

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION**

FREEDOM PATENTS LLC,

Plaintiff,

v.

VANTIVA SA F/K/A TECHNICOLOR
SA, COMMSCOPE, LLC F/K/A
COMMSCOPE, INC., and COMMSCOPE
HOLDING COMPANY, INC.,

Defendants.

CIVIL ACTION NO. 4:24-cv-544

ORIGINAL COMPLAINT FOR
PATENT INFRINGEMENT

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Freedom Patents LLC (“Freedom Patents” or “Plaintiff”) files this original complaint against Defendants Vantiva SA f/k/a Technicolor SA (“Vantiva”), Commscope, LLC f/k/a Commscope, Inc., and Commscope Holding Company, Inc. (“Commscope”) (collectively, “Defendants”), alleging, based on its own knowledge as to itself and its own actions and based on information and belief as to all other matters, as follows:

PARTIES

1. Freedom Patents is a limited liability company formed under the laws of the State of Texas, with its principal place of business at 2325 Oak Alley, Tyler, Texas, 75703.
2. Defendant Vantiva SA, formerly known as Technicolor SA (“Vantiva”) is a corporation duly organized and existing under the laws of France. It has a place of business at 10 Boulevard de Granelle Paris, France 75015. Vantiva SA may also be served with process by serving the Texas Secretary of State, 1019 Brazos Street, Austin, Texas 78701, as its agent for service because it engages in business in Texas but has not designated or maintained a resident

agent for service of process or a regular place of business in Texas as required by statute. This action arises out of that business.

3. Vantiva and its affiliates are a part of an interrelated group of companies that together comprise one of the world's largest digital medial solutions brands, especially wireless networking technology. Vantiva describes itself as "a global technology leader in designing, developing and supplying innovative products and solutions that connect customers around the world to the content and services they love."¹ Vantiva represents to its customers that it is "a world-class, truly global team operating 24/7 across timezones and on every continent."²

4. Vantiva and its affiliates are part of the same corporate structure and distribution chain for the making, importing, offering to sell, selling, and/or using of the accused devices in the United States, including in the State of Texas generally and this judicial district in particular.

5. Vantiva and its affiliates share the same management, common ownership, advertising platforms, facilities, distribution chains and platforms, and accused product lines and products involving related technologies.

6. Vantiva and its affiliates regularly contract with customers regarding products made for or on behalf of those customers.

7. Vantiva and its affiliates operate as a unitary business venture and are jointly and severally liable for the acts of patent infringement alleged herein.

8. Defendant Commscope, LLC, formerly known as Commscope, Inc., is a limited liability company duly organized and existing under the laws of the State of Delaware. It has a place of business at 2601 Telecom Parkway, Richardson, Texas 75082. Commscope, LLC f/k/a

¹ <https://www.vantiva.com/who-we-are/>

² *Id.*

Commscope, Inc. may be served through its registered agent United Agent Group Inc. at 1521 Concord Pike, Suite 201, Wilmington, DE 19803.

9. Commscope, LLC f/k/a Commscope, Inc.—together with its affiliates and subsidiaries—provides end-to-end solutions connecting technology and wireless and wired networks across the globe.

10. Defendant Commscope Holding Company, Inc. is a corporation duly organized and existing under the laws of the State of Delaware. Commscope Holding Company, Inc. may be served with process through its registered agent United Agent Group Inc. at 1521 Concord Pike, Suite 201, Wilmington, DE 19803.

11. Commscope Holding Company, Inc. is the wholly owned parent of Commscope, LLC f/k/a Commscope, Inc. Commscope Holding Company, Inc. provides end-to-end solutions connecting technology and wireless and wired networks.

12. The Defendants identified in paragraphs 8–11 above (collectively, “Commscope”) are an interrelated group of companies which together comprise one of the world’s largest communications technology companies, including under the CommScope, ARRIS, and RUCKUS brands. Commscope describes itself as “a global leader in connectivity and essential infrastructure solutions for communications and entertainment networks.”³

13. The Commscope defendants named above and their affiliates are part of the same corporate structure and distribution chain for the making, importing, offering to sell, selling, and using of the accused device in the United States, including in the State of Texas generally and this judicial district in particular.

³ <https://ir.commscope.com/static-files/60dc4f9a-b36f-45d3-aba4-5d698d7fb212>

14. The Commscope defendants named above and their affiliates share the same management, common ownership, advertising platforms, facilities, distribution chains and platforms, and accused product lines and products involving related technologies.

15. The Commscope defendants named above and their affiliates regularly contract with customers regarding products made for or on behalf of those customers.

16. Thus, the Commscope defendants named above and their affiliates operate as a unitary business venture and are jointly and severally liable for the acts of patent infringement alleged herein.

17. The parties to this action are properly joined under 35 U.S.C. § 299 because the right to relief asserted against Defendants jointly and severally arises out of the same series of transactions or occurrences relating to the making and using of the same products or processes, including wireless routers and related processes bearing the Commscope, Vantiva, or Arris brands or that are otherwise made by Commscope or Vantiva. Additionally, questions of fact common to all defendants will arise in this action.

JURISDICTION AND VENUE

18. This is an action for infringement of United States patents arising under 35 U.S.C. §§ 271, 281, and 284–85, among others. This Court has subject matter jurisdiction of the action under 28 U.S.C. § 1331 and § 1338(a).

