

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

COMMWORKS SOLUTIONS, LLC,

Plaintiff,

v.

AVM GmbH,

Defendant.

Civil Action No. 2:25-cv- 00026

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff CommWorks Solutions, LLC (“CommWorks” or “Plaintiff”) files this complaint against Defendant AVM GmbH (“AVM” or “Defendant”), 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:

NATURE OF THE ACTION

1. This is a patent infringement action for Defendant’s infringement of the following United States Patents (collectively, the “Asserted Patents”), issued by the United States Patent and Trademark Office (“USPTO”):

| | Patent No. | Reference |
|----|-------------------|---|
| 1. | 7,177,285 | https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7177285, https://patentcenter.uspto.gov/applications/10961959 |
| 2. | 7,463,596 | https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7463596, https://patentcenter.uspto.gov/applications/11673513 |
| 3. | 7,911,979 | https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7911979, https://patentcenter.uspto.gov/applications/12323399 |

| | Patent No. | Reference |
|----|-------------------|--|
| 4. | RE44,904 | https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/RE44904 , https://patentcenter.uspto.gov/applications/13171882 |
| 5. | 7,027,465 | https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/7027465 , https://patentcenter.uspto.gov/applications/10167986 |
| 6. | 6,891,807 | https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/6891807 , https://patentcenter.uspto.gov/applications/10341847 |

2. Plaintiff seeks monetary damages.

PARTIES

3. CommWorks is a limited liability company formed under the laws of the State of Georgia with its registered office address located in Alpharetta, Georgia (Fulton County).

4. On information and belief, Defendant AVM GmbH is a German-based corporation with a principal place of business at Alt-Moabit 95, 10559 Berlin, Germany.

5. On information and belief, Defendant has directly and/or indirectly developed, designed, manufactured, distributed, marketed, offered to sell and/or sold infringing products and services in the United States, including in the Eastern District of Texas, and otherwise direct infringing activities to this District in connection with their products and services as set forth in this Complaint.

JURISDICTION AND VENUE

6. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

7. This is an action for infringement of a United States patent 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).

8. Defendant is subject to this Court's specific and general personal jurisdiction under due process due at least to Defendant's substantial business in this judicial district, in the State of Texas and in the United States, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly transacting, doing, and/or soliciting business, engaging in other persistent courses of conduct, or deriving substantial revenue from goods and services provided to individuals in Texas and in this District.

9. Specifically, Defendant intends to do and does business in, and has committed acts of infringement in this District, in this State of Texas, and in the United States, directly, through intermediaries, by contributing to and through its inducement of third parties, and offering its products or services, including those accused of infringement here, to customers and potential customers located in this District.

10. Defendant has purposefully directed infringing activities at residents of the State of Texas, and this litigation results from those infringing activities. Defendant regularly sells (either directly or indirectly), its products within this District. Defendant is subject to this Court's specific and/or general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due to its substantial and pervasive business in this State and District, including its infringing activities alleged herein, from which Defendant derives substantial revenue from goods sold to residents and consumers.

11. Defendant sells, offers for sale, uses, makes and/or imports products that are and have been used, offered for sale, sold, and purchased in the Eastern District of Texas, and Defendant has committed acts of infringement in the Eastern District of Texas, has conducted business in the Eastern District of Texas, and/or has engaged in continuous and systematic activities in the Eastern

District of Texas.

12. Venue is proper in this District pursuant to 28 U.S.C. § 1391 because, among other things, Defendant is not a resident of the United States, and thus may be sued in any judicial district, including this one, pursuant to 28 U.S.C. § 1391(c)(3). See also *In re: HTC Corporation*, 889 F.3d 1349, 1357 (Fed. Cir. 2018) (holding that “[t]he Court’s recent decision in *TC Heartland* does not alter” the alien-venue rule).

THE ACCUSED PRODUCTS

13. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

14. Defendant uses, causes to be used, manufactures, provides, supplies, or distributes one or more AVM Systems-on-Chips (SoCs), and/or devices, including, but not limited to the “Accused Products,” set forth below:

- AVM SoCs, and/or devices supporting **Wi-Fi Multimedia and 802.11-2007+** functionality, including:
 - **FRITZ!Box 4060 AX**



Figure 1A (*FRITZ!Box4060*, AVM, available at <https://en.avm.de/products/fritzbox/fritzbox-4060/> (last visited Jan. 9, 2025)).

| MANAGEMENT FEATURES | |
|------------------------------|-----|
| Wi-Fi Multimedia (WMM)/(WME) | Yes |
| Wake-on-LAN ready | Yes |
| Intelligent Mesh technology | Yes |
| MIMO | Yes |
| MU-MIMO technology | Yes |

Figure 1B (*FRITZ!Box 4060 Edition International*, Senetic, available at <https://www.senetic.ie/product/20002952?srsId=AfmBOoo3b-dq4CzQi5CZRgO4AHQoDP6AJrSU9onUvdLdfZwYUAw9UPw5> (last visited Jan. 9, 2025)).

