

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

FREEDOM PATENTS LLC,

Plaintiff,

v.

HISENSE COMPANY LTD., HISENSE
VISUAL TECHNOLOGY CO. LTD. F/K/A
QINGDAO HISENSE ELECTRIC CO.
LTD., HISENSE INTERNATIONAL CO.
LTD., HISENSE INTERNATIONAL
(HONG KONG) AMERICA
INVESTMENTS CO. LTD., and HISENSE
INTERNATIONAL (HK) CO. LTD.,

Defendants.

CIVIL ACTION NO. 4:23-cv-419-ALM

FIRST AMENDED COMPLAINT FOR
PATENT INFRINGEMENT

JURY TRIAL DEMANDED

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Freedom Patents LLC (“Freedom Patents” or “Plaintiff”) files this first amended complaint against Defendants Hisense Company Ltd., Hisense Visual Technology Co. Ltd. f/k/a Qingdao Hisense Electric Co. Ltd., Hisense International Co. Ltd., Hisense International (Hong Kong) America Investments Co. Ltd., and Hisense International (HK) Co. Ltd. (collectively, “Hisense”), 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 Hisense Company Ltd. (“Hisense Co.”) is a corporation duly organized and existing under the laws of the People’s Republic of China. It has a place of business at

Hisense Tower No. 17, Donghaixi Road, Qingdao, Shandong Province, 266071, China. Hisense Co. 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 in Texas as required by statute. This action arises out of that business.

3. Hisense Co.—together with its subsidiaries and other affiliates of the Hisense group of companies—manufactures and sells smart TV and entertainment systems across the globe. At the end of 2022, Hisense placed second in the global market for TV shipments, having shipped nearly 20 million TVs from January to October 2022.¹ Hisense Co. is a subsidiary of Qingdao Huatong State-owned Capital Investment and Operation Group Co.

4. Defendant Hisense Visual Technology Co. Ltd. f/k/a Qingdao Hisense Electric Co. Ltd. (“Hisense Visual”) is a corporation duly organized and existing under the laws of the People’s Republic of China. It has a place of business at 218 Qianwangang Road, Qingdao Economic & Technological Development Zone, Qingdao, Shandong Province, 266555, China. Hisense Visual 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 in Texas as required by statute. This action arises out of that business.

5. Hisense Visual is a partial subsidiary of Hisense Group Holding Co. Ltd., which is one of multiple Hisense entities. It is involved in the research, design, development, testing, and manufacture of electronic devices, including TVs. In collaboration with other Hisense

¹ See <https://global.hisense.com/about-hisense/newsroom/soaring-to-2nd-in-the-market-hisense-hits-historical-high-in-the-global-tv-shipments>.

affiliates, Hisense Visual is also involved in the importation of TVs into the United States.

Hisense Visual was formerly known as Qingdao Hisense Electronics Co., Ltd. and before that, as Hisense Electric Co., Ltd.

6. Defendant Hisense International Co. Ltd. is a corporation duly organized and existing under the laws of the People's Republic of China. It has a place of business at Hisense Tower, No. 17, Floor 22, Donghaixi Road, Qingdao, Shandong Province, 266071, China. Hisense International Co. Ltd. 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 in Texas as required by statute. This action arises out of that business.

7. Hisense International Co. Ltd. is a partial subsidiary of multiple Hisense entities, including Hisense Visual. In collaboration with other Hisense affiliates, Hisense International Co. Ltd. is also involved in the importation of TVs into the United States.

8. Defendant Hisense International (Hong Kong) America Investments Co. Ltd. ("Hisense HK America") is a corporation duly organized and existing under the laws of Hong Kong SAR. It has a place of business at Room 3101-3105, Singga Commercial Centre, No. 148 Connaught Road West, Hong Kong SAR, China. Hisense HK America 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 in Texas as required by statute. This action arises out of that business.

9. Hisense HK America is a partial subsidiary of Hisense International America Holdings Co. Ltd., which is one of multiple Hisense entities. In collaboration with other Hisense affiliates, Hisense HK America is involved in the importation of TVs into the United States.