19. This Court has personal jurisdiction over Vantiva pursuant to due process and/or the Texas Long Arm Statute because, *inter alia*, (i) Vantiva has done and continues to do business in Texas; and (ii) Vantiva has committed and continues to commit acts of patent infringement in the State of Texas, including making, using, offering to sell, and/or selling accused products in Texas, and/or importing accused products into Texas, including by Internet sales and/or sales via retail and wholesale stores, inducing others to commit acts of patent

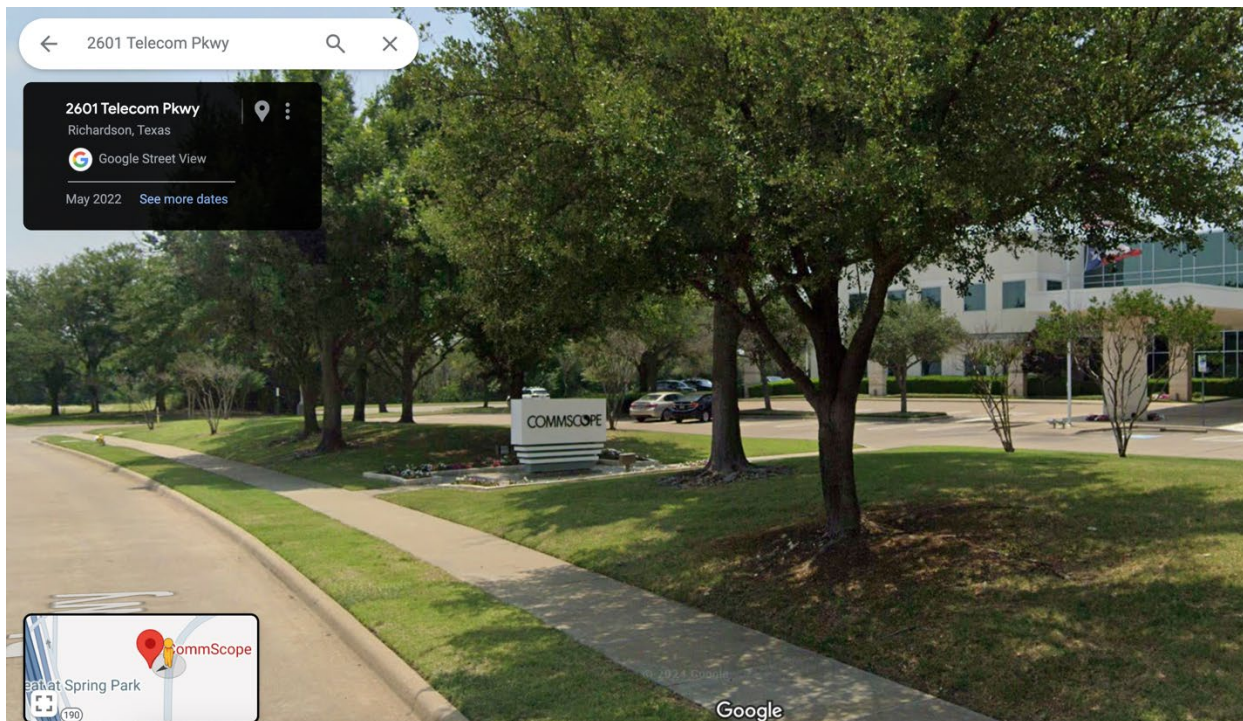
infringement in Texas, and/or committing at least a portion of any other infringements alleged herein in Texas. In addition, or in the alternative, this Court has personal jurisdiction over Vantiva pursuant to Fed. R. Civ. P. 4(k)(2) because: (1) it has substantial contacts with the United States and committed and/or induced acts of patent infringement in the United States; and (2) it is not subject to jurisdiction in any state's courts of general jurisdiction.

20. Venue is proper in this district as to Vantiva, which is organized under the laws of a foreign jurisdiction. 28 U.S.C. § 1391(c)(3) provides that “a defendant not resident in the United States may be sued in any judicial district, and the joinder of such a defendant shall be disregarded in determining where the action may be brought with respect to other defendants.” *See also In re HTC Corp.*, 889 F.3d 1349 (Fed. Cir. 2018).

21. This Court has personal jurisdiction over Commscope pursuant to due process and/or the Texas Long Arm Statute because, *inter alia*, (i) Commscope has done and continues to do business in Texas; and/or (ii) Commscope has committed and continues to commit acts of patent infringement in the State of Texas, including making, using, offering to sell, and/or selling accused products in Texas, and/or importing accused products into Texas, including by Internet sales and sales via retail and wholesale stores, inducing others to commit acts of patent infringement in Texas, and/or committing a least a portion of any other infringements alleged herein; and/or (iii) Commscope is registered to do business in Texas.

22. Venue is proper in this district as to Commscope pursuant to 28 U.S.C. § 1400(b). Venue is further proper because Commscope has committed and continues to commit acts of patent infringement in this district, including making, using, offering to sell, and/or selling accused products in this district, and/or importing accused products into this district, including by Internet sales and sales via retail and wholesale stores, inducing others to commit acts of

patent infringement in Texas, and/or committing at least a portion of any other infringements alleged herein in this district. Commscope has regular and established places of business in this district, including at least at 2601 Telecom Parkway, Richardson, Texas 75082.



Source: <https://www.google.com/maps/@32.985361,-96.6605871,3a,37.5y,222.82h,90.13t/data=!3m6!1e1!3m4!1sru4oNnQKN8wSLE5NTTtkzAg!2e0!7i16384!8i8192?coh=205409&entry=ttu>

BACKGROUND

23. The patents-in-suit generally relate to improvements in wireless communication technology that allow users to communicate over a wireless network. In particular, the patents are directed to methods and systems for selecting antennas in multiple-input, multiple-output (MIMO) wireless networks.

24. The technology of the patents-in-suit was developed by engineers at the Mitsubishi Electric Research Laboratories (MERL), which is the North American arm of

Mitsubishi Electric. MERL was founded in 1991 in Cambridge, Massachusetts, and has been known for its focus on innovation and long-range research.⁴ From its beginning, MERL was focused on pioneering new technologies in various industries, including computer graphics, digital communication, medical imaging, transportation etc.⁵ In the early 2000s, for example, “MERL focused on standardization and developments of new emerging technologies,” such as “antenna selection, channel equalization, efficient channel state estimation, and Orthogonal Frequency Division Multiplexing (OFDM).”⁶

25. The inventions disclosed in the patents-in-suit have been cited during patent prosecution multiple times by electronics companies, including Apple, Broadcom, Cisco, Ericsson, Fujitsu, Hewlett Packard, Hitachi, Huawei, Intel, Kyocera, LG Electronics, Marvell, MediaTek, Motorola Mobility, Nokia, NTT Docomo, Panasonic, Philips, Qualcomm, Siemens, Samsung, Sharp, Sony, Toshiba, and ZTE.

