UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

XIFI NETWORKS R&D, INC. a Delaware corporation, Plaintiff, v. SAMSUNG ELECTRONICS CO., LTD., a Korean business entity, and SAMSUNG ELECTRONICS AMERICA, INC., a New York corporation, Defendants.	Civil Action No. _____ **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff XiFi Networks R&D, Inc. ("Plaintiff" or "XiFi"), by its attorneys, hereby alleges patent infringement against Defendants Samsung Electronics Co., Ltd. ("SEC") and its U.S. subsidiary and related entity, Samsung Electronics America, Inc. ("SEA") (individually or collectively "Defendants" or "Samsung"), as follows:

INTRODUCTION

1. This is an action for patent infringement under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.* XiFi alleges that Samsung has infringed and/or continues to infringe, directly and/or indirectly, nine XiFi patents: U.S. Patent Nos. 11,818,591 ("'591 patent"), 11,849,337 ("'337 patent"), 11,856,414 ("'414 patent"),

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11,974,143 ("'143 patent"), 11,950,105 ("'105 patent"), 12,003,976 ("'976 patent"), 12,015,933 ("'933 patent"), 12,114,177 ("'177 patent"), and 12,169,756 ("'756 patent") (collectively, the "XiFi Patents"), copies of which are attached hereto as Exhibits 1-9, respectively.

2. The XiFi Patents cover foundational wireless communication technologies that utilize a processing interface for evaluating bandwidth resources and making bandwidth allocation decisions, thereby allowing devices to communicate wirelessly across multiple wireless channels or bands in a bandwidth intensive environment. The claimed inventions enable Samsung to offer superior devices that perform multi-link Wi-Fi operations, as contemplated by the IEEE 802.11be Wi-Fi 7 standards.

3. Samsung has infringed and/or continues to infringe the XiFi Patents, directly and indirectly, by: (1) making, using, testing, selling, offering for sale, and/or importing into the United States, devices that include infringing multi-link Wi-Fi operations functionality; (2) practicing the claimed methods of the XiFi Patents in the United States by making, testing, and/or using Samsung devices that include the claimed multi-link Wi-Fi operations functionality; (3) importing into the United States, offering to sell, selling, or using in the United States Samsung devices made abroad, on information and belief, by Samsung or by an entity it owns or controls, using XiFi's patented processes; and (4) at least from the date of filing of this Complaint, inducing third parties to use, sell, offer for sale, and/or import into the United States, Samsung devices that include infringing multi-link Wi-Fi operations functionality, with knowledge of the XiFi Patents and of the third parties' direct infringement resulting therefrom.

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4. XiFi seeks damages, including past damages, and other relief for Samsung's infringement of the XiFi Patents.

THE PARTIES

5. Plaintiff XiFi Networks R&D, Inc. is a corporation organized and existing under the laws of the State of Delaware, with offices at 21214 Chelton Beach Drive, Cypress, TX 77433.

6. Defendant SEC is a corporation organized and existing under the laws of the Republic of Korea that lists its global headquarters as 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea.

7. Defendant SEA is a corporation organized and existing under the laws of the State of New York, with corporate offices in the Eastern District of Texas at 6625 Excellence Way, Plano, Texas 75023. Defendant SEA may be served with process through its registered agent C T Corporation System, 1999 Bryan St., Suite 900, Dallas, Texas 75201-3136.

8. Defendant SEA is a wholly owned subsidiary of SEC.

9. Defendants have authorized sellers and sales representatives that offer and sell products pertinent to this Complaint throughout the State of Texas, including in this District and to consumers throughout this District, such as: Best Buy, 422 W TX-281 Loop, Suite 100, Longview, Texas 75605; AT&T Store, 1712 E. Grand Avenue, Marshall, Texas 75670; Verizon authorized retailers, including Russell Cellular, 1111 E. Grand Avenue, Marshall, Texas 75670, and Victra, 1006 East End Boulevard N, Suite A, Marshall, Texas 75670; and Amazon.com.

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JURISDICTION AND VENUE

10. This is an action for patent infringement under the Patent Laws of the United States, 35 U.S.C. § 101 *et seq.*

11. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

12. This Court has specific and personal jurisdiction over each of the Defendants consistent with the requirements of the Due Process Clause of the United States Constitution and the Texas Long-Arm Statute. Tex. Civ. Prac. & Rem. Code § 17.042. On information and belief, each Defendant has sufficient minimum contacts with the forum because each Defendant transacts substantial business in the State of Texas and in this District. On information and belief, SEA has more than 1,000 employees at its Plano, Texas facility, working in areas such as engineering, research and development, marketing, sales, and customer support for wireless devices. Further, each Defendant has, directly or through subsidiaries or intermediaries, committed and continues to commit acts of patent infringement in the State of Texas and in this District as alleged in this Complaint, as alleged more particularly below.

13. Venue is proper in this District pursuant to 28 U.S.C. §§ 1400(b) and 1391(b) and (c) because each Defendant is subject to personal jurisdiction in this District and has committed acts of patent infringement in this District. SEA has a regular and established place of business and employees in this District. Each Defendant, through its own acts and/or through the acts of each other Defendant, makes, uses, sells, and/or

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offers to sell infringing products within this District, regularly does and solicits business in this District, and has the requisite minimum contacts with this District such that this venue is a fair and reasonable one. Further, the Defendants have admitted or not contested proper venue in this District in other patent infringement actions.

FACTUAL BACKGROUND

I. The Inventor

14. Sai C. Manapragada is the President of XiFi Networks R&D, Inc.

15. Mr. Manapragada has worked in cellular and wireless communication and signal processing spaces for over 25 years.

16. After obtaining a Master's Degree in Electrical Engineering in 1995, Mr. Manapragada worked on digital signal processing technologies at Motorola for five years. Following his time at Motorola, Mr. Manapragada worked on digital networking technology for a number of companies in the Bay Area, California. By 2004, Mr. Manapragada held the position of Vice President of Engineering at Photron Technologies.

17. Mr. Manapragada founded his first company, Picongen Wireless, in 2006 to enhance media delivery over Wi-Fi. In 2012, he founded another company, xStream Wireless Works, focused on improving media performance over Wi-Fi on mobile devices.

18. By 2012, Mr. Manapragada had run his own Wi-Fi-focused companies for over six years. Over that time, he experienced continuous frustration with the capability of a device to connect to an access point (e.g., a router) using only one channel or band

(then, either 2.4 or 5 GHz) at a time. Drawing inspiration from his many years of experience working with Wi-Fi technology, Mr. Manapragada set to work on inventing a solution that would allow a device to wirelessly connect to an access point using more than one channel or band at a time (i.e., multi-link Wi-Fi operations).

19. In 2017, Mr. Manapragada founded Plaintiff XiFi Networks R&D, Inc. to advance XiFi's wireless technology business in the United States. A related, commonly owned wireless technology company, XiFi Smart Networks Pvt. Ltd., pioneered public Wi-Fi technology in India with its Wi-Fi Access Network Interface (WANI) architecture. The WANI architecture and service has generated significant interest in India, where it has been deployed in three regional test programs and has received support from, and adoption by, the Indian government.

20. Sai Manapragada is the sole inventor on the XiFi Patents.

II. The XiFi Patents

21. Plaintiff XiFi solely owns the XiFi Patents, including the exclusive rights to bring suit with respect to any past, present, and future infringement thereof.

