

**UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK**

TP-LINK SYSTEMS INC.,

Plaintiff,

v.

INNOMEMORY, LLC,

Defendant.

Civil Action No. 1:24-cv-07646

COMPLAINT

DEMAND FOR JURY TRIAL

Plaintiff TP-Link Systems Inc. (“TP-Link USA”) alleges for its Complaint against Defendant InnoMemory, LLC (“IM”) as follows:

NATURE OF THE ACTION

1. This action arises under 28 U.S.C. §§ 1331, 1338(a), 2201, and 2202.
2. TP-Link USA brings this action for a declaration that it does not infringe any claim of U.S. Patent No. 7,057,960 (the “’960 patent”) (Ex. 1).

THE PARTIES

3. TP-Link USA is a corporation organized and existing under the laws of the State of California with its principal place of business at 10 Mauchly, Irvine, CA 92618.
4. TP-Link USA was founded in 2008 and is a leading provider of consumer and business networking products in the United States. TP-Link USA’s award-winning products and services span a wide range of technologies, including consumer networking, consumer electronics, enterprise networking, enterprise security, software, and cloud services. TP-Link USA’s Wi-Fi router products include the AC1200 Gigabit Smart WiFi Router (“AC1200”) at issue in this case.

5. IM is a limited liability company organized and existing under the laws of Texas and maintains its principal place of business in this District at 261 West 35th Street – Suite 1003, New York, NY 10001-1902.

6. IM is a patent assertion entity that was founded in 2018, and its sole member is Jeffrey Gross. Jeffrey Gross is reportedly one of the most prolific filers of patent cases in the United States¹ and is responsible for at least 140 patent cases filed in 2024 so far.²

JURISDICTION AND VENUE

7. This is an action for declaratory relief under the Patent Laws of the United States, 35 U.S.C. § 1 et seq.

8. The Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action involves claims arising under the patent laws of the United States, 35 U.S.C. § 1, et seq., and under the Federal Declaratory Judgment Act, 28 U.S.C. §§ 2201 and 2202.

9. This Court has personal jurisdiction over IM because IM’s principal place of business is at 261 West 35th Street – Suite 1003, New York, NY 10001-1902, which is in this District.

10. Venue is proper in this District pursuant to 28 U.S.C. § 1391(b), (c), and (d) because IM’s principal place of business is in this District.

11. An actual and justiciable controversy exists between TP-Link USA and IM with respect to whether TP-Link USA’s AC1200 Gigabit Smart Wi-Fi Router (“AC1200”) allegedly

¹ See Ex. 2 (<https://www.unifiedpatents.com/insights/2024/1/8/patent-dispute-report-2023-in-review>).

² See Ex. 3 (<https://www.unifiedpatents.com/insights/2024/7/22/patent-dispute-report-2024-mid-year-report>).

infringes the '960 patent, requiring a declaration by the Court. The controversy is immediate and substantial because, as discussed below in the Factual Background and incorporated by reference here, IM has alleged in a complaint—filed in Texas against a non-existent company that IM calls “TP-LINK Technology Co., Ltd.”—that TP-Link USA’s AC1200 product purportedly infringes the '960 patent.

12. TP-Link USA brings this declaratory judgment action to remove the cloud from its products caused by IM’s unsupported infringement allegations against TP-Link USA’s AC1200 product. IM’s allegations that a Chinese company called “TP-LINK Technology Co., Ltd.”—a company that, as explained below, does not exist—has sold the AC1200 products in the United States have no merit. Moreover, TP-Link USA does not have any affiliation with any company called TP-LINK Technology Co., Ltd. Instead, TP-Link USA is the sole importer and seller of the AC1200 products in the United States. In addition, as described in detail below, IM’s allegations that TP-Link USA’s AC1200 product infringes the '960 patent have no merit. Yet, because IM has made its infringement allegations against TP-Link USA’s AC1200 product against a different and non-existent company—despite being aware of TP-Link USA—IM has created a cloud over TP-Link USA’s AC1200 products that the products will be subject to IM’s ongoing meritless infringement claims. TP-Link USA therefore brings this declaratory judgment action to remove the cloud created by IM’s unsupported allegations. TP-Link USA brings this action in this District because IM’s principal place of business is located here and because TP-Link USA has no material connection to Texas (and is not and could not be a defendant in IM’s case in Texas because there would not be proper venue).

13. In view of IM’s ongoing and incorrect allegations that TP-Link USA’s AC1200 product infringes the '960 patent, a threat of actual and imminent injury exists to TP-Link USA

that can only be redressed by judicial relief, and that injury is sufficiently immediate and real to warrant the issuance of a declaratory judgment. Such injury includes, among other things, concern among customers that the sale and use of TP-Link USA's AC1200 product will be subject to IM's infringement claims based on the '960 patent. Absent a declaration of noninfringement, IM will continue to wrongfully assert the '960 patent against TP-Link USA's AC1200 products and will thereby cause TP-Link USA irreparable injury and damage. A judicial declaration is thus necessary to determine the respective rights of the parties regarding TP-Link USA's AC1200 product and the '960 patent.