COUNT I

DIRECT INFRINGEMENT OF U.S. PATENT NO. 8,284,686

26. On October 9, 2012, United States Patent No. 8,284,686 (“the ‘686 Patent”) was duly and legally issued by the United States Patent and Trademark Office for an invention entitled “Antenna/Beam Selection Training in MIMO Wireless LANS with Different Sounding Frames.”

⁴ See <https://www.merl.com/company/history>.

⁵ See <https://www.merl.com/public/MERL-30Years.pdf>.

⁶ *Id.* at 22.

27. Freedom Patents is the owner of the '686 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the '686 Patent against infringers, and to collect damages for all relevant times.

28. Commscope made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including, for example, its Ruckus R560 Indoor Access Point, and other products⁷ that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”).

RUCKUS R560 Indoor Access Point

High-Performance Tri-Radio Wi-Fi 6E 2x2:2 Indoor Access Point with 4.7 Gbps max rate and Embedded IoT

[Download Data Sheet](#)



Source: <https://www.ruckusnetworks.com/products/wireless-access-points/r560/>

29. The Ruckus R560 Indoor Access Point is an exemplary accused product.

30. Vantiva and Commscope made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including, for example, the SURFboard DOCSIS 3.1 Gigabit Modem & Wi-Fi 6 Router, and other products⁸ that comply

⁷ See, e.g., RUCKUS Model Nos. R750, R350, R550, R650, H350, H550, R350e, R560, R760, R670, R770, T750, and T350, etc.

⁸ See, e.g., SURFboard Model Nos. G54, G36, G34, W133, W161, W31, W122, W130, W30, W121, W6U, and W6B, etc.

with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”).



G36

SURFboard® DOCSIS® 3.1 Gigabit Modem & Wi-Fi® 6 Router

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With a 2.5 Gbps Ethernet port plus four 1-Gigabit Ethernet ports built-in AX3000 Wi-Fi and a DOCSIS® 3.1 Cable Modem, the G36 provides the newest technology to support the latest devices, ensuring your home network is running at peak performance.

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Source: <https://www.surfboard.com/products/wi-fi-cable-modems/g36/>

Technical Specs

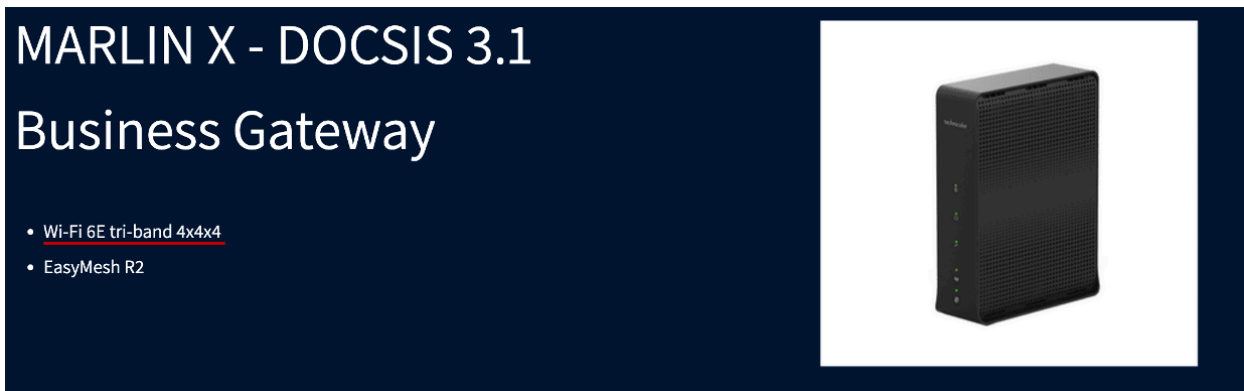
Best for Cable Internet Speed Plans	Up to 2.5 Gbps
DOCSIS Technology	DOCSIS 3.1
Gigabit Ethernet Ports	One 2.5 GB and four 1 GB Ethernet Ports
Compatibility	Major US Cable Providers
Built-in Wi-Fi	<u>AX3000 Wi-Fi 6</u>
Wi-Fi Coverage	Up to 2,500 sq ft
Digital Voice Service Capability	No

Source: <https://www.surfboard.com/products/wi-fi-cable-modems/g36/>

31. The SURFboard DOCSIS 3.1 Gigabit Modem & Wi-Fi 6 Router is an exemplary accused product.

32. Vantiva made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including, for example, its Vantiva Marlin L -

DOCSIS 3.1, and other products⁹ that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”).



Source: <https://www.vantiva.com/solutions/docsis3-1-cable/>

33. The Vantiva Marlin L - DOCSIS 3.1 is an exemplary accused product.

34. By doing so, Vantiva and Commscope have directly infringed (literally and/or under the doctrine of equivalents) at least Claims 1 and 21 of the '686 Patent. *See* Exhibit A. Vantiva’s and Commscope’s infringement in this regard is ongoing.

