

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF GEORGIA  
ATLANTA DIVISION**

AEGIS 11 S.A.,

Plaintiff,

v.

FUNAI ELECTRIC COMPANY,  
LTD. and  
FUNAI CORPORATION, INC.,

Defendants.

**Civil Action No.**

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**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Aegis 11 S.A. (“Aegis 11” or “Plaintiff”), for its Complaint against Funai Electric Company Ltd. (“Funai Electric”) and Funai Corporation, Inc. (“Funai Corp.”) (collectively “Defendants” or “Funai”), alleges the following:

**NATURE OF THE ACTION**

1. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1 *et seq.*

**THE PARTIES**

2. Aegis 11 is a corporation organized under the laws of Luxembourg with a place of business at 6, Avenue Marie Thérèse 2132 Luxembourg, Grand Duchy of Luxembourg.

3. Upon information and belief, Funai Electric is a corporation duly organized and existing under the laws of Japan with a principal place of business at 7-7-1 Nakagaito, Daito City, Osaka 574-0013, Japan. Funai Electric is the parent corporation of Defendant Funai Corp. Funai Electric, either itself and/or through the activities of its subsidiaries, makes, uses, sells, offers for sale, and/or imports products and services throughout the United States, including in this judicial district, and introduces products and services into the stream of commerce that incorporate infringing technology knowing that they would be sold in this judicial district and elsewhere in the United States.

4. Upon information and belief, Funai Corp. is a subsidiary of Defendant Funai Electric. Funai Corp. is a Georgia corporation with a place of business at 21061 S. Western Ave. Suite 210, Torrance, CA 90501, and can be served through its registered agent, Cogency Global Inc., 900 Old Roswell Lakes Parkway, Suite 310, Roswell, GA 30076. Funai Corp. provides sales, research, and development support in North America for its ultimate parent, Funai Electric. Funai Corp. makes, uses, sells, offers for sale, and/or imports products and services throughout the United States, including in this judicial district, and introduces products and services into the stream of commerce that incorporate infringing technology

knowing that they would be sold in this judicial district and elsewhere in the United States.

### **JURISDICTION AND VENUE**

5. This is an action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code.

6. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

7. Venue is proper in this judicial district under 28 U.S.C. § 1400(b). Defendant Funai Electric is not a resident of the United States and may be sued in any district, including this District. Defendant Funai Corp. is incorporated in the State of Georgia.

8. This Court has general and specific personal jurisdiction over Defendants. Defendants have sufficient minimum contacts within the State of Georgia and this District, pursuant to due process and/or the Ga. Code Ann. § 9-10-91, because Defendants purposefully availed themselves of the privileges of conducting business in the State of Georgia and in this District, because Defendants regularly conduct and solicit business within the State of Georgia and within this District, and because Plaintiff's causes of action arise directly from each of Defendants' business contacts and other activities in the State of Georgia

and this District. Further, this Court has personal jurisdiction over Defendant Funai Corp. because it is incorporated in Georgia and has purposely availed itself of the privileges and benefits of the laws of the State of Georgia.

### **BACKGROUND**

9. This action involves three patents, described in detail in the counts below (collectively, the “Asserted Patents”).

10. U.S. Patent No. 9,350,434 (“the ’434 patent”), claims technologies for channel sounding between stations in a wireless local area network system that were developed in the late 2000s by LG scientists Ill Soo Sohn and others.

11. U.S. Patent No. 9,848,443 (“the ’443 patent”) claims technologies for accessing a channel to support wideband in a wireless communication system that were developed in the late 2000s by LG scientist Yong Ho Seok.

12. U.S. Patent No. 9,584,200 (“the ’200 patent”) claims technologies for transmitting control information in a wireless communication system that were developed in the late 2000s by LG scientists Hyun Soo Ko and others.

13. LG was actively involved with standards-development organizations that developed industry standards relevant to LG’s product portfolios, including LG’s Wi-Fi enabled consumer electronic goods.

14. The Institute of Electrical and Electronics Engineers (IEEE) is a leading standards-development organization for the development of industrial standards (having developed over 900 active industry technical standards) in a broad range of disciplines, including electric power and energy, telecommunications, consumer electronics, biomedical technology and healthcare-information technology, information assurance, transportation, aerospace, and nanotechnology.

15. Today, IEEE is the world's largest association of technical professionals with more than 420,000 members in over 160 countries around the world. Its objectives are the educational and technical advancement of electrical and electronic engineering, telecommunications, computer engineering, and allied disciplines.

16. The IEEE 802.11 standards, created by the IEEE, are a set of media access control (MAC) and physical layer (PHY) specifications for implementing wireless local area network (WLAN) computer communication in the 900 MHz and 2.4, 3.6, 5, and 60 GHz frequency bands.

17. The IEEE 802.11 standards are created and maintained by the IEEE LAN/MAN Standards Committee (IEEE 802). The base version of IEEE 802.11 was released in 1997 and has had subsequent amendments. The standard and

amendments provide the basis for wireless network products using the Wi-Fi brand.

18. IEEE Std. 802.11-2016, commonly shortened to 802.11-2016, is a revision based on the IEEE 802.11-2012 wireless-networking standard, and further incorporates five amendments, including 802.11ac-2013 (commonly shortened to 802.11ac).

