

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

NETWORK SYSTEM TECHNOLOGIES, LLC,)
)
Plaintiff,)
)
v.) Civil Action No. 2:23-cv-167
)
LENOVO GROUP LTD.)
) **JURY TRIAL DEMANDED**
Defendant.)

COMPLAINT

Plaintiff Network System Technologies, LLC (“NST” or “Plaintiff”), by and through its attorneys, demands a trial by jury on all issues so triable, and for its complaint against Lenovo Group Ltd. (“Defendant”) alleges as follows:

NATURE OF THE ACTION

1. This is a civil action for patent infringement under the patent laws of the United States, Title 35, United States Code, Section 271, *et seq.*, involving the follow United States Patents (collectively, “Asserted Patents”) and seeking damages and injunctive relief as provided in 35 U.S.C. §§ 281 and 283-285.

U.S. Patent No. 7,366,818 (Exhibit 1, “’818 patent”)
U.S. Patent No. 7,373,449 (Exhibit 2, “’449 patent”)
U.S. Patent No. 7,594,052 (Exhibit 3, “’052 patent”)
U.S. Patent No. 7,769,893 (Exhibit 4, “’9893 patent”)
U.S. Patent No. 8,072,893 (Exhibit 5, “’2893 patent”)
U.S. Patent No. 8,086,800 (Exhibit 6, “’800 patent”)

THE PARTIES

2. Plaintiff is a limited liability company formed under the laws of Delaware, with a principal place of business at 533 Congress Street, Portland, ME 04101. Plaintiff is the owner by

assignment of the Asserted Patents.

3. On information and belief, Lenovo Group Ltd. (“Lenovo”) is a company organized and existing under the laws of China, having a registered office at 23rd Floor, Lincoln House, Taikoo Place, 979 King’s Road, Quarry Bay, Hong Kong S.A.R. of China and having key operations centers at Lenovo HQ East, Building 1, No. 10 Courtyard Xibeiwang East Road, Haidian District, Beijing, 100094, China and 1009 Think Place, Morrisville, North Carolina, USA.¹ On information and belief, Lenovo has, and controls and directs, wholly-owned U.S.-based subsidiaries including Lenovo (United States) Inc. and Motorola Mobility LLC.²

4. On information and belief, Defendant is engaged in making, using, offering for sale, selling, importing, or otherwise providing, within the United States and in particular the State of Texas and this Judicial District, directly or indirectly, system-on-a-chip products (“SoCs”) and/or related products and services, with features and functionalities that infringe the Asserted Patents.

JURISDICTION AND VENUE

5. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6. Defendant is subject to this Court’s personal jurisdiction consistent with the principles of due process and the Texas Long Arm Statute.³ Tex. Civ. Prac. & Rem. Code §§ 17.041, *et seq.*

¹ See <https://investor.lenovo.com/en/about/corpinfo.php> (last visited April 11, 2023).

² See <https://www.motorola.com/us> (last visited April 11, 2023) (stating that Motorola Mobility LLC is “a wholly owned subsidiary of Lenovo”); Defendant Motorola Mobility LLC’s Answer and Defenses to Plaintiff’s Complaint, *Theta IP, LLC v. Motorola Mobility LLC et al.*, 1:22-cv-03441, Dkt. 19 at 9 (N.D. Ill. Aug. 31, 2022) (admitting that Motorola Mobility LLC is an indirect subsidiary of Lenovo Group Ltd.); Defendant Lenovo (United States) Inc.’s Answer and Defenses to Plaintiff’s Complaint, *Theta IP, LLC v. Motorola Mobility LLC et al.*, 1:22-cv-03441, Dkt. 20 at 9-10 (N.D. Ill. Aug. 31, 2022) (admitting that Lenovo (United States) Inc. is an indirect subsidiary of Lenovo Group Ltd.).

³ Applying the Texas Long Arm statute, the Western District of Texas has found that exercise of personal jurisdiction over Defendant is reasonable and fair where Defendant acts in consort with Lenovo (United States) Inc. under a stream of commerce theory and, alternatively, where purposeful contacts by Lenovo (United States) Inc. are imputable to Defendant. *ACQIS Ltd. Liab. Co. v. Lenovo Grp. Ltd.*, 572 F. Supp. 3d 291, 307 (W.D. Tex. 2021).

7. Jurisdiction and venue for this action are proper in this Judicial District.

8. This Court has personal jurisdiction over Defendant at least because, through Defendant's own acts directly, through, or in consort with others, such as its subsidiaries, intermediaries and affiliated companies, including without limitation, Lenovo (United States), Inc. and Motorola Mobility LLC, acting as its agents, representatives or alter egos (for example, operating in consort as a single entity called "Lenovo Group"), it (i) has a presence or regular and established place of business in the State of Texas and this Judicial District; (ii) has purposefully availed itself of the rights and benefits of the laws of the State of Texas and this Judicial District; (iii) has done and is doing substantial business in the State of Texas and this Judicial District, directly, through, or in consort with its subsidiaries, intermediaries and affiliated companies, both generally and, on information and belief, with respect to the allegations in this Complaint, including its one or more acts of infringement in the State of Texas and this Judicial District; (iv) maintains continuous and systematic contacts in the State of Texas and this Judicial District; and/or (v) places products alleged to be infringing in this Complaint in the stream of commerce, directly, through, or in consort with its subsidiaries, intermediaries and affiliated companies, with awareness that those products are likely destined for use, offer for sale, sale, and/or importation in the State of Texas and this Judicial District. The actions of Defendant's subsidiaries, intermediaries and affiliated companies, including without limitation, Lenovo (United States), Inc. and Motorola Mobility LLC, are imputable to Defendant.

9. For example, Defendant sells and offers to sell infringing products through its websites, Lenovo.com and Motorola.com, which may be access throughout the United States, the State of Texas, and this District. As another example, Defendant, directly through, or in consort with its subsidiaries, intermediaries and affiliated companies, including without limitation, Lenovo

(United States), Inc. and Motorola Mobility LLC, acting as its agents, representatives or alter egos (for example, operating in consort as a single entity called “Lenovo Group”), has authorized retailers and distributors in the State of Texas and this Judicial District for the products alleged to be infringing in this Complaint, and Defendant has derived substantial revenues from its infringing acts occurring within the State of Texas and this Judicial District. Examples of such authorized retailers and distributors include: 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.

10. Defendant has derived substantial revenue from its contacts with the United States, the State of Texas, and this District. According to Defendant’s most recent annual report, Defendant generated \$71.6 billion in revenue globally, with \$23.3 billion in revenue coming from the Americas region.⁴ Institutional shareholders within the United States own over 2 billion shares of Defendant, representing 17.23% of Defendant’s total outstanding shares.⁵ Lenovo (United States) Inc. is listed as a Principal Subsidiary of Defendant and has \$1 in issued and fully paid up capital/registered capital, 100% of which is held by Defendant.⁶ Motorola Mobility LLC is listed as a Principal Subsidiary of Defendant and has “-” in issued and fully paid up capital/registered capital, 100% of which is held by Defendant.⁷

11. Defendant has established sufficient minimum contacts with the State of Texas and this Judicial District such that it should reasonably and fairly anticipate being brought into court

⁴ <https://doc.irasia.com/listco/hk/lenovo/annual/2022/ar2022.pdf> at 216 (last visited April 11, 2023).

⁵ *Id.* at 112.

⁶ *Id.* at 271.

⁷ *Id.* at 272.

in the State of Texas and this Judicial District without offending traditional notions of fair play and substantial justice; and Defendant has purposefully directed activities at residents of the State of Texas and this Judicial District. Moreover, the patent infringement claims alleged herein arise out of or are related to one or more of the foregoing activities. On information and belief, a substantial part of the events giving rise to Plaintiff's claims, including acts of patent infringement, have occurred in the State of Texas and this Judicial District.

12. Venue is proper in this Judicial District as to Defendant under 28 U.S.C. §§ 1391(b) and (c) and 1400(b).

13. Venue is proper as to Defendant because, on information and belief, it is a foreign entity, as identified above in paragraph 3. 28 U.S.C. § 1391(c); *In re HTC Corp.*, 889 F.3d 1349, 1357 (Fed. Cir. 2018) (holding that “[t]he Court’s recent decision in *TC Heartland* does not alter” the alien-venue rule).

