWS-RSP, Dkt. No. 110 (report and recommendation) (E.D. Tex. Sept. 6, 2023) (“exercising personal jurisdiction [over Lenovo Grp. Ltd.] would not offend traditional notions of fair place and substantial justice.”).

12. Venue is proper in this District under 28 U.S.C. §§ 1391 and 1400(b). Lenovo, directly and/or through subsidiaries or intermediaries, has transacted business in this District and has committed acts of direct infringement in this District by, among other things, making, using, offering to sell, selling, and importing products that infringe the Asserted Patents. Venue is also proper as to Lenovo because it is a foreign corporation organized under the laws of China and suits against foreign entities are proper in any judicial district. *See* 28 U.S.C. § 1391(c)(3); *In re HTC Corp.*, 889 F.3d 1349 (Fed. Cir. 2018).

COUNT I

INFRINGEMENT OF U.S. PATENT NO. 9,436,626

13. Plaintiff realleges and incorporates by reference the foregoing paragraphs as if fully set forth herein.

14. Plaintiff owns by assignment all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 9,436,626, titled

“Processor interrupt interface with interrupt partitioning and virtualization enhancements.” The ’626 Patent was duly and legally issued by the United States Patent and Trademark Office on September 6, 2016. The ’626 Patent is valid and enforceable. A true and correct copy of the ’626 Patent is attached hereto as Exhibit 2.

15. Lenovo makes, uses, offers for sale, sells, and/or imports certain products, including without limitation Lenovo’s products using Intel-based CPUs (Haswell-based architecture and newer) (including but not limited to ThinkSystem Servers (SD530 V3, SD550 V3, SE350 V2, SE360 V2, ST650 V3, SR630 V3, SR650 V3, SR850 V3, SR860 V3, SR950 V3, SD650 V3, SD650-I V3, SD650-N V3, SE450, ST50 V2, SR250 V2, ST650 V2, SR630 V2, SR650 V2, SR670 V2, SD630 V2, SD650 V2, SD650-N V2, SN550 V2 , SE350, ST50, SR530, SR630, SR650, SR850, SR850P, SR850 V2, SR860 V2, SR950, ST550, SN550, SN850), ThinkAgile Systems (HX630 V3, HX650 V3, HX1330, HX2330, HX3330, HX5530, HX7530, HX7820), ThinkStation Workstations (P3 Tiny Workstation, P3 Tower Workstation, P3 Ultra Small Workstation, P5 Workstation, P7 Workstation, PX Workstation), ThinkCentre Desktops (M80q Gen 4, Neo 50s Gen 4, M70s Gen 3, M70q Gen 3, Gen 4, M90q Gen 3, M90t Gen 3), ThinkPad Laptops (ThinkPad X1, ThinkPad E16, ThinkPad T14, ThinkPad T16 Gen 2), Legion Laptops (Legion Pro 7i, Legion Pro 5i Gen 8), ThinkBook Laptops (ThinkBook 16 Gen 1, ThinkBook 14 Gen 6), IdeaPads (IdeaPad 5i), and Yoga Laptops (Yoga 9i, 7i)) and AMD Zen-based CPUs (including but not limited to ThinkSystem Servers (SE455 V3, SR635 V3, SR655 V3, SR645 V3, SR665 V3, SR675 V3, SD665-N V3, SR635, SR655 V3, SR645, SR665), ThinkAgile Systems (HX645 V3 and HX655 V3), ThinkStation Workstations (P620 Workstation, P8 Workstation), ThinkCentre Desktops (M75q, M75s), ThinkPad Laptops (L14 Gen 3, P14s Gen 4, T16 Gen 2), ThinkBook Laptops (ThinkBook 16 Gen 6, ThinkBook 14 Gen 4), Legion Pro

Laptops (Legion Pro 5 Gen 8), IdeaPad Laptops (Flex 5, Slim 5), and Yoga Laptops (Yoga 7)) (the “Accused Products”), that directly infringe, literally and/or under the doctrine of equivalents, one or more claims of the ’626 Patent. Identification of the accused products will be provided in Plaintiff’s infringement contentions pursuant to the Court’s scheduling order.

16. The Accused Products satisfy all claim limitations of one or more claims of the ’626 Patent. A claim chart comparing exemplary independent claim 1 of the ’626 Patent to representative Accused Products is attached as Exhibits 3 and 4.