FACTUAL BACKGROUND

InnoMemory's Repeated Assertions of the '960 Patent Against Many Other Companies

14. According to the patent assignment database of the U.S. Patent and Trademark Office, IM was assigned the '960 patent by Intellectual Ventures Assets 92 LLC the day after IM was founded in 2018, and thus IM had nothing to do with the development of the alleged invention of the '960 patent. Ex. 4 (Assignment History).

15. On information and belief, IM's only business since its founding has been asserting patents, including the '960 patent, against companies to extract settlement payments based on litigation and/or the threat of litigation.

16. On information and belief, IM does not make or sell any products that use the '960 patent, and in fact does not sell any products at all. Instead, starting in 2022, IM has filed at least *fifty-one (51)* cut-and-paste lawsuits alleging infringement of the '960 patent against companies located throughout the United States. For example, in 2024 alone, IM has thus far asserted the '960 patent in litigation against at least the following thirty companies across many different and unrelated industries: Zions Bancorporation, N.A.; Texas Capital Bancshares, Inc.;

Texas Bank and Trust; Regions Bank; First United Bank; Truist Financial Corporation; Prosperity Bancshares, Inc.; JPMorgan Chase Bank, NA; Citizens State Bank; Amarillo National Bank; Citigroup Inc.; Capital One Financial Corporation; Fidelity Bank of Texas; G. Skill International Enterprise; Winbond Electronics Corporation; NEC Corporation; ATP Electronics Taiwan Inc.; Shenzhen Longsys Electronics Co., Ltd.; Advantech Co., Ltd.; Xiaomi Corporation; Exascend Co. Ltd.; Datalogic S.p.A.; NXP (AP Memory Technology Corp); Koninklijke Philips N.V.; EverFocus Co., Ltd.; Acrosser Technology Co. Ltd.; Nexcom International Co., Ltd.; Lanner Electronics, Inc.; Axiomtek Co., Ltd; and TP-LINK Technology Co., Ltd. In the sixteen lawsuits that IM has filed since July 2024, the infringement allegations are nearly identical.

17. Despite IM’s repeated assertions of the ’960 patent in at least fifty-one lawsuits filed since 2022, no company has been found by a court to infringe the ’960 patent.

18. In the lawsuits that it has filed in 2024, IM asserts that its “principal place of business” is at 261 West 35th Street – Suite 1003, New York, NY 10001-1902. Notably, at least *twelve other companies* have claimed that exact same suite as their principal place of business in other patent infringement complaints filed in 2024. *See Ex. 5 (Lex Machina Search Report)*. Thus, individuals connected with the same suite where IM is headquartered in this District are responsible for an extensive array of patent litigation filed throughout the country. This District has an interest in determining who is responsible for IM and these other companies operating in this District and whether their highly litigious activities—including threatening dozens if not hundreds of companies across a range of unrelated industries with expensive patent litigation—are based on meritless patent claims.³

³ Consistent with this, in 2014, the New York State Attorney General published a set of guidelines in 2014 that allows companies that are the targets of meritless claims by patent

InnoMemory’s Complaint Against “TP-LINK Technology Co., Ltd.”

19. On August 19, 2024, IM filed a complaint against a company it calls “TP-LINK Technology Co., Ltd.” in the U.S. District Court for the Eastern District of Texas (“EDTX”). Ex. 8 (Complaint for Patent Infringement, *InnoMemory, LLC v. TP-LINK Technology Co., Ltd.*, No. 2:24-cv-00683, Dkt. 1 (“EDTX Complaint”)). In its EDTX Complaint, IM alleges that “TP-LINK Technology Co., Ltd.”—which it identifies as a Chinese company—makes, uses, offers to sell, sells, and/or imports the TP-Link AC1200 and that the AC1200 allegedly infringes IM’s ’960 patent. Ex. 8 (EDTX Complaint); Ex. 9 (Claim Chart, *InnoMemory, LLC v. TP-LINK Technology Co., Ltd.*, No. 2:24-cv-00683, Dkt. 1-2 (“IM Claim Chart”)). As explained below, IM’s allegations about the purported company that sells the AC1200 products and IM’s infringement allegations are incorrect.