22. The '591 patent, entitled "Method and Apparatus for Processing Bandwidth Intensive Data Streams Using Virtual Media Access Control and Physical Layers," was duly and legally issued on November 14, 2023, from a patent application filed September 7, 2021, with Sai C. Manapragada as the sole named inventor. The '591 patent claims priority to U.S. Provisional Patent Application No. 61/897,216, filed October 30, 2013, and U.S. Provisional Patent Application No. 61/897,219, filed October 30, 2013.

23. The '337 patent, entitled "Method and Apparatus for Processing Bandwidth

Intensive Data Streams Using Virtual Media Access Control and Physical Layers," was duly and legally issued on December 19, 2023, from a patent application filed August 11, 2023, with Sai C. Manapragada as the sole named inventor. The '337 patent claims priority to U.S. Provisional Patent Application No. 61/897,216, filed October 30, 2013, and U.S. Provisional Patent Application No. 61/897,219, filed October 30, 2013.

24. The '414 patent, entitled "Method and Apparatus for Processing Bandwidth Intensive Data Streams Using Virtual Media Access Control and Physical Layers," was duly and legally issued on December 26, 2023, from a patent application filed August 10, 2023, with Sai C. Manapragada as the sole named inventor. The '414 patent claims priority to U.S. Provisional Patent Application No. 61/897,216, filed October 30, 2013, and U.S. Provisional Patent Application No. 61/897,219, filed October 30, 2013.

25. The '143 patent, entitled "Method and Apparatus for Processing Bandwidth Intensive Data Streams Using Virtual Media Access Control and Physical Layers," was duly and legally issued on April 30, 2024, from a patent application filed September 20, 2023, with Sai C. Manapragada as the sole named inventor. The '143 patent claims priority to U.S. Provisional Patent Application No. 61/897,216, filed October 30, 2013, and U.S. Provisional Patent Application No. 61/897,219, filed October 30, 2013.

26. The '105 patent, entitled "Method and Apparatus for Processing Bandwidth Intensive Data Streams Using Virtual Media Access Control and Physical Layers," was duly and legally issued on April 2, 2024, from a patent application filed December 7, 2023, with Sai C. Manapragada as the sole named inventor. The '105 patent claims priority to U.S. Provisional Patent Application No. 61/897,216, filed October 30, 2013,

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and U.S. Provisional Patent Application No. 61/897,219, filed October 30, 2013.

27. The ’976 patent, entitled “Method and Apparatus for Processing Bandwidth Intensive Data Streams Using Virtual Media Access Control and Physical Layers,” was duly and legally issued on June 4, 2024, from a patent application filed March 4, 2024, with Sai C. Manapragada as the sole named inventor. The ’976 patent claims priority to U.S. Provisional Patent Application No. 61/897,216, filed October 30, 2013, and U.S. Provisional Patent Application No. 61/897,219, filed October 30, 2013.

28. The ’933 patent, entitled “Method and Apparatus for Processing Bandwidth Intensive Data Streams Using Virtual Media Access Control and Physical Layers,” was duly and legally issued on June 18, 2024, from a patent application filed March 4, 2024, with Sai C. Manapragada as the sole named inventor. The ’933 patent claims priority to U.S. Provisional Patent Application No. 61/897,216, filed October 30, 2013, and U.S. Provisional Patent Application No. 61/897,219, filed October 30, 2013.

29. The ’177 patent, entitled “Method and Apparatus for Processing Bandwidth Intensive Data Streams Using Virtual Media Access Control and Physical Layers,” was duly and legally issued on October 8, 2024, from a patent application filed March 13, 2024, with Sai C. Manapragada as the sole named inventor. The ’177 patent claims priority to U.S. Provisional Patent Application No. 61/897,216, filed October 30, 2013, and U.S. Provisional Patent Application No. 61/897,219, filed October 30, 2013.

30. The ’756 patent, entitled “Method and Apparatus for Processing Bandwidth Intensive Data Streams Using Virtual Media Access Control and Physical Layers,” was duly and legally issued on December 17, 2024, from a patent application filed July 29,

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2024, with Sai C. Manapragada as the sole named inventor. The '756 patent claims priority to U.S. Provisional Patent Application No. 61/897,216, filed October 30, 2013, and U.S. Provisional Patent Application No. 61/897,219, filed October 30, 2013.

31. The claimed inventions of the XiFi Patents address significant technical problems in wireless networking technology, including inefficiencies in data transmission. As explained in the XiFi Patents' common specification, "With the proliferation of multi-media content over wireless networks [came] an insatiable demand for more bandwidth[.]" '591 patent at 1:38-40.[1] As noted in the specification, "Conventional wireless networking architectures . . . fail to take full advantage of the resources available to satisfy the desire for more bandwidth." *Id.* at 1:40-44. Often, in prior systems, an application's bandwidth requirements would exceed the transmission bandwidth of a Wi-Fi channel, resulting in an inefficient and slow transfer of application data.

32. Prior to the XiFi Patents, application data transmitted over a Wi-Fi network was confined to a single band, and any switch to another band required that the association between a transmitter and a receiver on one band be broken before a new association on a different band could be made, i.e., "break before make." The inventions of the XiFi Patents, in contrast, allow simultaneous associations to be made between a transmitter and a receiver on two or more different Wi-Fi bands which allows, for example, a switch between bands to be made without needing to first break

[1] The '591 patent's specification is cited herein on an exemplary basis.

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the current association, i.e., "make without break."

33. The XiFi Patents recite specific technical solutions to the technical problems identified above, for example by integrating additional logic (a virtual MAC and a virtual PHY and/or resource monitoring interface) into a Wi-Fi device. The XiFi Patent claims are directed to significant performance improvements to wireless networking technology by providing for a new Wi-Fi architecture to monitor and efficiently allocate existing resources. The virtual layers "determine[] available resources in the actual MAC and PHY layers . . . , and allocate the available resources to satisfy bandwidth demands" by "enabl[ing] simultaneous allocation of multiple PHY resources for different signal types associated with different applications." *Id.* at 4:10-13, 3:36-38. This results in significant performance improvements and efficiency advantages including reduced latency and increases in peak bandwidth and data transfer reliability.

34. The XiFi Patent claims are directed to a wireless networking system that "shar[es] . . . resources in a way sufficient to satisfy the bandwidth requirements of multiple applications running simultaneously." *Id.* at 4:28-30. As explained in the XiFi Patents' specification, inclusion of the virtual layers results in the Wi-Fi device finding "the most efficient path for wireless access between a given user and the wireless network[.]" *Id.* at 8:26-27. As further noted in the specification, use of the virtual layers results in "wireless transceiver resources [being] allocated more efficiently[.]" *Id.* at 5:54-58.