RELATED ACTION

14. On December 19, 2022, Plaintiff filed *Network Sys. Techs. v. Samsung Elecs. Co.*, No. 2:22-CV-481-JRG (the “Related Action”) naming Lenovo, as well as Samsung Electronics Co., Ltd., Samsung Electronics America, Inc., Samsung Austin Semiconductor, LLC, Samsung Semiconductor, Inc. (collectively, “Samsung”) and OnePlus Technology (Shenzhen) Co., Ltd. (“OnePlus”) as defendants. On April 11, 2023, Plaintiff filed a Notice of Dismissal Without Prejudice as to Lenovo. Samsung and OnePlus remain as defendants in the Related Action.

15. The accused products in the Related Action fall into three categories: 1) products containing Qualcomm “Snapdragon” SoCs; 2) Samsung “Exynos” SoCs; and 3) products containing Exynos SoCs. On information and belief Lenovo, as well as Samsung and OnePlus make, use, import, offer for sale, and/or sell accused products that fall within the first category

(hereinafter, the “Snapdragon Accused Products”). The Accused Products in this action are the Snapdragon Accused Products made, used, imported, offered for sale, and/or sold by Lenovo.

THE ASSERTED PATENTS

16. The Asserted Patents result from extensive research and development by Philips Semiconductors, a subsidiary of Koninklijke Philips N.V. (“Philips”) that included VLSI Technology, Inc., which Philips acquired in 1999. Prior to being spun off in 2006 as NXP Semiconductors N.V. (“NXP”), Philips Semiconductors was one of the largest semiconductor companies in the world. Each of the Asserted Patents predate the NXP spin-off and were retained by Philips until all right, title, and interest in the Asserted Patents were transferred to Plaintiff.

U.S. Patent No. 7,366,818

17. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 7,366,818 (the “’818 patent”), entitled “INTEGRATED CIRCUIT COMPRISING A PLURALITY OF PROCESSING MODULES AND A NETWORK AND METHOD FOR EXCHANGING DATA USING SAME,” including the right to sue and to recover for infringement thereof. The ’818 patent was duly and legally issued on April 29, 2008, naming Andrei Radulescu and Kees Gerard Willem Goossens as inventors. A copy of the ’818 patent is attached hereto as Exhibit 1.

18. The ’818 patent has 7 claims: 1 independent claim and 6 dependent claims.

19. The ’818 patent covers SoCs that have an interface that comprises a dropping means for dropping data exchanged by two modules and where the interface can control the dropping of data and therefore completion of message transactions.

20. The claims of the ’818 patent, including claim 1 (reproduced below), recite at least these inventive concepts of the ’818 patent.

1. Integrated circuit comprising a plurality of processing modules (M, S) said modules being disposed on the same chip, and a network (N; RN) arranged for providing at least one connection between a first and at least one second module (M, S),

wherein said modules communicate via a network on chip, and

wherein said connection supports transactions comprising outgoing messages from the first module to the second modules and return messages from the second modules to the first module, the integrated circuit comprising at least one dropping means (DM) for dropping data exchanged by said first and second module (M, S), and

at least one interface means (ANIP, PNIP) for managing the interface between a module (M, S) and the network (N, RN),

wherein said interface means (ANIP, PNIP) comprises a first dropping means (DM) for dropping data, and

wherein the dropping of data and therefore the transaction completion can be controlled by the interface means.

(Exhibit 1, '818 patent at claim 1.) The subject matter described and claimed by the '818 patent, including the integrated circuit of claim 1, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '818 patent.

21. Defendant had knowledge of the '818 patent at least as of the date of this Complaint.

22. Alternatively, Defendant had actual knowledge of the '818 patent at least as of December 19, 2022, by virtue of being named as a defendant in the Related Action. On information and belief, on or around December 19, 2022, Defendant received copies of the complaint in the Related Action, as well as the exhibits thereto, including Exhibit 1 (the '818 patent) and Exhibits 26 and 32 (claim charts demonstrating Lenovo's infringement of the '818 patent) from one or more of: the other Defendants in the Related Action, or their counsel; law firms or lawyers seeking to represent Lenovo in the Related Action; docket services, such as PACER, Docket Navigator, Lexis

CourtLink, Westlaw Court Wire, or similar; and/or defensive patent challenge or aggregation entities such as RPX Corporation, Open Invention Network LLC, Allied Security Trust, Unified Patents, LLC or similar.

23. In the Related Action, on January 5, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to Defendant's outside U.S. counsel, DLA Piper. Accordingly, Defendant had actual knowledge of the '818 patent at least as of January 5, 2023.

24. Additionally, in the Related Action, on January 17, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to inhouse counsel for Defendant and Lenovo (United States) Inc., Defendant's subsidiary. Accordingly, Defendant had actual knowledge of the '818 patent at least as of January 17, 2023.

25. The '818 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendant, monitored patenting activity by Philips and reviewed, and was aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '818 patent. On information and belief, such industry participants, including Defendant, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '818 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to its own current products and product roadmaps, including the products described herein.

26. The '818 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 76

patent applications assigned to industry leaders such as Intel Corporation, Arm Limited, NEC Corporation, IBM Corporation, and others.⁸

27. On information and belief, Defendant sought to develop its products and product roadmaps, including the products described herein, in ways that would not infringe U.S. patents in the semiconductor space.

28. Therefore, on information and belief, Defendant monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

29. On information and belief, Defendant was aware of and considered the '818 patent, and its actual or potential applicability to its own current products and product roadmaps, including the products described herein.

30. On information and belief, Defendant has expertise in the subject matter of the '818 patent and possesses sufficient technical competence to understand the scope of such patent.

31. By virtue of Philips' and the '818 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendant's desire to develop non-infringing products and product roadmaps, Defendant had actual knowledge of the '818 patent around the time it issued or its U.S. application published, and in no event later than the date of this Complaint.

U.S. Patent No. 7,373,449

32. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 7,373,449 (the "449 patent"), entitled "APPARATUS AND METHOD FOR COMMUNICATING IN AN INTEGRATED CIRCUIT," including the right to sue and to recover

⁸ <https://patents.google.com/patent/US7366818B2/en?q=7%2c366%2c818> (last visited April 11, 2023).

for infringement thereof. The '449 patent was duly and legally issued on May 13, 2008, naming Andrei Radulescu and Kees Gerard Willem Goossens as inventors. A copy of the '449 patent is attached hereto as Exhibit 2.

33. The '449 patent has 18 claims: 2 independent claims and 16 dependent claims.

34. The '449 patent covers SoCs that have a resource manager that manages network resources by determining whether the resources (i.e., communication channels and connection properties) are available.

35. The claims of the '449 patent, including claim 10 (reproduced below), recite at least these inventive concepts of the '449 patent.

10. Method for exchanging messages in an integrated circuit comprising a plurality of modules, the messages between the modules being exchanged over connections via a network, wherein said connections comprises a set of communication channels each having a set of connection properties, any communication channel being independently configurable, wherein said connection through the network supports transactions comprising at least one of outgoing messages from the first module to the second module and return messages from the second module to the first module and further comprising the steps of:

the first module issuing a request for a connection with the second module to a communication manager, wherein the request comprises desired connection properties associated with the sets of communication channels;

the communication manager forwarding the request to a resource manager;

the resource manager determining whether a target connection with the desired connection properties is available;

the resource manager responding with the availability of the target connection to the communication manager; and

the target connection between the first and second module being established based on the available properties of said communication channels of said connection.

(Exhibit 2, '449 patent at claim 10.) The subject matter described and claimed by the '449 patent,

including the method for exchanging messages in an integrated circuit of claim 10, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '449 patent.

36. Defendant had knowledge of the '449 patent at least as of the date of this Complaint.

37. Alternatively, Defendant had actual knowledge of the '449 patent at least as of December 19, 2022, by virtue of being named as a defendant in the Related Action. On information and belief, on or around December 19, 2022, Defendant received copies of the complaint in the Related Action, as well as the exhibits thereto, including Exhibit 2 (the '449 patent) and Exhibits 27 and 33 (claim charts demonstrating Lenovo's infringement of the '449 patent) from one or more of: the other Defendants in the Related Action, or their counsel; law firms or lawyers seeking to represent Lenovo in the Related Action; docket services, such as PACER, Docket Navigator, Lexis CourtLink, Westlaw Court Wire, or similar; and/or defensive patent challenge or aggregation entities such as RPX Corporation, Open Invention Network LLC, Allied Security Trust, Unified Patents, LLC or similar.

38. In the Related Action, on January 5, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to Defendant's outside U.S. counsel, DLA Piper. Accordingly, Defendant had actual knowledge of the '449 patent at least as of January 5, 2023.