20. As an initial matter, TP-Link USA is the *sole* importer and seller of the AC1200 products in the United States. Contrary to IM’s allegations in its EDTX Complaint, there is no company called TP-LINK Technology Co., Ltd. that makes, imports, or sells the accused AC1200 products in the United States. Indeed, on information and belief, there is no company by the name of “TP-LINK Technology Co., Ltd.” Moreover, TP-Link USA has no connection to any company by the name of “TP-LINK Technology Co., Ltd.”

21. There have been two companies that have used the name “TP-Link Technologies Co., Ltd.”

assertion entities to submit complaints to the New York Attorney General’s Office. See Ex. 6 (Patent Trolls Reporting Form) (<https://ag.ny.gov/patent-trolls>); see generally Ex. 7 (<https://ag.ny.gov/press-release/2014/ag-schneiderman-announces-groundbreaking-settlement-abusive-patent-troll>).

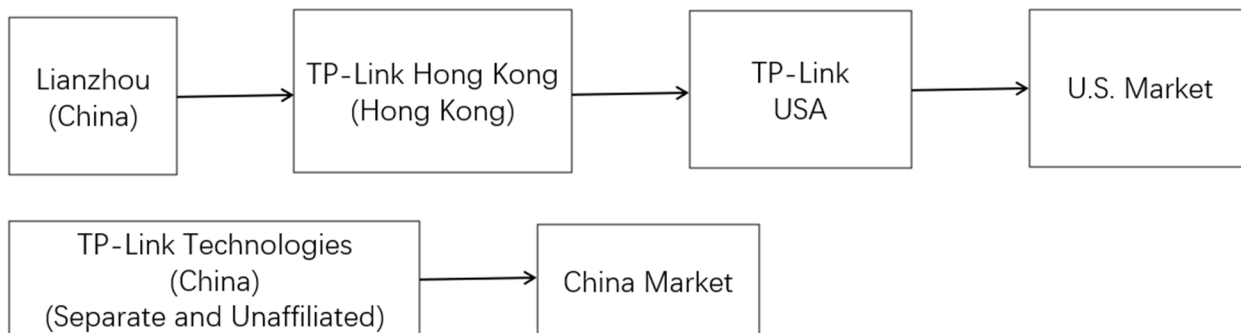
22. First, there is a Chinese company that uses the name TP-Link Technologies Co., Ltd. (“**TP-Link Technologies**”). TP-Link USA and its affiliates have no affiliation with TP-Link Technologies. TP-Link USA previously had an affiliation with TP-Link Technologies, but TP-Link USA and its affiliates formally separated from TP-Link Technologies beginning in 2022. In May of 2024, TP-Link USA and its affiliates announced publicly in a press release that TP-Link Technologies is a separate “standalone entity,” and that the separation of TP-Link USA and its affiliates from TP-Link Technologies encompasses “all shareholdings and operational aspects, including legal entities, workforce, research and development, production, marketing, and customer service.”⁴ Moreover, to TP-Link USA’s knowledge, TP-Link Technologies operates solely in China for the Chinese market. TP-Link Technologies never made, imported, or sold the accused AC1200 product in the United States when it was affiliated with TP-Link USA, and, to TP-Link USA’s knowledge, also has not done so since that company separated from TP-Link USA. Further, TP-Link Technologies has never manufactured, supplied, or sold the AC1200 to TP-Link USA for import into the United States.

23. Second, there is a Chinese company called Lianzhou Technologies Co., Ltd. (“**Lianzhou**”) that previously used the name TP-Link Technologies Co., Ltd. However, Lianzhou changed its name from “TP-Link Technologies Co., Ltd.” to “TP-Link Lianzhou Co., Ltd.” in 2021 and later changed its name to “Lianzhou Technologies Co., Ltd.” on June 20, 2024. TP-Link USA is neither a parent nor subsidiary of Lianzhou, either directly or indirectly, but the two companies have a common individual shareholder.

24. As shown in the diagram below, for the period relevant to this Action (*i.e.*, before IM’s asserted ’960 patent expired in 2022), Lianzhou manufactured and sold products, including

⁴ See <https://www.tp-link.com/us/press/news/21130/>.

the AC1200, that it sold to TP-Link USA’s Hong Kong affiliate, called TP-Link Corporation Limited (“TP-Link Hong Kong”)⁵; next, TP-Link USA purchased the AC1200 products from TP-Link Hong Kong in Hong Kong; and finally, TP-Link USA imported the AC1200 products into the United States and sold the AC1200 products in the U.S. market. Separately, TP-Link Technologies, which as noted above is not affiliated with TP-Link USA, sold its own products in China.



25. Despite accusing “TP-LINK Technology Co., Ltd.” of infringement by selling the AC1200 wireless router in the United States, IM’s counsel is aware of TP-Link USA, that it sells wireless router products in the United States, and that it is based in Irvine, California. In fact, IM’s counsel has sent correspondence to TP-Link USA at its Irvine, California address in which he made infringement allegations on behalf of a different company based on different patents.