35. Vantiva affirmatively touts Wi-Fi 6 technology and its advantages to its prospective customers who purchase Wi-Fi 6 products. For example, Vantiva tells its customers that “Wi-Fi 6 has established itself globally as the mainstream standard for operators who want to offer their customers multi-device, high-performance connectivity at the most competitive price.”¹⁰ According to this Vantiva website, “Wi-Fi 6 has taken over as the worldwide reference for device connectivity,” and “is indispensable for connected homes.”¹¹

⁹ *See, e.g.*, Vantiva Jade, Vantiva 5G FWA (5G FWA Indoor CPE - COBRA5G, 5G FWA Indoor CPE - COBRA 5G XTREAM, FALCON 5G), Vantiva Gazelle (S2, X, L3, L2, S), Vantiva Marlin (X, L2, L), Vantiva Eagle (X3, X2, X, L, M), and Vantiva Cobra (COBRA X2 - xDSL / XGS- PON Wi-Fi 6E gateway NVG678XY, COBRA Xh - DSL+LTE Wi-Fi 6E gateway, Cobra M -xDSL Wi-Fi 6 gateway), etc.

¹⁰ <https://www.vantiva.com/resources/wi-fi-6-infographics-the-most-mainstream-standard/>

¹¹ *Id.*

36. Commscope likewise touts the benefits of Wi-Fi 6 to its customers. Commscope explains that “[a]s Wi-Fi 6 expands and becomes the new standard for networks, businesses will start migrating their infrastructure to Wi-Fi 6. This will be increasingly important in high-density environments, such as stadiums, convention centers and transportation hubs.”¹² Commscope adds that “[t]he new technology maintains backward compatibility for older devices while increasing capacity and security, ramping up data rates, reducing network congestion and improving battery life for compatible devices.”¹³

37. Vantiva and Commscope directly infringe the '686 Patent when, for example, they and/or their agents use the accused products, including during testing of the accused products. Vantiva and Commscope also directly infringe the '686 Patent when the accused products are used after purchase by a customer or end user. For example, the accused products are built with hardware and/or software components that control the operation of the accused products. These components cause the accused products to perform the steps of the claimed invention after, for example, receiving sounding packets. Vantiva and Commscope also directly infringe the '686 Patent by exercising direction or control over the use of the accused products by others, including their affiliates, their subsidiaries, their business partners (including certification and testing organizations), and/or their customers and end-users. Vantiva and Commscope contract with, advise, and/or encourage such persons to engage in conduct satisfying one or more elements of the asserted claims, deriving a financial or other benefit (e.g., improved wireless communications) from doing so. Vantiva and Commscope condition these benefits on, for example, such persons performing certain activities involving the accused

¹² <https://www.commscope.com/insights/the-enterprise-source/wi-fi-6-the-fact-file/>

¹³ *Id.*

products during specified conditions that cause the accused products to perform the steps of the claimed method (e.g., after receiving sounding packets).

38. Vantiva and Commscope have had knowledge of the '686 Patent at least as of the date when it was notified of the filing of this action.

39. In addition, Commscope has had knowledge of the subject matter of the '686 Patent at least as of March 8, 2018 when its Chinese counterpart (CN101305525) was cited in a published Canadian application No. CA3064948, which is assigned to Arris Enterprises LLC and derived from a PCT application filed by Ruckus Wireless, Inc. (PCT No. WO2018/044262). Commscope employee Peter Khoury—who is the named inventor of CA3064948 and WO2018/044262—and others involved in the prosecution of the patent, have had knowledge of the '686 Patent well before this lawsuit was filed.

40. Freedom Patents has been damaged as a result of the infringing conduct by Vantiva and Commscope alleged above. Thus, Vantiva and Commscope are liable to Freedom Patents in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

41. Freedom Patents has neither made nor sold unmarked articles that practice the '686 Patent, and is entitled to collect pre-filing damages for the full period allowed by law for infringement of the '686 Patent.

COUNT II

DIRECT INFRINGEMENT OF U.S. PATENT NO. 8,374,096

42. On February 12, 2013, United States Patent No. 8,374,096 (“the '096 Patent”) was duly and legally issued by the United States Patent and Trademark Office for an invention entitled “Method for Selecting Antennas and Beams in MIMO Wireless LANs.”

43. Freedom Patents is the owner of the '096 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the '096 Patent against infringers, and to collect damages for all relevant times.

44. Commscope used products and/or systems including, for example, its Ruckus R560 Indoor Access Point, and other products¹⁴ that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”).

RUCKUS R560 Indoor Access Point

High-Performance Tri-Radio Wi-Fi 6E 2x2:2 Indoor Access Point with 4.7 Gbps max rate and Embedded IoT

[Download Data Sheet](#)



Source: <https://www.ruckusnetworks.com/products/wireless-access-points/r560/>

45. The Ruckus R560 Indoor Access Point is an exemplary accused product.

46. Vantiva and Commscope used products and/or systems including, for example, SURFboard DOCSIS 3.1 Gigabit Modem & Wi-Fi 6 Router, and other products¹⁵ that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”).

¹⁴ See, e.g., Model Nos. R750, R350, R550, R650, H350, H550, R350e, R560, R760, R670, R770, T750, and T350, etc.

¹⁵ See, e.g., SURFboard Model Nos. G54, G36, G34, W133, W161, W31, W122, W130, W30, W121, W6U, and W6B, etc.



G36

SURFboard® DOCSIS® 3.1 Gigabit Modem & Wi-Fi® 6 Router

★★★★☆ 2.0 (29) Write a review

With a 2.5 Gbps Ethernet port plus four 1-Gigabit Ethernet ports built-in AX3000 Wi-Fi and a DOCSIS® 3.1 Cable Modem, the G36 provides the newest technology to support the latest devices, ensuring your home network is running at peak performance.