35. The XiFi Patents provide for transparency in bandwidth allocation

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decisions, unlike prior art systems. As explained during prosecution of the '143 patent, the virtual MAC of the XiFi Patents "utilizes a virtual MAC address and allows for bandwidth allocation decisions to be made in a manner transparent to the layers above the MAC/PHY layers," whereas in prior art systems, bandwidth "allocation decisions are made by upper layers and, therefore, are not transparent to [the] upper layers as required by the [XiFi Patent] claims." Third Preliminary Amendment, App. No. 18/470,540, at 13. "Making routing decisions at higher layers [as in prior art systems] necessarily introduces significant latency and lowers throughput as compared to the inventions claimed" in the XiFi Patents. *Id.*

36. As similarly explained during prosecution of the '756 patent, prior art systems did not include, for example, "a virtual MAC layer and at least one resource monitoring interface that provides information regarding wireless transceiver bandwidth availabilities to the virtual MAC layer." Resp. to Non-Final Office Action of Sept. 26, 2024, App. No. 18/787,267, at 8-9. Such prior art "require[d] that routing decisions be made at a layer above the processing interface." *Id.* at 9. As a result, "those decisions are not made in a manner transparent to the layers above the processing interface, such as the data link layer[.]" *Id.*

37. As these exemplary prosecution histories indicate, the inventions of the XiFi Patents provide for transparency in bandwidth allocation decisions for all layers of the device above the claimed "processing interface," which includes the data link layer. Prior art Wi-Fi systems did not perform band allocation decisions in a manner transparent to layers above the MAC/PHY layers, such as the data link layer. Thus,

providing transparency in bandwidth allocation decisions was not well-known, routine, or conventional at the time of the inventions of the XiFi Patents.

38. The XiFi Patents further allow Multi-Link Operation (MLO), which is a significant aspect of Wi-Fi 7. MLO-enabled Wi-Fi 7 devices minimize the significant overhead of switching bands. "Whereas existing [i.e., pre-Wi-Fi 7] Wi-Fi technologies allow a device to connect and jump between either 2.4GHz, 5GHz and 6GHz bands, it can only send data via one band at a time. The current switching overhead as it hops frequencies can lead to delays of up to 100msec, whereas with an aggregated connection that's expected to drop as low as 1ms." *Key Advantages of Wi-Fi 7: Performance, MRU & MLO White Paper*, MediaTek (2022) (available at https://mediatek-marketing.files.svdcdn.com/production/documents/Key-Advantages-of-Wi-Fi-7_MediaTek-White-Paper-WF70222.pdf), at 5.

39. Regarding key functionalities of Wi-Fi 7, Samsung has acknowledged that "[m]ulti-channel/multiband operation represents a *paradigm shift* moving from a BSS operating on a single channel to a BSS operating over multiple channels, wherein the STAs can dynamically choose to operate on a subset of channels ranging from a single channel to multiple channels." U.S. Patent No. 11,452,116 at 1:46-51 (emphasis added).

40. The XiFi Patents provide a number of technical solutions to address the shortcomings of prior Wi-Fi devices. These technical solutions include, for example, link aggregation, link selection, preamble puncturing, transmit and receive, and band allocation decision making.

41. Each of the XiFi Patents is valid and enforceable.

42. Defendants are not authorized to practice the XiFi Patents.

43. The inventions recited in the XiFi Patents enable Samsung to offer, among other things, superior devices with multi-link Wi-Fi operations functionality.

III. Samsung

44. Samsung is a global leader in the mobile device and wearable device market, which includes smartphones, tablets, and smartwatches. On information and belief, Samsung designs, manufactures, uses, offers for sale, sells, and/or imports into the United States—including into the Eastern District of Texas—billions of dollars of mobile devices and wearable devices every year.

45. Samsung had global revenues of approximately $198 billion across all product lines in 2023, a significant portion of which is attributable to SEA. In 2023, SEA had revenues of approximately $29 billion, a significant portion of which is attributable to mobile devices.

IV. Samsung's Direct Infringement and the Accused Instrumentalities

46. Defendants have directly infringed, and/or continue to infringe, pursuant to 35 U.S.C. §§ 271(a) and (g), as applicable, one or more claims of each of the XiFi Patents (as further specified below as to each of the XiFi Patents, in Counts I-IX and in Exhibits 10-18) by: (1) making, using, testing, selling, offering for sale within the United States, and/or importing into the United States, Samsung devices that include multi-link Wi-Fi operations functionality; (2) practicing the claimed methods of the XiFi Patents in the United States by making, testing, and/or using in the United States Samsung devices that

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include the claimed multi-link Wi-Fi operations functionality; and (3) importing into the United States, offering to sell, selling, or using in the United States Samsung devices made abroad, on information and belief, by Samsung or by an entity it owns or controls, using XiFi's patented processes (at the least, Samsung continues to import, offer for sale, sell, and/or use Samsung devices made abroad using XiFi's patented processes after receiving notice of infringement at least as of the date of this Complaint). The products that XiFi accuses of infringing the XiFi Patents are collectively referred to herein as the "Accused Instrumentalities."

47. On information and belief, SEC manufactures and tests Accused Instrumentalities abroad and offers to sell, sells, and/or imports Accused Instrumentalities into the United States. On information and belief, SEA uses, tests, offers to sell, and/or sells Accused Instrumentalities in the United States and/or imports Accused Instrumentalities into the United States.

48. The Accused Instrumentalities include devices that incorporate the claimed inventions, including infringing implementations of multi-link Wi-Fi operations functionality, including but not limited to devices incorporating Wi-Fi 7 functionality, such as:

- Samsung smartphones ("Accused Smartphones") and tablets ("Accused Tablets) (collectively, "Accused Mobile Devices"), including but not limited to Galaxy Note, Galaxy S, Galaxy Z, Galaxy A, and Galaxy XCover smartphones, and Galaxy Tab tablets, including the exemplary Samsung Galaxy S24 Ultra smartphone;

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- Samsung Galaxy Book computers and Galaxy Chromebooks ("Accused Notebook Computers");
- Samsung televisions ("Accused TVs");
- Samsung smartwatches and wearable devices ("Accused Wearables"), including but not limited to Galaxy smartwatches, including but not limited to Galaxy Watch Classic, Galaxy Watch, and Galaxy Watch Pro smartwatches; and
- Any additional Samsung devices that incorporate the multi-link Wi-Fi operations functionality described herein.

49. The Accused Instrumentalities include products made, used, tested, offered for sale, sold within the United States, and/or imported into the United States within the last six years before the filing date of this Complaint, including products made abroad using the XiFi Patents' claimed methods and then sold in or imported into the United States. The Accused Instrumentalities also include products used to perform the claimed methods of the XiFi Patents in the United States within the last six years before the filing date of this Complaint.

50. The claims of the XiFi Patents relate generally to, *inter alia*, multi-link Wi-Fi operations functionality, including through the utilization of one or more virtual MAC interfaces and resource monitoring interfaces. *See, e.g.*, '591 patent at 3:12-41; 4:4-24; 4:45-64; 5:51-58; 7:64-8:29. The inventions of the XiFi Patents enable Samsung to offer superior devices with multi-link Wi-Fi operations functionality, allowing users of such Samsung devices to benefit from Wi-Fi 7 infrastructure and

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thereby send and receive wireless communications with higher throughput and lower latency than would be possible without the XiFi inventions.

51. The presence of multi-link Wi-Fi operations functionality in the Accused Instrumentalities that infringe the XiFi Patents is established with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in the charts submitted herewith as Exhibits 10-18. On information and belief, all Accused Instrumentalities operate in substantially the same way as the exemplary Samsung Galaxy S24 Ultra smartphone with respect to the functionality described below and in Exhibits 10-18.