10. Defendant Hisense International (HK) Co. Ltd. (“Hisense International (HK)”) is a corporation duly organized and existing under the laws duly organized and existing under the laws of Hong Kong SAR. It has a place of business at Room 3101-3105, Singga Commercial Centre, No. 148 Connaught Road West, Hong Kong SAR, China. Hisense International (HK) 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 in Texas as required by statute. This action arises out of that business.

11. Hisense International (HK) is a partial subsidiary of Hisense International Co. Ltd., which is one of multiple Hisense entities. In collaboration with other Hisense affiliates, Hisense International (HK) is involved in the importation of TVs into the United States.

12. The Defendants identified in paragraphs 2–11 above (collectively, “Hisense”) are an interrelated group of companies which together comprise one of the world’s largest manufacturers of televisions and one of the leading sellers of televisions in the United States, including the Hisense brand.

13. The Hisense 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 devices in the United States, including in the State of Texas generally and

this judicial district in particular. For instance, Hisense states that it “has established 55 overseas companies and offices for localization operation.”²

14. The Hisense 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. Thus, the Hisense 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.

16. 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. Additionally, questions of fact common to all defendants will arise in this action.

JURISDICTION AND VENUE

17. 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).

18. This Court has personal jurisdiction over the Hisense defendants pursuant to due process and/or the Texas Long Arm Statute because, *inter alia*, (i) Hisense has done and continues to do business in Texas; (ii) Hisense 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

² See <https://global.hisense.com/about-hisense/overview/>.

infringement in Texas, and/or committing a least a portion of any other infringements alleged herein in Texas, and (iii) Hisense regularly places its products or services within the stream of commerce—directly, through subsidiaries, or through third parties—with the expectation and knowledge that such products or services will be sold or used in Texas and elsewhere in the United States. In addition, or in the alternative, this Court has personal jurisdiction over Hisense pursuant to Fed. R. Civ. P. 4(k)(2).

19. Venue is proper in this district as to the Hisense defendants, each of 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).

BACKGROUND

20. 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.

21. 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.³ From its beginning, MERL was focused on pioneering new technologies in various industries, including computer graphics,

³ See <https://www.merl.com/company/history>.

digital communication, medical imaging, transportation etc.⁴ 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).”⁵

22. 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

23. 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.”

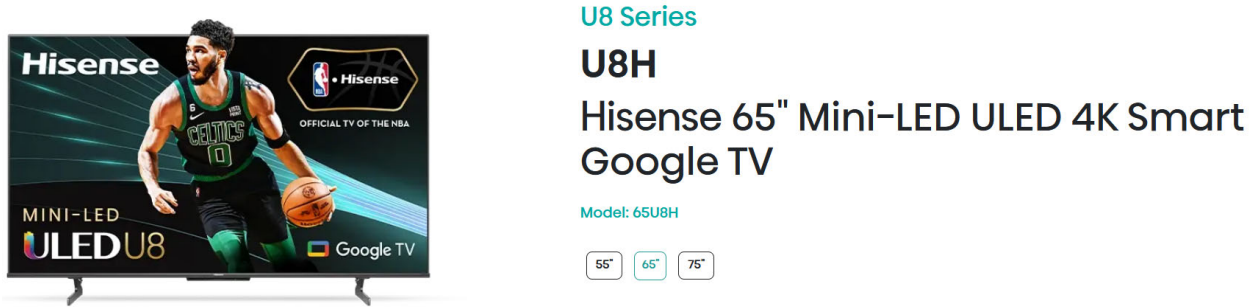
24. Freedom Patents is the owner of the ’686 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the ’686 Patent against infringers, and to collect damages for all relevant times.

25. Hisense made, had made, used, imported, provided, supplied, distributed, sold, and/or offered for sale products and/or systems including, for example, its Hisense U8H (with

⁴ See <https://www.merl.com/public/MERL-30Years.pdf>.

⁵ *Id.* at 22.