17. By making, using, offering for sale, selling and/or importing into the United States the Accused Products, Lenovo has injured Plaintiff and is liable for infringement of the ’626 Patent pursuant to 35 U.S.C. § 271(a).

18. Lenovo also knowingly and intentionally induces infringement of one or more claims of the ’626 Patent in violation of 35 U.S.C. § 271(b). At least as of the filing and service of the original complaint on April 11, 2024, Lenovo has knowledge of the ’626 Patent and the infringing nature of the Accused Products through, for example, the ’626 Patent claim charts served therewith. Despite this knowledge of the ’626 Patent, Lenovo continues to actively encourage and instruct its customers and end users (for example, through user manuals and online instruction materials on its website and materials cited in Exhibits 3 and 4) to use the Accused Products in ways that directly infringe the ’626 Patent. For example, Lenovo advertises the benefits of Intel Xeon and AMD EPYC processors and their impact on Lenovo’s products, such as the accused ThinkSystem and ThinkAgile products. *See* Ex. 5 (<https://www.lenovo.com/us/en/c/servers-storage/servers-intel/?orgRef=https%253A%252F%252Fwww.google.com%252F>); Ex. 6 (<https://lenovopress.lenovo.com/lp1866-launch-5th-gen-intel-xeon-scalable->

[processors?orgRef=https%253A%252F%252Fwww.google.com%252F](https://www.google.com/)); Ex. 7

[\(\[\\[storage/alliance/amd/?orgRef=https%253A%252F%252Fwww.google.com%252F\\]\\(https://www.google.com/\\)\\). Further,\]\(https://www.lenovo.com/us/en/servers-</p></div><div data-bbox=\)](https://www.lenovo.com/us/en/servers-)

Lenovo provides customers with instructions and user manuals detailing how to setup, configure, and utilize the Accused Products to utilize the infringing functionality. *See, e.g.,* Ex. 8

[\(\[https://pubs.lenovo.com/st650-v2/ST650_V2_setup_guide.pdf\]\(https://pubs.lenovo.com/st650-v2/ST650_V2_setup_guide.pdf\)\);](https://pubs.lenovo.com/st650-v2/ST650_V2_setup_guide.pdf) Ex. 9

[\(\[https://pubs.lenovo.com/thinkagile-hx/hx_series_user_guide.pdf\]\(https://pubs.lenovo.com/thinkagile-hx/hx_series_user_guide.pdf\)\).](https://pubs.lenovo.com/thinkagile-hx/hx_series_user_guide.pdf) Lenovo provides these

instructions, user manuals, and other materials knowing and intending (or with willful blindness to the fact) that its customers and end users will commit these infringing acts. Lenovo also continues to make, use, offer for sale, sell, and/or import the Accused Products, despite its knowledge of the '626 Patent, thereby specifically intending for and inducing its customers to infringe the '626 Patent through the customers' normal and customary use of the Accused Products.

19. Lenovo has also infringed, and continues to infringe, one or more claims of the '626 Patent by selling, offering for sale, or importing into the United States, the Accused Products, knowing that the Accused Products constitute a material part of the inventions claimed in the '626 Patent, are especially made or adapted to infringe the '626 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use. At least as of the filing and service of the original complaint on April 11, 2024, Lenovo has knowledge of the '626 Patent and the infringing nature of the Accused Products through, for example, the '626 Patent claim chart served therewith. Lenovo has been, and currently is, contributorily infringing the '626 Patent in violation of 35 U.S.C. §§ 271(c) and/or (f). For example, the accused processor interrupt management features constitute a material part of the inventions claimed in the '626 Patent, are especially made

or adapted to infringe the '626 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use, as demonstrated by the evidence in Exhibits 3 and 4.

20. On information and belief, Plaintiff (including its predecessors and any licensees) complied with 35 U.S.C. § 287 during the relevant time period because Plaintiff, any predecessor assignees to the '626 Patent, and any licensees did not make, offer for sale, or sell products that practice(d) the '626 Patent during the relevant time period or were not required to mark during the relevant time period.

21. As a result of Lenovo's direct infringement of the '626 Patent, Plaintiff is entitled to monetary damages (past, present, and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court.

22. As a result of Lenovo's indirect infringement of the '626 Patent, Plaintiff is entitled to monetary damages (present and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court, accruing as of the time Lenovo obtained knowledge of the '626 Patent.

COUNT II

INFRINGEMENT OF U.S. PATENT NO. 9,442,870

23. Plaintiff realleges and incorporates by reference the foregoing paragraphs as if fully set forth herein.

24. Plaintiff owns by assignment all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 9,442,870, titled "Interrupt priority management using partition-based priority blocking processor registers."