V. Samsung's Indirect Infringement

52. From at least the date of this Complaint, Defendants indirectly infringe the XiFi Patents by inducing infringement by others, such as importers, resellers, customers, and end users under 35 U.S.C. § 271(b) in this District and elsewhere in the United States and the State of Texas.

53. Specifically, Defendants induce others' direct infringement of the XiFi Patents by selling Accused Instrumentalities to third-party customers, such as retailers, who then directly infringe by using, offering to sell, selling within the United States, and/or importing into the United States those Accused Instrumentalities, which infringe the XiFi Patents.

54. On information and belief, Defendants actively promote the multi-link Wi-Fi operations functionality of the Accused Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants' Accused Instrumentalities sold in the United States, Defendants pursue and obtain approval from

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U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

55. Defendants know that their customers will sell infringing Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States—or have deliberately avoided learning of the infringing circumstances so as to be willfully blind to the infringement that was induced—and Defendants specifically intend their customers to purchase those Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States. Defendants' direct and indirect purchasers directly infringe the XiFi Patents by importing such Accused Instrumentalities into the United States, selling such Accused Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

56. Defendants further induce others' direct infringement of the XiFi Patents by providing instruction and direction to end users, such as consumers, about how to use the Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the XiFi Patents. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. In some instances, such infringing uses occur upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities.

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Further, on information and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable. Any such products that were converted to Wi-Fi 7 capable products via firmware update are also Accused Instrumentalities.

57. Defendants have induced others' direct infringement despite actual notice that the Accused Instrumentalities infringe the XiFi Patents, as set forth herein. Defendants therefore have caused their purchasers and end users to directly infringe the XiFi Patents with knowledge of the XiFi Patents and specific intent that the purchasers and end users will directly infringe, or have deliberately avoided learning of the infringing circumstances so as to be willfully blind to the infringement that was induced.

58. Defendants derive significant revenue by selling products, including the Accused Instrumentalities, to third parties who directly infringe one or more claims of the XiFi Patents.

59. The above-described acts of indirect infringement committed by Defendants have caused injury and damage to Plaintiff XiFi, and will cause additional severe and irreparable injury and damages in the future.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 11,818,591

60. The allegations set forth in paragraphs 1 through 59 of this Complaint are incorporated by reference as though fully set forth herein.

61. Pursuant to 35 U.S.C. § 282, the '591 patent is presumed valid.

62. Defendants have directly infringed and continue to infringe one or more

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claims of the ’591 patent in violation of 35 U.S.C. § 271. The infringing products are the Accused Instrumentalities.

63. The Samsung Galaxy S24 Ultra smartphone provides a representative example of Samsung’s infringement of the ’591 patent. The Accused Instrumentalities directly infringe at least claim 1 of the ’591 patent at least in the manner described with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in Exhibit 10, submitted herewith. Plaintiff’s allegations of infringement are not limited to claim 1, and additional infringed claims will be identified and disclosed through discovery and infringement contentions.

64. The descriptions and infringement theories set forth in Exhibit 10 are preliminary and based on publicly available information. XiFi expects to further develop infringement evidence after obtaining discovery from Defendants in the course of this case.

65. On information and belief, the other Accused Instrumentalities are in relevant part substantially similar to the exemplary Samsung Galaxy S24 Ultra smartphone, in particular with regard to the manner in which the Accused Instrumentalities include and utilize multi-link Wi-Fi operations functionality, including link aggregation functionality. Exhibit 10 is thus illustrative of the manner in which each of the Accused Instrumentalities infringes.

66. Defendants have actual notice pursuant to 35 U.S.C. § 287(a) of the ’591 patent and the infringement alleged herein at least upon the filing of this Complaint. Neither XiFi nor any authorized licensee made, offered for sale, or sold within the United

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States any article embodying the ’591 patent claims following issuance of the ’591 patent.

67. Defendants indirectly infringe the ’591 patent by actively inducing the direct infringement of others of the ’591 patent, in the United States, the State of Texas, and the Eastern District of Texas.

68. Defendants induce, through affirmative acts, their customers and other third parties, such as retailers and end users, to directly infringe the ’591 patent by using, offering to sell, selling within the United States, and/or importing into the United States those Accused Instrumentalities, which infringe the ’591 patent.

69. On information and belief, Defendants actively promote the Accused Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants’ Accused Instrumentalities sold in the United States, Defendants pursue and obtain approval from U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

70. Defendants know that their customers will sell infringing Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States, and Defendants specifically intend their customers to purchase those Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States. Defendants’ direct and indirect purchasers directly infringe the ’591 patent by importing such Accused Instrumentalities into the United States, selling such Accused

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Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

71. Defendants further induce others' direct infringement of the '591 patent by providing instruction and direction to end users, such as consumers, about how to use the Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the '591 patent. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. Such infringing uses occur upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities. Further, on information and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable.

72. Defendants induce others' direct infringement despite actual notice that the Accused Instrumentalities infringe the '591 patent. At least as of the date of filing of this Complaint, Defendants know that the induced conduct would constitute infringement—and intend that infringement at the time of committing the aforementioned affirmative acts, such that the acts and conduct have been and continue to be committed with the specific intent to induce infringement—or deliberately avoided learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the

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infringement that was induced.

73. The above-described acts of infringement committed by Defendants have caused injury and damage to XiFi, and will cause additional severe and irreparable injury and damages in the future.

74. Defendants' acts of infringement as described above are willful, at least as of the date of filing of this Complaint.

75. XiFi is entitled to recover damages sustained as a result of Defendants' wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 11,849,337

76. The allegations set forth in paragraphs 1 through 59 of this Complaint are incorporated by reference as though fully set forth herein.

77. Pursuant to 35 U.S.C. § 282, the '337 patent is presumed valid.

78. Defendants have directly infringed and continue to infringe one or more claims of the '337 patent in violation of 35 U.S.C. § 271. The infringing products are the Accused Instrumentalities.

79. The Samsung Galaxy S24 Ultra smartphone provides a representative example of Samsung's infringement of the '337 patent. The Accused Instrumentalities directly infringe at least claim 1 of the '337 patent at least in the manner described with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in Exhibit 11, submitted herewith. Plaintiff's allegations of infringement are not limited to claim 1, and additional infringed claims will be identified and disclosed through discovery and infringement

contentions.

80. The descriptions and infringement theories set forth in Exhibit 11 are preliminary and based on publicly available information. XiFi expects to further develop infringement evidence after obtaining discovery from Defendants in the course of this case.

81. On information and belief, the other Accused Instrumentalities are in relevant part substantially similar to the exemplary Samsung Galaxy S24 Ultra smartphone, in particular with regard to the manner in which the Accused Instrumentalities include and utilize multi-link Wi-Fi operations functionality, including link selection functionality. Exhibit 11 is thus illustrative of the manner in which each of the Accused Instrumentalities infringes.

82. Defendants have actual notice pursuant to 35 U.S.C. § 287(a) of the ’337 patent and the infringement alleged herein at least upon the filing of this Complaint. Neither XiFi nor any authorized licensee made, offered for sale, or sold within the United States any article embodying the ’337 patent claims following issuance of the ’337 patent.

83. Defendants indirectly infringe the ’337 patent by actively inducing the direct infringement of others of the ’337 patent, in the United States, the State of Texas, and the Eastern District of Texas.