19. 802.11ac is an amendment to IEEE 802.11, published in December 2013, and builds on 802.11n. The goal of 802.11n was to improve network throughput over the two previous standards—802.11a and 802.11g—with a significant increase in the maximum net data rate from 54 Mbit/s to 600 Mbit/s (slightly higher gross bit rate, including, for example, error-correction codes, and slightly lower maximum throughput) with the use of four spatial streams at a channel width of 40 MHz.

20. Changes in 802.11ac compared to 802.11n include wider channels (80 or 160 MHz versus 40 MHz) in the 5 GHz band, more spatial streams (up to eight versus four), higher-order modulation (up to 256-QAM vs. 64-QAM), and the addition of Multi-user MIMO (MU-MIMO). While initial implementations supported 80 MHz channels, three spatial streams, and 256-QAM, in 80 MHz

channels in the 5 GHz band, more recent devices support 160 MHz channels, four spatial streams, and MU-MIMO.

21. The 802.11ac standard has enabled increased efficiency, as evidenced by the fact that most high-end, Wi-Fi-enabled consumer electronics on the market are 802.11ac compliant. The majority of products adopting this technological advance are advertised as being compliant with the standard, and companies regularly list their product as compliant with this particular standard on trade group web sites (such as the Wi-Fi Alliance website).

22. In or about April 2019, Aegis 11 acquired the Asserted Patents from LG.

**COUNT I – INFRINGEMENT OF U.S. PATENT NO. 9,350,434**

23. The allegations set forth in the foregoing paragraphs 1 through 22 are incorporated into this First Claim for Relief.

24. On May 24, 2016, U.S. Patent No. 9,350,434 (“the ’434 patent”), entitled “Channel Sounding Method in Wireless Local Area Network System and Apparatus for Supporting the Same,” was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the ’434 patent is attached as Exhibit A.

25. Aegis 11 holds the exclusive right to assert all causes of action arising under the '434 patent and the right to collect any remedies for infringement thereof.

26. The inventions claimed in the '434 patent relate to technologies for channel sounding between stations in a wireless local area network system. Such technologies are a required part of the very-high throughput ("VHT") beamforming protocols of 802.11ac standard, subsequently incorporated into 802.11-2016. Accordingly, devices supporting the 802.11ac standard necessarily meet the claim limitations of the '434 patent.

27. Upon information and belief, Funai has and continues to directly infringe at least claim 4 of the '434 patent by making, using, selling, importing and/or providing and causing to be used 802.11ac-compliant devices ("the '434 Patent Accused Instrumentalities"), as set forth in detail in the attached preliminary and exemplary claim chart provided in Exhibit B.

28. For example, Funai affirmatively represents that it makes and sells products under the Philips, Magnavox, and Sanyo brands that qualify as Accused Instrumentalities. (*See* <https://www.funai.us/our-brands/>.)

29. For example, Funai makes and sells at least the following Philips-branded televisions that qualify as Accused Instrumentalities: 75PFL5603/F7,



75PFL4864/F7, 65PFL5922/F7, 65PFL5703/F7, 65PFL5603/F7, 65PFL5602/F7, 55PFL5922/F7, 55PFL5703/F7, 55PFL5603/F7, 55PFL5602/F7, 24PFL6704, 43PFL5704, 50PFL5604, 50PFL5704, 55PFL5604, 55PFL5704, 65PFL5504, 65PFL5604, 65PFL5704, 75PFL5604, 75PFL5704. Below are exemplary screenshots of such Philips-branded televisions made and sold by Funai:



**Wi-Fi CERTIFIED™ Interoperability Certificate**

This certificate lists the features that have successfully completed Wi-Fi Alliance interoperability testing.  
Learn more: [www.wi-fi.org/certification/programs](http://www.wi-fi.org/certification/programs)



**Certification ID: WFA97188**

**Page 1 of 2**

<b>Date of Last Certification</b>	March 19, 2020
<b>Company</b>	Funai Electric Co., Ltd.
<b>Product</b>	Philips Smart TV
<b>Model Number</b>	50PFL5704
<b>Product Identifier(s)</b>	F7 (SKU), F8 (SKU)
<b>Category</b>	Televisions & Set Top Boxes
<b>Subcategory</b>	Television
<b>Hardware Version</b>	Product: 1.00.00, Wi-Fi Component: 1.00.00
<b>Firmware Version</b>	Product: 1.00.00, Wi-Fi Component: mp2_1801__20190711174239f
<b>Operating System</b>	Android, version: 9.0.0
<b>Frequency Band(s)</b>	2.4 GHz, 5 GHz

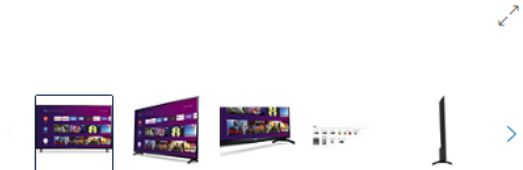
**Summary of Certifications**

<b>CLASSIFICATION</b>	<b>PROGRAM</b>
Connectivity	Wi-Fi CERTIFIED™ a, b, g, n, ac
	WPA™ - Personal
	WPA2™ - Personal
Optimization	WMM®

**Wi-Fi CERTIFIED™ ac**

- 2 Spatial Streams 5 GHz
- Rx MCS 8-9 (256-QAM)
- Rx STBC 2x1
- Rx A-MPDU of A-MSDU
- Low Density Parity Check coding
- Tx SU beamformee
- Rx DL MU-MIMO
- RTS with BW Signaling

(<http://certifications.prod.wi-fi.org/pdf/certificate/public/download?cid=WFA97188>.)