The '870 Patent was duly and legally issued by the United States Patent and Trademark Office on September 13, 2016. The '870 Patent is valid and enforceable. A true and correct copy of the '870 Patent is attached hereto as Exhibit 10.

25. Lenovo makes, uses, offers for sale, sells, and/or imports certain products, including without limitation Lenovo's products using Intel-based CPUs (Haswell-based architecture and newer) (including but not limited to ThinkSystem Servers (SD530 V3, SD550 V3, SE350 V2, SE360 V2, ST650 V3, SR630 V3, SR650 V3, SR850 V3, SR860 V3, SR950 V3, SD650 V3, SD650-I V3, SD650-N V3, SE450, ST50 V2, SR250 V2, ST650 V2, SR630 V2, SR650 V2, SR670 V2, SD630 V2, SD650 V2, SD650-N V2, SN550 V2, SE350, ST50, SR530, SR630, SR650, SR850, SR850P, SR850 V2, SR860 V2, SR950, ST550, SN550, SN850), ThinkAgile Systems (HX630 V3, HX650 V3, HX1330, HX2330, HX3330, HX5530, HX7530, HX7820), ThinkStation Workstations (P3 Tiny Workstation, P3 Tower Workstation, P3 Ultra Small Workstation, P5 Workstation, P7 Workstation, PX Workstation), ThinkCentre Desktops (M80q Gen 4, Neo 50s Gen 4, M70s Gen 3, M70q Gen 3, Gen 4, M90q Gen 3, M90t Gen 3), ThinkPad Laptops (ThinkPad X1, ThinkPad E16, ThinkPad T14, ThinkPad T16 Gen 2), Legion Laptops (Legion Pro 7i, Legion Pro 5i Gen 8), ThinkBook Laptops (ThinkBook 16 Gen 1, ThinkBook 14 Gen 6), IdeaPads (IdeaPad 5i), and Yoga Laptops (Yoga 9i, 7i)) and AMD Zen-based CPUs (including but not limited to ThinkSystem Servers (SE455 V3, SR635 V3, SR655 V3, SR645 V3, SR665 V3, SR675 V3, SD665-N V3, SR635, SR655 V3, SR645, SR665), ThinkAgile Systems (HX645 V3 and HX655 V3), ThinkStation Workstations (P620 Workstation, P8 Workstation), ThinkCentre Desktops (M75q, M75s), ThinkPad Laptops (L14 Gen 3, P14s Gen 4, T16 Gen 2), ThinkBook Laptops (ThinkBook 16 Gen 6, ThinkBook 14 Gen 4), Legion Pro Laptops (Legion Pro 5 Gen 8), IdeaPad Laptops (Flex 5, Slim 5), and Yoga Laptops (Yoga 7)) (the

“Accused Products”), that directly infringe, literally and/or under the doctrine of equivalents, one or more claims of the ’870 Patent. Identification of the accused products will be provided in Plaintiff’s infringement contentions pursuant to the Court’s scheduling order.

26. The Accused Products satisfy all claim limitations of one or more claims of the ’870 Patent. A claim chart comparing exemplary independent claim 1 of the ’870 Patent to representative Accused Products is attached as Exhibits 11 and 12.

27. By making, using, offering for sale, selling and/or importing into the United States the Accused Products, Lenovo has injured Plaintiff and is liable for infringement of the ’870 Patent pursuant to 35 U.S.C. § 271(a).

28. Lenovo also knowingly and intentionally induces infringement of one or more claims of the ’870 Patent in violation of 35 U.S.C. § 271(b). At least as of the filing and service of the original complaint on April 11, 2024, Lenovo has knowledge of the ’870 Patent and the infringing nature of the Accused Products through, for example, the ’870 Patent claim charts served therewith. Despite this knowledge of the ’870 Patent, Lenovo continues to actively encourage and instruct its customers and end users (for example, through user manuals and online instruction materials on its website and materials cited in Exhibits 11 and 12) to use the Accused Products in ways that directly infringe the ’870 Patent. For example, Lenovo advertises the benefits of Intel Xeon and AMD EPYC processors and their impact on Lenovo’s products, such as the accused ThinkSystem and ThinkAgile products. *See* Ex. 5 (<https://www.lenovo.com/us/en/c/servers-storage/servers-intel/?orgRef=https%253A%252F%252Fwww.google.com%252F>); Ex. 6 (<https://lenovopress.lenovo.com/lp1866-launch-5th-gen-intel-xeon-scalable-processors?orgRef=https%253A%252F%252Fwww.google.com%252F>); Ex. 7