84. Defendants induce, through affirmative acts, their customers and other third parties, such as retailers and end users, to directly infringe the ’337 patent by using, offering to sell, selling within the United States, and/or importing into the United States

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those Accused Instrumentalities, which infringe the ’337 patent.

85. On information and belief, Defendants actively promote the Accused Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants’ Accused Instrumentalities sold in the United States, Defendants pursue and obtain approval from U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

86. Defendants know that their customers will sell infringing Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States, and Defendants specifically intend their customers to purchase those Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States. Defendants’ direct and indirect purchasers directly infringe the ’337 patent by importing such Accused Instrumentalities into the United States, selling such Accused Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

87. Defendants further induce others’ direct infringement of the ’337 patent by providing instruction and direction to end users, such as consumers, about how to use the Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the ’337 patent. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. Such infringing uses occur

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upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities. Further, on information and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable.

88. Defendants induce others' direct infringement despite actual notice that the Accused Instrumentalities infringe the '337 patent. At least as of the date of filing of this Complaint, Defendants know that the induced conduct would constitute infringement—and intend that infringement at the time of committing the aforementioned affirmative acts, such that the acts and conduct have been and continue to be committed with the specific intent to induce infringement—or deliberately avoided learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the infringement that was induced.

89. The above-described acts of infringement committed by Defendants have caused injury and damage to XiFi, and will cause additional severe and irreparable injury and damages in the future.

90. Defendants' acts of infringement as described above are willful, at least as of the date of filing of this Complaint.

91. XiFi is entitled to recover damages sustained as a result of Defendants' wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable

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royalty.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 11,865,414

92. The allegations set forth in paragraphs 1 through 59 of this Complaint are incorporated by reference as though fully set forth herein.

93. Pursuant to 35 U.S.C. § 282, the ’414 patent is presumed valid.

94. Defendants have directly infringed and continue to infringe one or more claims of the ’414 patent in violation of 35 U.S.C. § 271. The infringing products are the Accused Instrumentalities.

95. The Samsung Galaxy S24 Ultra smartphone provides a representative example of Samsung’s infringement of the ’414 patent. The Accused Instrumentalities directly infringe at least claim 1 of the ’414 patent at least in the manner described with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in Exhibit 12, submitted herewith. Plaintiff’s allegations of infringement are not limited to claim 1, and additional infringed claims will be identified and disclosed through discovery and infringement contentions.

96. The descriptions and infringement theories set forth in Exhibit 12 are preliminary and based on publicly available information. XiFi expects to further develop infringement evidence after obtaining discovery from Defendants in the course of this case.

97. On information and belief, the other Accused Instrumentalities are in relevant part substantially similar to the exemplary Samsung Galaxy S24 Ultra smartphone, in particular with regard to the manner in which the Accused

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Instrumentalities include and utilize multi-link Wi-Fi operations functionality, including link aggregation functionality. Exhibit 12 is thus illustrative of the manner in which each of the Accused Instrumentalities infringes.

98. Defendants have actual notice pursuant to 35 U.S.C. § 287(a) of the '414 patent and the infringement alleged herein at least upon the filing of this Complaint. Neither XiFi nor any authorized licensee made, offered for sale, or sold within the United States any article embodying the '414 patent claims following issuance of the '414 patent.

99. Defendants indirectly infringe the '414 patent by actively inducing the direct infringement of others of the '414 patent, in the United States, the State of Texas, and the Eastern District of Texas.

100. Defendants induce, through affirmative acts, their customers and other third parties, such as retailers and end users, to directly infringe the '414 patent by using, offering to sell, selling within the United States, and/or importing into the United States those Accused Instrumentalities, which infringe the '414 patent.

101. On information and belief, Defendants actively promote the Accused Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants' Accused Instrumentalities sold in the United States, Defendants pursue and obtain approval from U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

102. Defendants know that their customers will sell infringing Accused

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Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States, and Defendants specifically intend their customers to purchase those Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States. Defendants' direct and indirect purchasers directly infringe the '414 patent by importing such Accused Instrumentalities into the United States, selling such Accused Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

103. Defendants further induce others' direct infringement of the '414 patent by providing instruction and direction to end users, such as consumers, about how to use the Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the '414 patent. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. Such infringing uses occur upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities. Further, on information and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable.

104. Defendants induce others' direct infringement despite actual notice that the

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Accused Instrumentalities infringe the ’414 patent. At least as of the date of filing of this Complaint, Defendants know that the induced conduct would constitute infringement—and intend that infringement at the time of committing the aforementioned affirmative acts, such that the acts and conduct have been and continue to be committed with the specific intent to induce infringement—or deliberately avoided learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the infringement that was induced.

105. The above-described acts of infringement committed by Defendants have caused injury and damage to XiFi, and will cause additional severe and irreparable injury and damages in the future.

106. Defendants’ acts of infringement as described above are willful, at least as of the date of filing of this Complaint.

107. XiFi is entitled to recover damages sustained as a result of Defendants’ wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 11,974,143

108. The allegations set forth in paragraphs 1 through 59 of this Complaint are incorporated by reference as though fully set forth herein.

109. Pursuant to 35 U.S.C. § 282, the ’143 patent is presumed valid.

110. Defendants have directly infringed and continue to infringe one or more claims of the ’143 patent in violation of 35 U.S.C. § 271. The infringing products are the Accused Instrumentalities.

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111. The Samsung Galaxy S24 Ultra smartphone provides a representative example of Samsung's infringement of the '143 patent. The Accused Instrumentalities directly infringe at least claim 1 of the '143 patent at least in the manner described with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in Exhibit 13, submitted herewith. Plaintiff's allegations of infringement are not limited to claim 1, and additional infringed claims will be identified and disclosed through discovery and infringement contentions.

112. The descriptions and infringement theories set forth in Exhibit 13 are preliminary and based on publicly available information. XiFi expects to further develop infringement evidence after obtaining discovery from Defendants in the course of this case.

113. On information and belief, the other Accused Instrumentalities are in relevant part substantially similar to the exemplary Samsung Galaxy S24 Ultra smartphone, in particular with regard to the manner in which the Accused Instrumentalities include and utilize multi-link Wi-Fi operations functionality, including transmit/receive functionality. Exhibit 13 is thus illustrative of the manner in which each of the Accused Instrumentalities infringes.

114. Defendants have actual notice pursuant to 35 U.S.C. § 287(a) of the '143 patent and the infringement alleged herein at least upon the filing of this Complaint. Neither XiFi nor any authorized licensee made, offered for sale, or sold within the United States any article embodying the '143 patent claims following issuance of the '143 patent.

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115. Defendants indirectly infringe the ’143 patent by actively inducing the direct infringement of others of the ’143 patent, in the United States, the State of Texas, and the Eastern District of Texas.

116. Defendants induce, through affirmative acts, their customers and other third parties, such as retailers and end users, to directly infringe the ’143 patent by using, offering to sell, selling within the United States, and/or importing into the United States those Accused Instrumentalities, which infringe the ’143 patent.