## 5000 series Android TV

55PFL5604/F7

★★★★☆ 58 Reviews

### 4K Android TV with Google Assistant

The Philips AndroidTV brings great content to you, so you can spend less time browsing and more time watching. Just pick from the personalized recommendations from Google Play, YouTube, Netflix, and other apps directly on your TV screen.

[See all benefits >](#)

Buy this product at:




Buy from Retailers

Connectivity

HDMI 1	HDMI
HDMI 2(ARC)	HDMI
HDMI 3	HDMI
AV1	<ul style="list-style-type: none"> <li>• Audio L/R in</li> <li>• CVBS in</li> </ul>
Audio Output - Digital	Optical (TOSLINK)
Other connections	<ul style="list-style-type: none"> <li>• Ethernet</li> <li>• Headphone out</li> <li>• Wireless LAN 802.11ac MIMO</li> </ul>

([https://www.usa.philips.com/c-p/55PFL5604\\_F7/5000-series-android-tv.](https://www.usa.philips.com/c-p/55PFL5604_F7/5000-series-android-tv.))

PHILIPS | Roku TV




### Roku TV

## 4000 series LED-LCD TV

75PFL4864/F7

★★★★★

**More than a smart TV, a better TV.**  
 A simpler, smarter and totally entertaining TV with built-in features to stream, watch live, and more [See all benefits](#)



Connectivity	HDMI 1	HDMI
	HDMI 2(ARC)	HDMI
	HDMI 3	HDMI
	AV1	<ul style="list-style-type: none"> <li>• Audio L/R in</li> <li>• CVBS in</li> </ul>
	Audio Output - Digital	Optical (TOSLINK)
	USB	USB
	Other connections	<ul style="list-style-type: none"> <li>• Headphone out</li> <li>• Wireless LAN 802.11ac MIMO</li> <li>• Ethernet</li> </ul>

([https://www.usa.philips.com/c-p/75PFL4864\\_F7/roku-tv-4000-series-led-lcd-tv/overview.](https://www.usa.philips.com/c-p/75PFL4864_F7/roku-tv-4000-series-led-lcd-tv/overview.))

30. For example, Funai makes and sells at least the following Magnavox-branded televisions that qualify as Accused Instrumentalities: 65MV379R/F7, 55MV379R/F7, 50MV349R/F7, 43MV349R/F7, 32MV319R/F7, 65MV378Y/F7, 55MV387Y/F7, 50MV387Y/F7, 40ME338V/F7. Below are exemplary screenshots of such Magnavox-branded televisions made and sold by Funai:

## 55" Class 4K Ultra HD Roku TV

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### DETAILS AND OPTIONS

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#### MORE INFO

- 4K Ultra HD Resolution for finely detailed images
- High Dynamic Range (HDR10)
- Simple, intuitive interface for easy navigation
- Enjoy 500,000+ movies and TV episodes
- Fast and easy search across top channels
- Free mobile app for iOS and Android
- Wireless LAN 802.11ac MIMO
- Works with voice-enabled devices featuring Google Assistant

(<https://www.magnavox.com/en/televisions/384-55mv379rf7.html>.)

## 65" Class 4K Smart Ultra HD TV

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### DETAILS AND OPTIONS

---

#### MORE INFO

- 4K Ultra HD Resolution for finely detailed images
- High Dynamic Range (HDR10) provides sharp and rich colors
- 4K Upscaling to convert any content into near 4K resolution
- Wirelessly stream apps, surf the web, and more
- Built-in Wireless 802.11ac for a truly wireless connection
- Immersive sound with clear voice designed by Sonic Emotion
- HDMI 2.0 with HDCP 2.2 on all HDMI Inputs

(<https://www.magnavox.com/en/televisions/342-65-class-4k-smart-ultra-hd-tv.html>.)

31. For example, Funai makes and sells at least the following Sanyo-branded televisions that qualify as Accused Instrumentalities: FW65R70F, FW55R70F, FW32R19F, FW55C87F. Below are exemplary screenshots of such Sanyo-branded televisions made and sold by Funai:

**FW55C87F**  
55" class Smart 4K Ultra HDTV

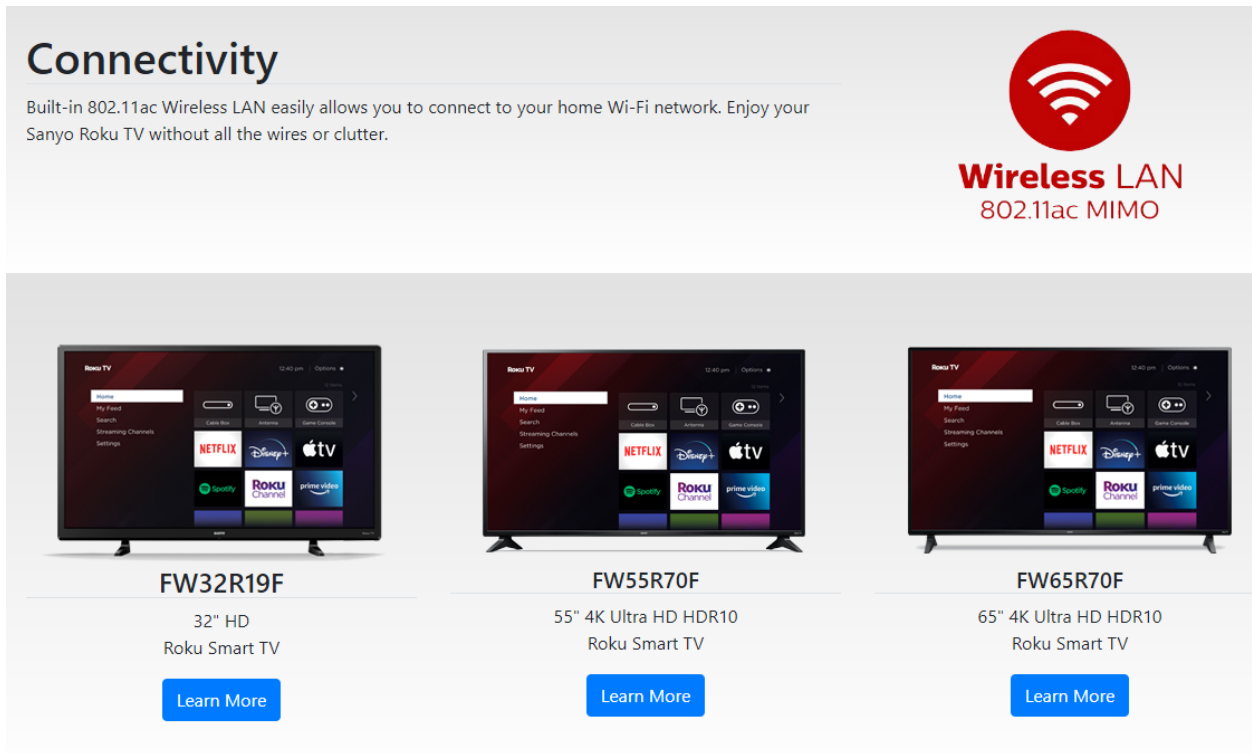
[Buy Now at Walmart >](#)



## NETWORK FEATURES

- Streaming Apps: Netflix, YouTube, Hotlist
- Dual Band Wi-Fi 802.11ac
- Wireless Screencasting

(<https://www.sanyo-av.com/us/product/product.php?id=593>.)



The screenshot shows a webpage titled "Connectivity" for Roku TVs. It features a red Wi-Fi icon and the text "Wireless LAN 802.11ac MIMO". Below this, three Roku TV models are displayed: FW32R19F (32" HD Roku Smart TV), FW55R70F (55" 4K Ultra HD HDR10 Roku Smart TV), and FW65R70F (65" 4K Ultra HD HDR10 Roku Smart TV). Each model has a "Learn More" button.

(<https://www.sanyo-av.com/us/product/roku.php>.)

32. The '434 Patent Accused Instrumentalities include any and all products that Funai has or continues to make, use, sell, import and/or provide and cause to be used that incorporate the channel sounding features of the 802.11ac standard, whether certified for 802.11ac or other versions of the 802.11 standard.

33. On information and belief, the '434 Patent Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of Funai's partners, clients, customers and end users across the country and in this District.

34. Plaintiff has been harmed by Funai's infringing activities.

**COUNT II – INFRINGEMENT OF U.S. PATENT NO. 9,848,443**

35. The allegations set forth in the foregoing paragraphs 1 through 34 are incorporated into this Second Claim for Relief.

36. On December 19, 2017, U.S. Patent No. 9,848,443 ("the '443 patent"), entitled "Method and Apparatus of Accessing Channel in Wireless Communication System," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '443 patent is attached as Exhibit C.

37. Aegis 11 holds the exclusive right to assert all causes of action arising under the '443 patent and the right to collect any remedies for infringement thereof.

38. The inventions claimed in the '443 patent relate to technologies for accessing a channel to support wideband in a wireless communication system. Such technologies are a required part of the 802.11ac standard, subsequently



incorporated into 802.11-2016. Accordingly, devices supporting the 802.11ac standard necessarily meet the claim limitations of the '443 patent.

39. The inventions claimed in the '443 patent provide many advantages over the prior art, and in particular improve the efficiency of radio resources by managing and using a wideband channel through a plurality of narrowband channels. One advantage of the patented inventions in efficiently operating a wideband VHT (Very High Throughput) system, as disclosed by the 802.11 standard, is to segment a wideband channel into a plurality of narrowband channels for efficiency. (*See Ex. C at 4:28-30.*)

40. Upon information and belief, Funai has and continues to directly infringe at least claims 1-10 of the '443 patent by making, using, selling, importing and/or providing and causing to be used 802.11ac-compliant devices (“the '443 Patent Accused Instrumentalities”), as set forth in detail in the attached preliminary and exemplary claim chart provided in Exhibit D.