26. In addition, since at least May of 2024, IM and its counsel have been aware of Lianzhou and that it no longer uses the name TP-Link Technologies Co., Ltd.

27. Despite being aware of TP-Link USA and despite that TP-Link USA is the sole supplier of the AC1200 products in the United States, IM filed its EDTX Complaint for the AC1200 products against “TP-LINK Technology Co., Ltd.”—a purported Chinese company that

⁵ In IM’s EDTX Complaint against the non-existent company it refers to as TP-LINK Technology Co., Ltd., IM incorrectly uses TP-Link Hong Kong’s address as the address of TP-LINK Technology Co., Ltd.

does not exist. Indeed, IM could not have satisfied the patent venue statute (28 U.S.C. § 1400(b)) for an infringement claim against TP-Link USA in Texas because TP-Link USA is a California corporation headquartered in Irvine, California, and TP-Link USA has no offices in the State of Texas. IM filed its EDTX Complaint against “TP-LINK Technology Co., Ltd.” *either* as a litigation tactic to attempt to avoid the patent venue requirement for U.S. companies that applies to TP-Link USA—so that it could attempt to pursue its infringement claims against an unaffiliated (and non-existent) Chinese company in Texas—*or* because it did not conduct a sufficient pre-suit investigation. Either way, its allegations are fundamentally flawed.

U.S. Patent No. 7,057,960

28. The '960 patent is titled “Method and Architecture for Reducing the Power Consumption for Memory Devices in Refresh Operations” and issued on June 6, 2006. The named inventors of the '960 patent are Timothy E. Fiscus, David E. Chapman, and Richard M. Parent. A true and correct copy of the '960 patent is attached as Exhibit 1.

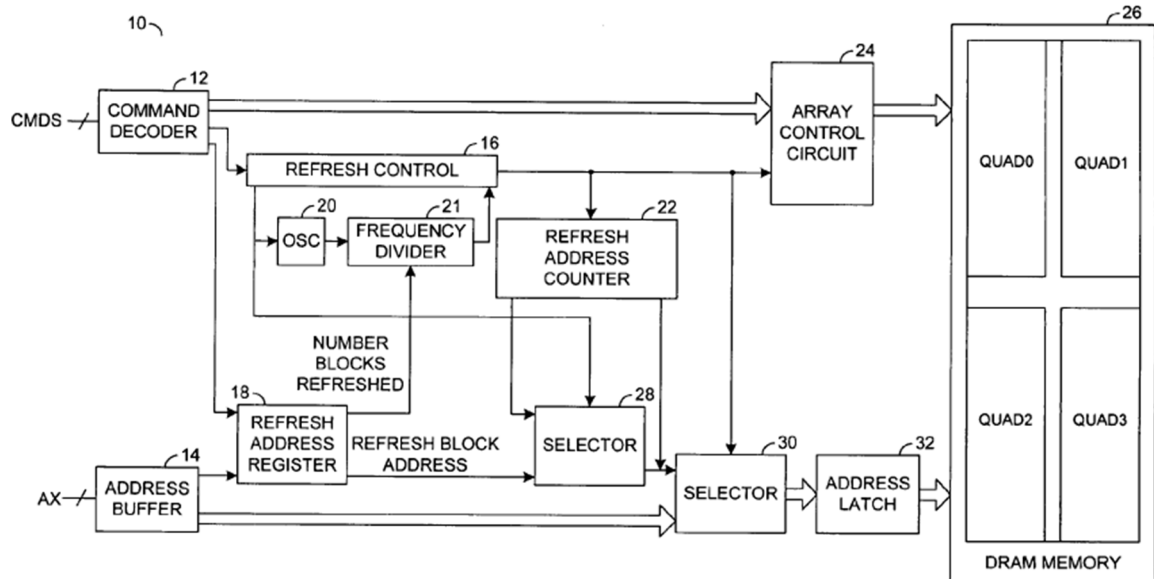
29. Cypress Semiconductor Corp. is identified on the face of the '960 patent as the assignee. According to the U.S. Patent and Trademark Office’s patent assignment database, the '960 patent has been assigned at least four times since it issued. The '960 patent was reportedly assigned by an entity affiliated with Intellectual Ventures to IM on November 30, 2018—one day after IM was founded. *See* Ex. 4 (Assignment History).

