

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

ENTROPIC COMMUNICATIONS, LLC,

Plaintiff,

v.

UBEE INTERACTIVE HOLDING
CORPORATION,

Defendant.

Case No. _____

DEMAND FOR JURY TRIAL

**ENTROPIC COMMUNICATIONS, LLC'S
COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Entropic Communications, LLC, by and through its undersigned counsel, files this Complaint for patent infringement against Defendant Ubee Interactive Holding Corporation, and alleges as follows:

INTRODUCTION

1. This action relates to U.S. Patent No. 8,223,775 (the “’775 Patent”) (the “Patent-in-Suit”)¹, which covers a groundbreaking invention in the delivery of broadband internet services over coaxial cable networks. This patent originally issued to a small, pioneering startup—Entropic Communications, Inc. (“Entropic, Inc.”)—and was later held by the U.S.-based provider of communications hardware and components that acquired Entropic, Inc.: MaxLinear, Inc. (“MaxLinear”). The Plaintiff here, Entropic Communications, LLC (“Entropic”), is the successor in interest to these two entities as to the Patent-in-Suit.

¹ Attached as Exhibit A.

2. The technologies claimed in the '775 Patent allow companies to provide faster internet service over a cable network and are now widely used in cable equipment, such as cable modems and set-top boxes.

3. Defendant Ubee Interactive Holding Corporation (“Ubee” or “Defendant”) researches, designs, and develops cable modems that use Entropic’s innovations, and causes these products, either itself or through its subsidiaries, affiliates, and/or agents, to be imported and sold to providers of cable telecommunications and television services, as well as their customers, throughout the United States, within the State of Texas, and in this District.

4. Although Ubee’s products use technologies protected by the Patent-in-Suit, Ubee has no license to do so. The law requires that Ubee compensate Entropic for its use of these patented technologies through the payment of no less than a reasonable royalty, and Entropic thus brings this action.

NATURE OF THE ACTION

5. This is an action for patent infringement under 35 U.S.C. §§ 271, 281 *et seq.*

THE PARTIES

6. Plaintiff Entropic Communications, LLC is a limited liability company organized and existing under the laws of the State of Texas, with an office at 7150 Preston Road, Suite 300, Plano, Texas 75024.

7. Entropic owns, through assignment, the Patent-in-Suit.

8. Entropic Communications, Inc., was founded in San Diego, California, in 2001 by a group of entrepreneurs including Dr. Anton Monk.

9. Over the course of its nearly fifteen-year history as an independent company, Entropic, Inc. pioneered numerous technologies that, to this day, form the basis for the hardware,

software, and communications protocols used in various aspects of satellite and cable communications.

10. For instance, Entropic, Inc. developed System-on-Chip (“SoC”) solutions for the microprocessors used in set-top boxes (“STB”) and cable modems in the home television and home video markets. It pioneered Direct Broadcast Satellite Outdoor Unit single-wire technology. And, as a small company in an industry populated with giants, Entropic, Inc. single-handedly developed the hardware, software, and protocols necessary to support “Multimedia over Coax” (“MoCA”), which for the first time allowed for the use of existing cable wiring to provide a communications network between devices in a home or other building.

11. Under the technical guidance of Dr. Monk, Entropic, Inc. grew to be publicly listed on the NASDAQ in 2007.

12. As part of its efforts to protect its innovative technologies from unlawful use by others in the industry, Entropic, Inc. filed and prosecuted patent applications covering, and received patent protection on, many of these technologies, including those disclosed in the Patent-in-Suit.

13. In 2015, MaxLinear, Inc. acquired Entropic, Inc., as well as the pioneering intellectual property developed by Dr. Monk and his team.

14. Founded in 2003, MaxLinear was and is a leading provider of SoCs used in broadband, mobile and wireline infrastructure, data center, and industrial and multi-market communications applications. MaxLinear is engaged in the development of new, high-performance integrated circuits and other equipment for use in various communications applications, including for broadband video and data communications over coaxial cable networks.

15. In 2021, Plaintiff Entropic was established to own a portion of MaxLinear’s

intellectual property portfolio, including the Patent-in-Suit. The Patent-in-Suit, among others, was duly transferred to Entropic in 2021.

16. Defendant Ubee Interactive Holding Corporation is a Cayman Islands corporation having its principal place of business located at 10F-1, No. 5, Taiyuan 1st St. Jhubei City, Hsinchu County 302 Taiwan, Republic of China.