○ **FRITZ!Box 7590 AX**



Figure 2A (*FRITZ!Box 7590 AX*, AVM, available at <https://en.avm.de/products/fritzbox/fritzbox-7590-ax/> (last visited Jan. 9, 2025)).


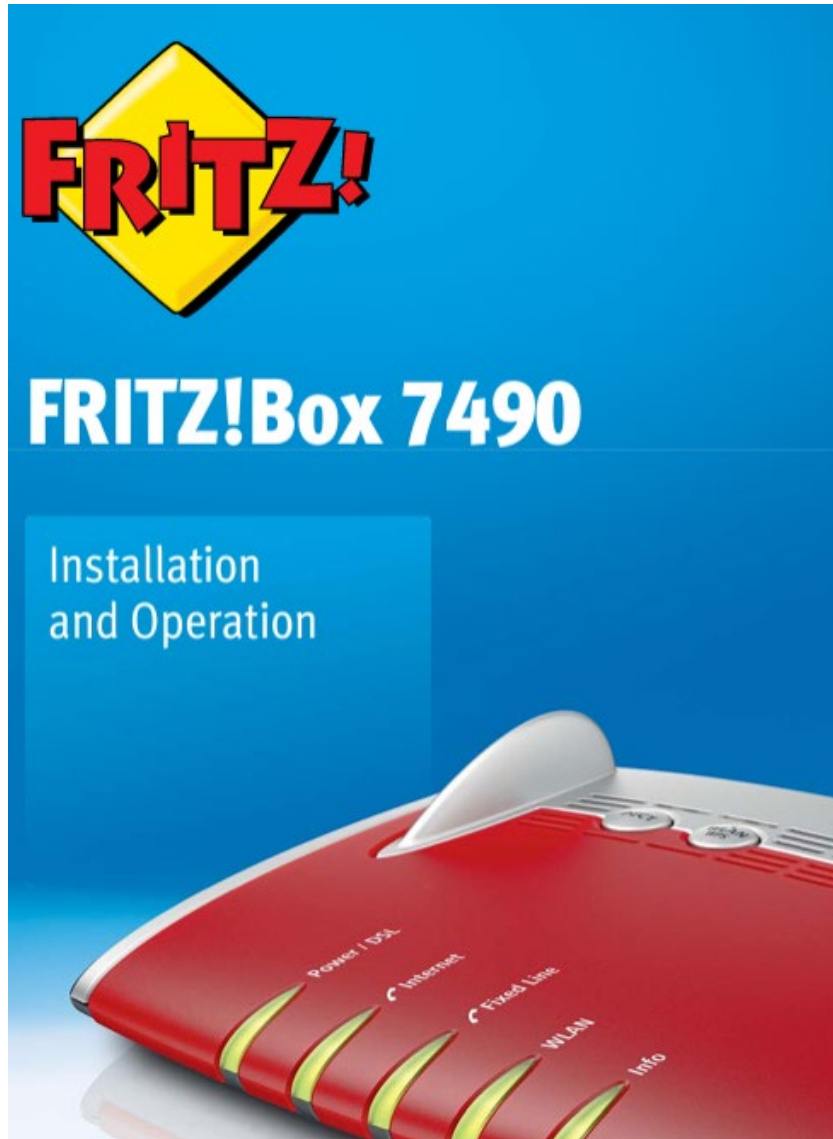
| MANAGEMENT FEATURES | |
|---|-----|
| Web-based management  | Yes |
| Wi-Fi Multimedia (WMM)/(WME) | Yes |
| Intelligent Mesh technology | Yes |
| WPS push button | Yes |
| MIMO | Yes |
| MU-MIMO technology | No |

Figure 2B (*FRITZ!Box 7590 AX Edition International*, SENETIC, available at <https://www.senetic.co.uk/product/20002999?srsId=AfmBOootTWyII2U7IepNqQG9zEunNGHqTffyExsmguJJjGghnGtLNj8Q> (last visited Jan. 9, 2025)).

○ **AVM FRITZ!Box 7490**



- **Wireless access point**

Integrated wireless access point for connecting to wireless LAN devices that use the radio standard IEEE 802.11a, IEEE 802.11b, IEEE 802.11g or IEEE 802.11n (in the 2.4- or 5-GHz frequency band) or IEEE 802-11ac

Figure 3A (*FRITZ!Box FRITZ!Box 7490: Installation and Operation*, AVM, available at <https://gzhls.at/blob/ldb/4/1/c/c/7d32f583150f9615f6c384222475870b856a.pdf> (last visited Jan. 9, 2025)).