2x2 MIMO) family of TVs and other products⁶ that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”):



Source: www.hisense-usa.com/televisions/65u8h-hisense-65-mini-led-uled-4k-smart-google-tv-2022

Connectivity		
Wireless built-in	Bluetooth®	Ethernet
<u>Wifi6E(Triple-band)</u>	Yes	Yes

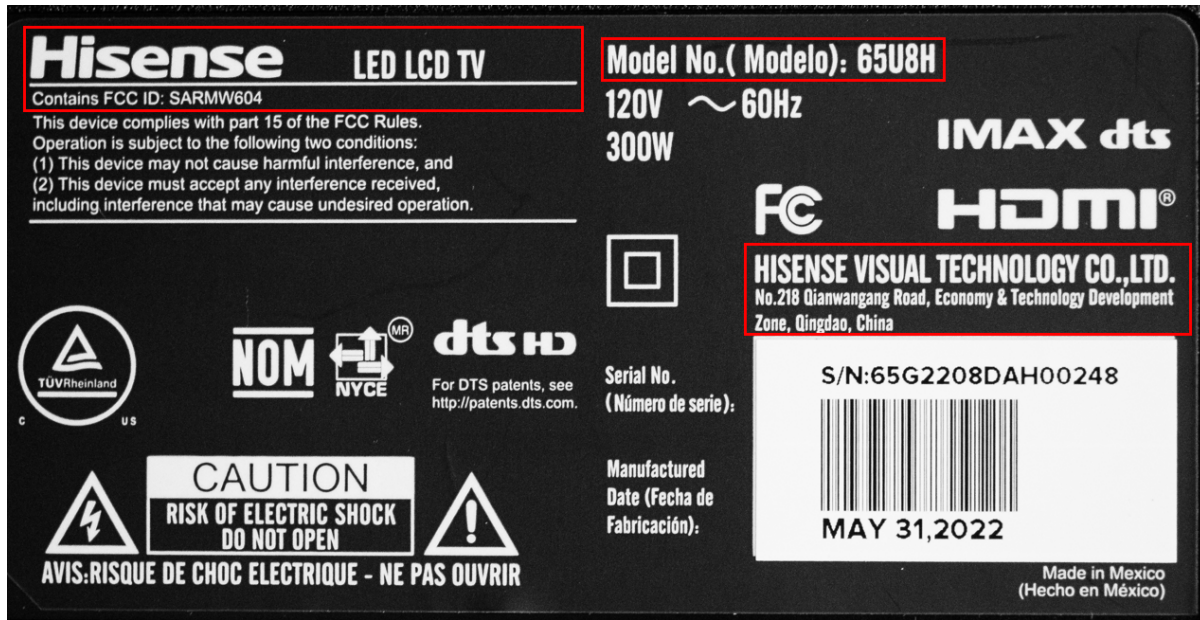
Source: www.hisense-usa.com/televisions/65u8h-hisense-65-mini-led-uled-4k-smart-google-tv-2022

Size	US Model	Local Dimming Zones	Panel Type
55"	55U8H	336	VA
65"	65U8H	504	VA
75"	75U8H	528	VA

The unit we tested was manufactured in May 2022, and you can see the label [here](#).

Source: <https://www.rtings.com/tv/reviews/hisense/u8h>

⁶ See, e.g., Appendix to Exhibits B1, B2, and B3 to Freedom Patents’ Preliminary Infringement Contentions Against Hisense.



Source: www.rtings.com/assets/products/5BHTio1i/hisense-u8h/label-large.jpg

Grant Comments

Enter any text that you would like to appear at the bottom of the Grant of Equipment Authorization:
 Power Output listed is conducted. Modular Approval. The antenna(s) used for this transmitter must not transmit simultaneously with any other antenna or transmitter, except in accordance with FCC multi-transmitter product procedures. Grantee must provide installation and operating instructions for complying with FCC multi-transmitter product procedures. This module is approved in mobile/portable configurations. Only those antenna(s) tested with the device or similar antenna(s) with equal or lesser gain may be used with this transmitter. Grantee must coordinate with OEM integrator to determine applicable host configurations to ensure RF exposure compliance, including simultaneous transmission SAR requirements according to published KDB 616217 supplement documentation. When all conditions of this filing cannot be met installation of this device into specific final products may require the submission of a permissive change application, containing appropriate data demonstrating compliance, or a new application. This transmitter has 20MHz, 40MHz, 80MHz bandwidth modes as described in this filing. Device is a client only device containing a 2 x 2 MIMO configuration, enabled for either 2.4 or 5 GHz band operations as described in this filing. OEM/Host integrator must be provided with antenna installation instructions and transmitter operating conditions to satisfy RF exposure compliance. OEM/Host integrator is responsible for complying with the instructions and requirements for each transmitter they choose to integrate into a host product. This DUT can only be installed at 20 cm minimum separation distance from human. This device supports 20 MHz, 40 MHz and 80 MHz BW modes in 5G WLAN transmitter. It also contains Bluetooth, 2.4 GHz WLAN and 6 GHz WLAN transmitters.
 Set the grant of this application to be deferred to a specified date:
 No