(<https://www.lenovo.com/us/en/servers-storage/alliance/amd/?orgRef=https%253A%252F%252Fwww.google.com%252F>). Further, Lenovo provides customers with instructions and user manuals detailing how to setup, configure, and utilize the Accused Products to utilize the infringing functionality. *See, e.g.*, Ex. 8 (https://pubs.lenovo.com/st650-v2/ST650_V2_setup_guide.pdf); Ex. 9 (https://pubs.lenovo.com/thinkagile-hx/hx_series_user_guide.pdf). Lenovo provides these instructions, user manuals, and other materials knowing and intending (or with willful blindness to the fact) that its customers and end users will commit these infringing acts. Lenovo also continues to make, use, offer for sale, sell, and/or import the Accused Products, despite its knowledge of the '870 Patent, thereby specifically intending for and inducing its customers to infringe the '870 Patent through the customers' normal and customary use of the Accused Products.

29. Lenovo has also infringed, and continues to infringe, one or more claims of the '870 Patent by selling, offering for sale, or importing into the United States, the Accused Products, knowing that the Accused Products constitute a material part of the inventions claimed in the '870 Patent, are especially made or adapted to infringe the '870 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use. At least as of the filing and service of the original complaint on April 11, 2024, Lenovo has knowledge of the '870 Patent and the infringing nature of the Accused Products through, for example, the '870 Patent claim chart served therewith. Lenovo has been, and currently is, contributorily infringing the '870 Patent in violation of 35 U.S.C. §§ 271(c) and/or (f). For example, the accused processor interrupt management features constitute a material part of the inventions claimed in the '870 Patent, are especially made

or adapted to infringe the '870 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use, as demonstrated by the evidence in Exhibits 11 and 12.

30. On information and belief, Plaintiff (including its predecessors and any licensees) complied with 35 U.S.C. § 287 during the relevant time period because Plaintiff, any predecessor assignees to the '870 Patent, and any licensees did not make, offer for sale, or sell products that practice(d) the '870 Patent during the relevant time period or were not required to mark during the relevant time period.

31. As a result of Lenovo's direct infringement of the '870 Patent, Plaintiff is entitled to monetary damages (past, present, and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court.

32. As a result of Lenovo's indirect infringement of the '870 Patent, Plaintiff is entitled to monetary damages (present and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court, accruing as of the time Lenovo obtained knowledge of the '870 Patent.

COUNT III

INFRINGEMENT OF U.S. PATENT NO. 8,504,777

33. Plaintiff realleges and incorporates by reference the foregoing paragraphs as if fully set forth herein.

34. Plaintiff owns by assignment all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 8,504,777, titled "Data processor for processing decorated instructions with cache bypass." The '777 Patent was

duly and legally issued by the United States Patent and Trademark Office on August 6, 2013. The '777 Patent is valid and enforceable. A true and correct copy of the '777 Patent is attached hereto as Exhibit 13.

35. Lenovo makes, uses, offers for sale, sells, and/or imports certain products, including without limitation Lenovo's products using Intel-based CPUs (Skylake-based architecture and newer) (including but not limited to ThinkSystem Servers (SD530 V3, SD550 V3, SE350 V2, SE360 V2, ST650 V3, SR630 V3, SR650 V3, SR850 V3, SR860 V3, SR950 V3, SD650 V3, SD650-I V3, SD650-N V3, SE450, ST50 V2, SR250 V2, ST650 V2, SR630 V2, SR650 V2, SR670 V2, SD630 V2, SD650 V2, SD650-N V2, SN550 V2, SE350, ST50, SR530, SR630, SR650, SR850, SR850P, SR850 V2, SR860 V2, SR950, ST550, SN550, SN850) and ThinkAgile Systems (HX630 V3, HX650 V3, HX1330, HX2330, HX3330, HX5530, HX7530, HX7820)) and AMD-based EPYC CPUs (including but not limited to ThinkSystem Servers (SE455 V3, SR635 V3, SR655 V3, SR645 V3, SR665 V3, SR675 V3, SD665-N V3, SR635, SR655 V3, SR645, SR665) and ThinkAgile Systems (HX645 V3 and HX655 V3)) (the "Accused Products"), that directly infringe, literally and/or under the doctrine of equivalents, one or more claims of the '777 Patent. Identification of the accused products will be provided in Plaintiff's infringement contentions pursuant to the Court's scheduling order.