AVM FRITZ! Box 7490 Int. Edition

Wireless Functions

- Enable/Disable Wireless Radio, WDS Bridge, WMM, Wireless Statistics

Figure 3B (AVM *FRITZ!Box 7490 Int. Edition*, MIRONET, available at <https://www.mironet.cz/avm-fritz-box-7490-int-edition-wifi-router-vdsl-24ghz-a-5-ghz-lan-usb-30+dp348785/> (last visited Jan. 9, 2025)).

○ **FRITZ!Box 7390**



AVM FRITZ!Box 7390

Brand: Fritz

4.4 ★★★★★ 2,251 ratings | Search this page

\$498⁰⁰

Get \$50 off instantly: Pay \$448.00 upon approval for Amazon Visa.

| | |
|---------------------------------|------------------------------------|
| Brand | Fritz |
| Model Name | 20002448 |
| Special Feature | WPS |
| Frequency Band Class | Dual-Band |
| Wireless Communication Standard | 802.11n, 802.11b, 802.11a, 802.11g |
| Compatible Devices | Personal Computer |
| Frequency | 2.4 GHz |
| Recommended Uses For Product | Home, Business |
| Included Components | DECT phone base station |
| Connectivity Technology | Wi-Fi |

About this item

- Features:Firewall protection, IP-routing, DHCP support, Stateful Packet Inspection (SPI), print server, MIMO technology, Wi-Fi Multimedia (WMM) support, built-in DECT phone base station, DHCP server
- Encryption Algorithm:128-bit WEP, 64-bit WEP, WPA, WPA2
- Connectivity Technology:Wireless, wired
- Enclosure Type:Desktop
- Compliant Standards:IEEE 802.11b, IEEE 802.11a, IEEE 802.11g, IEEE 802.11n, UPnP

Figure 4 (AVM FRITZ!Box 7390, AMAZON, available at <https://www.amazon.com/AVM-20002448-FRITZ-Box-7390/dp/B003108AZ> (last visited Jan. 9, 2025)).

- AVM devices supporting **Wi-Fi Protected Setup (WPS)** functionality, including:
 - **AVM Fritz!Box 5590 Fiber**

AVM Fritz!Box 5590 Fiber (Wi-Fi 6 Glasfasermodem (WLAN AX), bis 2.400 MBit/s (5 GHz) und 1.200 MBit/s (2,4 GHz), WLAN Mesh, DECT-Basis, 2,5-Gigabit-Port, weiß, geeignet für Deutschland)

Brand: AVM

4.7 ★★★★★ 1,924 ratings | Search this page

\$512⁹⁰

Get \$50 off instantly: Pay \$462.90 upon approval for Amazon Visa.

| | |
|-------------------------------------|---|
| Brand | AVM |
| Model Name | FRITZ!Box 5590 Fiber |
| Special Feature | WPS |
| Frequency Band Class | Dual-Band |
| Wireless | DECT |
| Communication Standard | |
| Compatible Devices | Tablet, Smart Television, Smartphone |
| Frequency | 5 GHz |
| Recommended Uses For Product | Home, Business |
| Included Components | FRITZ!Box 5590 Fiber, 1x FRITZ!SFP AON, 1x FRITZ!SFP GPON, 1x Power Supply, 4m Fibre Optic Cable (LC/APC - LC/APC), 1.5m LAN Cable, Installation Instructions (English language not guaranteed) |
| Connectivity Technology | Wi-Fi |

Figure 5 (AVM Fritz!Box 5590 Fiber, AMAZON, available at https://www.amazon.com/Glasfasermodem-DECT-Basis-5-Gigabit-Port-geeignet-Deutschland/dp/B09ZD4LFR3/ref=sr_1_10?crid=3W3UIVJHIW9C5&dib=eyJ2IjojMSJ9.iuH2YXd3xM3NduzzIdedv3-3A-0ewdcgcLZa7fkk2PBVPKi2JpCCpVdR2mMETbnzZt4mobUeAznUvf3BU5hNBWzWG9wl3a82TUJBsjPP8o0K5Znq8jtSfSkKiy9RWqulPtTdpalwVrM4fXSNilbgSeTGtrhYw0OSOas4107XADPXsdwsgb2D5eqbYRsTwD8Kn26ZJ463UbXM6oPx8V68TpwCUgFva0QbKv186nBCJrM.rwnJwLGww2mV8VAZh6wenIc2Fyuwpx3iXNJldjoqds&dib_tag=se&keywords=avm+fritz&qid=1728552348&prefix=avm+fritz%2Caps%2C413&sr=8-10 (last visited Jan. 9, 2025)).