Source: <https://fccid.io/SARMW604>

Power Output listed is EIRP. Modular Approval filing. The antenna(s) used for this transmitter must not transmit simultaneously with any other antenna or transmitter, except in accordance with FCC multitransmitter product procedures. Grantee must provide installation and operating instructions for complying with FCC multi-transmitter product procedures. Only those antenna(s) tested with the device or similar antenna(s) with equal or lesser gain may be used with this transmitter. End-users and installers must be provided with transmitter operating conditions for satisfying RF exposure compliance. Power Density and SAR testing was performed to demonstrate RF exposure compliance.
 This DUT can only be installed at 20 cm minimum separation distance from human.

This device supports 20 MHz, 40 MHz and 80 MHz BW modes in 6 GHz WLAN transmitter. It also contains Bluetooth, 2.4 GHz WLAN and 5 GHz WLAN transmitters.

- CC: This device is certified pursuant to two different Part 15 rules sections.
- EP: Output power is Effective Isotropic Radiated Power (EIRP)
- MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.

Source: <https://fccid.io/SARMW604>



Network

Supported network technologies and standards for exchanging data with other devices.

Network

Information about the network technologies and standards supported by the model, which allow for it to connect to and communicate with other devices.

- ▶ LAN
- ▶ Wi-Fi
- ▶ 802.11a (IEEE 802.11a-1999)
- ▶ 802.11b (IEEE 802.11b-1999)
- ▶ 802.11g (IEEE 802.11g-2003)
- ▶ 802.11n (IEEE 802.11n-2009)
- ▶ 802.11n 5GHz
- ▶ 802.11ac (IEEE 802.11ac)
- ▶ 802.11ax (IEEE 802.11ax, Wi-Fi 6)
- ▶ Wi-Fi Direct
- ▶ DLNA
- ▶ Bluetooth 5.0
- ▶ 2x2 MiMO

Source: www.displayspecifications.com/en/model/121a2e11

26. By doing so, Hisense has directly infringed (literally and/or under the doctrine of equivalents) at least Claims 1 and 21 of the '686 Patent. *See* Exhibit B-1 to Freedom Patents' Preliminary Infringement Contentions Against Hisense. Hisense's infringement in this regard is ongoing.

27. The Hisense 65U8H Smart TV is an exemplary accused product.

28. Hisense directly infringes the '686 Patent when, for example, it and/or its agents use the accused products, including during testing of the accused products. Hisense also directly infringes 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. Hisense also directly infringes the '686 Patent by exercising direction or control over the use of the accused products by others, including its affiliates, its subsidiaries, its business partners (including certification and testing organizations), and/or its customers and end-users. Hisense contracts with, advises, and/or encourages 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. Hisense conditions 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).

29. Hisense has had knowledge of the '686 Patent at least as of the date when it was notified of the filing of this action.

30. Freedom Patents has been damaged as a result of the infringing conduct by Hisense alleged above. Thus, Hisense is 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.

31. 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.