17. On information and belief, Ubee does business in the State of Texas and in this District, either directly or through its subsidiaries, affiliates, and/or agents.

JURISDICTION

18. This action arises under the laws of the United States, specifically the federal patent laws, codified at 35. U.S.C. §§ 271 and 281 *et seq.* This Court therefore has subject-matter jurisdiction over this action under 28 U.S.C. § 1338(a).

19. This Court has personal jurisdiction over Ubee consistent with the requirements of the Due Process Clause of the United States Constitution and the Texas Long Arm Statute. Ubee has sufficient minimum contacts with this forum, related to the subject matter of this action, to subject it to personal jurisdiction here. Among other things, Ubee conducts substantial business itself, or through its subsidiaries, affiliates, and/or agents, in the State of Texas and this District.

20. For instance, Ubee itself, or through its subsidiaries, affiliates, and/or agents, is responsible for designing, importing, making, marketing, distributing, offering for sale, and/or selling products in the State of Texas and this District that infringe the Patent-in-Suit.

21. Further, Ubee induces others to import, make, distribute, offer for sale, sell, or use within the State of Texas and this District products that infringe the Patent-in-Suit. On information and belief, the others so induced include Ubee Interactive Inc. (“Ubee Interactive”), which is, on information and belief, a wholly owned subsidiary of Ubee Interactive Holding Corporation,

having its principal place of business located at 9155 E. Nichols Ave., #220, Centennial, CO 80112.

22. The others so induced further include customers of Ubee or its subsidiaries (i.e., entities that receive products or services from Ubee and/or use such products or services to provide telecommunications services to end-users), including providers of cable telecommunications and television services (commonly referred to as multiple-system operators or “MSOs”) such as Cox Communications, Inc. (“Cox”) and TDS Telecommunications LLC (“TDS”). The others so induced further include end-users of Ubee’s products.

23. On information and belief, Ubee itself, or through its subsidiaries, affiliates, and/or agents, provides service and support to its customers in the State of Texas and this District relating to the products that infringe the Patent-in-Suit. For example, Ubee itself, or through its subsidiaries, affiliates, and/or agents, prepares, drafts, and/or distributes English user guides for products that infringe the Patent-in-Suit. (*See, e.g.*, Ex. B, UBC1329 Installation Guide; Ex. C, UBC1310 Installation Guide; Ex. D, UBC1329 Setup Instructions.)

24. On information and belief, Ubee itself, or through its subsidiaries, affiliates, and/or agents, places products that infringe the Patent-in-Suit into the stream of commerce with the knowledge and expectation that they will be sold in the State of Texas, including in this District.

25. For example, Ubee itself, or through its subsidiaries, affiliates, and/or agents, markets, distributes, offers for sale, and/or sells its cable-modem products to companies that operate coaxial cable networks. These customers include MSOs which operate such networks and use the products at issue in this case within the State of Texas. On information and belief, Ubee is, through its relations with these customers, aware of the locations in which the customers operate networks and deploy Ubee’s products. Accordingly, on information and belief, Ubee has

knowledge of the sale of products that infringe the Patent-in-Suit in Texas and has taken no action to prevent such sales.

26. For example, Ubee itself, or through its subsidiaries, affiliates, and/or agents, distributes, offers for sale, and/or sells at least the UBC1329 modem to TDS, a provider of cable telecommunications services within the State of Texas. The UBC1329 modem is—as, on information and belief, Ubee is aware—sold or provided to customers in the State of Texas. (*See* TDS, Ubee 1329 Modem Self-Setup²; TDS, Service in Texas.³) Indeed, this product, and each of the other products that infringe the Patent-in-Suit, include power plug and other assemblies for compatibility with the American electrical grid. (*See, e.g.*, Exs. B–D.) On information and belief, when designing, distributing, selling, and offering for sale products that infringe the Patent-in-Suit for use in the United States, Ubee has and had the knowledge and expectation that they will be sold in the State of Texas, including in this District.