39. Additionally, in the Related Action, on January 17, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to inhouse counsel for Defendant and Lenovo (United States) Inc., Defendant's subsidiary. Accordingly, Defendant had actual knowledge of the '449 patent at least as of January 17, 2023.

40. The '449 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendant, monitored patenting activity by Philips and reviewed, and was aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '449 patent. On information and belief, such industry participants, including Defendant, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '449 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to its own current products and product roadmaps, including the products described herein.

41. The '449 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 76 patent applications assigned to industry leaders such as Intel Corporation, Arm Limited, NEC Corporation, IBM Corporation, and others.⁹

42. On information and belief, Defendant sought to develop its products and product roadmaps, including the products described herein, in ways that would not infringe U.S. patents in the semiconductor space.

43. Therefore, on information and belief, Defendant monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

44. On information and belief, Defendant was aware of and considered the '449 patent, and its actual or potential applicability to its own current products and product roadmaps, including

⁹ <https://patents.google.com/patent/US7373449B2/en?q=7%2c373%2c449> (last visited April 11, 2023).

the products described herein.

45. On information and belief, Defendant has expertise in the subject matter of the '449 patent and possesses sufficient technical competence to understand the scope of such patent.

46. By virtue of Philips' and the '449 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendant's desire to develop non-infringing products and product roadmaps, Defendant had actual knowledge of the '449 patent around the time it issued or its U.S. application published, and in no event later than the date of this Complaint.

U.S. Patent No. 7,594,052

47. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 7,594,052 (the "'052 patent"), entitled "INTEGRATED CIRCUIT AND METHOD OF COMMUNICATION SERVICE MAPPING," including the right to sue and to recover for infringement thereof. The '052 patent was duly and legally issued on September 22, 2009, naming Andrei Radulescu and Kees Gerard Willem Goossens as inventors. A copy of the '052 patent is attached hereto as Exhibit 3.

48. The '052 patent has 7 claims: 3 independent claims and 4 dependent claims.

49. The '052 patent covers SoCs that offer differentiated intermodular communication services based on connections with corresponding properties. The covered SoCs map a requested communication service to a connection based on communication and connection properties.

50. The claims of the '052 patent, including claim 6 (reproduced below), recite at least these inventive concepts of the '052 patent.

6. Method of communication service mapping in an integrated circuit, having a plurality of processing modules (M, S), wherein at least one first of said processing modules (M) requests at least one communication service to at least one second processing module (S) based on specific communication properties and at least one

communication service identification, wherein said at least one communication service identification comprises at least one communication thread or at least one address range, said address range for identifying one or more second processing modules (S) or a memory region within said one or more second processing modules (S), comprising the steps of:

coupling said plurality of processing modules (M, S) by an interconnect means (N) and

enabling a connection based communication having a set of connection properties,

controlling the communication between said at least one first of said plurality of processing modules (M) and said interconnect means (N) by at least one network interface (NI) associated to said at least one first of said processing modules,

mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification.

(Exhibit 3, '052 patent at claim 6.) The subject matter described and claimed by the '052 patent, including the method of communication service mapping in an integrated circuit of claim 6, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '052 patent.

51. Defendants had knowledge of the '052 patent at least as of the date of this Complaint.

52. Alternatively, Defendant had actual knowledge of the '052 patent at least as of December 19, 2022, by virtue of being named as a defendant in the Related Action. On information and belief, on or around December 19, 2022, Defendant received copies of the complaint in the Related Action, as well as the exhibits thereto, including Exhibit 3 (the '052 patent) and Exhibits 28 and 34 (claim charts demonstrating Lenovo's infringement of the '052 patent) from one or more of: the other Defendants in the Related Action, or their counsel; law firms or lawyers seeking to represent Lenovo in the Related Action; docket services, such as

PACER, Docket Navigator, Lexis CourtLink, Westlaw Court Wire, or similar; and/or defensive patent challenge or aggregation entities such as RPX Corporation, Open Invention Network LLC, Allied Security Trust, Unified Patents, LLC or similar.

53. In the Related Action, on January 5, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to Defendant's outside U.S. counsel, DLA Piper. Accordingly, Defendant had actual knowledge of the '052 patent at least as of January 5, 2023.

54. Additionally, in the Related Action, on January 17, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to inhouse counsel for Defendant and Lenovo (United States) Inc., Defendant's subsidiary. Accordingly, Defendant had actual knowledge of the '052 patent at least as of January 17, 2023.

55. The '052 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendant, monitored patenting activity by Philips and reviewed, and was aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '052 patent. On information and belief, such industry participants, including Defendant, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '052 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to its own current products and product roadmaps, including the products described herein.

56. The '052 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 19

patent applications assigned to industry leaders such as Samsung Electronics Co., Texas Instruments Incorporated, and others.¹⁰

57. On information and belief, Defendant sought to develop its products and product roadmaps, including the products described herein, in ways that would not infringe U.S. patents in the semiconductor space.

58. Therefore, on information and belief, Defendant monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

59. On information and belief, Defendant was aware of and considered the '052 patent, and its actual or potential applicability to its own current products and product roadmaps, including the products described herein.

60. On information and belief, Defendant has expertise in the subject matter of the '052 patent and possesses sufficient technical competence to understand the scope of such patent.

61. By virtue of Philips' and the '052 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and the Defendant's desire to develop non-infringing products and product roadmaps, Defendant had actual knowledge of the '052 patent around the time it issued or its U.S. application published, and in no event later than the date of this Complaint.

U.S. Patent No. 7,769,893

62. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 7,769,893 (the "'9893 patent"), entitled "INTEGRATED CIRCUIT AND METHOD FOR ESTABLISHING TRANSACTIONS," including the right to sue and to recover for infringement

¹⁰ <https://patents.google.com/patent/US7594052B2/en?q=7%2c594%2c052> (last visited April 11, 2023).

thereof. The '9893 patent was duly and legally issued on August 3, 2010, naming Kees Gerard Willem Goossens as inventor. A copy of the '9893 patent is attached hereto as Exhibit 4.

63. The '9893 patent has 11 claims: 2 independent claims and 9 dependent claims.

64. The '9893 patent covers SoCs that use an address translation unit, which is part of a network interface, for address mapping, where the address translation unit determines both the location of a message receiving module and a location within the message receiving module.

65. The claims of the '9893 patent, including claim 4 (reproduced below), recite at least these inventive concepts of the '9893 patent.

4. A method for exchanging messages in an integrated circuit comprising a plurality of modules, the messages between the plurality of modules being exchanged via a network wherein a message issued by an addressing module M comprises:

first information indicative of a location of an addressed message receiving module S within the network and is comprised of (1) a connection identifier identifying two or more message receiving modules S and (2) an identifier of a passive network interface means associated with the addressed message receiving module S, and second information indicative of a particular location within the addressed message receiving module S, such as a memory, or a register address, the method including the steps of:

(a) issuing from said addressing module M a message request including said first information, said second information, and data and/or connection properties to an address translation unit included as part of an active network interface module associated with said addressing module M,

(b) arranging, at said address translation unit, the first and the second information comprising said issued message as a single address,

(c) determining, at said address translation unit, which message receiving module S is being addressed in said message request issued from said addressing module M based on said single address, and

(d) further determining, at said address translation unit, the particular location within the addressed message receiving module S based on said single address.

(Exhibit 4, '9893 patent at claim 4.) The subject matter described and claimed by the '9893 patent,

including the method for exchanging messages in an integrated circuit of claim 4, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '9893 patent.

66. Defendant had knowledge of the '9893 patent at least as of the date of this Complaint.

67. Alternatively, Defendant had actual knowledge of the '9893 patent at least as of December 19, 2022, by virtue of being named as a defendant in the Related Action. On information and belief, on or around December 19, 2022, Defendant received copies of the complaint in the Related Action, as well as the exhibits thereto, including Exhibit 4 (the '9893 patent) and Exhibits 29 and 35 (claim charts demonstrating Lenovo's infringement of the '9893 patent) from one or more of: the other Defendants in the Related Action, or their counsel; law firms or lawyers seeking to represent Lenovo in the Related Action; docket services, such as PACER, Docket Navigator, Lexis CourtLink, Westlaw Court Wire, or similar; and/or defensive patent challenge or aggregation entities such as RPX Corporation, Open Invention Network LLC, Allied Security Trust, Unified Patents, LLC or similar.