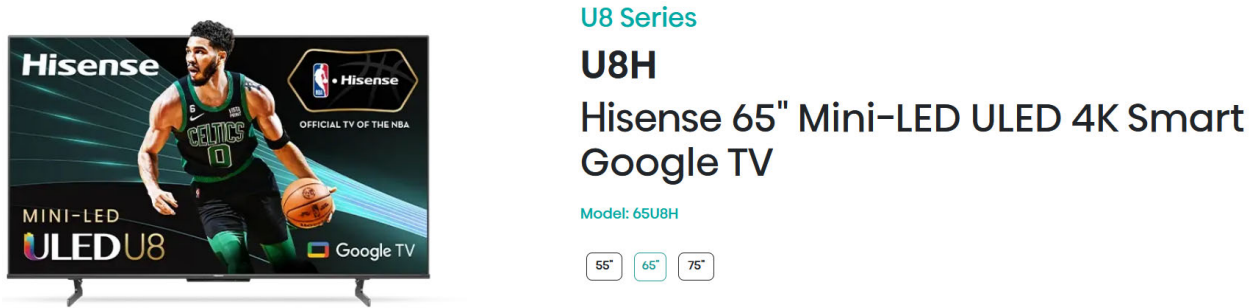
COUNT II

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

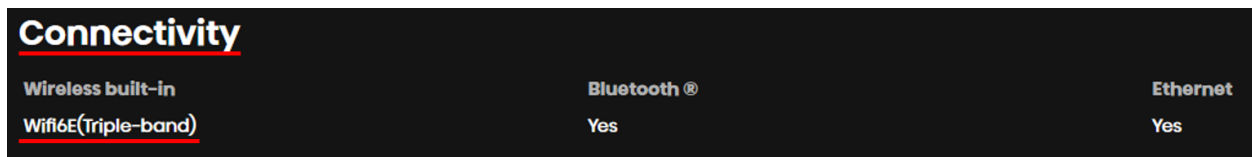
32. On February 12, 2013, United States Patent No. 8,374,096 (“the '096 Patent”) was duly and legally issued by the United States Patent and Trademark Office for an invention entitled “Method for Selecting Antennas and Beams in MIMO Wireless LANs.”

33. 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.

34. Hisense used products and/or systems including, for example, its Hisense U8H (with 2x2 MIMO) family of TVs and other products⁷ that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”):



Source: www.hisense-usa.com/televisions/65u8h-hisense-65-mini-led-uled-4k-smart-google-tv-2022



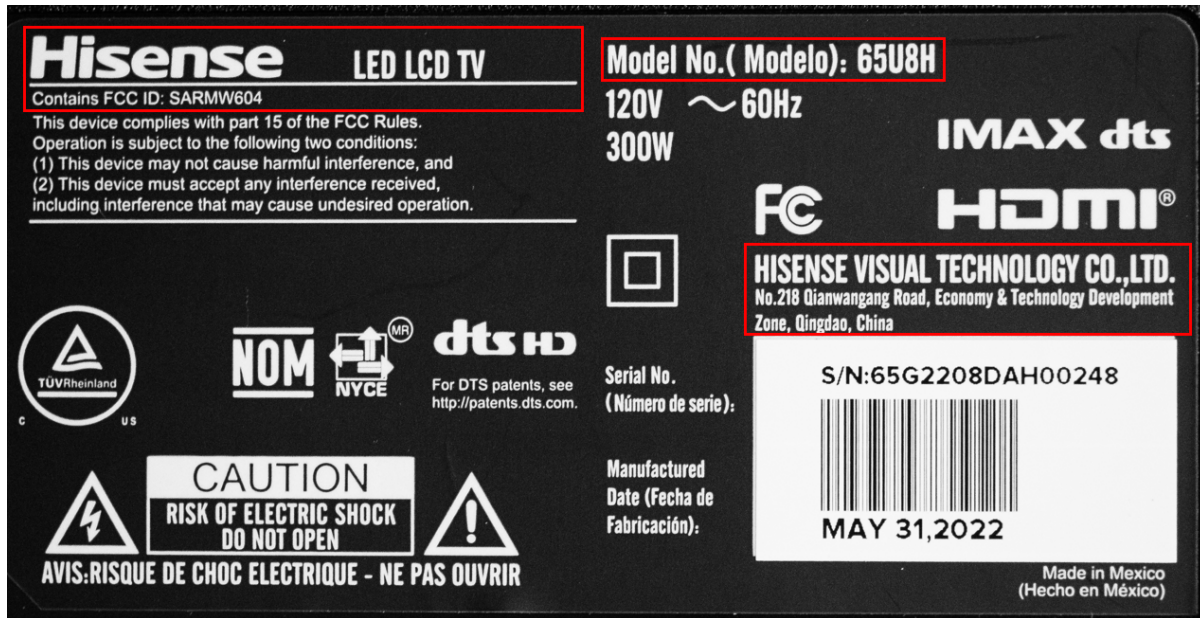
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The unit we tested was manufactured in May 2022, and you can see the label [here](#).