27. Ubee itself, or through its subsidiaries, affiliates, and/or agents, applied for and obtained United States Federal Communications Commission certificates for products that infringe the Patent-in-Suit. (*See, e.g.*, Ex. E, FCC Application for UBC1340.) In addition, Ubee itself, or through its subsidiaries, affiliates, and/or agents, applied for and obtained Wi-Fi Alliance certificates for products that infringe the Patent-in-Suit. (*See, e.g.*, Wi-Fi Alliance, Product Finder Search Results for Ubee (listing Ubee as applicant for UBC1310, UBC1319, UBC1322, UBC1326, UBC1329, UBC1330).⁴) On information and belief, when seeking certification of

² <https://hellotds.com/support/self-setup/ubee.html> (last visited Nov. 6, 2024); *id.* at Resources, UBEE Self-Setup Instructions.

³ <https://hellotds.com/texas.html> (last visited Nov. 6, 2024).

⁴ <https://www.wi-fi.org/product-finder-results?keywords=ubee> (last visited Nov. 6, 2024).

products that infringe the Patent-in-Suit in the United States, Ubee has the knowledge and expectation that they will be sold in the State of Texas, including in this District.

28. In the alternative, this Court has personal jurisdiction over Ubee under Federal Rule of Civil Procedure 4(k)(2) because the claims for patent infringement in this action arise under federal law; because if it is not otherwise subject to personal jurisdiction here, Ubee is not subject to the jurisdiction of the courts of general jurisdiction of any state; and because exercising jurisdiction over Ubee is consistent with the U.S. Constitution.

VENUE

29. Venue is proper in this District pursuant to 28 U.S.C. § 1391(c) because Ubee is not a resident of the United States, and therefore may be sued in any district in which it is subject to personal jurisdiction.

30. Venue is convenient in this District because this Court has extensive familiarity with the patent at issue in this action.

31. For instance, on April 27, 2022, Entropic filed an action for patent infringement against Charter Communications, Inc. (“Charter”) in this Court entitled *Entropic Communications, LLC v. Charter Communications, Inc.*, No. 2:22-CV-00125-JRG (“the *Charter* 2022 Litigation”). In the *Charter* 2022 Litigation, Entropic alleged that certain of Charter’s products and services infringed several patents, including the ’775 Patent.

32. During the *Charter* 2022 Litigation, the Court conducted a *Markman* hearing, issued a *Markman* order, and addressed *Daubert* and summary judgment motions relating to the ’775 Patent, thus gaining extensive familiarity with that patent.

FACTUAL ALLEGATIONS

33. Ubee, either itself or through its subsidiaries, affiliates, and/or agents, has infringed and continues to infringe the Patent-in-Suit by making, using, offering to sell, selling, and/or importing, and by actively inducing others to make, use, offer to sell, sell, and/or import, products that infringe the Patent-in-Suit, and by contributing to the infringement of the Patent-in-Suit by others.

The Accused Products

34. Ubee, either itself or through its subsidiaries, affiliates, and/or agents, makes, uses, imports, offers for sale, and sells cable modems or gateways (collectively, the “Accused Products”) (collectively, the “Accused Products”)⁵ that infringe the Patent-in-Suit.

35. The Accused Products include, for example, the UBC1310, UBC1319, UBC1322, UBC1326, UBC1329, UBC1330, UBC1338, and UBE1340 cable modems, and any other cable modems that include or are based on the Broadcom BCM3390, BCM33843, or BCM3384 SoCs.

Ubee and Its Subsidiaries and Affiliates

36. On information and belief, Ubee and its subsidiaries and affiliates, including Ubee Interactive, Inc., act as a single or common enterprise with respect to the acts relevant to Ubee’s infringement of the Patent-in-Suit, such that Ubee acts through its subsidiaries and affiliates or, in the alternative, these subsidiaries act as agents of Ubee.

Exemplary Acts of Direct Infringement By Ubee

37. Ubee, either itself or through its subsidiaries, affiliates, and/or agents, imports, offers to sell and sells the Accused Products to providers of cable telecommunications and

⁵ The Accused Products exclude any product whose system-on-chip is designed, manufactured, or sold by or on behalf of MaxLinear, or that is sold or provided to Charter or its subsidiaries or affiliates.

television services in the United States, including MSOs.

38. For example, on information and belief, Ubee offers to sell and sells the Accused Products to TDS and other providers of cable telecommunications and television services or subsidiaries thereof, in the United States. (*See* Ubee, 1/18/17 News Article;⁶ TDS, Ubee Modem Self-Setup;⁷ TDS, Service in Texas.⁸)

Exemplary Acts of Indirect Infringement by Ubee

39. Ubee induces others, including Ubee Interactive, to import, make, distribute, offer for sale, sell, or use the Accused Products within the United States and, thus, to commit acts of infringement.