68. In the Related Action, on January 5, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to Defendant's outside U.S. counsel, DLA Piper. Accordingly, Defendant had actual knowledge of the '9893 patent at least as of January 5, 2023.

69. Additionally, in the Related Action, on January 17, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to inhouse counsel for Defendant and Lenovo (United States) Inc., Defendant's subsidiary. Accordingly,

Defendant had actual knowledge of the '9893 patent at least as of January 17, 2023.

70. The '9893 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendant, monitored patenting activity by Philips and reviewed, and was aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '9893 patent. On information and belief, such industry participants, including Defendant, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '9893 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to its own current products and product roadmaps, including the products described herein.

71. The '9893 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 76 patent applications assigned to industry leaders such as Intel Corporation, Arm Limited, NEC Corporation, IBM Corporation, and others.¹¹

72. On information and belief, Defendant sought to develop its products and product roadmaps, including the products described herein, in ways that would not infringe U.S. patents in the semiconductor space.

73. Therefore, on information and belief, Defendant monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

74. On information and belief, the Defendant was aware of and considered the '9893

¹¹ <https://patents.google.com/patent/US7769893B2/en?q=7%2c769%2c893> (last visited April 11, 2023).

patent, and its actual or potential applicability to its own current products and product roadmaps, including the products described herein.

75. On information and belief, Defendant has expertise in the subject matter of the '9893 patent and possesses sufficient technical competence to understand the scope of such patent.

76. By virtue of Philips' and the '9893 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendant's desire to develop non-infringing products and product roadmaps, Defendant had actual knowledge of the '9893 patent around the time it issued or its U.S. application published, and in no event later than the date of this Complaint.

U.S. Patent No. 8,072,893

77. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 8,072,893 (the "'2893 patent"), entitled "INTEGRATED CIRCUIT WITH DATA COMMUNICATION NETWORK AND IC DESIGN METHOD," including the right to sue and to recover for infringement thereof. The '2893 patent was duly and legally issued on December 6, 2011, naming John Dielissen and Edwin Rijpkema as inventors. A copy of the '2893 patent is attached hereto as Exhibit 5.

78. The '2893 patent has 12 claims: 5 independent claims and 7 dependent claims.

79. The '2893 patent covers SoCs that improve data communication speed and frequency synchronization between processing units through the use of packetized data (comprising N data elements) and introduction of a delay (of M*N cycles) on a communication channel for communication synchronization, with such delay correlated to the size (N) of the data packet.

80. The claims of the '2893 patent, including claims 1 and 10 (reproduced below),

recite at least these inventive concepts of the '2893 patent.

1. An integrated circuit comprising:

a plurality of functional blocks; and

a data communication network comprising a plurality of network stations being interconnected via a plurality of communication channels for communicating data packages between the functional blocks, each data package comprising N data elements including a data element comprising routing information for the network stations, N being an integer of at least two, the plurality of network stations comprising a plurality of data routers and a plurality of network interfaces, each of the data routers being coupled to a functional block via a network interface, the data communication network comprising a first network station and a second network station interconnected through a first communication channel, the data communication network further comprising $M*N$ data storage elements, M being a positive integer, the data communication introducing a delay of $M*N$ cycles on the first communication channel when the data communication network identifies the first communication channel as having a data transfer delay exceeding a predefined delay threshold.

10. A method of designing an integrated circuit comprising a plurality of functional blocks, and a data communication network comprising a plurality of network stations being interconnected via a plurality of communication channels for communicating data packages between the functional blocks, each data package comprising N data elements including a data element comprising routing information for the network stations, N being an integer of at least two, the plurality of network stations comprising a plurality of data routers and a plurality of network interfaces, each of the data routers being coupled to a functional block via a network interface; the method comprising the acts of:

identifying a first communication channel between a first network station and a second network station that has a data transfer delay exceeding a predefined delay threshold; and

in response to the identifying act, inserting $M*N$ data storage elements into the data communication network, M being a positive integer, for introducing a delay of $M*N$ cycles on the first communication channel.

(Exhibit 5, '2893 patent at claims 1 and 10.) The subject matter described and claimed by the '2893 patent, including the integrated circuit of claim 1 and method of designing an integrated circuit of claim 10, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and

not well-understood, routine, or conventional at the time of the '2893 patent.

81. Defendant had knowledge of the '2893 patent at least as of the date of this Complaint.

82. Alternatively, Defendant had actual knowledge of the '2893 patent at least as of December 19, 2022, by virtue of being named as a defendant in the Related Action. On information and belief, on or around December 19, 2022, Defendant received copies of the complaint in the Related Action, as well as the exhibits thereto, including Exhibit 5 (the '2893 patent) and Exhibits 30 and 36 (claim charts demonstrating Lenovo's infringement of the '2893 patent) from one or more of: the other Defendants in the Related Action, or their counsel; law firms or lawyers seeking to represent Lenovo in the Related Action; docket services, such as PACER, Docket Navigator, Lexis CourtLink, Westlaw Court Wire, or similar; and/or defensive patent challenge or aggregation entities such as RPX Corporation, Open Invention Network LLC, Allied Security Trust, Unified Patents, LLC or similar.

83.

84. In the Related Action, on January 5, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to Defendant's outside U.S. counsel, DLA Piper. Accordingly, Defendant had actual knowledge of the '2893 patent at least as of January 5, 2023.

85. Additionally, in the Related Action, on January 17, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to inhouse counsel for Defendant and Lenovo (United States) Inc., Defendant's subsidiary. Accordingly, Defendant had actual knowledge of the '2893 patent at least as of January 17, 2023.

86. The '2893 patent was developed and patented by Philips Semiconductors, one of

the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendant, monitored patenting activity by Philips and reviewed, and was aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '2893 patent. On information and belief, such industry participants, including Defendant, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '2893 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to its own current products and product roadmaps, including the products described herein.

87. The '2893 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 13 patent applications assigned to industry leaders such as Intel Corporation and others.¹²

88. On information and belief, Defendant sought to develop its products and product roadmaps, including the products described herein, in ways that would not infringe U.S. patents in the semiconductor space.

89. Therefore, on information and belief, Defendant monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

90. On information and belief, Defendant was aware of and considered the '2893 patent, and its actual or potential applicability to its own current products and product roadmaps, including the products described herein.

91. On information and belief, Defendant has expertise in the subject matter of the

¹² <https://patents.google.com/patent/US8072893B2/en?q=8%2c072%2c893> (last visited April 11, 2023).

'2893 patent and possesses sufficient technical competence to understand the scope of such patent.

92. By virtue of Philips' and the '2893 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendant's desire to develop non-infringing products and product roadmaps, Defendant had actual knowledge of the '2893 patent around the time it issued or its U.S. application published, and in no event later than the date of this Complaint.

U.S. Patent No. 8,086,800

93. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 8,086,800 (the "'800 patent"), entitled "INTEGRATED CIRCUIT AND METHOD FOR BUFFERING TO OPTIMIZE BURST LENGTH IN NETWORKS ON CHIPS," including the right to sue and to recover for infringement thereof. The '800 patent was duly and legally issued on December 27, 2011, naming Andrei Radulescu and Kees Gerard Willem Goossens as inventors. A copy of the '800 patent is attached hereto as Exhibit 6.

94. The '800 patent has 21 claims: 4 independent claims and 17 dependent claims.

95. The '800 patent covers SoCs that employ data buffering at requesting (master) and responding (slave) modules and where each module has a network interface with a wrapper that buffers data into optimal amounts for transfer.

96. The claims of the '800 patent, including claim 10 (reproduced below), recite at least these inventive concepts of the '800 patent.

10. A method for buffering data in an integrated circuit having a plurality of processing modules being connected with an interconnect through interface units, wherein a first processing module communicates to a second processing module using transactions, the method comprising the acts of:

configuring the first processing module having a first memory as a master the provides requests;

configuring the second processing module having a second memory as a slave the provides responses to the requests;

connecting the master to a master interface unit of the interface units;

connecting the master interface unit to the interconnect so that the master interface unit is between the master and the interconnect;

connecting the slave to a slave interface unit of the interface units;

connecting the slave interface unit to the interconnect so that the slave interface unit is between the slave and the interconnect;

determining by a master determination unit of the master interface unit a first optimal amount of data to be buffered by a master wrapper of the master interface unit;

determining by a slave determination unit of the slave interface unit a second optimal amount of data to be buffered by a slave wrapper of the slave interface unit;

buffering by the slave wrapper of the slave interface unit data from the slave to be transferred over the interconnect until a first optimal amount of data is buffered;

transferring the buffered data from the slave wrapper to the master wrapper when said first optimal amount of data has been buffered by the slave wrapper;

buffering by the master wrapper of the master interface unit data from the master to be transferred over the interconnect until a second optimal amount of data is buffered by the master wrapper;

transferring the buffered data from the master wrapper to the slave wrapper when said second optimal amount of data has been buffered by the master wrapper,

wherein at least one of the first determination unit and the second determination unit is further configured to determine an optimal moment for sending the data in said first wrapper or said second wrapper according to communication properties of the communication between the master and the slave, wherein the communication properties include ordering of data transport, flow control including when a remote buffer is reserved for a connection, then a data producer will be allowed to send data only when it is guaranteed that space is available for the produced data at the remote buffer, throughput where a lower bound on throughput is guaranteed, latency where an upper bound for latency

is guaranteed, lossiness including dropping of data, transmission termination, transaction completion, data correctness, priority, and data delivery.