41. For example, Funai affirmatively represents that it makes and sells products under the Philips, Magnavox, and Sanyo brands that qualify as Accused Instrumentalities. (*See <https://www.funai.us/our-brands/>.*)

42. For example, Funai makes and sells at least the following Philips-branded televisions that qualify as Accused Instrumentalities: 75PFL5603/F7,

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<b>Subcategory</b>	Television
<b>Hardware Version</b>	Product: 1.00.00, Wi-Fi Component: 1.00.00
<b>Firmware Version</b>	Product: 1.00.00, Wi-Fi Component: mp2_1801__20190711174239f
<b>Operating System</b>	Android, version: 9.0.0
<b>Frequency Band(s)</b>	2.4 GHz, 5 GHz

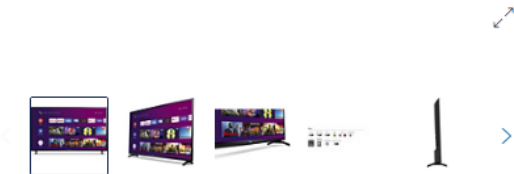
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[See all benefits >](#)

Buy this product at:




Buy from Retailers

## Connectivity

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PHILIPS | Roku TV




### Roku TV

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75PFL4864/F7

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([https://www.usa.philips.com/c-p/75PFL4864\\_F7/roku-tv-4000-series-led-lcd-tv/overview](https://www.usa.philips.com/c-p/75PFL4864_F7/roku-tv-4000-series-led-lcd-tv/overview).)

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## 55" Class 4K Ultra HD Roku TV

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- Free mobile app for iOS and Android
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## 65" Class 4K Smart Ultra HD TV

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### DETAILS AND OPTIONS

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#### MORE INFO

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(<https://www.magnavox.com/en/televisions/342-65-class-4k-smart-ultra-hd-tv.html>.)

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**FW55C87F**  
55" class Smart 4K Ultra HDTV

  **NETFLIX**   **Wireless Screencasting** 

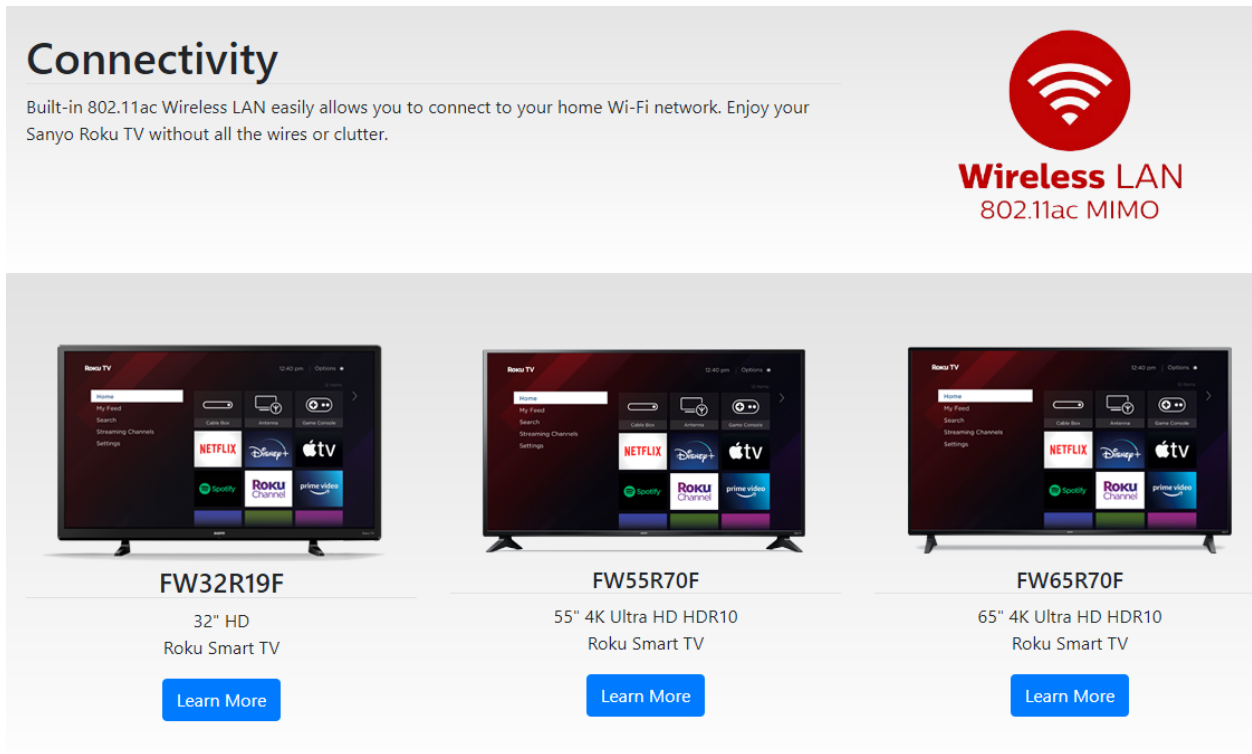
[Buy Now at Walmart >](#)



## NETWORK FEATURES

- Streaming Apps: Netflix, YouTube, Hotlist
- Dual Band Wi-Fi 802.11ac
- Wireless Screencasting

(<https://www.sanyo-av.com/us/product/product.php?id=593>.)