○ **AVM FRITZ!Box 7390**

AVM FRITZ!Box 7390

Brand: Fritz

4.4 ★★★★★ 2,251 ratings | Search this page

\$498⁰⁰

Get \$50 off instantly: Pay \$448.00 upon approval for Amazon Visa.

| | |
|---------------------------------|------------------------------------|
| Brand | Fritz |
| Model Name | 20002448 |
| Special Feature | WPS |
| Frequency Band Class | Dual-Band |
| Wireless Communication Standard | 802.11n, 802.11b, 802.11a, 802.11g |
| Compatible Devices | Personal Computer |
| Frequency | 2.4 GHz |
| Recommended Uses For Product | Home, Business |
| Included Components | DECT phone base station |
| Connectivity Technology | Wi-Fi |

Figure 6 (*AVM FRITZ!Box 7390*, AMAZON, available at https://www.amazon.com/AVM-20002448-FRITZ-Box-7390/dp/B003108AZI/ref=sr_1_1?crid=3W3UIVJHIW9C5&dib=eyJ2IjoiMSJ9.iuH2YXd3xM3NduzzIdedv3-3A-0ewdcgcLZa7fkk2PBVPKi2JpCCpVdR2mMETbnzlKQBFcSezFAj8RKW2Ar2Nscp6iYg2XqQsbhMhNQRoDoK5Znq8jtSfSkKiy9RWqulPtTdpalwVrM4fXSNilbgSeTGtrhYw0OSOas4107XADPXsdwsgb2D5eqbYRsTwD8Kn26ZJ463UbXM6oPx8V68TpwCUgFva0QbKv186nBCJrM.iZ4m7X5v_K-x_10pP6mrgxNrUx6H15R6My_3-086YuY&dib_tag=se&keywords=avm+fritz&qid=1728551060&sprefix=avm+fritz%2Caps%2C413&sr=8-1, (last visited Jan. 9, 2025)).

○ **AVM Fritz!Mesh Set 7530AX Repeater AX 1200**

AVM Fritz!Mesh Set 7530AX Repeater AX 1200

Brand: AVM

4.6 ★★★★★  56 ratings | Search this page

\$484⁵⁸

Get \$50 off instantly: Pay \$434.58 upon approval for Amazon Visa.

| | |
|---------------------------------|---|
| Brand | AVM |
| Special Feature | WPS |
| Frequency Band Class | Dual-Band |
| Wireless Communication Standard | 802.11ax |
| Compatible Devices | Laptop, Personal Computer, Tablet, Smart Television |
| Frequency | 5 GHz |
| Recommended Uses For Product | Home, Business |
| Included Components | 1 package |
| Connectivity Technology | Ethernet |
| Color | Black |

Figure 7 (AVM Fritz!Mesh Set 7530AX Repeater AX 1200, AMAZON, available at https://www.amazon.com/Fritz-Mesh-7530AX-Repeater-1200/dp/B0CW21RNKT/ref=sr_1_4?crd=3W3UIVJHIW9C5&dib=eyJ2IjoiMSJ9.iuH2YXd3xM3NduzzIdedv3-3A-0ewdcgcLZa7fkk2PBVPKi2JpCCpVdR2mMETbnzZt4mobUeAznUvf3BU5hNBWzWG9wl3a82TUJBSjPP8o0K5Znq8jtSfSkKiy9RWqulPtTdpalwVrM4fXSNilbgSeTGtrhYw0OSOas4107XADPXsdwsgb2D5eqbYRsTwD8Kn26ZJ463UbXM6oPx8V68TpwCUgFva0QbKv186nBCJrM.rwnJwLGww2mV8VAZh6wenIc2Fyuwpx3iXNJqldjoqds&dib_tag=se&keywords=avm+fritz&qid=1728552348&srefix=avm+fritz%2Caps%2C413&sr=8-4 (last visited Jan. 9, 2025)).