(Exhibit 6, '800 patent at claim 10.) The subject matter described and claimed by the '800 patent, including the method for buffering data in an integrated circuit of claim 10, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '800 patent.

97. Defendant had knowledge of the '800 patent at least as of the date of this Complaint.

98. Alternatively, Defendant had actual knowledge of the '800 patent at least as of December 19, 2022, by virtue of being named as a defendant in the Related Action. On information and belief, on or around December 19, 2022, Defendant received copies of the complaint in the Related Action, as well as the exhibits thereto, including Exhibit 6 (the '800 patent) and Exhibits 31 and 37 (claim charts demonstrating Lenovo's infringement of the '800 patent) from one or more of: the other Defendants in the Related Action, or their counsel; law firms or lawyers seeking to represent Lenovo in the Related Action; docket services, such as PACER, Docket Navigator, Lexis CourtLink, Westlaw Court Wire, or similar; and/or defensive patent challenge or aggregation entities such as RPX Corporation, Open Invention Network LLC, Allied Security Trust, Unified Patents, LLC or similar.

99. In the Related Action, on January 5, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to Defendant's outside U.S. counsel, DLA Piper. Accordingly, Defendant had actual knowledge of the '800 patent at least as of January 5, 2023.

100. Additionally, in the Related Action, on January 17, 2023, Plaintiff transmitted a copy of the complaint, exhibits, summons, and Plaintiff's request for waiver of service to inhouse

counsel for Defendant and Lenovo (United States) Inc., Defendant's subsidiary. Accordingly, Defendant had actual knowledge of the '800 patent at least as of January 17, 2023.

101. The '800 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendant, monitored patenting activity by Philips and reviewed, and was aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '800 patent. On information and belief, such industry participants, including Defendant, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '800 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to its own current products and product roadmaps, including the products described herein.

102. On information and belief, Defendant sought to develop its products and product roadmaps, including the products described herein, in ways that would not infringe U.S. patents in the semiconductor space.

103. Therefore, on information and belief, Defendant monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

104. On information and belief, Defendant was aware of and considered the '800 patent, and its actual or potential applicability to its own current products and product roadmaps, including the products described herein.

105. On information and belief, Defendant has expertise in the subject matter of the '800 patent and possesses sufficient technical competence to understand the scope of such patent.

106. By virtue of Philips' and the '800 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendant's desire to develop non-infringing products and product roadmaps, Defendant had actual knowledge of the '800 patent around the time it issued or its U.S. application published, and in no event later than the date of this Complaint.

BACKGROUND OF DEFENDANT'S INFRINGING CONDUCT

107. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 106 above.

108. SoCs are widely used in consumer electronics or computing devices, including smartphones, laptops, tablets, and embedded systems such as vehicle infotainment devices and advanced driver assistance systems. SoCs are complex integrated circuits that may incorporate multiple processors, memory units, and interfaces onto a single chip.

109. As SoCs have developed over time, more processing cores and other IP blocks were incorporated into SoCs, resulting in increased intermodular connections and a greater need for intra-SoC communication efficiency. Thus, intra-SoC communication designs have moved from prior interconnect technologies (e.g., bus or point-to-point designs) to network- interconnects, which provide advantages compared to other forms of intra-SoC communication, such as fewer wires, lower routing congestion, and decreased SoC die area, all leading to: smaller devices; increased IP block density, which results in more powerful devices; increased power efficiency, which enables better battery life; decreased thermal load, which leads to longer system life; and improved system performance. Therefore, interconnect efficiency—driven by the pioneering innovations claimed in the Asserted Patents—is now a dominant factor in determining overall SoC system performance, size, and cost.

110. As discussed above, the Asserted Patents relate to fundamental innovations in SoCs, including how the multitude of processors, memories, and other functional units residing on an SoC are interconnected and communicate with each other.

111. Defendant is a leading electronic device company. The accused products are products containing Qualcomm “Snapdragon” SoCs; On information and belief, Defendant makes, uses, offers for sale, sells, and/or imports accused products that incorporate Snapdragon SoCs. Stated differently, on information and belief, Defendant’s accused products infringe the Asserted Patents by using the Snapdragon SoCs.

112. On information and belief, Snapdragon SoCs include Arteris interconnect technology and/or a derivative thereof.¹³ Thus, on information and belief, Defendant makes, uses, sells, offers for sale, and/or imports, or has otherwise made, used, sold, offered for sale, and/or imported, Snapdragon Accused Products incorporating Arteris interconnect technology and/or a derivative thereof.

113. As set forth in the charts appended hereto, the Snapdragon Accused Products, including their incorporation of Arteris interconnect technology and/or a derivative thereof, infringe each of the Asserted Patents.

114. On information and belief, Defendant’s products that infringe the Asserted Patents (collectively, the “Accused Products”) include the following:

Accused Products
• Lenovo phones, tablets, computers, laptops and

¹³ <https://web.archive.org/web/20210514110614/https://www.arteris.com/customers> (last visited December 19, 2022) (identifying Qualcomm as an Arteris customer and stating that “Arteris-developed NoC technology is the backbone of Snapdragon application processors & LTE modems, Atheros wireless connectivity SoCs, and CSR IoT products”); <https://www.eetimes.com/qualcomm-buys-arteris-tech-team> (last visited December 19, 2022) (“Qualcomm has been a customer of Arteris for about three years. It uses its FlexNoc ‘in most of its chips,’ [Arteris President] Janac said.”); *see also* <https://news.thomasnet.com/fullstory/arteris-flexnoc-network-on-chip-technology-designed-into-majority-of-mobile-socs-20009449> (last visited December 19, 2022) (Arteris FlexNoC was incorporated into over 60% of SoCs deployed in smartphones and tablets).

- Chromebooks containing Exynos processors or other Samsung integrated circuits
- Lenovo phones, tablets, computers, laptops and Chromebooks containing Snapdragon processors or other Qualcomm integrated circuits
- Motorola phones, tablets, computers, laptops and Chromebooks containing Exynos processors or other Samsung integrated circuits
- Motorola phones, tablets, computers, laptops and Chromebooks containing Snapdragon processors or other Qualcomm integrated circuits
- ThinkPad x13s laptop
- IdeaPad Duet series of Chromebooks
- Tab series tablets
- Yoga Tab series tablets
- Moto E series phones
- Moto Edge series phones
- Moto G series phones
- Moto One series phones
- Moto Z series phones

115. The above-listed Accused Products are non-limiting. Additional products of Defendant may infringe the Asserted Patents, and the above-listed Accused Products may infringe additional patents.

116. On information and belief, the Accused Products include Qualcomm Snapdragon SoCs with Arteris interconnect technology and/or a derivative thereof.

117. Defendant has infringed and continues to infringe the Asserted Patents by making, using, selling, offering to sell, and/or importing, without license or authority, the Accused Products as alleged herein, which embody or use the inventions claimed in the Asserted Patents literally or under the doctrine of equivalents.

118. Comparisons of claims of the Asserted Patents to exemplary products of the Accused Products are attached as Exhibits 7 and 13 ('818 patent), Exhibits 8 and 14 ('449 patent), Exhibits 9 and 15 ('052 patent), Exhibits 10 and 16 ('9893 patent), Exhibits 11 and 17 ('2893 patent), and Exhibits 12 and 18 ('800 patent), which are incorporated herein by reference.

119. Defendant has induced infringement and continues to induce infringement of the Asserted Patents by actively and knowingly inducing others to make, use, sell, offer to sell, and/or import, without license or authority, the Accused Products as alleged herein, which embody or use the inventions claimed in the Asserted Patents literally or under the doctrine of equivalents.