The screenshot shows a webpage titled "Connectivity" for Roku TVs. It features a red Wi-Fi icon and the text "Wireless LAN 802.11ac MIMO". Below this, three Roku TV models are displayed: FW32R19F (32" HD), FW55R70F (55" 4K Ultra HD HDR10), and FW65R70F (65" 4K Ultra HD HDR10). Each model has a "Learn More" button.

(<https://www.sanyo-av.com/us/product/roku.php>.)

45. The '443 Patent Accused Instrumentalities include any and all products that Funai has or continues to make, use, sell, import and/or provide and cause to be used that incorporate the wideband channel access features of the 802.11ac standard, whether certified for 802.11ac or other versions of the 802.11 standard.



46. On information and belief, the '443 Patent Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of Funai's partners, clients, customers and end users across the country and in this District.

47. Plaintiff has been harmed by Funai's infringing activities.

**COUNT III – INFRINGEMENT OF U.S. PATENT NO. 9,584,200**

48. The allegations set forth in the foregoing paragraphs 1 through 47 are incorporated into this Third Claim for Relief.

49. On February 28, 2017, U.S. Patent No. 9,584,200 ("the '200 patent"), entitled "Method for Transmitting Control Information in Multiple Antenna System," was duly and legally issued by the United States Patent and Trademark Office. A true and correct copy of the '200 patent is attached as Exhibit E.

50. Aegis 11 holds the exclusive right to assert all causes of action arising under the '200 patent and the right to collect any remedies for infringement thereof.

51. The inventions claimed in the '200 patent relate to technologies for transmitting control information in a wireless communication system, comprising dividing frequency bandwidth into ranges to which a precoding matrix index (PMI) is applied, obtaining multiple antenna information by the range to which the same PMI is applied, and transmitting the multiple antenna information. Such

technologies are a required part of the 802.11ac standard, subsequently incorporated into 802.11-2016. Accordingly, devices supporting the 802.11ac standard necessarily meet the claim limitations of the '200 patent.

52. The inventions claimed in the '200 patent provide many advantages over the prior art, and in particular improve data transmission efficiency in a wireless communication network by transmitting multiple antenna information by the unit of a range to which the same PMI is applied. (*See* Ex. E at 2:44-48.)

53. Upon information and belief, Funai has and continues to directly infringe at least claims 1, 4, 5, 6, 7, 10, 11, and 12 of the '200 patent by making, using, selling, importing and/or providing and causing to be used 802.11ac-compliant devices (“the '200 Patent Accused Instrumentalities”), as set forth in detail in the attached preliminary and exemplary claim chart provided in Exhibit F.

54. For example, Funai affirmatively represents that it makes and sells products under the Philips, Magnavox, and Sanyo brands that qualify as Accused Instrumentalities. (*See* <https://www.funai.us/our-brands/>.)

55. For example, Funai makes and sells at least the following Philips-branded televisions that qualify as Accused Instrumentalities: 75PFL5603/F7, 75PFL4864/F7, 65PFL5922/F7, 65PFL5703/F7, 65PFL5603/F7, 65PFL5602/F7, 55PFL5922/F7, 55PFL5703/F7, 55PFL5603/F7, 55PFL5602/F7, 24PFL6704,

43PFL5704, 50PFL5604, 50PFL5704, 55PFL5604, 55PFL5704, 65PFL5504, 65PFL5604, 65PFL5704, 75PFL5604, 75PFL5704. Below are exemplary screenshots of such Philips-branded televisions made and sold by Funai:



**Wi-Fi CERTIFIED™ Interoperability Certificate**

This certificate lists the features that have successfully completed Wi-Fi Alliance interoperability testing.  
Learn more: [www.wi-fi.org/certification/programs](http://www.wi-fi.org/certification/programs)



**Certification ID: WFA97188** **Page 1 of 2**

<b>Date of Last Certification</b>	March 19, 2020
<b>Company</b>	Funai Electric Co., Ltd.
<b>Product</b>	Philips Smart TV
<b>Model Number</b>	50PFL5704
<b>Product Identifier(s)</b>	F7 (SKU), F8 (SKU)
<b>Category</b>	Televisions & Set Top Boxes
<b>Subcategory</b>	Television
<b>Hardware Version</b>	Product: 1.00.00, Wi-Fi Component: 1.00.00
<b>Firmware Version</b>	Product: 1.00.00, Wi-Fi Component: mp2_1801__20190711174239f
<b>Operating System</b>	Android, version: 9.0.0
<b>Frequency Band(s)</b>	2.4 GHz, 5 GHz

**Summary of Certifications**

<b>CLASSIFICATION</b>	<b>PROGRAM</b>
Connectivity	Wi-Fi CERTIFIED™ a, b, g, n, ac
	WPA™ - Personal
	WPA2™ - Personal
Optimization	WMM®

**Wi-Fi CERTIFIED™ ac**

- 2 Spatial Streams 5 GHz
- Rx MCS 8-9 (256-QAM)
- Rx STBC 2x1
- Rx A-MPDU of A-MSDU
- Low Density Parity Check coding
- Tx SU beamformee
- Rx DL MU-MIMO
- RTS with BW Signaling

(<http://certifications.prod.wi-fi.org/pdf/certificate/public/download?cid=WFA97188>.)