30. The '960 patent purportedly “relates to a method and/or architecture for refreshing a memory device generally and, more particularly, to a method and/or architecture for reducing the power consumption for memory devices in refresh operations.” Ex. 1 ('960 patent) at 1:11-15. According to the '960 patent, a refresh operation is a type of “background operation” for a computer memory that is used to “restore[] the data” stored in its memory cells. *Id.* at 1:26-

28; 2:36-55. The '960 patent asserts that prior art “dynamic random access memories (DRAMs)” were configured to refresh “all memory cells,” and that this can result in higher power consumption than would be needed to refresh “less than the full [memory] array.” *Id.* at 1:36-48; 2:25-29. The '960 patent purports to solve this problem through a claimed method that involves using, among other things, certain “control signals” and “programmable address signals” to refresh two or more sections of the memory array “simultaneously” and “independently” of other sections of the memory array. *See, e.g., id.* at Claim 1.

31. The '960 patent's Background admits that many of these claimed features were well known and conventional in the prior art. For example, according to the '960 patent, Figure 1 (shown below) describes a “conventional memory device” that was known in the prior art. *See, e.g., Ex. 1* ('960 patent) at 1:57-2:6. (“Referring to FIG. 1, a conventional memory device 10 is shown.”). The patent acknowledges that the “conventional” memory device shown in Figure 1 “supports ***partial or full array refresh*** by programming the refresh address register 18 with the ***portion of the memory array 26 to be refreshed.***” *Id.* at 1:57-2:1.⁶

⁶ Emphases are added, unless otherwise noted.



(CONVENTIONAL)

FIG. 1

32. Similarly, during prosecution of the application that led to the '960 patent, the patent examiner cited significant prior art that disclosed the core aspects of the alleged invention. For example, the examiner cited prior art U.S. Patent No. 6,381,188 ("Choi"), and explained that Choi discloses a memory that—just like the claimed invention of the '960 patent—can perform refresh operations in certain portions of the memory independently of other portions of the memory:

The Examiner would like to direct the Applicants to column 10, lines 47-50 of Choi which states: "Thus, the first through third memory banks ... perform a refresh operation and the fourth memory bank ... does not perform a refresh operation." In other words, the first through third memory banks are enabled *simultaneously and independently* of the fourth bank.

See Ex. 10 (Final Rejection) at 5.

33. As a result of this admitted conventional prior art and the significant other prior art cited during prosecution, the applicants for the '960 patent were forced to attempt to overcome the prior art by claiming a narrow implementation of a partial refresh operation for computer memory that there is no evidence that anyone—including any of the multiple prior

owners of the '960 patent—has ever used (and that, as described below, TP-Link USA has never used).

34. For example, asserted claim 1 of the '960 patent includes the following requirements:

1.[Pre] A method for reducing power consumption during background operations in a memory array with a plurality of sections comprising the steps of:

[a] controlling said background operations in each of said plurality of sections of said memory array in response to one or more control signals, wherein said one or more control signals are generated in response to a programmable address signal and

[b] said background operations can be enabled simultaneously in two or more of said plurality of sections independently of any other section; and

[c] presenting said one or more control signals and one or more decoded address signals to one or more periphery array circuits of said plurality of sections.

35. The '960 patent expired on March 4, 2022. IM thus filed its EDTX lawsuit claiming that the AC1200 router allegedly infringes the '960 patent over two years after its expiration date.

TP-Link USA's AC1200 Gigabit Smart Wi-Fi Router

36. TP-Link USA's AC1200 router, pictured below, is a wireless router that provides a Wi-Fi network in one's home or office. A wireless router works through built-in antennas to create and communicate with a Wi-Fi network, and it receives and transmits information to the internet. The AC1200's three external antennas form a signal-boosting array to provide expanded coverage. It can be setup and managed through TP-Link USA's Tether App. The AC1200 supports the IEEE Standard 802.11ac specifications (Wi-Fi 5) and provides a 5GHz band for streaming HD video and online gaming.



Ex. 11 (<https://www.tp-link.com/us/home-networking/wifi-router/archer-c1200/>).

37. TP-Link USA’s products and services are highly praised in the industry. For example, in its 2020 Wireless Router Satisfaction Report, J.D. Power reported that “TP-Link ranks highest in customer satisfaction with wireless routers.” Ex. 12 (JDP). TP-Link Wi-Fi products have received many awards for innovation, including the Consumer Electronics Show (“CES”) Innovation Award 2019—one of the largest trade shows in the world. Ex. 13 (TP-Link Awards). Recently, in 2024, TP-Link USA has been repeatedly recognized by leading publications as providing the best Wi-Fi products in the industry:

- The New York Times reported that TP-Link USA provides the “best Wi-Fi router.” Ex. 14 (<https://www.nytimes.com/wirecutter/reviews/best-wi-fi-router/>);
- Wired Magazine recognized TP-Link USA as providing the “Best Overall” Wi-Fi Router. Ex. 15 (<https://www.wired.com/gallery/best-wifi-routers/>);
- PC Magazine awarded TP-Link USA’s Wi-Fi Products first place in multiple product categories, including “Best Wi-Fi Router for Most People,” “Best Wi-Fi Mesh System for Large Homes,” and “Best Budget Wi-Fi Router.” Ex. 16 (<https://www.pcmag.com/categories/wireless-routers>).