120. Defendant markets, advertises, offers for sale, and/or otherwise promotes the Accused Products and, on information and belief, does so to actively and knowingly induce, encourage, instruct, and aid one or more persons in the United States to make, use, sell, offer to sell and/or import the Accused Products. For example, Defendant, or an entity under Defendant's direction or control, advertises, offers for sale, and/or otherwise promotes the Accused Products on its website.¹⁴ Defendant, or one or more related entities, further publishes and distributes data sheets, manuals, and guides for the Accused Products.¹⁵ Therein, on information and belief, Defendant describes and touts the use of the subject matter claimed in the Asserted Patents, as described and alleged herein.

121. Defendant has contributorily infringed and continues to contributorily infringe the Asserted Patents by selling or offering to sell the Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the Asserted Patents and not a staple article or commodity of commerce suitable for substantial non-infringing use.

122. On information and belief, and as alleged above, Defendant has known of the existence of the Asserted Patents and their applicability to Defendant's Accused Products, and its

¹⁴ See, e.g., [https://www.lenovo.com/us/en/p/laptops/thinkpad/thinkpadx/thinkpad-x13s-\(13-inch-snapdragon\)/len101t0019](https://www.lenovo.com/us/en/p/laptops/thinkpad/thinkpadx/thinkpad-x13s-(13-inch-snapdragon)/len101t0019) (last visited December 19, 2022) (Lenovo webpage for ThinkPad X13s); <https://www.motorola.com/us/smartphones-motorola-one-5g/p?skuId=459> (last visited December 19, 2022) (Motorola webpage for Motorola One 5G).

¹⁵ https://psref.lenovo.com/syspool/Sys/PDF/ThinkPad/ThinkPad_X13s_Gen_1/ThinkPad_X13s_Gen_1_Spec.pdf (last visited December 19, 2022) (ThinkPad X13s Gen 1 Product Specifications Reference); and https://motorola-global-portal.custhelp.com/app/product_page/faqs/p/10896 (last visited December 19, 2022) (displaying list of guides and FAQs for Motorola One 5G).

acts of infringement have been willful and in disregard for the Asserted Patents, without any reasonable basis for believing that it had a right to engage in the infringing conduct, at least as of the dates of knowledge of the Asserted Patents alleged above, and no later than the date of this Complaint.

COUNT I – INFRINGEMENT OF U.S. PATENT NO. 7,366,818

123. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 122 above.

124. On information and belief, Defendant has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '818 patent in violation of 35 U.S.C. § 271(a), including claim 1. Comparisons of claim 1 of the '818 patent to exemplary products of the Accused Products are attached as Exhibits 7 and 13, which are incorporated herein by reference.

125. On information and belief, with knowledge of the '818 patent, Defendant has actively induced and continues to induce the direct infringement of one or more claims of the '818 patent, including claim 1, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '818 patent, including claim 1, with the intent to encourage those customers and/or end users to infringe the '818 patent.

126. By way of example, on information and belief, Defendant actively induces infringement of the '818 patent by encouraging, instructing, and aiding one or more persons in the

United States, including but not limited to customers and/or end users who test, operate, and use Defendant's products, including at least the Accused Products, to make, use, sell, offer to sell, and/or import Defendant's products, including at least the Accused Products, in a manner that infringes at least one claim of the '818 patent, including claim 1. For example, as described above, Defendant actively markets, advertises, offers for sale, and/or otherwise promotes the Accused Products by publishing and distributing data sheets, manuals, and guides for the Accused Products. Therein, on information and belief, Defendant describes and touts the use of the subject matter claimed in the '818 patent.

127. On information and belief, with knowledge of the '818 patent, Defendant also contributed to, and continues to contribute to, the infringement of one or more claims of the '818 patent, including claim 1, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '818 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Accused Products, which are especially made or especially adapted for use in infringement of the '818 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Defendant's informational and promotional materials described above, which describe the normal use and intended purpose of the Accused Products and demonstrate that the Accused Products are especially made or especially adapted for a use that infringes the '818 patent.

128. On information and belief, as a result of Defendant's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Defendant's products, including

the Accused Products, in ways that directly infringe one or more claims of the '818 patent, including claim 1. On information and belief, Defendant had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Defendant's products, including the Accused Products, at least as of the dates of knowledge of the '818 patent alleged above, and no later than the date of this Complaint.

129. On information and belief, with knowledge of the '818 patent, Defendant has willfully, deliberately, and intentionally infringed the '818 patent, at least as of the dates of knowledge of the '818 patent alleged above, and no later than the date of this Complaint, and continues to willfully, deliberately, and intentionally infringe the '818 patent. On information and belief, Defendant had actual knowledge of the '818 patent and Defendant's infringement of the '818 patent at least as of the dates of knowledge of the '818 patent alleged above, and no later than the date of this Complaint. On information and belief, after acquiring that knowledge, Defendant continued to directly and indirectly infringe the '818 patent as set forth above. On information and belief, Defendant knew or should have known that its conduct amounted to infringement of the '818 patent at least because Defendant was aware of the '818 patent and Defendant's infringement of the '818 patent at least as of the dates of knowledge of the '818 patent alleged above, and no later than the date of this Complaint. Defendant was aware of its infringement by virtue of the '818 patent's fame in the semiconductor industry, Defendant's expertise in the subject matter of the '818 patent, Defendant's technical competence to understand the scope of the '818 patent, and Defendant's intimate familiarity with its Accused Products. Additionally, Defendant was aware of the '818 patent, and Defendant's infringement of the '818 patent, at least as of the date of this Complaint because Plaintiff notified Defendant of such.

130. On information and belief, Defendant will continue to infringe the '818 patent

unless and until it is enjoined by this Court. Defendant, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Defendant's acts of infringement and, unless Defendant is enjoined from its infringement of the '818 patent, Plaintiff will continue to suffer irreparable harm.

131. Plaintiff is entitled to recover from Defendant damages at least in an amount adequate to compensate for its infringement of the '818 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

COUNT II – INFRINGEMENT OF U.S. PATENT NO. 7,373,449

132. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 131 above.

133. On information and belief, Defendant has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '449 patent in violation of 35 U.S.C. § 271(a), including claim 10. Comparisons of claim 10 of the '449 patent to exemplary products of the Accused Products are attached as Exhibits 8 and 14, which are incorporated herein by reference.

134. On information and belief, with knowledge of the '449 patent, Defendant has actively induced and continues to induce the direct infringement of one or more claims of the '449 patent, including claim 10, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '449

patent, including claim 10, with the intent to encourage those customers and/or end users to infringe the '449 patent.

135. By way of example, on information and belief, Defendant actively induces infringement of the '449 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Defendant's products, including at least the Accused Products, to make, use, sell, offer to sell, and/or import Defendant's products, including at least the Accused Products, in a manner that infringes at least one claim of the '449 patent, including claim 10. For example, as described above, Defendant actively markets, advertises, offers for sale, and/or otherwise promotes the Accused Products by publishing and distributing data sheets, manuals, and guides for the Accused Products. Therein, on information and belief, Defendant describes and touts the use of the subject matter claimed in the '449 patent.

136. On information and belief, with knowledge of the '449 patent, Defendant also contributed to, and continues to contribute to, the infringement of one or more claims of the '449 patent, including claim 10, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '449 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Accused Products, which are especially made or especially adapted for use in infringement of the '449 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Defendant's informational and promotional materials described above, which describe the normal use and intended purpose of the Accused Products and demonstrate that the Accused Products are especially made or especially

adapted for a use that infringes the '449 patent.

137. On information and belief, as a result of Defendant's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Defendant's products, including the Accused Products, in ways that directly infringe one or more claims of the '449 patent, including claim 10. On information and belief, Defendant had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Defendant's products, including the Accused Products, at least as of the dates of knowledge of the '449 patent alleged above, and no later than the date of this Complaint.