36. The Accused Products satisfy all claim limitations of one or more claims of the '777 Patent. A claim chart comparing exemplary independent claim 16 of the '777 Patent to representative Accused Products is attached as Exhibits 14 and 15.

37. By making, using, offering for sale, selling and/or importing into the United States the Accused Products, Lenovo has injured Plaintiff and is liable for infringement of the '777 Patent pursuant to 35 U.S.C. § 271(a).

38. Lenovo also knowingly and intentionally induces infringement of one or more claims of the '777 Patent in violation of 35 U.S.C. § 271(b). At least as of the filing and service of the original complaint on April 11, 2024, Lenovo has knowledge of the '777 Patent and the infringing nature of the Accused Products through, for example, the '777 Patent claim chart served therewith. Despite this knowledge of the '777 Patent, Lenovo continues to actively encourage and instruct its customers and end users (for example, through user manuals and online instruction materials on its website and materials cited in Exhibits 14 and 15) to use the Accused Products in ways that directly infringe the '777 Patent. For example, Lenovo advertises the benefits of Intel Xeon and AMD EPYC processors and their impact on Lenovo's products, such as the accused ThinkSystem and ThinkAgile products. See Ex. 5 (<https://www.lenovo.com/us/en/c/servers-storage/servers-intel/?orgRef=https%253A%252F%252Fwww.google.com%252F>); Ex. 6 (<https://lenovopress.lenovo.com/lp1866-launch-5th-gen-intel-xeon-scalable-processors?orgRef=https%253A%252F%252Fwww.google.com%252F>); Ex. 7 (<https://www.lenovo.com/us/en/servers-storage/alliance/amd/?orgRef=https%253A%252F%252Fwww.google.com%252F>). Further, Lenovo provides customers with instructions and user manuals detailing how to setup, configure, and utilize the Accused Products to utilize the infringing functionality. See, e.g., Ex. 8 (https://pubs.lenovo.com/st650-v2/ST650_V2_setup_guide.pdf); Ex. 9 (https://pubs.lenovo.com/thinkagile-hx/hx_series_user_guide.pdf). Lenovo provides these instructions, user manuals, and other materials knowing and intending (or with willful blindness to the fact) that its customers and end users will commit these infringing acts. Lenovo also continues to make, use, offer for sale, sell, and/or import the Accused Products, despite its knowledge of the '777 Patent, thereby specifically intending for and inducing its customers to

infringe the '777 Patent through the customers' normal and customary use of the Accused Products.

39. Lenovo has also infringed, and continues to infringe, one or more claims of the '777 Patent by selling, offering for sale, or importing into the United States, the Accused Products, knowing that the Accused Products constitute a material part of the inventions claimed in the '777 Patent, are especially made or adapted to infringe the '777 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use. At least as of the filing and service of the original complaint on April 11, 2024, Lenovo has knowledge of the '777 Patent and the infringing nature of the Accused Products through, for example, the '777 Patent claim chart served therewith. Lenovo has been, and currently is, contributorily infringing the '777 Patent in violation of 35 U.S.C. §§ 271(c) and/or (f). For example, the accused cache processing features constitute a material part of the inventions claimed in the '777 Patent, are especially made or adapted to infringe the '777 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use, as demonstrated by the evidence in Exhibits 14 and 15.

40. On information and belief, Plaintiff (including its predecessors and any licensees) complied with 35 U.S.C. § 287 during the relevant time period because Plaintiff, any predecessor assignees to the '777 Patent, and any licensees did not make, offer for sale, or sell products that practice(d) the '777 Patent during the relevant time period or were not required to mark during the relevant time period.

41. As a result of Lenovo's direct infringement of the '777 Patent, Plaintiff is entitled to monetary damages (past, present, and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court.

42. As a result of Lenovo's indirect infringement of the '777 Patent, Plaintiff is entitled to monetary damages (present and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court, accruing as of the time Lenovo obtained knowledge of the '777 Patent.

COUNT IV

INFRINGEMENT OF U.S. PATENT NO. 8,117,399

43. Plaintiff realleges and incorporates by reference the foregoing paragraphs as if fully set forth herein.

44. Plaintiff owns by assignment all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 8,117,399, titled "Processing of coherent and incoherent accesses at a uniform cache." The '399 Patent was duly and legally issued by the United States Patent and Trademark Office on February 14, 2012. The '399 Patent is valid and enforceable. A true and correct copy of the '399 Patent is attached hereto as Exhibit 16.