## 5000 series Android TV

55PFL5604/F7

★★★★☆ 58 Reviews

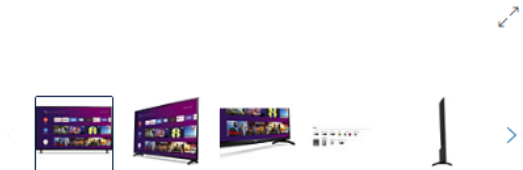
### 4K Android TV with Google Assistant

The Philips AndroidTV brings great content to you, so you can spend less time browsing and more time watching. Just pick from the personalized recommendations from Google Play, YouTube, Netflix, and other apps directly on your TV screen. [See all benefits >](#)

Buy this product at:



Buy from Retailers




## Connectivity

HDMI 1	HDMI
HDMI 2(ARC)	HDMI
HDMI 3	HDMI
AV1	<ul style="list-style-type: none"> <li>• Audio L/R in</li> <li>• CVBS in</li> </ul>
Audio Output - Digital	Optical (TOSLINK)
Other connections	<ul style="list-style-type: none"> <li>• Ethernet</li> <li>• Headphone out</li> <li>• Wireless LAN 802.11ac MIMO</li> </ul>

([https://www.usa.philips.com/c-p/55PFL5604\\_F7/5000-series-android-tv.](https://www.usa.philips.com/c-p/55PFL5604_F7/5000-series-android-tv.))

PHILIPS | Roku TV




### Roku TV

## 4000 series LED-LCD TV

75PFL4864/F7

★★★★★

**More than a smart TV, a better TV.**  
 A simpler, smarter and totally entertaining TV with built-in features to stream, watch live, and more [See all benefits](#)



Connectivity	HDMI 1	HDMI
	HDMI 2(ARC)	HDMI
	HDMI 3	HDMI
	AV1	<ul style="list-style-type: none"> <li>• Audio L/R in</li> <li>• CVBS in</li> </ul>
	Audio Output - Digital	Optical (TOSLINK)
	USB	USB
	Other connections	<ul style="list-style-type: none"> <li>• Headphone out</li> <li>• Wireless LAN 802.11ac MIMO</li> <li>• Ethernet</li> </ul>

([https://www.usa.philips.com/c-p/75PFL4864\\_F7/roku-tv-4000-series-led-lcd-tv/overview](https://www.usa.philips.com/c-p/75PFL4864_F7/roku-tv-4000-series-led-lcd-tv/overview).)

56. For example, Funai makes and sells at least the following Magnavox-branded televisions that qualify as Accused Instrumentalities: 65MV379R/F7, 55MV379R/F7, 50MV349R/F7, 43MV349R/F7, 32MV319R/F7, 65MV378Y/F7, 55MV387Y/F7, 50MV387Y/F7, 40ME338V/F7. Below are exemplary screenshots of such Magnavox-branded televisions made and sold by Funai:

## 55" Class 4K Ultra HD Roku TV

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### DETAILS AND OPTIONS

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#### MORE INFO

- 4K Ultra HD Resolution for finely detailed images
- High Dynamic Range (HDR10)
- Simple, intuitive interface for easy navigation
- Enjoy 500,000+ movies and TV episodes
- Fast and easy search across top channels
- Free mobile app for iOS and Android
- Wireless LAN 802.11ac MIMO
- Works with voice-enabled devices featuring Google Assistant

(<https://www.magnavox.com/en/televisions/384-55mv379rf7.html>.)

## 65" Class 4K Smart Ultra HD TV

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### DETAILS AND OPTIONS

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#### MORE INFO

- 4K Ultra HD Resolution for finely detailed images
- High Dynamic Range (HDR10) provides sharp and rich colors
- 4K Upscaling to convert any content into near 4K resolution
- Wirelessly stream apps, surf the web, and more
- Built-in Wireless 802.11ac for a truly wireless connection
- Immersive sound with clear voice designed by Sonic Emotion
- HDMI 2.0 with HDCP 2.2 on all HDMI Inputs

(<https://www.magnavox.com/en/televisions/342-65-class-4k-smart-ultra-hd-tv.html>.)

57. For example, Funai makes and sells at least the following Sanyo-branded televisions that qualify as Accused Instrumentalities: FW65R70F, FW55R70F, FW32R19F, FW55C87F. Below are exemplary screenshots of such Sanyo-branded televisions made and sold by Funai:

**FW55C87F**  
55" class Smart 4K Ultra HDTV

[Buy Now at Walmart >](#)