○ FRITZ!Powerline 1260 WLAN Set

AVM Fritz!Powerline 1260E WLAN Set Edit, 20002819 (Set Edit)

Brand: AVM

4.4 ★★★★★ 955 ratings | [Search this page](#)

\$391⁰⁰

30-day refund/replacement

| | |
|---------------------------|--------------------------|
| Brand | AVM |
| Data Link Protocol | Ethernet |
| Data Transfer Rate | 1200 Megabits Per Second |
| Item Weight | 200 Grams |
| Manufacturer | AVM |

Figure 8A (*AVM Fritz!Powerline 1260E WLAN Set Edit*, AMAZON, available at https://www.amazon.com/Fritz-Powerline-1260E-WLAN-20002819/dp/B076J16J87/ref=sr_1_1?crd=2SZFE2ZM969TK&dib=eyJ2IjojMSJ9.uDnYDL2JzvGWHy6Z5OtU2A.hK1PkwjKcDwuMkhQiJqqBuEEcwYVTsGEZMDnu107GMw&dib_tag=s&keywords=FRITZ%21Powerline+1260&qid=1728555201&srefix=fritz+powerline+1260+%2Caps%2C689&sr=8-1 (last visited Jan. 9, 2025)).

- Compatible with powerline adapters supporting rates of 1200, 600, 500 and 200 Mbit/s and the IEEE P1901 and HomePlug AV2 standards, coexistence with older powerline adapters
- Supports the IPv6 web protocol
- Status display with 3 LEDs
- Convenient multifunctional button to connect powerline securely and enable wireless devices to connect via WPS
- Own web-based user interface for easy configuration, operation and maintenance
- Optimum FRITZ!Box integration including secure access to the user interface and central update function (FRITZ!OS 6.35 or higher)
- Expanded functions with the FRITZ!Powerline software for Windows 10, 8, 7, Vista and XP

Figure 8B (*FRITZ!Powerline 1260E WLAN Set*, AVM, available at <https://en.avm.de/products/mesh-wi-fi/fritzpowerline-1260-wlan-set/technical-specifications/> (last visited Jan. 9, 2025)).

○ Router Fritz 6890 LTE

ROUTER FRITZ 6890 LTE AC1800 MU-MIMO GIGABIT DUAL BAND

Brand: AVM

4.3 ★★★★★ 346 ratings | Search this page

\$410⁸⁶

30-day refund/replacement

| | |
|--|--|
| Brand | AVM |
| Special Feature | WPS |
| Frequency Band Class | Dual-Band |
| Wireless Communication Standard | 802.11n, 802.11b, 802.11a, 802.11ac, 802.11g |
| Compatible Devices | Personal Computer |
| Frequency | 5 GHz |
| Recommended Uses For Product | Home |
| Connectivity Technology | Wi-Fi |
| Item Weight | 0.57 Kilograms |
| Security Protocol | WPS, WPA2-PSK |

Figure 9A (Router FRITZ 6890 LTE AC1800 MU-MIMO GIGABIT DUAL BAND, AMAZON, available at https://www.amazon.com/ROUTER-FRITZ-AC1800-MU-MIMO-GIGABIT/dp/B077Z481SC/ref=sr_1_19?crd=3W3UIVJHIW9C5&dib=eyJ2IjojMSJ9.iuH2YXd3xM3Nduzzldedv3-3A-0ewdcgcLZa7fkk2PBVPKi2JpCCpVdR2mMETbnzZt4mobUeAznUvf3BU5hNBWzWG9wl3a82TUJBSjPP8o0K5Znq8jtSfSkKiy9RWqulPtTdpalwVrM4fXSNilbgSeTGtrhYw0OSOas4107XADPXsdwsgb2D5eqbYRsTwD8Kn26ZJ463UbXM6oPx8V68TpwCUgFva0QbKv186nBCJrM.rwnJwLGww2mV8VAZh6wenlc2Fyuwpx3iXNJqldjoqds&dib_tag=se&keywords=avm+fritz&qid=1728552348&prefix=avm+fritz%2Caps%2C413&sr=8-19 (last visited Jan. 9, 2025)).



- Wi-Fi Protected Setup (WPS) for safe Wi-Fi connections at the touch of a button or by entering a PIN
- Wi-Fi guest access – secure surfing for friends and visitors
- Wi-Fi network range extended via repeater function
- Wi-Fi auto channel: Automated search for Wi-Fi channel free of interference
- Green AP mode for optimum performance at minimum power consumption

Figure 9B (*FRITZ!Box 6890 LTE*, AVM, available at <https://en.avm.de/products/fritzbox/fritzbox-6890-lte/> (last visited Jan. 9, 2025)).