138. On information and belief, with knowledge of the '449 patent, Defendant has willfully, deliberately, and intentionally infringed the '449 patent, at least as of the dates of knowledge of the '449 patent alleged above, and no later than the date of this Complaint, and continues to willfully, deliberately, and intentionally infringe the '449 patent. On information and belief, Defendant had actual knowledge of the '449 patent and Defendant's infringement of the '449 patent at least as of the dates of knowledge of the '449 patent alleged above, and no later than the date of this Complaint. On information and belief, after acquiring that knowledge, Defendant continued to directly and indirectly infringe the '449 patent as set forth above. On information and belief, Defendant knew or should have known that its conduct amounted to infringement of the '449 patent at least because Defendant was aware of the '449 patent and Defendant's infringement of the '449 patent at least as of the dates of knowledge of the '449 patent alleged above, and no later than the date of this Complaint. Defendant was aware of its infringement by virtue of the '449 patent's fame in the semiconductor industry, Defendant's expertise in the subject matter of the '449 patent, Defendant's technical competence to understand the scope of the '449

patent, and Defendant's intimate familiarity with its Accused Products. Additionally, Defendant was aware of the '449 patent, and Defendant's infringement of the '449 patent, at least as of the date of this Complaint because Plaintiff notified Defendant of such.

139. On information and belief, Defendant will continue to infringe the '449 patent unless and until it is enjoined by this Court. Defendant, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Defendant's acts of infringement and, unless Defendant is enjoined from its infringement of the '449 patent, Plaintiff will continue to suffer irreparable harm.

140. Plaintiff is entitled to recover from Defendant damages at least in an amount adequate to compensate for its infringement of the '449 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

COUNT III – INFRINGEMENT OF U.S. PATENT NO. 7,594,052

141. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 140 above.

142. On information and belief, Defendant has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '052 patent in violation of 35 U.S.C. § 271(a), including claim 6. Comparisons of claim 6 of the '052 patent to exemplary products of the Accused Products are attached as Exhibits 9 and 15, which are incorporated herein by reference.

143. On information and belief, with knowledge of the '052 patent, Defendant has actively induced and continues to induce the direct infringement of one or more claims of the '052

patent, including claim 6, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '052 patent, including claim 6, with the intent to encourage those customers and/or end users to infringe the '052 patent.

144. By way of example, on information and belief, Defendant actively induces infringement of the '052 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Defendant's products, including at least the Accused Products, to make, use, sell, offer to sell, and/or import Defendant's products, including at least the Accused Products, in a manner that infringes at least one claim of the '052 patent, including claim 6. For example, as described above, Defendant actively markets, advertises, offers for sale, and/or otherwise promotes the Accused Products by publishing and distributing data sheets, manuals, and guides for the Accused Products. Therein, on information and belief, Defendant describes and touts the use of the subject matter claimed in the '052 patent.

145. On information and belief, with knowledge of the '052 patent, Defendant also contributed to, and continues to contribute to, the infringement of one or more claims of the '052 patent, including claim 6, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '052 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Accused Products, which are especially made or especially

adapted for use in infringement of the '052 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Defendant's informational and promotional materials described above, which describe the normal use and intended purpose of the Accused Products and demonstrate that the Accused Products are especially made or especially adapted for a use that infringes the '052 patent.

146. On information and belief, as a result of Defendant's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Defendant's products, including the Accused Products, in ways that directly infringe one or more claims of the '052 patent, including claim 6. On information and belief, Defendant had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Defendant's products, including the Accused Products, at least as of the dates of knowledge of the '052 patent alleged above, and no later than the date of this Complaint.

147. On information and belief, with knowledge of the '052 patent, Defendant has willfully, deliberately, and intentionally infringed the '052 patent, at least as of the dates of knowledge of the '052 patent alleged above, and no later than the date of this Complaint, and continues to willfully, deliberately, and intentionally infringe the '052 patent. On information and belief, Defendant had actual knowledge of the '052 patent and Defendant's infringement of the '052 patent at least as of the dates of knowledge of the '052 patent alleged above, and no later than the date of this Complaint. On information and belief, after acquiring that knowledge, Defendant continued to directly and indirectly infringe the '052 patent as set forth above. On information and belief, Defendant knew or should have known that its conduct amounted to infringement of the '052 patent at least because Defendant was aware of the '052 patent and Defendant's

infringement of the '052 patent at least as of the dates of knowledge of the '052 patent alleged above, and no later than the date of this Complaint. Defendant was aware of its infringement by virtue of the '052 patent's fame in the semiconductor industry, Defendant's expertise in the subject matter of the '052 patent, Defendant's technical competence to understand the scope of the '052 patent, and Defendant's intimate familiarity with its Accused Products. Additionally, Defendant was aware of the '052 patent, and Defendant's infringement of the '052 patent, at least as of the date of this Complaint because Plaintiff notified Defendant of such.

148. On information and belief, Defendant will continue to infringe the '052 patent unless and until it is enjoined by this Court. Defendant, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Defendant's acts of infringement and, unless Defendant is enjoined from its infringement of the '052 patent, Plaintiff will continue to suffer irreparable harm.

149. Plaintiff is entitled to recover from Defendant damages at least in an amount adequate to compensate for its infringement of the '052 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

COUNT IV – INFRINGEMENT OF U.S. PATENT NO. 7,769,893

150. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 149 above.

151. On information and belief, Defendant has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '9893 patent in violation of 35 U.S.C. § 271(a), including claim 4. Comparisons of claim 4 of the '9893

patent to exemplary products of the Accused Products are attached as Exhibits 10 and 16, which are incorporated herein by reference.

152. On information and belief, with knowledge of the '9893 patent, Defendant has actively induced and continues to induce the direct infringement of one or more claims of the '9893 patent, including claim 4, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '9893 patent, including claim 4, with the intent to encourage those customers and/or end users to infringe the '9893 patent.

153. By way of example, on information and belief, Defendant actively induces infringement of the '9893 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Defendant's products, including at least the Accused Products, to make, use, sell, offer to sell, and/or import Defendant's products, including at least the Accused Products, in a manner that infringes at least one claim of the '9893 patent, including claim 4. For example, as described above, Defendant actively markets, advertises, offers for sale, and/or otherwise promotes the Accused Products by publishing and distributing data sheets, manuals, and guides for the Accused Products. Therein, on information and belief, Defendant describes and touts the use of the subject matter claimed in the '9893 patent.

154. On information and belief, with knowledge of the '9893 patent, Defendant also contributed to, and continues to contribute to, the infringement of one or more claims of the '9893 patent, including claim 4, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or

importing the Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '9893 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Accused Products, which are especially made or especially adapted for use in infringement of the '9893 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Defendant's informational and promotional materials described above, which describe the normal use and intended purpose of the Accused Products and demonstrate that the Accused Products are especially made or especially adapted for a use that infringes the '9893 patent.

155. On information and belief, as a result of Defendant's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Defendant's products, including the Accused Products, in ways that directly infringe one or more claims of the '9893 patent, including claim 4. On information and belief, Defendant had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Defendant's products, including the Accused Products, at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the date of this Complaint.

156. On information and belief, with knowledge of the '9893 patent, Defendant has willfully, deliberately, and intentionally infringed the '9893 patent, at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the date of this Complaint, and continues to willfully, deliberately, and intentionally infringe the '9893 patent. On information and belief, Defendant had actual knowledge of the '9893 patent and Defendant's infringement of the '9893 patent at least as of the dates of knowledge of the '9893 patent alleged above, and no

later than the date of this Complaint. On information and belief, after acquiring that knowledge, Defendant continued to directly and indirectly infringe the '9893 patent as set forth above. On information and belief, Defendant knew or should have known that its conduct amounted to infringement of the '9893 patent at least because Defendant was aware of the '9893 patent and Defendant's infringement of the '9893 patent at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the date of this Complaint. Defendant was aware of its infringement by virtue of the '9893 patent's fame in the semiconductor industry, Defendant's expertise in the subject matter of the '9893 patent, Defendant's technical competence to understand the scope of the '9893 patent, and Defendant's intimate familiarity with its Accused Products. Additionally, Defendant was aware of the '9893 patent, and Defendant's infringement of the '9893 patent, at least as of the date of this Complaint because Plaintiff notified Defendant of such.

157. On information and belief, Defendant will continue to infringe the '9893 patent unless and until it is enjoined by this Court. Defendant, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Defendant's acts of infringement and, unless Defendant is enjoined from its infringement of the '9893 patent, Plaintiff will continue to suffer irreparable harm.

158. Plaintiff is entitled to recover from Defendant damages at least in an amount adequate to compensate for its infringement of the '9893 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

COUNT V – INFRINGEMENT OF U.S. PATENT NO. 8,072,893

159. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 158 above.

160. On information and belief, Defendant has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '2893 patent in violation of 35 U.S.C. § 271(a), including claim 1. Comparisons of claim 1 of the '2893 patent to exemplary products of the Accused Products are attached as Exhibits 11 and 17, which are incorporated herein by reference.