45. Lenovo makes, uses, offers for sale, sells, and/or imports certain products, including without limitation Lenovo's products using Intel-based CPUs (Skylake-based architecture and newer) (including but not limited to ThinkSystem Servers (SD530 V3, SD550 V3, SE350 V2, SE360 V2, ST650 V3, SR630 V3, SR650 V3, SR850 V3, SR860 V3, SR950 V3, SD650 V3, SD650-I V3, SD650-N V3, SE450, ST50 V2, SR250 V2, ST650 V2, SR630 V2, SR650 V2, SR670 V2, SD630 V2, SD650 V2, SD650-N V2, SN550 V2 , SE350, ST50, SR530, SR630, SR650, SR850, SR850P, SR850 V2, SR860 V2, SR950, ST550, SN550, SN850) and ThinkAgile Systems (HX630 V3, HX650 V3, HX1330, HX2330, HX3330, HX5530, HX7530,

HX7820)) and AMD-based EPYC CPUs (including but not limited to ThinkSystem Servers (SE455 V3, SR635 V3, SR655 V3, SR645 V3, SR665 V3, SR675 V3, SD665-N V3, SR635, SR655 V3, SR645, SR665) and ThinkAgile Systems (HX645 V3 and HX655 V3)) (the “Accused Products”), that directly infringe, literally and/or under the doctrine of equivalents, one or more claims of the ’399 Patent. Identification of the accused products will be provided in Plaintiff’s infringement contentions pursuant to the Court’s scheduling order.

46. The Accused Products satisfy all claim limitations of one or more claims of the ’399 Patent. A claim chart comparing exemplary independent claim 14 of the ’399 Patent to representative Accused Products is attached as Exhibits 17 and 18.

47. By making, using, offering for sale, selling and/or importing into the United States the Accused Products, Lenovo has injured Plaintiff and is liable for infringement of the ’399 Patent pursuant to 35 U.S.C. § 271(a).

48. Lenovo also knowingly and intentionally induces infringement of one or more claims of the ’399 Patent in violation of 35 U.S.C. § 271(b). At least as of the filing and service of the original complaint on April 11, 2024, Lenovo has knowledge of the ’399 Patent and the infringing nature of the Accused Products through, for example, the ’399 Patent claim chart served therewith. Despite this knowledge of the ’399 Patent, Lenovo continues to actively encourage and instruct its customers and end users (for example, through user manuals and online instruction materials on its website and materials cited in Exhibits 17 and 18) to use the Accused Products in ways that directly infringe the ’399 Patent. For example, Lenovo advertises the benefits of Intel Xeon and AMD EPYC processors and their impact on Lenovo’s products, such as the accused ThinkSystem and ThinkAgile products. *See* Ex. 5 (<https://www.lenovo.com/us/en/c/servers-storage/servers-intel/?orgRef=https%253A%252F%252Fwww.google.com%252F>); Ex. 6

<https://lenovopress.lenovo.com/lp1866-launch-5th-gen-intel-xeon-scalable-processors?orgRef=https%253A%252F%252Fwww.google.com%252F>); Ex. 7
<https://www.lenovo.com/us/en/servers-storage/alliance/amd/?orgRef=https%253A%252F%252Fwww.google.com%252F>). Further, Lenovo provides customers with instructions and user manuals detailing how to setup, configure, and utilize the Accused Products to utilize the infringing functionality. *See, e.g.*, Ex. 8
https://pubs.lenovo.com/st650-v2/ST650_V2_setup_guide.pdf); Ex. 9
https://pubs.lenovo.com/thinkagile-hx/hx_series_user_guide.pdf). Lenovo provides these instructions, user manuals, and other materials knowing and intending (or with willful blindness to the fact) that its customers and end users will commit these infringing acts. Lenovo also continues to make, use, offer for sale, sell, and/or import the Accused Products, despite its knowledge of the '399 Patent, thereby specifically intending for and inducing its customers to infringe the '399 Patent through the customers' normal and customary use of the Accused Products.