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- ▶ 802.11n 5GHz
- ▶ 802.11ac (IEEE 802.11ac)
- ▶ 802.11ax (IEEE 802.11ax, Wi-Fi 6)
- ▶ Wi-Fi Direct
- ▶ DLNA
- ▶ Bluetooth 5.0
- ▶ 2x2 MiMO

Source: www.displayspecifications.com/en/model/121a2e11

35. By doing so, Hisense has directly infringed (literally and/or under the doctrine of equivalents) at least Claim 1 of the '096 Patent. *See* Exhibit B-2 to Freedom Patents' Preliminary Infringement Contentions Against Hisense. Hisense's infringement in this regard is ongoing.

36. The Hisense 65U8H Smart TV is an exemplary accused product.

37. Hisense directly infringes the '096 Patent when, for example, it and/or its agents use the accused products, including during testing of the accused products. Hisense also directly infringes 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. Hisense also directly infringes the '096 Patent by exercising direction or control over the use of the accused products by others, including its affiliates, its subsidiaries, its business partners (including certification and testing organizations), and/or its customers and end-users. Hisense contracts with, advises, and/or encourages 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. Hisense conditions 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).

38. Hisense has had knowledge of the '096 Patent at least as of the date when it was notified of the filing of this action.

39. Freedom Patents has been damaged as a result of the infringing conduct by Hisense alleged above. Thus, Hisense is 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.

40. 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.

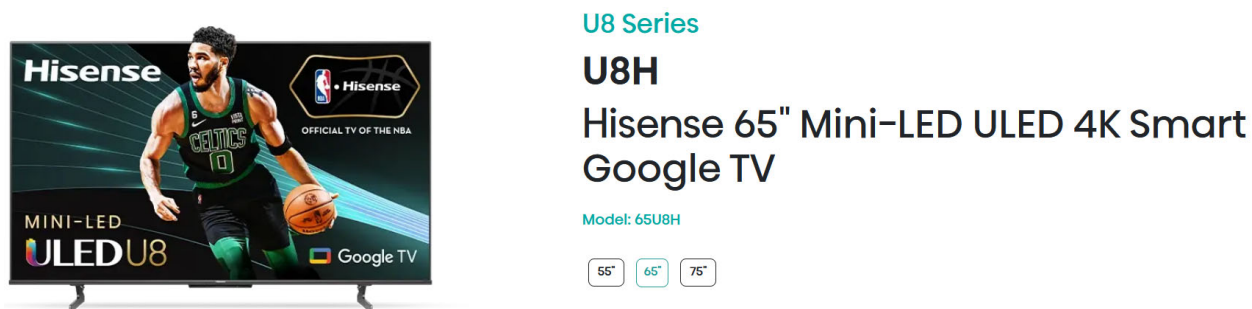
COUNT III

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

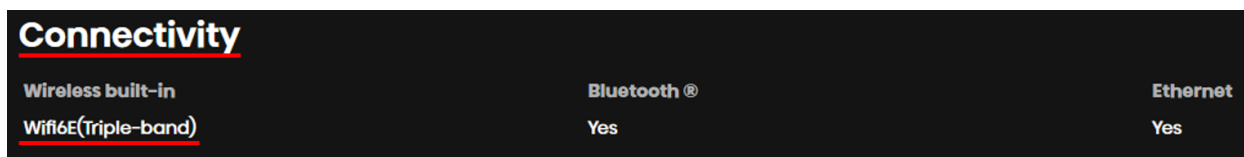
41. On August 20, 2013, United States Patent No. 8,514,815 (“the '815 Patent”) was duly and legally issued by the United States Patent and Trademark Office for an invention entitled “Training Signals for Selecting Antennas and Beams in MIMO Wireless LANs.”

42. 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.

43. Hisense used products and/or systems including, for example, its Hisense U8H (with 2x2 MIMO) family of TVs and other products⁸ that comply with the IEEE 802.11ax-2021 standard and implement MIMO Wi-Fi capabilities (“accused products”):