40. For example, Ubee induces Ubee Interactive to import, make, distribute, offer for sale, sell, and use the Accused Products through its exercise of operational control over Ubee Interactive's actions.

41. Ubee induces others, including its customers, such as Cox and TDS, to distribute, offer for sale, sell, and use the Accused Products within the United States and, thus, to commit acts of patent infringement.

42. For example, Ubee induces, either itself or through its affiliates or subsidiaries, Cox and TDS to distribute, offer for sale, sell, and use the Accused Products by, on information and belief, selling or providing the Accused Products to them with representations or directions regarding their suitability for use in these customers' businesses or business applications.

⁶ <https://www.ubeeinteractive.com/news/1> (last visited November 7, 2024).

⁷ <https://hellotds.com/support/self-setup/ubee.html> (last visited Nov. 6, 2024); *id.* at Resources, UBEE Self-Setup Instructions.

⁸ <https://hellotds.com/texas.html> (last visited Nov. 6, 2024).

43. Ubee induces others, including end-users of Ubee's products, to use the Accused Products within the United States and, thus, to commit acts of patent infringement.

44. For example, Ubee, either itself or through its subsidiaries, affiliates, and/or agents, creates and distributes user guides to its customers and/or end users for the Accused Products in the United States. These user guides instruct its customers and/or end users of the Accused Products as to how to use such products. For example, on information and belief, Ubee offers user guides for the accused UBC1310 and UBC1329 cable modems. (Exs. B and C.) When end-users use the Accused Products for their ordinary and intended purposes in accordance with the instructions within these user guides, they infringe the Patent-in-Suit.

45. When put into service and used for their ordinary and intended purposes, the Accused Products infringe the Patent-in-Suit as set forth below. Because the Accused Products have no substantial non-infringing uses, and are not staple articles of commerce, Ubee contributes to infringement of the Patent-in-Suit when it, either itself or through its subsidiaries, affiliates, and/or agents, imports, sells, and/or offers for sale the Accused Products into or within the United States.

Ubee's Knowledge of the Patent-in-Suit

46. Ubee was aware of the Patent-in-Suit no later than the date of filing of this Complaint.

47. On information and belief, Ubee was aware of the Patent-in-Suit prior to the filing of this Complaint as a result of prior lawsuits Entropic had brought against Ubee's customers, alleging that certain Ubee products infringed the Patent-in-Suit.

48. The Accused Products are provided by Ubee to MSOs, which operate networks that provide video and internet services, among others, over coaxial-cable networks, including Cox and TDS.

49. On information and belief, Ubee learned from one or more of these customers that Entropic had brought lawsuits involving the Patent-in-Suit against such customers, and thus became aware of the Patent-in-Suit and its relevance to Ubee's products. For instance, on information and belief, Ubee learned of the Patent-in-Suit because one or more of its customers requested assistance and/or satisfaction of an indemnity obligation from it in connection with Entropic's allegations that Ubee's products infringed the Patent-in-Suit.

50. Therefore, on information and belief, Ubee learned of the existence of the Patent-in-Suit shortly after April 27, 2022, when Entropic filed a complaint asserting the Patent-in-Suit against Ubee's customer, Charter.⁹

COUNT I - INFRINGEMENT OF THE '775 PATENT

51. Entropic incorporates by reference the allegations set forth in Paragraphs 6 through 50 as though fully set forth herein.

52. The '775 Patent, entitled "Architecture for a Flexible and High-Performance Gateway Cable Modem," was duly issued by the United States Patent and Trademark Office on July 17, 2012. The '775 Patent names Gordon Y. Li and Yoav Hebron as inventors. A true and accurate copy of the '775 Patent is attached to this Complaint as Exhibit A.

53. The '775 Patent is in force today. Entropic owns by assignment all rights and title in and to the '775 Patent, including the sole and exclusive right to right to sue to recover damages for past infringement and to seek equitable and other relief for infringement of the '775 Patent.

⁹ *Entropic Commc'ns, LLC v. Charter Commc'ns, Inc.*, No. 2:22-CV-00125-JRG (E.D. Tex.).