49. Lenovo has also infringed, and continues to infringe, one or more claims of the '399 Patent by selling, offering for sale, or importing into the United States, the Accused Products, knowing that the Accused Products constitute a material part of the inventions claimed in the '399 Patent, are especially made or adapted to infringe the '399 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use. At least as of the filing and service of the original complaint on April 11, 2024, Lenovo has knowledge of the '399 Patent and the infringing nature of the Accused Products through, for example, the '399 Patent claim chart served therewith. Lenovo has been, and currently is, contributorily infringing the '399 Patent in violation of 35 U.S.C. §§ 271(c) and/or (f). For example, the accused cache processing features constitute

a material part of the inventions claimed in the '399 Patent, are especially made or adapted to infringe the '399 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use, as demonstrated by the evidence in Exhibits 17 and 18.

50. On information and belief, Plaintiff (including its predecessors and any licensees) complied with 35 U.S.C. § 287 during the relevant time period because Plaintiff, any predecessor assignees to the '399 Patent, and any licensees did not make, offer for sale, or sell products that practice(d) the '399 Patent during the relevant time period or were not required to mark during the relevant time period.

51. As a result of Lenovo's direct infringement of the '399 Patent, Plaintiff is entitled to monetary damages (past, present, and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court.

52. As a result of Lenovo's indirect infringement of the '399 Patent, Plaintiff is entitled to monetary damages (present and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court, accruing as of the time Lenovo obtained knowledge of the '399 Patent.

COUNT V

INFRINGEMENT OF U.S. PATENT NO. 9,335,805

53. Plaintiff realleges and incorporates by reference the foregoing paragraphs as if fully set forth herein.

54. Plaintiff owns by assignment all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 9,335,805, titled

“Method and apparatus for managing power in a multi-core processor.” The ’805 Patent was duly and legally issued by the United States Patent and Trademark Office on May 10, 2016. The ’805 Patent is valid and enforceable. A true and correct copy of the ’805 Patent is attached hereto as Exhibit 19.

55. Lenovo makes, uses, offers for sale, sells, and/or imports certain products, including without limitation Lenovo’s products using Intel Core CPUs (12th Generation (Alder Lake) and newer) (including but not limited to IdeaPad Laptops (5i, 5i 2-in-1, Slim 3i, Slim 5i, Pro 5i, Flex 3i, Flex 5i), ThinkBook Laptops (13s, 13x, 14, 14 2-in-1, 15, 16, 16p), LOQ Laptops, Yoga Laptops (7i, Pro 7i, 7i 2-in-1, 9i, Book 9i, Pro 9i, 9i 2-in-1), Legion Laptops (5i, Pro 5i, Slim 5i, 7i, Pro 7i, Slim 7i, 9i, Slim 9i), Lenovo Laptops (Slim 7i), Yoga Desktops (AIO 9i), LOQ Tower, ThinkCentre Desktops (Neo 30a, Neo 50s, Neo 50q, M60q, M70a, M70s, M70q, M70t, M90a, M90s, M90q, M90t), Legion Tower Desktops (5i, 7i), IdeaCentre Desktops (Mini, Tower, AIO 3i, 5i, AIO 5i, AIO I), ThinkPad Laptops and Mobile Workstations (X1 Carbon, X1 Yoga, X1 Fold, X1 Extreme, X1 Nano, X1 2-in-1, X13, X13 Yoga, X13 2-in-1, T14, T14s, T15p, T16, P1, P14s, P15v, P16, P16s, P16v, L13, L13 Yoga, L14, L15, L16, E14, E15, E16), ThinkStation Workstations (P2 Tower, P3 Tiny, P3 Tower, P3 Ultra Small Form Factor)) (the “Accused Products”), that directly infringe, literally and/or under the doctrine of equivalents, one or more claims of the ’805 Patent. Identification of the accused products will be provided in Plaintiff’s infringement contentions pursuant to the Court’s scheduling order.

56. The Accused Products satisfy all claim limitations of one or more claims of the ’805 Patent. A claim chart comparing exemplary independent claim 6 of the ’805 Patent to representative Accused Products is attached as Exhibit 20.

57. By making, using, offering for sale, selling and/or importing into the United States the Accused Products, Lenovo has injured Plaintiff and is liable for infringement of the '805 Patent pursuant to 35 U.S.C. § 271(a).