COX Charter Spectrum xfinity

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Source: <https://www.surfboard.com/products/wi-fi-cable-modems/g36/>

Technical Specs

Best for Cable Internet Speed Plans

Up to 2.5 Gbps

DOCSIS Technology

DOCSIS 3.1

Gigabit Ethernet Ports

One 2.5 GB and four 1 GB Ethernet Ports

Compatibility

Major US Cable Providers

Built-in Wi-Fi

AX3000 Wi-Fi 6

Wi-Fi Coverage

Up to 2,500 sq ft

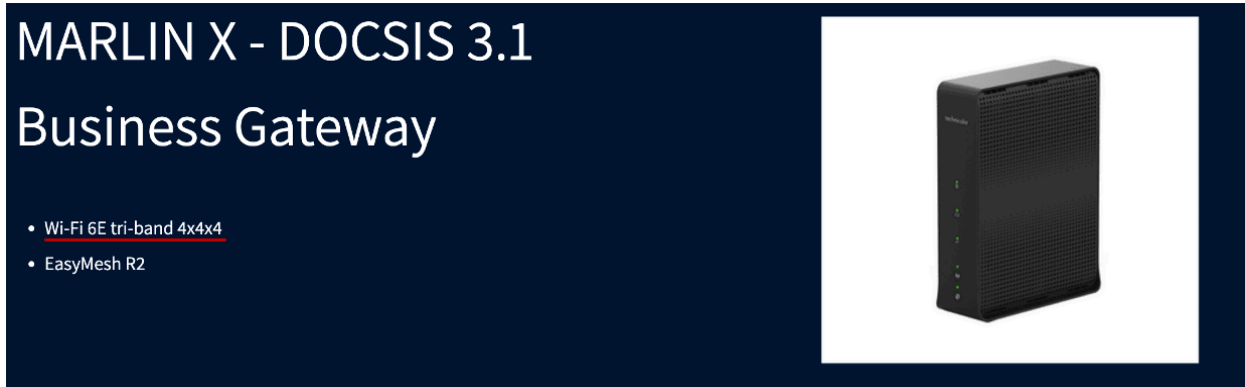
Digital Voice Service Capability

No

Source: <https://www.surfboard.com/products/wi-fi-cable-modems/g36/>

47. The SURFboard DOCSIS 3.1 Gigabit Modem & Wi-Fi 6 Router is an exemplary accused product.

48. Vantiva used products and/or systems including, for example, its Vantiva Marlin L - DOCSIS 3.1, and other products¹⁶ comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”).



Source: <https://www.vantiva.com/solutions/docsis3-1-cable/>

49. The Vantiva Marlin L - DOCSIS 3.1 is an exemplary accused product.

50. By doing so, Vantiva and Commscope have directly infringed (literally and/or under the doctrine of equivalents) at least Claim 1 of the '096 Patent. *See* Exhibit B. Vantiva’s and Commscope’s infringement in this regard is ongoing.

51. Vantiva affirmatively touts Wi-Fi 6 technology and its advantages to its prospective customers who purchase Wi-Fi 6 products. For example, Vantiva tells its customers that “Wi-Fi 6 has established itself globally as the mainstream standard for operators who want to offer their customers multi-device, high-performance connectivity at the most competitive

¹⁶ *See, e.g.*, Vantiva Jade, Vantiva 5G FWA (5G FWA Indoor CPE - COBRA5G, 5G FWA Indoor CPE - COBRA 5G XTREAM, FALCON 5G), Vantiva Gazelle (S2, X, L3, L2, S), Vantiva Marlin (X, L2, L), Vantiva Eagle (X3, X2, X, L, M), and Vantiva Cobra (COBRA X2 - xDSL / XGS- PON Wi-Fi 6E gateway NVG678XY, COBRA Xh - DSL+LTE Wi-Fi 6E gateway, Cobra M -xDSL Wi-Fi 6 gateway), etc.

price.”¹⁷ According to this Vantiva website, “Wi-Fi 6 has taken over as the worldwide reference for device connectivity,” and “is indispensable for connected homes.”¹⁸

52. Commscope likewise touts the benefits of Wi-Fi 6 to its customers. Commscope explains that “[a]s Wi-Fi 6 expands and becomes the new standard for networks, businesses will start migrating their infrastructure to Wi-Fi 6. This will be increasingly important in high-density environments, such as stadiums, convention centers and transportation hubs.”¹⁹ Commscope adds that “[t]he new technology maintains backward compatibility for older devices while increasing capacity and security, ramping up data rates, reducing network congestion and improving battery life for compatible devices.”²⁰

53. Vantiva and Commscope directly infringes the '096 Patent when, for example, they and/or their agents use the accused products, including during testing of the accused products. Vantiva and Commscope also directly infringe the '096 Patent when the accused products are used after purchase by a customer or end user. For example, the accused products are built with hardware and/or software components that control the operation of the accused products. These components cause the accused products to perform the steps of the claimed invention after, for example, receiving sounding packets. Vantiva and Commscope also directly infringe the '096 Patent by exercising direction or control over the use of the accused products by others, including their affiliates, their subsidiaries, their business partners (including certification and testing organizations), and/or their customers and end-users. Vantiva and Commscope contract with, advise, and/or encourage such persons to engage in conduct

¹⁷ <https://www.vantiva.com/resources/wi-fi-6-infographics-the-most-mainstream-standard/>

¹⁸ *Id.*

¹⁹ <https://www.commscope.com/insights/the-enterprise-source/wi-fi-6-the-fact-file/>

²⁰ *Id.*

satisfying one or more elements of the asserted claims, deriving a financial or other benefit (e.g., improved wireless communications) from doing so. Vantiva and Commscope condition these benefits on, for example, such persons performing certain activities involving the accused products during specified conditions that cause the accused products to perform the steps of the claimed method (e.g., after receiving sounding packets).

54. Vantiva and Commscope have had knowledge of the '096 Patent at least as of the date when it was notified of the filing of this action.

55. Freedom Patents has been damaged as a result of the infringing conduct by Vantiva and Commscope alleged above. Thus, Vantiva and Commscope are liable to Freedom Patents in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

56. Freedom Patents has neither made nor sold unmarked articles that practice the '096 Patent, and is entitled to collect pre-filing damages for the full period allowed by law for infringement of the '096 Patent.

COUNT III

DIRECT INFRINGEMENT OF U.S. PATENT NO. 8,514,815

57. On August 20, 2013, United States Patent No. 8,514,815 (“the '815 Patent”) was duly and legally issued by the United States Patent and Trademark Office for an invention entitled “Training Signals for Selecting Antennas and Beams in MIMO Wireless LANs.”