54. The '775 Patent generally relates to an architecture for a cable modem system that performs both cable modem functions, such as processing data transmitted to and from a cable headend over a coaxial cable network, and home networking functions, such as providing connectivity to network-connected devices within a building, such as computers. The cable-modem architecture described in the '775 Patent includes both a cable-modem engine and a data-networking engine, which are functionally partitioned, providing greater flexibility in the design and control of the modem's components and functions. For example, this partitioning allows software related to the modem's cable modem functions to be upgraded independently of software related to the home networking functions. The claimed architecture also boosts the throughput (i.e., speed) of a cable modem by forwarding certain data packets to the data networking engine while bypassing a processor, the DOCSIS controller, which can act as a bottleneck and reduce the achievable throughput.

55. The '775 Patent is directed to patent-eligible subject matter under 35 U.S.C. § 101. For instance, the '775 Patent is directed to a new architecture for an integrated circuit in a cable modem system that improves the functioning of a cable modem itself. The '775 Patent's invention further provides a technological solution to specific technological problems arising in the context of cable modems relating to how to manage the architecture of, and connections between, components in order to support high throughput and maximize flexibility.

56. The claims of the '775 Patent recite elements, and combinations of elements, that were neither routine nor conventional as of the September 30, 2003, priority date of the '775 Patent. For instance, as of that time, it was neither routine nor conventional to architect a cable modem in such a way as to allow the forwarding of data packets from a DOCSIS MAC processor to a data networking component without involving a DOCSIS controller.

57. The '775 Patent is valid and enforceable.

58. Ubee has directly infringed and continues to directly infringe at least claim 18 of the '775 Patent, either literally or through the doctrine of equivalents, by making, using, selling, or offering for sale in the United States, and/or importing into the United States, either itself or through its subsidiaries, affiliates, and/or agents, the Accused Products. As set forth in the exemplary claim chart attached hereto as Appendix A, the Accused Products, including the exemplary UBC1340, UBC1338, UBC1330, UBC1329, UBC1326, UBC1322, UBC1319, and UBC1310 cable modems, infringe at least claim 18 of the '775 Patent.

59. Ubee, either itself or through its subsidiaries, affiliates, and/or agents, indirectly infringes the '775 Patent.

60. As set forth above in Paragraphs 47 through 50, Ubee had knowledge of the '775 Patent no later than the filing of this complaint and, on information and belief, no later than April 2022.

61. The Accused Products, when put into service and used for their ordinary and intended purposes by end-users (e.g., when receiving data over a coaxial cable network) or cable service operators (e.g., for testing, servicing, and the like) directly infringe at least claim 18 of the '775 Patent in the manner set forth in Appendix A.

62. Ubee, either itself or through its subsidiaries, affiliates, and/or agents, contributes to infringement of the '775 Patent through its importation, sale, and/or offer for sale of the Accused Products because these products are not staple articles of commerce suitable for any substantial non-infringing uses.

63. Ubee, either itself or through its subsidiaries, affiliates, and/or agents, induces others to infringe at least claim 18 of the '775 Patent through the acts described in Paragraphs 39 through 44, above.

64. Entropic has been harmed as a result of the infringing conduct set forth above and, as a result, Ubee is liable to Entropic for an amount that reasonably compensates Entropic for Ubee's infringement, but in no event less than a reasonable royalty.

65. Ubee's infringement of the '775 Patent is, has been, and continues to be willful, intentional, deliberate, and in conscious disregard for Entropic's rights. As set forth above in Paragraphs 47 through 50, on information and belief, at least as of April 2022, Ubee had knowledge of the '775 Patent, and knowledge that the '775 Patent was relevant to its products because they were accused of infringing it in earlier lawsuits. Despite this knowledge, Ubee continued to infringe the '775 Patent or, at a minimum, to willfully blind itself to the probability that it was so infringing.

JURY DEMAND

66. Entropic demands a jury trial on all issues triable by jury.

PRAYER FOR RELIEF

Entropic asks the Court to enter judgment in its favor, and against Ubee, on each of Counts I through V, for the following:

- a. A judgment that Ubee has infringed one or more claims of the '775 Patent.
- b. An award to Entropic of damages adequate to compensate it for Ubee's past infringement of the '775 Patent;
- c. A finding that Ubee's infringement is willful and an award to Entropic of enhanced damages;

- d. An award to Entropic of its costs and of pre- and post-judgment interest on the damages awarded; and
- e. An award of such other relief, in law or equity, as this Court may deem proper.

Dated: November 11, 2024

Respectfully submitted,

/s/ Andrea L. Fair

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