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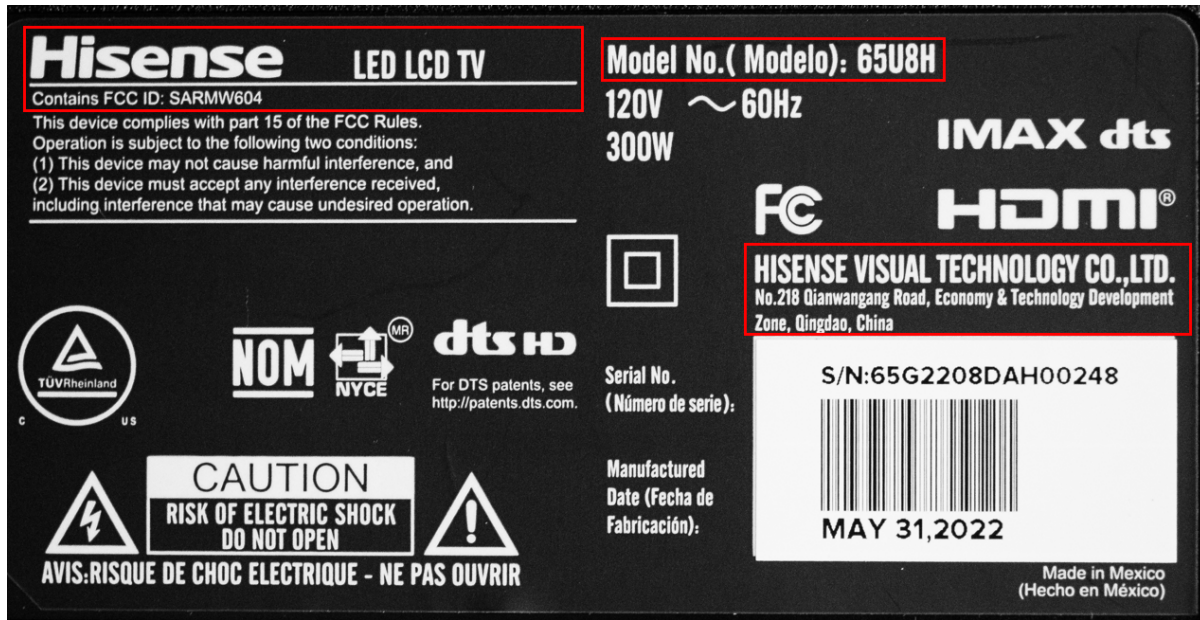
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Source: <https://www.rtings.com/tv/reviews/hisense/u8h>

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 No

Source: <https://fccid.io/SARMW604>

Power Output listed is EIRP. Modular Approval filing. The antenna(s) used for this transmitter must not transmit simultaneously with any other antenna or transmitter, except in accordance with FCC multitransmitter product procedures. Grantee must provide installation and operating instructions for complying with FCC multi-transmitter product procedures. Only those antenna(s) tested with the device or similar antenna(s) with equal or lesser gain may be used with this transmitter. End-users and installers must be provided with transmitter operating conditions for satisfying RF exposure compliance. Power Density and SAR testing was performed to demonstrate RF exposure compliance.
 This DUT can only be installed at 20 cm minimum separation distance from human.

This device supports 20 MHz, 40 MHz and 80 MHz BW modes in 6 GHz WLAN transmitter. It also contains Bluetooth, 2.4 GHz WLAN and 5 GHz WLAN transmitters.

- CC: This device is certified pursuant to two different Part 15 rules sections.
- EP: Output power is Effective Isotropic Radiated Power (EIRP)
- MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.

Source: <https://fccid.io/SARMW604>



Network

Supported network technologies and standards for exchanging data with other devices.

Network

Information about the network technologies and standards supported by the model, which allow for it to connect to and communicate with other devices.

- ▶ LAN
- ▶ Wi-Fi
- ▶ 802.11a (IEEE 802.11a-1999)
- ▶ 802.11b (IEEE 802.11b-1999)
- ▶ 802.11g (IEEE 802.11g-2003)
- ▶ 802.11n (IEEE 802.11n-2009)
- ▶ 802.11n 5GHz
- ▶ 802.11ac (IEEE 802.11ac)
- ▶ 802.11ax (IEEE 802.11ax, Wi-Fi 6)
- ▶ Wi-Fi Direct
- ▶ DLNA
- ▶ Bluetooth 5.0
- ▶ 2x2 MiMO

Source: www.displayspecifications.com/en/model/121a2e11

44. By doing so, Hisense has directly infringed (literally and/or under the doctrine of equivalents) at least Claim 1 of the '815 Patent. *See* Exhibit B-3 to Freedom Patents' Preliminary Infringement Contentions Against Hisense. Hisense's infringement in this regard is ongoing.