InnoMemory’s Infringement Allegations Are Wholly Without Merit

38. IM’s allegations that TP-Link USA’s AC1200 router infringes one or more claims of the ’960 patent have no basis.

39. In its claim chart alleging that the AC1200 purportedly infringes the ’960 patent, IM addresses only claim 1 of the ’960 patent. IM’s infringement allegations for each requirement of claim 1 are based solely on its allegations directed to the DDR4 standard for DRAM memory. *See* Ex. 9 (IM Claim Chart). ***But the AC1200 does not use DDR4 memory.*** IM’s allegation that the AC1200 uses DDR4 memory is based solely on an incorrect third-party posting on Amazon.com at the following webpage: <https://www.amazon.com/TP-Link-Archer-C1200-Gigabit-Wireless/dp/B01IU DUJE0>. *See id.*; Ex. 17 (Amazon.com Posting). The Amazon.com posting cited by IM purports to be a “used” product listing provided by a third-party identified on the Amazon posting as “Legacy-books,” which is not affiliated with TP-Link USA or any of TP-Link USA’s affiliates. Ex. 17 (Amazon.com Posting).

40. Contrary to IM’s allegations, the AC1200 does not use DDR4 memory. As a result, IM’s infringement allegations against the AC1200—which are based solely on the assertion that the AC1200 uses DDR4 memory—are wholly without merit. Indeed, IM appears to have filed its complaint against the AC1200 router without even inspecting an actual AC1200 product.

41. Moreover, IM’s allegations that claim 1 of the ’960 patent covers the use of DDR4 memory are fundamentally flawed in multiple respects. Just by way of example:

42. **First**, the DDR4 standard does not meet claim limitation 1[a], which requires: controlling said ***background operations*** in each of said plurality of sections of said memory array ***in response to*** one or more ***control signals***, wherein said one or more ***control signals*** are generated ***in response to a programmable address signal***.

Ex. 1 ('960 patent) at Claim 1[a]. IM points to bits called “Low-Power Auto Self Refresh (LPASR) bits”—specifically, the LPASR bits referred to in the DDR4 standard as “A6” and “A7”—as the alleged “programmable address signal.” Ex. 9 (IM Claim Chart) at 2. This argument fails because the A6 and A7 LPASR bits are not programmable address signals and do not refer to any memory banks, or any portions of memory, within the DDR4 memory array. Instead, as shown in the excerpt of the DDR4 standard from IM’s own claim chart, the A6 and A7 LAPSRS bits determine what *mode* of self-refresh the DDR4 memory will undertake at different *temperatures*—e.g., manual or automatic modes are triggered at different temperature ranges—and have nothing to do with the addresses of any portion of the DDR4 memory:

4.27.1 Low Power Auto Self Refresh

DDR4 devices support Low Power Auto Self-Refresh (LP ASR) operation at multiple temperatures ranges (See temperature table below). Mode Register MR2 – descriptions

Table 47 — MR2 definitions for Low Power Auto Self-Refresh mode

A6	A7	Self-Refresh Operation Mode
0	0	Manual Mode – Normal operating temperature range
0	1	Manual Mode – Extended operating temperature range
1	0	Manual Mode – Lower power mode at a reduced operating temperature range
1	1	ASR Mode – automatically switching between all modes to optimize power for any of the temperature ranges listed above

Ex. 9 (IM Claim Chart) at 6 (citing DDR4 standard). Thus, the LPASR bits that IM alleges to be the “programmable address signal” are indisputably not a programmable address signal, but rather are a signal for various manual and automatic modes at different temperature ranges. *Id.*

43. Moreover, in the DDR4 standard, there is no evidence of any claimed “control signals” for the alleged “background operation” (self-refresh operation) that are generated “*in response to*” a “programmable address signal,” as required by the claims. Instead, the DDR4 standard expressly states that when a refresh command is received by the DDR4 control circuitry, the circuitry is set to “*don’t care*” for the address bits—meaning that it ignores the address bits during a refresh operation and does not have any “control signals” generated “in

response to” any address bits. *See* Ex. 9 (IM Claim Chart) at 8 (citing DDR4 Section 4.26) (“All banks of the SDRAM must be precharged and idle for a minimum of the precharge time $t_{RP}(\min)$ before the Refresh Command can be applied. The refresh addressing is generated by the internal refresh controller. This makes the address bits ‘Don’t Care’ during a Refresh command.”); *see also* Ex. 9 (IM Claim Chart) at 7 (citing DDR4 Section 4.27) (“When the DDR4 SDRAM has entered Self-Refresh mode, all of the external control signals, except CKE and RESET_n, are ‘don’t care.’”).