117. On information and belief, Defendants actively promote the Accused Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants’ Accused Instrumentalities sold in the United States, Defendants pursue and obtain approval from U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

118. Defendants know that their customers will sell infringing Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States, and Defendants specifically intend their customers to purchase those Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States. Defendants’ direct and indirect purchasers directly infringe the ’143 patent by importing such Accused Instrumentalities into the United States, selling such Accused Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

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119. Defendants further induce others' direct infringement of the '143 patent by providing instruction and direction to end users, such as consumers, about how to use the Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the '143 patent. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. Such infringing uses occur upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities. Further, on information and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable.

120. Defendants induce others' direct infringement despite actual notice that the Accused Instrumentalities infringe the '143 patent. At least as of the date of filing of this Complaint, Defendants know that the induced conduct would constitute infringement—and intend that infringement at the time of committing the aforementioned affirmative acts, such that the acts and conduct have been and continue to be committed with the specific intent to induce infringement—or deliberately avoided learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the infringement that was induced.

121. The above-described acts of infringement committed by Defendants have

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caused injury and damage to XiFi, and will cause additional severe and irreparable injury and damages in the future.

122. Defendants' acts of infringement as described above are willful, at least as of the date of filing of this Complaint.

123. XiFi is entitled to recover damages sustained as a result of Defendants' wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 11,950,105

124. The allegations set forth in paragraphs 1 through 59 of this Complaint are incorporated by reference as though fully set forth herein.

125. Pursuant to 35 U.S.C. § 282, the '105 patent is presumed valid.

126. Defendants have directly infringed and continue to infringe one or more claims of the '105 patent in violation of 35 U.S.C. § 271. The infringing products are the Accused Instrumentalities.

127. The Samsung Galaxy S24 Ultra smartphone provides a representative example of Samsung's infringement of the '105 patent. The Accused Instrumentalities directly infringe at least claim 1 of the '105 patent at least in the manner described with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in Exhibit 14, submitted herewith. Plaintiff's allegations of infringement are not limited to claim 1, and additional infringed claims will be identified and disclosed through discovery and infringement contentions.

128. The descriptions and infringement theories set forth in Exhibit 14 are

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preliminary and based on publicly available information. XiFi expects to further develop infringement evidence after obtaining discovery from Defendants in the course of this case.

129. On information and belief, the other Accused Instrumentalities are in relevant part substantially similar to the exemplary Samsung Galaxy S24 Ultra smartphone, in particular with regard to the manner in which the Accused Instrumentalities include and utilize multi-link Wi-Fi operations functionality, including preamble puncturing functionality. Exhibit 14 is thus illustrative of the manner in which each of the Accused Instrumentalities infringes.

130. Defendants have actual notice pursuant to 35 U.S.C. § 287(a) of the '105 patent and the infringement alleged herein at least upon the filing of this Complaint. Neither XiFi nor any authorized licensee made, offered for sale, or sold within the United States any article embodying the '105 patent claims following issuance of the '105 patent.

131. Defendants indirectly infringe the '105 patent by actively inducing the direct infringement of others of the '105 patent, in the United States, the State of Texas, and the Eastern District of Texas.

132. Defendants induce, through affirmative acts, their customers and other third parties, such as retailers and end users, to directly infringe the '105 patent by using, offering to sell, selling within the United States, and/or importing into the United States those Accused Instrumentalities, which infringe the '105 patent.

133. On information and belief, Defendants actively promote the Accused

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Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants' Accused Instrumentalities sold in the United States, Defendants pursue and obtain approval from U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

134. Defendants know that their customers will sell infringing Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States, and Defendants specifically intend their customers to purchase those Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States. Defendants' direct and indirect purchasers directly infringe the '105 patent by importing such Accused Instrumentalities into the United States, selling such Accused Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

135. Defendants further induce others' direct infringement of the '105 patent by providing instruction and direction to end users, such as consumers, about how to use the Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the '105 patent. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. Such infringing uses occur upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants

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have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities. Further, on information and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable.

136. Defendants induce others' direct infringement despite actual notice that the Accused Instrumentalities infringe the '105 patent. At least as of the date of filing of this Complaint, Defendants know that the induced conduct would constitute infringement—and intend that infringement at the time of committing the aforementioned affirmative acts, such that the acts and conduct have been and continue to be committed with the specific intent to induce infringement—or deliberately avoided learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the infringement that was induced.

137. The above-described acts of infringement committed by Defendants have caused injury and damage to XiFi, and will cause additional severe and irreparable injury and damages in the future.

138. Defendants' acts of infringement as described above are willful, at least as of the date of filing of this Complaint.

139. XiFi is entitled to recover damages sustained as a result of Defendants' wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty.

COUNT VI: INFRINGEMENT OF U.S. PATENT NO. 12,003,976

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140. The allegations set forth in paragraphs 1 through 59 of this Complaint are incorporated by reference as though fully set forth herein.

141. Pursuant to 35 U.S.C. § 282, the ’976 patent is presumed valid.

142. Defendants have directly infringed and continue to infringe one or more claims of the ’976 patent in violation of 35 U.S.C. § 271. The infringing products are the Accused Instrumentalities.

143. The Samsung Galaxy S24 Ultra smartphone provides a representative example of Samsung’s infringement of the ’976 patent. The Accused Instrumentalities directly infringe at least claim 1 of the ’976 patent at least in the manner described with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in Exhibit 15, submitted herewith. Plaintiff’s allegations of infringement are not limited to claim 1, and additional infringed claims will be identified and disclosed through discovery and infringement contentions.

144. The descriptions and infringement theories set forth in Exhibit 15 are preliminary and based on publicly available information. XiFi expects to further develop infringement evidence after obtaining discovery from Defendants in the course of this case.

145. On information and belief, the other Accused Instrumentalities are in relevant part substantially similar to the exemplary Samsung Galaxy S24 Ultra smartphone, in particular with regard to the manner in which the Accused Instrumentalities include and utilize multi-link Wi-Fi operations functionality, including preamble puncturing functionality. Exhibit 15 is thus illustrative of the manner in which

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each of the Accused Instrumentalities infringes.

146. Defendants have actual notice pursuant to 35 U.S.C. § 287(a) of the '976 patent and the infringement alleged herein at least upon the filing of this Complaint. Neither XiFi nor any authorized licensee made, offered for sale, or sold within the United States any article embodying the '976 patent claims following issuance of the '976 patent.

147. Defendants indirectly infringe the '976 patent by actively inducing the direct infringement of others of the '976 patent, in the United States, the State of Texas, and the Eastern District of Texas.

148. Defendants induce, through affirmative acts, their customers and other third parties, such as retailers and end users, to directly infringe the '976 patent by using, offering to sell, selling within the United States, and/or importing into the United States those Accused Instrumentalities, which infringe the '976 patent.

149. On information and belief, Defendants actively promote the Accused Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants' Accused Instrumentalities sold in the United States, Defendants pursue and obtain approval from U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

150. Defendants know that their customers will sell infringing Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States, and Defendants specifically intend their customers to purchase those

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Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States. Defendants' direct and indirect purchasers directly infringe the '976 patent by importing such Accused Instrumentalities into the United States, selling such Accused Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

151. Defendants further induce others' direct infringement of the '976 patent by providing instruction and direction to end users, such as consumers, about how to use the Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the '976 patent. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. Such infringing uses occur upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities. Further, on information and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable.