58. Freedom Patents is the owner of the '815 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the '815 Patent against infringers, and to collect damages for all relevant times.

59. Commscope used products and/or systems including, for example, its Ruckus R560 Indoor Access Point, and other products²¹ that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”):

RUCKUS R560 Indoor Access Point

High-Performance Tri-Radio Wi-Fi 6E 2x2:2 Indoor Access Point with 4.7 Gbps max rate and Embedded IoT

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Source: <https://www.ruckusnetworks.com/products/wireless-access-points/r560/>

60. The Ruckus R560 Indoor Access Point is an exemplary accused product.

61. Vantiva and Commscope used products and/or systems including, for example, SURFboard DOCSIS 3.1 Gigabit Modem & Wi-Fi 6 Router, and other products²² that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”).

²¹ See, e.g., Model Nos. R750, R350, R550, R650, H350, H550, R350e, R560, R760, R670, R770, T750, and T350, etc.

²² See, e.g., SURFboard Model Nos. G54, G36, G34, W133, W161, W31, W122, W130, W30, W121, W6U, and W6B, etc.



G36

SURFboard® DOCSIS® 3.1 Gigabit Modem & Wi-Fi® 6 Router

★★★★☆ 2.0 (29) Write a review

With a 2.5 Gbps Ethernet port plus four 1-Gigabit Ethernet ports, built-in AX3000 Wi-Fi and a DOCSIS® 3.1 Cable Modem, the G36 provides the newest technology to support the latest devices, ensuring your home network is running at peak performance.

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Source: <https://www.surfboard.com/products/wi-fi-cable-modems/g36/>

Technical Specs

Best for Cable Internet Speed Plans

Up to 2.5 Gbps

DOCSIS Technology

DOCSIS 3.1

Gigabit Ethernet Ports

One 2.5 GB and four 1 GB Ethernet Ports

Compatibility

Major US Cable Providers

Built-in Wi-Fi

AX3000 Wi-Fi 6

Wi-Fi Coverage

Up to 2,500 sq ft

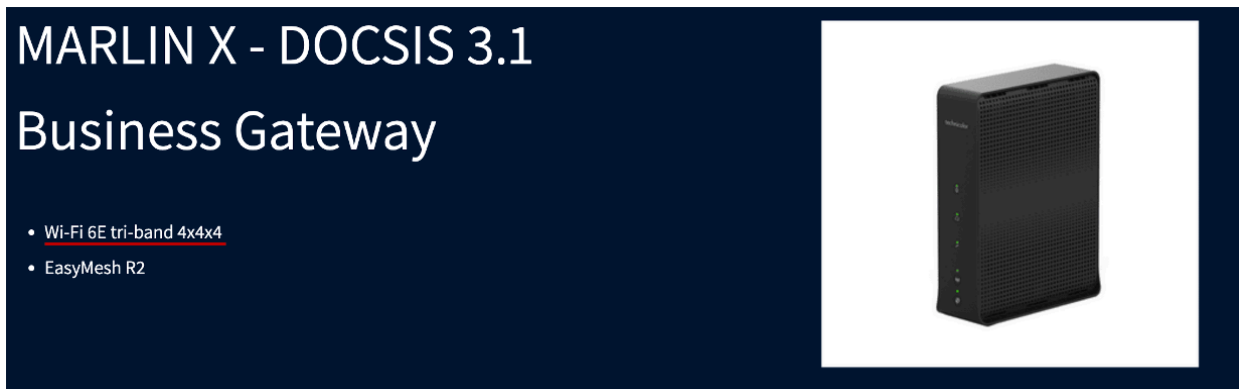
Digital Voice Service Capability

No

Source: <https://www.surfboard.com/products/wi-fi-cable-modems/g36/>

62. The SURFboard DOCSIS 3.1 Gigabit Modem & Wi-Fi 6 Router is an exemplary accused product.

63. Vantiva used products and/or systems including, for example, its Vantiva Marlin L - DOCSIS 3.1, and other products²³ that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”):



Source: <https://www.vantiva.com/solutions/docsis3-1-cable/>

64. The Vantiva Marlin L - DOCSIS 3.1 is an exemplary accused product.

65. By doing so, Vantiva and Commscope have directly infringed (literally and/or under the doctrine of equivalents) at least Claim 1 of the '815 Patent. *See* Exhibit C. Vantiva’s and Commscope’s infringement in this regard is ongoing.

66. Vantiva affirmatively touts Wi-Fi 6 technology and its advantages to its prospective customers who purchase Wi-Fi 6 products. For example, Vantiva tells its customers that “Wi-Fi 6 has established itself globally as the mainstream standard for operators who want to offer their customers multi-device, high-performance connectivity at the most competitive

²³ *See, e.g.*, Vantiva Jade, Vantiva 5G FWA (5G FWA Indoor CPE - COBRA5G, 5G FWA Indoor CPE - COBRA 5G XTREAM, FALCON 5G), Vantiva Gazelle (S2, X, L3, L2, S), Vantiva Marlin (X, L2, L), Vantiva Eagle (X3, X2, X, L, M), and Vantiva Cobra (COBRA X2 - xDSL / XGS- PON Wi-Fi 6E gateway NVG678XY, COBRA Xh - DSL+LTE Wi-Fi 6E gateway, Cobra M -xDSL Wi-Fi 6 gateway), etc.

price.”²⁴ According to this Vantiva website, “Wi-Fi 6 has taken over as the worldwide reference for device connectivity,” and “is indispensable for connected homes.”²⁵