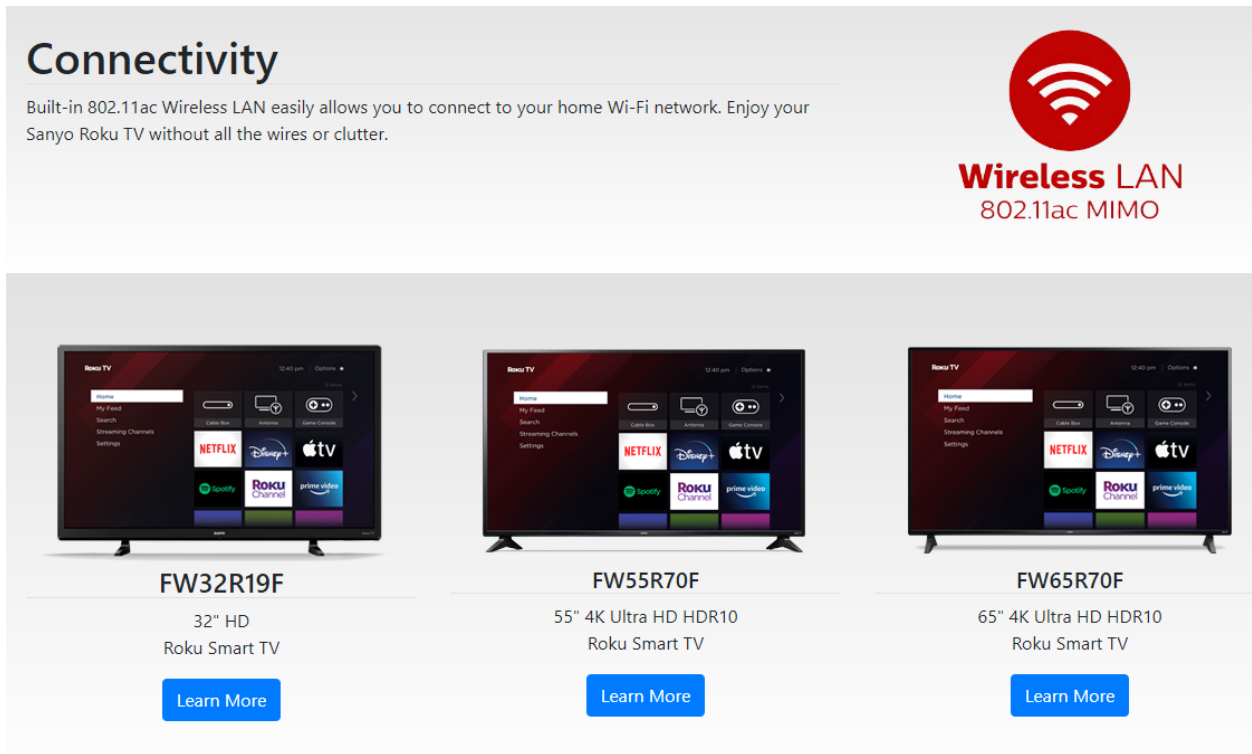




## NETWORK FEATURES

- Streaming Apps: Netflix, YouTube, Hotlist
- Dual Band Wi-Fi 802.11ac
- Wireless Screencasting

(<https://www.sanyo-av.com/us/product/product.php?id=593>.)



The screenshot shows a webpage titled "Connectivity" for Roku TVs. It features a red Wi-Fi icon and the text "Wireless LAN 802.11ac MIMO". Below this, three Roku TV models are displayed: FW32R19F (32" HD), FW55R70F (55" 4K Ultra HD HDR10), and FW65R70F (65" 4K Ultra HD HDR10). Each model has a "Learn More" button.

(<https://www.sanyo-av.com/us/product/roku.php>.)

58. The '200 Patent Accused Instrumentalities include any and all products that Funai has or continues to make, use, sell, import and/or provide and cause to be used that incorporate the wideband channel access features of the 802.11ac standard, whether certified for 802.11ac or other versions of the 802.11 standard.

59. On information and belief, the '200 Patent Accused Instrumentalities are used, marketed, provided to, and/or used by or for each of Funai's partners, clients, customers and end users across the country and in this District.

60. Plaintiff has been harmed by Funai's infringing activities.

**STATEMENT REGARDING RAND OBLIGATION**

61. Pursuant to relevant IEEE bylaws, the '434, '443, and '200 patents are subject to Reasonable and Non-Discriminatory ("RAND") licensing obligations to willing licensees.

62. To the extent Funai refuses to willingly license the '434, '443, and '200 patents under RAND terms, Plaintiff reserves the right to treat Funai as an unwilling licensee, such that Plaintiff would not be bound by any RAND licensing obligation for purposes of this action or any license to Funai. Accordingly, Plaintiff seeks the maximum available reasonable royalty damages to compensate for Funai's infringing activities.

**JURY DEMAND**

Pursuant to Rule 38 of the Federal Rules of Civil Procedure, Plaintiff demands a trial by jury on all issues triable as such.

**PRAYER FOR RELIEF**

WHEREFORE, Plaintiff demands judgment for itself and against

Defendants as follows:

A. An adjudication that Defendants have infringed the '434, '443, and '200 patents;

B. An award of damages to be paid by Defendants adequate to compensate Plaintiff for Defendants' infringement of the '434, '443, and '200 patents, and any continuing or future infringement through the date such judgment is entered, including interest, costs, expenses and an accounting of all infringing acts including, but not limited to, those acts not presented at trial;

C. A declaration that this case is exceptional under 35 U.S.C. § 285, and an award of Plaintiff's reasonable attorneys' fees; and

D. An award to Plaintiff of such further relief at law or in equity as the Court deems just and proper.

Dated: September 19, 2020

DEVLIN LAW FIRM LLC

/s/ Timothy Devlin

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