152. Defendants induce others' direct infringement despite actual notice that the Accused Instrumentalities infringe the '976 patent. At least as of the date of filing of this Complaint, Defendants know that the induced conduct would constitute infringement—

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and intend that infringement at the time of committing the aforementioned affirmative acts, such that the acts and conduct have been and continue to be committed with the specific intent to induce infringement—or deliberately avoided learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the infringement that was induced.

153. The above-described acts of infringement committed by Defendants have caused injury and damage to XiFi, and will cause additional severe and irreparable injury and damages in the future.

154. Defendants' acts of infringement as described above are willful, at least as of the date of filing of this Complaint.

155. XiFi is entitled to recover damages sustained as a result of Defendants' wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty.

COUNT VII: INFRINGEMENT OF U.S. PATENT NO. 12,015,933

156. The allegations set forth in paragraphs 1 through 59 of this Complaint are incorporated by reference as though fully set forth herein.

157. Pursuant to 35 U.S.C. § 282, the '933 patent is presumed valid.

158. Defendants have directly infringed and continue to infringe one or more claims of the '933 patent in violation of 35 U.S.C. § 271. The infringing products are the Accused Instrumentalities.

159. The Samsung Galaxy S24 Ultra smartphone provides a representative example of Samsung's infringement of the '933 patent. The Accused Instrumentalities

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directly infringe at least claim 1 of the ’933 patent at least in the manner described with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in Exhibit 16, submitted herewith. Plaintiff’s allegations of infringement are not limited to claim 1, and additional infringed claims will be identified and disclosed through discovery and infringement contentions.

160. The descriptions and infringement theories set forth in Exhibit 16 are preliminary and based on publicly available information. XiFi expects to further develop infringement evidence after obtaining discovery from Defendants in the course of this case.

161. On information and belief, the other Accused Instrumentalities are in relevant part substantially similar to the exemplary Samsung Galaxy S24 Ultra smartphone, in particular with regard to the manner in which the Accused Instrumentalities include and utilize multi-link Wi-Fi operations functionality, including preamble puncturing functionality. Exhibit 16 is thus illustrative of the manner in which each of the Accused Instrumentalities infringes.

162. Defendants have actual notice pursuant to 35 U.S.C. § 287(a) of the ’933 patent and the infringement alleged herein at least upon the filing of this Complaint. Neither XiFi nor any authorized licensee made, offered for sale, or sold within the United States any article embodying the ’933 patent claims following issuance of the ’933 patent.

163. Defendants indirectly infringe the ’933 patent by actively inducing the direct infringement of others of the ’933 patent, in the United States, the State of Texas,

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and the Eastern District of Texas.

164. Defendants induce, through affirmative acts, their customers and other third parties, such as retailers and end users, to directly infringe the ’933 patent by using, offering to sell, selling within the United States, and/or importing into the United States those Accused Instrumentalities, which infringe the ’933 patent.

165. On information and belief, Defendants actively promote the Accused Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants’ Accused Instrumentalities sold in the United States, Defendants pursue and obtain approval from U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

166. Defendants know that their customers will sell infringing Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States, and Defendants specifically intend their customers to purchase those Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States. Defendants’ direct and indirect purchasers directly infringe the ’933 patent by importing such Accused Instrumentalities into the United States, selling such Accused Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

167. Defendants further induce others’ direct infringement of the ’933 patent by providing instruction and direction to end users, such as consumers, about how to use the

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Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the ’933 patent. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. Such infringing uses occur upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities. Further, on information and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable.

168. Defendants induce others’ direct infringement despite actual notice that the Accused Instrumentalities infringe the ’933 patent. At least as of the date of filing of this Complaint, Defendants know that the induced conduct would constitute infringement—and intend that infringement at the time of committing the aforementioned affirmative acts, such that the acts and conduct have been and continue to be committed with the specific intent to induce infringement—or deliberately avoided learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the infringement that was induced.

169. The above-described acts of infringement committed by Defendants have caused injury and damage to XiFi, and will cause additional severe and irreparable injury and damages in the future.

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170. Defendants' acts of infringement as described above are willful, at least as of the date of filing of this Complaint.

171. XiFi is entitled to recover damages sustained as a result of Defendants' wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty.

COUNT VIII: INFRINGEMENT OF U.S. PATENT NO. 12,114,177

172. The allegations set forth in paragraphs 1 through 59 of this Complaint are incorporated by reference as though fully set forth herein.

173. Pursuant to 35 U.S.C. § 282, the '177 patent is presumed valid.

174. Defendants have directly infringed and continue to infringe one or more claims of the '177 patent in violation of 35 U.S.C. § 271. The infringing products are the Accused Instrumentalities.

175. The Samsung Galaxy S24 Ultra smartphone provides a representative example of Samsung's infringement of the '177 patent. The Accused Instrumentalities directly infringe at least claim 1 of the '177 patent at least in the manner described with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in Exhibit 17, submitted herewith. Plaintiff's allegations of infringement are not limited to claim 1, and additional infringed claims will be identified and disclosed through discovery and infringement contentions.

176. The descriptions and infringement theories set forth in Exhibit 17 are preliminary and based on publicly available information. XiFi expects to further develop infringement evidence after obtaining discovery from Defendants in the course of this

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case.

177. On information and belief, the other Accused Instrumentalities are in relevant part substantially similar to the exemplary Samsung Galaxy S24 Ultra smartphone, in particular with regard to the manner in which the Accused Instrumentalities include and utilize multi-link Wi-Fi operations functionality, including preamble puncturing functionality and transmit/receive functionality. Exhibit 17 is thus illustrative of the manner in which each of the Accused Instrumentalities infringes.

178. Defendants have actual notice pursuant to 35 U.S.C. § 287(a) of the '177 patent and the infringement alleged herein at least upon the filing of this Complaint. Neither XiFi nor any authorized licensee made, offered for sale, or sold within the United States any article embodying the '177 patent claims following issuance of the '177 patent.

179. Defendants indirectly infringe the '177 patent by actively inducing the direct infringement of others of the '177 patent, in the United States, the State of Texas, and the Eastern District of Texas.

180. Defendants induce, through affirmative acts, their customers and other third parties, such as retailers and end users, to directly infringe the '177 patent by using, offering to sell, selling within the United States, and/or importing into the United States those Accused Instrumentalities, which infringe the '177 patent.

181. On information and belief, Defendants actively promote the Accused Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants' Accused Instrumentalities sold in the United States, Defendants

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pursue and obtain approval from U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

182. Defendants know that their customers will sell infringing Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States, and Defendants specifically intend their customers to purchase those Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States. Defendants' direct and indirect purchasers directly infringe the '177 patent by importing such Accused Instrumentalities into the United States, selling such Accused Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

183. Defendants further induce others' direct infringement of the '177 patent by providing instruction and direction to end users, such as consumers, about how to use the Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the '177 patent. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. Such infringing uses occur upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities. Further, on information

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and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable.

184. Defendants induce others' direct infringement despite actual notice that the Accused Instrumentalities infringe the '177 patent. At least as of the date of filing of this Complaint, Defendants know that the induced conduct would constitute infringement—and intend that infringement at the time of committing the aforementioned affirmative acts, such that the acts and conduct have been and continue to be committed with the specific intent to induce infringement—or deliberately avoided learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the infringement that was induced.