67. Commscope likewise touts the benefits of Wi-Fi 6 to its customers. Commscope explains that “[a]s Wi-Fi 6 expands and becomes the new standard for networks, businesses will start migrating their infrastructure to Wi-Fi 6. This will be increasingly important in high-density environments, such as stadiums, convention centers and transportation hubs.”²⁶ Commscope adds that “[t]he new technology maintains backward compatibility for older devices while increasing capacity and security, ramping up data rates, reducing network congestion and improving battery life for compatible devices.”²⁷

68. Vantiva and Commscope directly infringe the ’815 Patent when, for example, they and/or their agents use the accused products, including during testing of the accused products. Vantiva and Commscope also directly infringe the ’815 Patent when the accused products are used after purchase by a customer or end user. For example, the accused products are built with hardware and/or software components that control the operation of the accused products. These components cause the accused products to perform the steps of the claimed invention after, for example, receiving sounding packets. Vantiva and Commscope also directly infringe the ’815 Patent by exercising direction or control over the use of the accused products by others, including their affiliates, their subsidiaries, their business partners (including certification and testing organizations), and/or their customers and end-users. Vantiva and Commscope contract with, advise, and/or encourage such persons to engage in conduct

²⁴ <https://www.vantiva.com/resources/wi-fi-6-infographics-the-most-mainstream-standard/>

²⁵ *Id.*

²⁶ <https://www.commscope.com/insights/the-enterprise-source/wi-fi-6-the-fact-file/>

²⁷ *Id.*

satisfying one or more elements of the asserted claims, deriving a financial or other benefit (e.g., improved wireless communications) from doing so. Vantiva and Commscope condition these benefits on, for example, such persons performing certain activities involving the accused products during specified conditions that cause the accused products to perform the steps of the claimed method (e.g., after receiving sounding packets).

69. Vantiva and Commscope have had knowledge of the '815 Patent at least as of the date when it was notified of the filing of this action.

70. Freedom Patents has been damaged as a result of the infringing conduct by Vantiva and Commscope alleged above. Thus, Vantiva and Commscope are liable to Freedom Patents in an amount that adequately compensates it for such infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

71. Freedom Patents has neither made nor sold unmarked articles that practice the '815 Patent, and is entitled to collect pre-filing damages for the full period allowed by law for infringement of the '815 Patent.

**ADDITIONAL ALLEGATIONS REGARDING INFRINGEMENT
AND PERSONAL JURISDICTION**

72. Vantiva and Commscope have also indirectly infringed the '686 Patent, the '096 Patent, and the '815 Patent by inducing others to directly infringe the '686 Patent, the '096 Patent, and the '815 Patent.

73. Vantiva and Commscope have induced the end users and/or Vantiva's and Commscope's customers to directly infringe (literally and/or under the doctrine of equivalents) the '686 Patent, the '096 Patent, and the '815 Patent by using the accused products.

74. Vantiva and Commscope took active steps, directly and/or through contractual relationships with others, with the specific intent to cause them to use the accused products in a manner that infringes one or more claims of the '686 Patent, the '096 Patent, and the '815 Patent, including, for example, claims 1 and 21 of the '686 Patent, claim 1 of the '096 Patent, and claim 1 of the '815 Patent.

75. Such steps by Vantiva and Commscope included, among other things, advising or directing customers, end users, and others (including distributors and equipment services entities) to use the accused products in an infringing manner; advertising and promoting the use of the accused products in an infringing manner; and/or distributing instructions that guide users to use the accused products in an infringing manner.

76. Vantiva and Commscope performed these steps, which constitute joint and/or induced infringement, with the knowledge of the '686 Patent, the '096 Patent, and the '815 Patent and with the knowledge that the induced acts constitute infringement.

77. Vantiva and Commscope were and are aware that the normal and customary use of the accused products by Vantiva's and Commscope's customers would infringe the '686 Patent, the '096 Patent, and the '815 Patent. Vantiva's and Commscope's inducement is ongoing.

78. Vantiva and Commscope have also induced their affiliates, or third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their affiliates' behalf, to directly infringe (literally and/or under the doctrine of equivalents) at least claim 21 of the '686 Patent by importing, selling or offering to sell the accused products.

79. Vantiva and Commscope have a significant role in placing the accused products in the stream of commerce with the expectation and knowledge that they will be purchased by consumers in Texas and elsewhere in the United States.

80. Vantiva and Commscope purposefully direct or control the making of accused products and their shipment to the United States, using established distribution channels, for sale in Texas and elsewhere within the United States.

81. Vantiva and Commscope purposefully direct or control the sale of the accused products into established United States distribution channels, including sales to nationwide retailers and wholesalers, including, for example, Amazon, Best Buy, and Walmart. Vantiva's and Commscope's established United States distribution channels include one or more United States based affiliates (e.g., Commscope Holding Company, Inc., Commscope, LLC f/k/a Commscope, Inc., Commscope, Inc. of North Carolina, Commscope Technologies LLC, Commscope Connectivity, LLC, Arris US Holdings, Inc., Ruckus Wireless LLC f/k/a Ruckus Wireless, Inc., Arris Technology, Inc., Arris Enterprises LLC, and Arris Solutions, LLC f/k/a Arris Solutions, Inc.) and third-parties working on behalf of Vantiva and Commscope.

82. Vantiva's United States based affiliates (e.g., Arris Solutions, LLC f/k/a Arris Solutions, Inc.) operate entirely in support of Vantiva and are not free to sell products of Vantiva's competitors.

83. Vantiva's United States based affiliates (e.g., Arris Solutions, LLC f/k/a Arris Solutions, Inc.) were formed or acquired by Vantiva to further its domestic sales of the accused infringing products and are controlled by Vantiva to ensure that result.

84. Vantiva and Commscope purposefully direct or control the sale of the accused products online and in nationwide retailers and wholesalers, including for sale in Texas and elsewhere in the United States, and expects and intends that the accused products will be so sold.

85. Vantiva and Commscope purposefully place the accused products—whether by themselves or through subsidiaries, affiliates, or third parties—into an international supply chain, knowing that the accused products will be sold in the United States, including Texas. Therefore, Commscope also facilitates the sale of the accused products in Texas.