58. Lenovo also knowingly and intentionally induces infringement of one or more claims of the '805 Patent in violation of 35 U.S.C. § 271(b). At least as of the filing and service of this complaint, Lenovo has knowledge of the '805 Patent and the infringing nature of the Accused Products through, for example, the '805 Patent claim charts served therewith. Despite this knowledge of the '805 Patent, Lenovo continues to actively encourage and instruct its customers and end users (for example, through user manuals and online instruction materials on its website and materials cited in Exhibit 20) to use the Accused Products in ways that directly infringe the '805 Patent. For example, Lenovo advertises the benefits of Intel Core processors and their impact on Lenovo's products, such as the accused desktop and laptop products. *See* Ex. 21 (<https://www.lenovo.com/us/en/faqs/intel/13th-gen-intel-core-desktop-processors/>); Ex. 22 (<https://www.lenovo.com/us/en/faqs/intel/12th-gen-intel-core-laptop-processors/>). Further, Lenovo provides customers with instructions and user manuals detailing how to setup, configure, and utilize the Accused Products to utilize the infringing functionality. *See, e.g.*, Ex. 23 (https://download.lenovo.com/consumer/mobiles_pub/lenovo_thinkbook_14_16_gen_6_ug_en.pdf); Ex. 24 (https://download.lenovo.com/consumer/mobiles_pub/ideapad_slim_5i_15_ug_en.pdf). Lenovo provides these instructions, user manuals, and other materials knowing and intending (or with willful blindness to the fact) that its customers and end users will commit these infringing acts. Lenovo also continues to make, use, offer for sale, sell, and/or import the Accused Products, despite its knowledge of the '805 Patent, thereby specifically intending for and inducing its

customers to infringe the '805 Patent through the customers' normal and customary use of the Accused Products.

59. Lenovo has also infringed, and continues to infringe, one or more claims of the '805 Patent by selling, offering for sale, or importing into the United States, the Accused Products, knowing that the Accused Products constitute a material part of the inventions claimed in the '805 Patent, are especially made or adapted to infringe the '805 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use. At least as of the filing and service of this complaint, Lenovo has knowledge of the '805 Patent and the infringing nature of the Accused Products through, for example, the '805 Patent claim chart served therewith. Lenovo has been, and currently is, contributorily infringing the '805 Patent in violation of 35 U.S.C. §§ 271(c) and/or (f). For example, the accused processor power management features constitute a material part of the inventions claimed in the '805 Patent, are especially made or adapted to infringe the '805 Patent, and are not staple articles or commodities of commerce suitable for non-infringing use, as demonstrated by the evidence in Exhibit 20.

60. On information and belief, Plaintiff (including its predecessors and any licensees) complied with 35 U.S.C. § 287 during the relevant time period because Plaintiff, any predecessor assignees to the '805 Patent, and any licensees did not make, offer for sale, or sell products that practice(d) the '805 Patent during the relevant time period or were not required to mark during the relevant time period.

61. As a result of Lenovo's direct infringement of the '805 Patent, Plaintiff is entitled to monetary damages (past, present, and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court.

62. As a result of Lenovo's indirect infringement of the '805 Patent, Plaintiff is entitled to monetary damages (present and future) in an amount adequate to compensate for Lenovo's infringement, but in no event less than a reasonable royalty for the use made of the invention by Lenovo, together with interest and costs as fixed by the Court, accruing as of the time Lenovo obtained knowledge of the '805 Patent.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests that this Court enter:

- a. A judgment in favor of Plaintiff that Lenovo has infringed, either literally and/or under the doctrine of equivalents, the '626, '870, '777, '399, and '805 Patents;
- b. A judgment and order requiring Lenovo to pay Plaintiff its damages (past, present, and future), costs, expenses, and pre-judgment and post-judgment interest for Lenovo's infringement of the '626, '870, '777, '399, and '805 Patents;
- c. A judgment and order requiring Lenovo to pay Plaintiff compulsory ongoing licensing fees, as determined by the Court in equity.
- d. A judgment and order requiring Lenovo to provide an accounting and to pay supplemental damages to Plaintiff, including without limitation, pre-judgment and post-judgment interest and compensation for infringing products released after the filing of this case that are not colorably different from the accused products;
- e. A judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding to Plaintiff its reasonable attorneys' fees against Lenovo; and
- f. Any and all other relief as the Court may deem appropriate and just under the circumstances.

DEMAND FOR JURY TRIAL

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, requests a trial by jury of any issues so triable by right.

Dated: June 4, 2024

Respectfully submitted,

By: *Brett E. Cooper*

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CERTIFICATE OF SERVICE

I certify that this document is being served upon counsel of record for Defendant on June 4, 2024 via electronic service.

/s/ Brett E. Cooper
Brett E. Cooper