○ **AVM FRITZ!Box 2170**

AVM FRITZ!Box 2170 - Router - DSL

Brand: Fritz

3.7 ★★☆☆☆ ▾ 50 ratings | [Search this page](#)

| | |
|--------------------------------|-------------------------|
| Brand | Fritz |
| Special Feature | WPS |
| Frequency Band Class | Single-Band |
| Compatible Devices | Personal Computer |
| Connectivity Technology | Wired, Ethernet |
| Item Weight | 0.63 Grams |
| Security Protocol | WPS |
| Number of Ports | 4 |
| Control Method | Touch |
| Data Transfer Rate | 0.1 Gigabits Per Second |

Figure 10 (AVM FRITZ!Box 2170 – Router - DSL, AMAZON, available at https://www.amazon.com/AVM-20002366-FRITZ-Box-2170/dp/B000MQQTKM/ref=sr_1_20?crd=3W3UIVJHIW9C5&dib=eyJ2IjoiMSJ9.TBbH7yH_s0Jaf_buP8jWAzcBmKNq6FCEptlVQJbfe47GjHj071QN20LucGBJIeps.mbCglVV8QPoU1TEGYbTdgNIe1PO2zzROZGUUz2IcRdY&dib_tag=se&keywords=avm+fritz&qid=1728555692&sprefix=avm+fritz%2Caps%2C413&sr=8-20 (last visited Jan. 9, 2025)).

○ **AVM FRITZ!Box 7330**

AVM FRITZ!Box 7330

Brand: Fritz

4.3 ★★★★★ ✓ 600 ratings | [Search this page](#)

| | |
|--|---------------------------|
| Brand | Fritz |
| Special Feature | WPS |
| Wireless Communication Standard | 802.11n, 802.11b, 802.11g |
| Compatible Devices | Personal Computer |
| Frequency | 2.4 GHz |
| Recommended Uses For Product | Home |
| Connectivity Technology | Wireless, Wired |
| Item Weight | 1.8 Pounds |
| Number of Ports | 2 |
| Control Method | App |

Figure 11 (*AVM FRITZ!Box 7330*, AMAZON, available at https://www.amazon.com/AVM-20002510-FRITZ-Box-7330/dp/B005BCYNGY/ref=sr_1_17?crd=3W3UIVJHIW9C5&dib=eyJ2IjoiMSJ9.ZahHZGgtI4J0wrp9zKyBmoSAbGH8IHauHHroEzka_QGmGPQK_W73uvs6fq7V9h2LCLnl8TrE_OMegNI16coc14PKEdoT-iDnWcSLvAdM_ioBkqIzEzpRNkWKh-bBYtTK60IszxHy2NH6hKTL3a1A2oG-LRoZmo8aaPY_WQ_qHfr7r2qPBrYz6-7vsP3Phi3u.8IB29hXQeKmWtbvfoCujLzmMI8RqSdDAGiezQd9YThI&dib_tag=se&keywords=avm+fritz&qid=1728555692&sprefix=avm+fritz%2Caps%2C413&sr=8-17 (last visited Jan. 9, 2025)).

○ **FRITZ!Box Fon WLAN 7170**

FRITZ!Box Fon WLAN 7170 - Wireless Router - DSL

Brand: Fritz

4.1 ★★★★★ 218 ratings | Search this page

| | |
|--|-------------------|
| Brand | Fritz |
| Special Feature | WPS |
| Frequency Band Class | Single-Band |
| Wireless Communication Standard | 802.11b, 802.11g |
| Compatible Devices | Personal Computer |
| Recommended Uses For Product | Home |
| Connectivity Technology | wireless |
| Antenna Type | Internal |
| Item Weight | 897 Grams |
| Security Protocol | [POSSIBLY] WEP |

Figure 12 (*FRITZ!Box Fon WLAN 7170 – Wireless Router - DSL*, AMAZON, available at https://www.amazon.com/AVM-FRITZ-Box-WLAN-7170/dp/B000MQUCXW/ref=sr_1_24?crid=3W3UIVJHIW9C5&dib=eyJ2IjoiMSJ9.ZahHZGgtI4J0wrp9zKyBmoSAbGH8IHauHHroEzka_QGmGPQK_W73uvs6fq7V9h2LCLnl8TrE_OMeg_NI16coc14PKEdoT-iDnWcSLvAdM_ioBkqIzEzpRNkWKh-bBYtTK60IszxHy2NH6hKTL3a1A2oG-LRoZmo8aaPY_WQ_qHfr7r2qPBrYz6-7vsP3Phi3u.8IB29hXQeKmWtbvfoCujLzmMI8RqSdDAGiezQd9YThI&dib_tag=se&keywords=avm+fritz&qid=1728555692&sprefix=avm+fritz%2Caps%2C413&sr=8-24 (last visited Jan. 9, 2025)).

○ **FRITZ!Box 7490**



Button Functions

"WLAN" Button

- Switch wireless LAN of the FRITZ!Box on and off
- Establish a wireless LAN connection using WPS, see [Establishing a Wireless LAN Connection Using WPS](#) from page 28

Figure 13 (*FRITZ!Box 7490: Installation and Operation*, AVM, available at <https://gzhls.at/blob/ldb/4/1/c/c/7d32f583150f9615f6c384222475870b856a.pdf> (last visited Jan. 9, 2025)).