86. Vantiva and Commscope took active steps, directly and/or through contractual relationships with others, with the specific intent to cause such persons to import, sell, or offer to sell the accused products in a manner that infringes claim 21 of the '686 Patent.

87. Such steps by Vantiva and Commscope included, among other things, making or selling the accused products outside of the United States for importation into or sale in the United States, or knowing that such importation or sale would occur; and directing, facilitating, or influencing their affiliates, or third-party manufacturers, shippers, distributors, retailers, or other persons acting on their or their affiliates' behalf, to import, sell, or offer to sell the accused products in an infringing manner.

88. Vantiva and Commscope performed these steps, which constitute induced infringement, with the knowledge of the '686 Patent, the '096 Patent, and the '815 Patent, and with the knowledge that the induced acts would constitute infringement.

89. Vantiva and Commscope performed such steps in order to profit from the eventual sale of the accused products in the United States.

90. Vantiva's and Commscope's inducement is ongoing.

91. Vantiva and Commscope has also indirectly infringed by contributing to the infringement of the '686 Patent, the '096 Patent, and the '815 Patent. Vantiva and Commscope have contributed to the direct infringement of the '686 Patent, the '096 Patent, and the '815 Patent by the end user of the accused products.

92. The accused products have special features that are specially designed to be used in an infringing way and that have no substantial uses other than ones that infringe the '686 Patent, the '096 Patent, and the '815 Patent, including, for example, claims 1 and 21 of the '686 Patent, claim 1 of the '096 Patent, and claim 1 of the '815 Patent.

93. The special features include, for example, hardware and/or software components especially adapted for transmitting/receiving sounding packets and estimating channel matrices for the selection of antennas in a multiple-input, multiple-output wireless network, used in a manner that infringes the '686 Patent, the '096 Patent, and the '815 Patent.

94. These special features constitute a material part of the invention of one or more of the claims of the '686 Patent, the '096 Patent, and the '815 Patent, and are not staple articles of commerce suitable for substantial non-infringing use.

95. Vantiva's and Commscope's contributory infringement is ongoing.

96. Commscope has had actual knowledge of the '096 Patent and the '815 Patent at least as of the date when it was notified of the filing of this action. Since at least that time, Commscope has known the scope of the claims of the '096 Patent and the '815 Patent, the products that practice the '096 Patent and the '815 Patent, and that Freedom Patents is the owner of the '686 Patent, the '096 Patent, and the '815 Patent.

97. In addition, Commscope has had actual knowledge of the '686 Patent at least as early as March 8, 2018 when it was cited in a published Canadian patent application and/or as of

the date when it was notified of the filing of this action. Since at least that time, Commscope has known the scope of the claims of the '686 Patent and the products that practice the '686 Patent.

98. Vantiva has had actual knowledge of the '686 Patent, the '096 Patent, and the '815 Patent at least as of the date when it was notified of the filing of this action. Since at least that time, Vantiva has known the scope of the claims of the '686 Patent, the '096 Patent, and the '815 Patent, the products that practice the '686 Patent, the '096 Patent, and the '815 Patent, and that Freedom Patents is the owner of the '686 Patent, the '096 Patent, and the '815 Patent.

99. By the time of trial, Vantiva and Commscope will have known and intended (since receiving such notice) that their continued actions would infringe and actively induce and contribute to the infringement of one or more claims of the '686 Patent, the '096 Patent, and the '815 Patent.

100. Furthermore, Vantiva and Commscope have policies or practices of not reviewing the patents of others (including instructing their employees to not review the patents of others), and thus has been willfully blind of Freedom Patents' patent rights. *See, e.g.,* M. Lemley, "Ignoring Patents," 2008 Mich. St. L. Rev. 19 (2008).

101. Vantiva's and Commscope's customers have infringed the '686 Patent, the '096 Patent, and the '815 Patent. Vantiva and Commscope encouraged their customers' infringement.

102. Vantiva's and Commscope's direct and indirect infringement of the '686 Patent, the '096 Patent, and the '815 Patent has been, and/or continues to be willful, intentional, deliberate, and/or in conscious disregard of Freedom Patents' rights under the patents-in-suit.

103. Freedom Patents has been damaged as a result of Vantiva's and Commscope's infringing conduct alleged above. Thus, Vantiva and Commscope are liable to Freedom Patents in an amount that adequately compensates it for such infringements, which, by law, cannot be

less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

JURY DEMAND

Freedom Patents hereby requests a trial by jury on all issues so triable by right.

PRAYER FOR RELIEF

Freedom Patents requests that the Court find in its favor and against Vantiva and Commscope, and that the Court grant Freedom Patents the following relief:

a. Judgment that one or more claims of the '686 Patent, the '096 Patent, and the '815 Patent have been infringed, either literally and/or under the doctrine of equivalents, by Vantiva, Commscope, and/or all others acting in concert therewith;

b. A permanent injunction enjoining Vantiva and Commscope and their officers, directors, agents, servants, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in concert therewith from infringement of the '686 Patent, the '096 Patent, and the '815 Patent; or, in the alternative, an award of a reasonable ongoing royalty for future infringement of the '686 Patent, the '096 Patent, and the '815 Patent by such entities;

c. Judgment that Vantiva and Commscope account for and pay to Freedom Patents all damages to and costs incurred by Freedom Patents because of Vantiva's and Commscope's infringing activities and other conduct complained of herein, including an award of all increased damages to which Freedom Patents is entitled under 35 U.S.C. § 284;

d. That Freedom Patents be granted pre-judgment and post-judgment interest on the damages caused by Vantiva's and Commscope's infringing activities and other conduct complained of herein;

e. That this Court declare this an exceptional case and award Freedom Patents its reasonable attorney's fees and costs in accordance with 35 U.S.C. § 285; and

f. That Freedom Patents be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: June 14, 2024

Respectfully submitted,

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