44. **Second**, the DDR4 standard does not meet claim limitation 1[b], which requires that:

said background operations can be enabled *simultaneously in two or more of said plurality of sections independently of any other section*

Ex. 1 (’960 patent) at Claim 1[b]. In its claim chart, IM points to no evidence that any portion (memory bank) of DDR4 memory undertakes a self-refresh operation (the alleged “background operation”) independently of another section of the memory. Ex. 9 (IM Claim Chart) at 2, 7-9. Instead, the DDR4 standard—including the excerpts that IM cites in its claim chart—indicates that the refresh operation is applied to “*all [memory] banks.*” *See* Ex. 9 (IM Claim Chart) at 8, 9 (citing DDR4 Section 4.26) (“All banks of the SDRAM must be precharged and idle for a minimum of the precharge time $t_{RP}(\min)$ before the Refresh Command can be applied... When the refresh cycle has completed, all banks of the SDRAM will be in the precharged (idle) state.”); Ex. 9 (IM Claim Chart) at 7 (citing DDR4 Section 4.27) (“Before issuing the Self-Refresh-Entry command, the DDR4 SDRAM must be idle with all bank precharge state with t_{RP} satisfied.... ‘Idle state’ is defined as all banks are closed (...), no data bursts are in progress, CKE is high, and all timings from previous operations are satisfied....”).

45. **Third**, claim limitations 1[a] and 1[c] require “control signals,” including “wherein said one or more control signals are generated in response to a programmable address signal.” Ex. 1 (’960 patent) at Claim 1[a], 1[c]. IM does not identify anywhere in its claim chart what it contends are the claimed “control signals” for the self-refresh operation (alleged to be the claimed “background operation”). Instead, IM merely parrots the claim language. Ex. 9 (IM claim chart) at 2. IM thus fails to provide any factual basis for its allegation that the control signal limitations are met by the DDR4 standard.

46. Because IM’s allegations are based entirely on its incorrect assertion that TP-Link USA’s AC1200 router uses DDR4 memory, and because IM’s allegations with respect to DDR4 memory are flawed for multiple reasons, IM’s allegation that the AC1200 infringes the ’960 patent is wholly without merit.

CLAIM FOR RELIEF

COUNT I

Declaratory Judgment of Noninfringement of U.S. Patent No. 7,057,960

47. Paragraphs 1-46 are incorporated herein by reference.

48. TP-Link USA’s AC1200 router does not infringe any claim of the ’960 patent, either directly or indirectly, and it does not infringe either literally or under the doctrine of equivalents.

49. For example, for at least the reasons explained in the Factual Background above, TP-Link USA’s AC1200 router does not infringe independent claim 1 because it does not use DDR4 memory, which is the sole basis on which IM has accused the AC1200 of infringement and, in any event, IM’s allegations against DDR4 memory are fundamentally flawed because DDR4 memory does not meet at least the following limitations of claim 1:

- 1[a]: “controlling said background operations in each of said plurality of sections of said memory array in response to one or more control signals, wherein said one or more control signals are generated in response to a programmable address signal”;
- 1[b]: “said background operations can be enabled simultaneously in two or more of said plurality of sections independently of any other section”;
- 1[c]: “presenting said one or more control signals and one or more decoded address signals to one or more periphery array circuits of said plurality of sections.”

50. As another example, for at least the reasons explained in the Factual Background above, TP-Link USA’s AC1200 router does not infringe independent claim 9 because it does not use DDR4 memory, which is the sole basis on which IM has accused the AC1200 of infringement and, in any event, IM’s allegations against DDR4 memory are fundamentally flawed because DDR4 memory does not meet at least the following limitations of claim 9:

- 9[a] “means for controlling a background operation in each of a plurality of sections of a memory array in response to one or more control signals, wherein said one or more control signals are generated in response to a programmable address signal”;
- 9[b] “said background operations can be enabled simultaneously in two or more of said plurality of sections independently of any other section”;
- 9[c] “means for presenting said one or more control signals and one or more decoded address signals to one or more periphery array circuits of said plurality of sections.”

51. As another example, for at least the reasons explained in the Factual Background above, TP-Link USA’s AC1200 router does not infringe independent claim 10 because it does not use DDR4 memory, which is the sole basis on which IM has accused the AC1200 of infringement and, in any event, IM’s allegations against DDR4 memory are fundamentally flawed because DDR4 memory does not meet at least the following limitations of claim 10:

- 10[b] “a control circuit configured to present one or more control signals and one or more decoded address signals to said periphery array circuitry of said plurality of sections, wherein said one or more control signals are generated in response to

a programmable address signal, a background operation in each of said plurality of sections is controlled in response to said one or more control signals”;

- 10[c] “said background operation can be enabled simultaneously in two or more of said plurality of sections independently of any other section.”