- **FRITZ! Repeater 3000 AX**



Easy to install thanks to WPS

The FRITZ!Repeater 3000 AX supports uncomplicated, automatic registration using the Wi-Fi Protected Setup (WPS) standard. A touch of a button is all it takes: Repeaters and WPS-enabled routers, such as FRITZ!Box, then connect automatically. The FRITZ!Repeater adopts the Wi-Fi settings and is ready for use immediately.

Figure 14 (*FRITZ!Repeater 3000 AX*, AVM, available at <https://en.avm.de/products/mesh-wi-fi/fritzrepeater-3000-ax> (last visited Jan. 9, 2025)).

- **FRITZ! Repeater 2400**



Easy to install thanks to WPS

The FRITZ!Repeater 2400 supports uncomplicated, automatic registration using the Wi-Fi Protected Setup (WPS) standard. Configuration is completed with the touch of a button: Repeaters and WPS-enabled routers, such as the FRITZ!Box, then connect automatically. The FRITZ!Repeater adopts the appropriate Wi-Fi settings and is ready for use immediately.

Figure 15 (*FRITZ!Repeater 2400*, AVM, available at <https://en.avm.de/products/mesh-wi-fi/fritzrepeater-2400/> (last visited Jan. 9, 2025)).

- **FRITZ! Repeater 1200 AX**



Connect and go

Setting up the FRITZ!Repeater 1200 AX is super easy: plug it in, press the button and the FRITZ!Repeater and FRITZ!Box or a WPS-enabled router connect automatically. The FRITZ!Repeater adopts the Wi-Fi settings and is ready for use immediately. The FRITZ!App Wi-Fi helps you find the ideal position for your FRITZ!Repeater.

Figure 16 (*FRITZ!Repeater 1200 AX*, AVM, available at <https://en.avm.de/products/mesh-wi-fi/fritzrepeater-1200-ax/> (last visited Jan. 9, 2025)).

- **FRITZ! Repeater 600**



Easy to install thanks to WPS

The FRITZ!Repeater 600 supports uncomplicated, automatic registration using the Wi-Fi Protected Setup (WPS) standard. Configuration is completed with the touch of a button: Repeaters and WPS-enabled routers, such as the FRITZ!Box, then connect automatically. The FRITZ!Repeater adopts the appropriate Wi-Fi settings and is ready for use immediately.

Figure 17 (*FRITZ!Repeater 600*, AVM, available at <https://en.avm.de/products/mesh-wi-fi/fritzrepeater-600/> (last visited Jan. 9, 2025)).

- **FRITZ!WLAN Stick AC 860**



Easy to install

The FRITZ!WLAN Stick also supports WPS for automatically secure radio connections to wireless devices from other manufacturers. After plugging the FRITZ!WLAN Stick AC 860 into a computer's USB port it automatically installs itself.

Figure 18 (*FRITZ!WLAN Stick AC 860*, AVM, available at <https://en.avm.de/products/mesh-wi-fi/fritz wlan-stick-ac-860/> (last visited Jan. 9, 2025)).

- **FRITZ!WLAN Stick AC 430 MU-MIMO**



Easy to install

The FRITZ!WLAN Stick also supports WPS for an automatically secure Wi-Fi connection, even with wireless devices from other manufacturers. Once inserted into the computer's USB port, the FRITZ!WLAN Stick AC 430 installs itself – so there's no need for a driver CD.

Figure 19 (*FRITZ!WLAN Stick AC 430 MU-MIMO*, AVM, available at <https://en.avm.de/products/mesh-wi-fi/fritz wlan-stick-ac-430-mu-mimo/> (last visited Jan. 9, 2025)).

○ **FRITZ!Box 4060**



Figure 20A (FRITZ!Box 4060, AVM, available at <https://en.avm.de/products/fritzbox/fritzbox-4060/> (last visited Jan. 9, 2025)).

- Simple, convenient connection setup at the touch of a button
- Wi-Fi Protected Setup (WPS)
- Wi-Fi guest access – secure surfing for friends and visitors
- Repeater function extends Wi-Fi network range
- Wi-Fi auto channel: Automated search for Wi-Fi channel free of interference
- Wi-Fi Eco for optimum performance at minimum power consumption

Figure 20B (FRITZ!Box 4060, AVM, available at <https://en.avm.de/products/fritzbox/fritzbox-4060/technical-specifications/> (last visited Jan. 9, 2025)).