185. The above-described acts of infringement committed by Defendants have caused injury and damage to XiFi, and will cause additional severe and irreparable injury and damages in the future.

186. Defendants' acts of infringement as described above are willful, at least as of the date of filing of this Complaint.

187. XiFi is entitled to recover damages sustained as a result of Defendants' wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty.

COUNT IX: INFRINGEMENT OF U.S. PATENT NO. 12,169,756

188. The allegations set forth in paragraphs 1 through 59 of this Complaint are incorporated by reference as though fully set forth herein.

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189. Pursuant to 35 U.S.C. § 282, the ’756 patent is presumed valid.

190. Defendants have directly infringed and continue to infringe one or more claims of the ’756 patent in violation of 35 U.S.C. § 271. The infringing products are the Accused Instrumentalities.

191. The Samsung Galaxy S24 Ultra smartphone provides a representative example of Samsung’s infringement of the ’756 patent. The Accused Instrumentalities directly infringe at least claim 1 of the ’756 patent at least in the manner described with respect to the exemplary Samsung Galaxy S24 Ultra smartphone in Exhibit 18, submitted herewith. Plaintiff’s allegations of infringement are not limited to claim 1, and additional infringed claims will be identified and disclosed through discovery and infringement contentions.

192. The descriptions and infringement theories set forth in Exhibit 18 are preliminary and based on publicly available information. XiFi expects to further develop infringement evidence after obtaining discovery from Defendants in the course of this case.

193. On information and belief, the other Accused Instrumentalities are in relevant part substantially similar to the exemplary Samsung Galaxy S24 Ultra smartphone, in particular with regard to the manner in which the Accused Instrumentalities include and utilize multi-link Wi-Fi operations functionality, including band allocation decision functionality. Exhibit 18 is thus illustrative of the manner in which each of the Accused Instrumentalities infringes.

194. Defendants have actual notice pursuant to 35 U.S.C. § 287(a) of the ’756

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patent and the infringement alleged herein at least upon the filing of this Complaint. Neither XiFi nor any authorized licensee made, offered for sale, or sold within the United States any article embodying the '756 patent claims following issuance of the '756 patent.

195. Defendants indirectly infringe the '756 patent by actively inducing the direct infringement of others of the '756 patent, in the United States, the State of Texas, and the Eastern District of Texas.

196. Defendants induce, through affirmative acts, their customers and other third parties, such as retailers and end users, to directly infringe the '756 patent by using, offering to sell, selling within the United States, and/or importing into the United States those Accused Instrumentalities, which infringe the '756 patent.

197. On information and belief, Defendants actively promote the Accused Instrumentalities for the U.S. market. For example, on information and belief, for every one of Defendants' Accused Instrumentalities sold in the United States, Defendants pursue and obtain approval from U.S. and state regulatory agencies, such as the United States Federal Communications Commission, to allow sales of such Accused Instrumentalities in the United States.

198. Defendants know that their customers will sell infringing Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States, and Defendants specifically intend their customers to purchase those Accused Instrumentalities from Defendants and sell the Accused Instrumentalities in the United States or cause Accused Instrumentalities to be sold in the United States.

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Defendants' direct and indirect purchasers directly infringe the '756 patent by importing such Accused Instrumentalities into the United States, selling such Accused Instrumentalities in the United States, and using such Accused Instrumentalities in the United States.

199. Defendants further induce others' direct infringement of the '756 patent by providing instruction and direction to end users, such as consumers, about how to use the Accused Instrumentalities such that those end users use the Accused Instrumentalities and directly infringe the '756 patent. Defendants have knowledge that end users will use Accused Instrumentalities in the manner directed by Defendants and specifically intend that end users will perform such uses in the United States. Such infringing uses occur upon operation of the Accused Instrumentalities in their normal, intended manner without any specific action of the end user other than turning on the product. That is, Defendants have configured the Accused Instrumentalities in such a way as to induce infringement by end users upon any use of those Accused Instrumentalities. Further, on information and belief, Defendants have provided to consumers firmware updates for Samsung products that have converted such products to Wi-Fi 7 capable products, even if such products were not sold as Wi-Fi 7 capable.

200. Defendants induce others' direct infringement despite actual notice that the Accused Instrumentalities infringe the '756 patent. At least as of the date of filing of this Complaint, Defendants know that the induced conduct would constitute infringement—and intend that infringement at the time of committing the aforementioned affirmative acts, such that the acts and conduct have been and continue to be committed with the

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specific intent to induce infringement—or deliberately avoided learning of the infringing circumstances at the time of committing these acts so as to be willfully blind to the infringement that was induced.

201. The above-described acts of infringement committed by Defendants have caused injury and damage to XiFi, and will cause additional severe and irreparable injury and damages in the future.

202. Defendants' acts of infringement as described above are willful, at least as of the date of filing of this Complaint.

203. XiFi is entitled to recover damages sustained as a result of Defendants' wrongful acts in an amount subject to proof at trial, but in no event less than a reasonable royalty.

JURY TRIAL DEMANDED

XiFi Networks R&D, Inc. hereby demands a trial by jury on all claims and issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff XiFi respectfully requests that this Court:

A. Enter judgment that each of the Defendants has infringed one or more claims of each of the XiFi Patents and continues to infringe those claims, and that such infringement is willful;

B. Enter an order, pursuant to 35 U.S.C. § 284, awarding to Plaintiff XiFi monetary relief in an amount adequate to compensate for Defendants' infringement of the XiFi Patents, in an amount to be determined at trial, but not less than a reasonable

royalty, as well as pre- and post-judgment interest and costs and enhanced damages for Defendants' willful infringement of the XiFi Patents;

C. Enter an order that Defendants pay to Plaintiff XiFi ongoing royalties in an amount to be determined for any infringement occurring after the date that judgment is entered;

D. Enter an order, pursuant to 35 U.S.C. § 285, declaring this to be an exceptional case and thereby awarding to Plaintiff XiFi its reasonable attorneys' fees;

E. Enter an order, pursuant to 35 U.S.C. § 283, preventing Defendants from making, using, selling, offering for sale, or importing into the United States the Accused Instrumentalities; and

F. Enter an order awarding to Plaintiff XiFi such other and further relief, whether at law or in equity, that this Court seems just, equitable, and proper.

Dated: December 17, 2024

Respectfully submitted,

By: */s/ Andrea L. Fair*

Of Counsel:
Andrea L. Fair
Texas State Bar No. 24078488
E-mail: andrea@millerfairhenry.com
MILLER FAIR HENRY, PLLC
1507 Bill Owens Parkway
Longview, TX 75604
(903) 757-6400 (telephone)
(903) 757-2323 (facsimile)

Aaron R. Fahrenkrog
MN Bar No. 0386673 (admitted in this District)
Email: afahrenkrog@robinskaplan.com

Logan J. Drew
MN Bar No. 0389449 (admitted in this District)
Email: ldrew@robinskaplan.com
Jessica L. Gutierrez
MN Bar No. 0396359 (to appear *pro hac vice*)
Email: jgutierrez@robinskaplan.com
ROBINS KAPLAN LLP
2800 LaSalle Plaza
800 LaSalle Avenue
Minneapolis, MN 55402
Telephone: 612-349-8500
Facsimile: 612-339-4181

Attorneys for Plaintiff XiFi Networks R&D, Inc.