161. On information and belief, with knowledge of the '2893 patent, Defendant has actively induced and continues to induce the direct infringement of one or more claims of the '2893 patent, including claim 1, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '2893 patent, including claim 1, with the intent to encourage those customers and/or end users to infringe the '2893 patent.

162. By way of example, on information and belief, Defendant actively induces infringement of the '2893 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Defendant's products, including at least the Accused Products, to make, use, sell, offer to sell, and/or import Defendant's products, including at least the Accused Products, in a manner that infringes at least one claim of the '2893 patent, including claim 1. For example, as described above, Defendant actively markets, advertises, offers for sale, and/or otherwise promotes the Accused Products by publishing and distributing data sheets, manuals, and guides for the Accused Products. Therein, on information and belief, Defendant describes and touts the use of the subject

matter claimed in the '2893 patent.

163. On information and belief, with knowledge of the '2893 patent, Defendant also contributed to, and continues to contribute to, the infringement of one or more claims of the '2893 patent, including claim 1, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '2893 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Accused Products, which are especially made or especially adapted for use in infringement of the '2893 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Defendant's informational and promotional materials described above, which describe the normal use and intended purpose of the Accused Products and demonstrate that the Accused Products are especially made or especially adapted for a use that infringes the '2893 patent.

164. On information and belief, as a result of Defendant's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Defendant's products, including the Accused Products, in ways that directly infringe one or more claims of the '2893 patent, including claim 1. On information and belief, Defendant had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Defendant's products, including the Accused Products, at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the date of this Complaint.

165. On information and belief, with knowledge of the '2893 patent, Defendant has willfully, deliberately, and intentionally infringed the '2893 patent, at least as of the dates of

knowledge of the '2893 patent alleged above, and no later than the date of this Complaint, and continues to willfully, deliberately, and intentionally infringe the '2893 patent. On information and belief, Defendant had actual knowledge of the '2893 patent and Defendant's infringement of the '2893 patent at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the date of this Complaint. On information and belief, after acquiring that knowledge, Defendant continued to directly and indirectly infringe the '2893 patent as set forth above. On information and belief, Defendant knew or should have known that its conduct amounted to infringement of the '2893 patent at least because Defendant was aware of the '2893 patent and Defendant's infringement of the '2893 patent at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the date of this Complaint. Defendant was aware of its infringement by virtue of the '2893 patent's fame in the semiconductor industry, Defendant's expertise in the subject matter of the '2893 patent, Defendant's technical competence to understand the scope of the '2893 patent, and Defendant's intimate familiarity with its Accused Products. Additionally, Defendant was aware of the '2893 patent, and Defendant's infringement of the '2893 patent, at least as of the date of this Complaint because Plaintiff notified Defendant of such.

166. On information and belief, Defendant will continue to infringe the '2893 patent unless and until it is enjoined by this Court. Defendant, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Defendant's acts of infringement and, unless Defendant is enjoined from its infringement of the '2893 patent, Plaintiff will continue to suffer irreparable harm.

167. Plaintiff is entitled to recover from Defendant damages at least in an amount adequate to compensate for its infringement of the '2893 patent, which amount has yet to be

determined, together with interest and costs fixed by the Court.

COUNT VI – INFRINGEMENT OF U.S. PATENT NO. 8,086,800

168. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 167 above.

169. On information and belief, Defendant has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '800 patent in violation of 35 U.S.C. § 271(a), including claim 10. Comparisons of claim 10 of the '800 patent to exemplary products of the Accused Products are attached as Exhibits 12 and 18, which are incorporated herein by reference.

170. On information and belief, with knowledge of the '800 patent, Defendant has actively induced and continues to induce the direct infringement of one or more claims of the '800 patent, including claim 10, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '800 patent, including claim 10, with the intent to encourage those customers and/or end users to infringe the '800 patent.

171. By way of example, on information and belief, Defendant actively induces infringement of the '800 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Defendant's products, including at least the Accused Products, to make, use, sell, offer to sell, and/or import Defendant's products, including at least the Accused Products, in a manner that

infringes at least one claim of the '800 patent, including claim 10. For example, as described above, Defendant actively markets, advertises, offers for sale, and/or otherwise promotes the Accused Products by publishing and distributing data sheets, manuals, and guides for the Accused Products. Therein, on information and belief, Defendant describes and touts the use of the subject matter claimed in the '800 patent.

172. On information and belief, with knowledge of the '800 patent, Defendant also contributed to, and continues to contribute to, the infringement of one or more claims of the '800 patent, including claim 10, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '800 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Accused Products, which are especially made or especially adapted for use in infringement of the '800 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Defendant's informational and promotional materials described above, which describe the normal use and intended purpose of the Accused Products and demonstrate that the Accused Products are especially made or especially adapted for a use that infringes the '800 patent.

173. On information and belief, as a result of Defendant's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Defendant's products, including the Accused Products, in ways that directly infringe one or more claims of the '800 patent, including claim 10. On information and belief, Defendant had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise

promotion of Defendant's products, including the Accused Products, at least as of the dates of knowledge of the '800 patent alleged above, and no later than the date of this Complaint.

174. On information and belief, with knowledge of the '800 patent, Defendant has willfully, deliberately, and intentionally infringed the '800 patent, at least as of the dates of knowledge of the '800 patent alleged above, and no later than the date of this Complaint, and continues to willfully, deliberately, and intentionally infringe the '800 patent. On information and belief, Defendant had actual knowledge of the '800 patent and Defendant's infringement of the '800 patent at least as of the dates of knowledge of the '800 patent alleged above, and no later than the date of this Complaint. On information and belief, after acquiring that knowledge, Defendant continued to directly and indirectly infringe the '800 patent as set forth above. On information and belief, Defendant knew or should have known that its conduct amounted to infringement of the '800 patent at least because Defendant was aware of the '800 patent and Defendant's infringement of the '800 patent at least as of the dates of knowledge of the '800 patent alleged above, and no later than the date of this Complaint. Defendant was aware of its infringement by virtue of the '800 patent's fame in the semiconductor industry, Defendant's expertise in the subject matter of the '800 patent, Defendant's technical competence to understand the scope of the '800 patent, and Defendant's intimate familiarity with its Accused Products. Additionally, Defendant was aware of the '800 patent, and Defendant's infringement of the '800 patent, at least as of the date of this Complaint because Plaintiff notified Defendant of such.

175. On information and belief, Defendant will continue to infringe the '800 patent unless and until it is enjoined by this Court. Defendant, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against

Defendant's acts of infringement and, unless Defendant is enjoined from its infringement of the '800 patent, Plaintiff will continue to suffer irreparable harm.

176. Plaintiff is entitled to recover from Defendant damages at least in an amount adequate to compensate for its infringement of the '800 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Network System Technologies, LLC requests that the Court enter judgment for Plaintiff and against Defendant Lenovo, and enter the following relief:

A. A judgment that Defendant infringes the following Asserted Patents:

U.S. Patent No. 7,366,818 (Exhibit 1, "'818 patent")
U.S. Patent No. 7,373,449 (Exhibit 2, "'449 patent")
U.S. Patent No. 7,594,052 (Exhibit 3, "'052 patent")
U.S. Patent No. 7,769,893 (Exhibit 4, "'9893 patent")
U.S. Patent No. 8,072,893 (Exhibit 5, "'2893 patent")
U.S. Patent No. 8,086,800 (Exhibit 6, "'800 patent")

B. A preliminary and permanent injunction restraining and enjoining Defendant, its officers, partners, agents, servants, employees, parents, subsidiaries, divisions, affiliate corporations, joint ventures, other related business entities and all other persons acting in concert, participation, or in privity with them, and their successors and assigns, from infringing the Asserted Patents;

C. An award of damages to Plaintiff arising from Defendant's past and continuing infringement up until the date Defendant is finally and permanently enjoined from further infringement, including compensatory damages;

D. A determination that Defendant's infringement of the Asserted Patents has been willful, and an award of treble damages to Plaintiff pursuant to 35 U.S.C. § 284;

E. A determination that this is an exceptional case and awarding Plaintiff's attorneys'

fees pursuant to 35 U.S.C. § 285;

- F. An order awarding Plaintiff costs and expenses in this action;
- G. An order awarding Plaintiff pre- and post-judgment interest on its damages; and
- H. Such other and further relief in law or in equity as this Court deems just and proper.

JURY DEMAND

Plaintiff respectfully requests a jury trial on all issues so triable.

Dated: April 11, 2023

Respectfully submitted,

/s/ William E. Davis, III

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