45. The Hisense 65U8H Smart TV is an exemplary accused product.

46. Hisense directly infringes the '815 Patent when, for example, it and/or its agents use the accused products, including during testing of the accused products. Hisense also directly infringes 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. Hisense also directly infringes the '815 Patent by exercising direction or control over the use of the accused products by others, including its affiliates, its subsidiaries, its business partners (including certification and testing organizations), and/or its customers and end-users. Hisense contracts with, advises, and/or encourages 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. Hisense conditions 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).

47. Hisense has had knowledge of the '815 Patent at least as of the date when it was notified of the filing of this action.

48. Freedom Patents has been damaged as a result of the infringing conduct by Hisense alleged above. Thus, Hisense is 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.

49. 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**

50. Hisense has 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.

51. Hisense has induced the end users and/or Hisense'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.

52. Hisense 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.

53. Such steps by Hisense 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.

54. Hisense 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.

55. Hisense was and is aware that the normal and customary use of the accused products by Hisense's customers would infringe the '686 Patent, the '096 Patent, and the '815 Patent. Hisense's inducement is ongoing.

56. Hisense has also induced its affiliates, or third-party manufacturers, shippers, distributors, retailers, or other persons acting on its or its 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.

57. Hisense has 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.

58. Hisense purposefully directs or controls 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.

59. Hisense purposefully directs or controls 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. Hisense's established United States distribution channels include one or more United States based affiliates (e.g., Hisense Electronics Manufacturing Company of America Corp., Hisense USA Corp.) and third-parties working on behalf of Hisense.

60. Hisense purposefully directs or controls 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.

61. Hisense purposefully places the accused products—whether by itself 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, Hisense also facilitates the sale of the accused products in Texas.

62. Hisense 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.

63. Such steps by Hisense 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 its affiliates, or third-party manufacturers, shippers, distributors, retailers, or other persons acting on its or its affiliates' behalf, to import, sell, or offer to sell the accused products in an infringing manner.

64. Hisense 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.

65. Hisense performed such steps in order to profit from the eventual sale of the accused products in the United States.

66. Hisense's inducement is ongoing.

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

68. 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.

69. 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.

70. 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.

71. Hisense's contributory infringement is ongoing.

72. Hisense 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, Hisense 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.

73. By the time of trial, Hisense will have known and intended (since receiving such notice) that its 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.

74. Furthermore, Hisense has a policy or practice of not reviewing the patents of others (including instructing its 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).

75. Hisense' customers have infringed the '686 Patent, the '096 Patent, and the '815 Patent. Hisense encouraged its customers' infringement.

76. Hisense'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.

77. Freedom Patents has been damaged as a result of Hisense's infringing conduct alleged above. Thus, Hisense is 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 Hisense, 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 Hisense and/or all others acting in concert therewith;
- b. A permanent injunction enjoining Hisense and its 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 Hisense account for and pay to Freedom Patents all damages to and costs incurred by Freedom Patents because of Hisense'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 Hisense'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: February 1, 2024

Respectfully submitted,

/s/ Zachariah S. Harrington

Matthew J. Antonelli
Texas Bar No. 24068432
matt@ahtlawfirm.com
Zachariah S. Harrington
Texas Bar No. 24057886
zac@ahtlawfirm.com
Larry D. Thompson, Jr.
Texas Bar No. 24051428
larry@ahtlawfirm.com
Rehan M. Safiullah
Texas Bar No. 24066017
rehan@ahtlawfirm.com

ANTONELLI, HARRINGTON
& THOMPSON LLP
4306 Yoakum Blvd., Ste. 450
Houston, TX 77006
(713) 581-3000

Stafford Davis
State Bar No. 24054605
sdavis@stafforddavisfirm.com
Catherine Bartles
Texas Bar No. 24104849
cbartles@stafforddavisfirm.com

THE STAFFORD DAVIS FIRM
815 South Broadway Avenue
Tyler, Texas 75701
(903) 593-7000
(903) 705-7369 fax

Attorneys for Freedom Patents LLC

CERTIFICATE OF SERVICE

I hereby certify that on the 1st day of February 2024, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system, which will send notification of such filing to all counsel of record.

/s/ Zachariah S. Harrington
Zachariah S. Harrington