52. As another example, in addition to the reasons described above, TP-Link USA’s AC1200 router does not meet at least the following limitation of independent claim 25 because it does not use DDR4 memory and, in any event, there is nothing in the accused DDR4 standard that describes the following limitation of claim 25:

- 25[a] “controlling said parity checking in one or more of said plurality of sections of said memory array in response to one or more control signals.”

53. As another example, in addition to the reasons described above, TP-Link USA’s AC1200 router does not meet at least the following limitation of independent claim 26 because it does not use DDR4 memory and, in any event, there is nothing in the accused DDR4 standard that describes the following limitation of claim 26:

- 26[c]: “generating a memory cell selection signal comprising a binary numerical representation configured such that a single bit changes between successive numbers in response to a refresh enable signal.”

54. As another example, for at least the reasons explained in the Factual Background above, TP-Link USA’s AC1200 router does not infringe independent claim 27 because it does not use DDR4 memory, which is the sole basis on which IM has accused the AC1200 of infringement and, in any event, IM’s allegations against DDR4 memory are fundamentally flawed because DDR4 memory does not meet at least the following limitations of claim 27:

- 27[b] “a control circuit configured to present one or more control signals and one or more decoded address signals to said periphery array circuitry of said plurality of sections, wherein (a) a background operation in each of said plurality of sections (i) is controlled in response to said one or more control signals and (ii) can be enabled independently of any other section and (b) said control circuit comprises (i) an array control circuit configured to generate said one or more control signals in response to one or more block address signals and a refresh

enable signal and (ii) a register configured to store said one or more block address signals.”

55. TP-Link USA does not infringe the remaining claims of the '960 patent for at least one or more of the above reasons.

56. As set forth above, an actual controversy exists between IM and TP-Link USA with respect to the alleged infringement of the '960 patent, and this controversy is ongoing. Absent a declaration of noninfringement, IM will continue to wrongfully allege infringement of the '960 patent against TP-Link USA's products, thereby causing TP-Link USA irreparable injury and damage.

57. Accordingly, TP-Link USA seeks a judicial determination and declaration that its products do not infringe the '960 patent. Such a declaration is necessary and appropriate at this time so that the parties may ascertain their respective rights and duties with respect to the matters set forth above.

PRAYER FOR RELIEF

WHEREFORE, TP-Link USA prays that judgment be entered in its favor and requests:

- (a) A judgment and declaration that TP-Link USA's AC1200 products do not infringe in any manner any claim of the '960 patent;
- (b) An injunction against IM and its subsidiaries, assigns, employees, agents, and/or anyone acting in privity or concert with IM from charging infringement or instituting any legal action for infringement of the '960 patent against TP-Link USA, or anyone acting in privity with TP-Link USA, including its divisions, successors, assigns, agents, suppliers, manufacturers, contractors, and customers;

- (c) A judgment and declaration that this is an exceptional case within the meaning of 35 U.S.C. § 285, entitling TP-Link USA to an award of its reasonable attorneys' fees, expenses, and costs in this action;
- (d) An award to TP-Link USA of its costs and reasonable expenses to the fullest extent permitted by law; and
- (e) An award of such other and further relief as the Court may deem just and proper.

JURY DEMAND

Pursuant to Federal Rule of Civil Procedure 38(b), TP-Link USA hereby demands a trial by jury on all issues so triable.

Dated: October 8, 2024

Respectfully submitted,

**WILMER CUTLER PICKERING
HALE AND DORR LLP**

By:

/s/ Jeffrey A. Dennhardt
Michael J. Summersgill (*pro hac vice* forthcoming)
michael.summersgill@wilmerhale.com
Makenzi G. Herbst (*pro hac vice* forthcoming)
makenzi.herbst@wilmerhale.com
WILMER CUTLER PICKERING
HALE AND DORR LLP
60 State Street
Boston, Massachusetts 02109
Telephone: (617) 526-6261

Arthur W. Coviello (*pro hac vice* forthcoming)
arthur.coviello@wilmerhale.com
WILMER CUTLER PICKERING
HALE AND DORR LLP
2400 El Camino Real, Suite 400
Palo Alto, CA 94306
Telephone: (650) 858-6069

Jeffrey A. Dennhardt (SBN 5343660)
jeffrey.denhardt@wilmerhale.com
WILMER CUTLER PICKERING
HALE AND DORR LLP
7 World Trade Center
50 Greenwich Street
New York, NY 10007
Telephone: (212) 295-6293

Attorneys for Plaintiff TP-Link Systems Inc.