○ **FRITZ!Mesh Set 4060 + 3000 AX**



Figure 21A (*FRITZ!Mesh Set 4060 + 3000 AX*, AVM, available at <https://en.avm.de/products/fritzbox/fritz-mesh-set-4060-3000-ax/> (last visited Jan. 9, 2025)).

Technical specifications

- Simple, convenient connection setup at the touch of a button
- Wi-Fi Protected Setup (WPS)
- Wi-Fi guest access – secure surfing for friends and visitors
- Repeater function extends Wi-Fi network range
- Wi-Fi auto channel: Automated search for Wi-Fi channel free of interference
- Wi-Fi Eco for optimum performance at minimum power consumption

Figure 21B (*FRITZ!Mesh Set 4060 + 3000 AX*, AVM, available at <https://en.avm.de/products/fritzbox/fritz-mesh-set-4060-3000-ax/technical-specifications/> (last visited Jan. 9, 2025)).

- **FRITZ!DECT 500**



Easy to set up

In just a few minutes you'll have the FRITZ! DECT 500 integrated in your home network: Simply press the DECT or Connect/WPS button on your FRITZ!Box and the FRITZ!DECT 500 is automatically connected. The LED light is securely integrated in the home network via the DECT ULE wireless communication standard.

Figure 22 (*FRITZ!Dect 500*, AVM, available at <https://en.avm.de/products/smart-home/fritzdect-500/> (last visited Jan. 9, 2025)).

- **FRITZ!App**



With FRITZ!App Wi-Fi, connecting your Android device to the FRITZ!Box is super easy. The scannable QR code or WPS mean there's no need to type in any long passwords or search for the right Wi-Fi network.

Figure 23 (*FRITZ!App Wi-Fi*, AVM, available at <https://en.avm.de/products/apps/fritzapp-wi-fi/> (last visited Jan. 9, 2025)).

○ **FRITZ!Box 6690 Cable**



Figure 24A (*FRITZ!Box 6690 Cable*, AVM, available at <https://en.avm.de/products/fritzbox/fritzbox-6690-cable/> (last visited Jan. 9, 2025)).

- AVM Stick & Surf: automatic security for cable-free surfing
- Wi-Fi Protected Setup (WPS)
- Wi-Fi guest access – secure surfing for friends and visitors
- Wi-Fi auto channel: Automated search for Wi-Fi channel free of interference
- Wi-Fi Eco for optimum performance at minimum power consumption
- Integrates iPhones and Android smartphones into the home network via Wi-Fi

Figure 24B (*FRITZ!Box 6690 Cable*, AVM, available at <https://en.avm.de/products/fritzbox/fritzbox-6690-cable/technical-specifications/> (last visited Jan. 9, 2025)).

○ **FRITZ!Repeater 6000**



Figure 25A (FRITZ!Repeater 6000, AVM, available at <https://en.avm.de/products/mesh-wi-fi/fritzrepeater-6000/> (last visited Jan. 9, 2025)).

Features

- Can also be connected to a router via network cable (LAN bridge)
- Secure upon delivery with WPA2 encryption, WPA3/2 transition mode is also available
- Compatible with all common wireless routers
- Simple, secure configuration at the touch of a button (WPS method)
- Display shows connection quality and status
- Supports the IPv6 internet protocol

Figure 25B (FRITZ!Repeater 6000, AVM, available at <https://en.avm.de/products/mesh-wi-fi/fritzrepeater-6000/technical-specifications/> (last visited Jan. 9, 2025)).

15. On information and belief, Defendant provides information and assistance to their

customers to enable them to use the Accused Products in an infringing manner as described below.

16. For these reasons and the additional reasons detailed below, the Accused Products practice at least one claim of each of the Asserted Patents.

17. By letter dated February 2, 2022, addressed to Johannes Nill, Chief Executive Officer of AVM GmbH (the “Notice Letter”), Defendant received notice of its infringement of CommWorks’ patents, including the Asserted Patents.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 7,177,285

18. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

19. The USPTO duly issued U.S. Patent No. 7,177,285 (the “’285 patent”) on February 13, 2007, after full and fair examination of Application No. 10/961,959 which was filed October 8, 2004. The ’285 patent is entitled “Time Based Wireless Access Provisioning.”

20. CommWorks owns all substantial rights, interest, and title in and to the ’285 patent, including the sole and exclusive right to prosecute this action and enforce the ’285 patent against infringers and to collect damages for all relevant times.

21. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the ’285 patent.

22. The claims of the ’285 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems. The written description of the ’285 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how

the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

23. For example, at the time of the invention, wireless access to data networks was not yet conventional. Then existent systems for provisioning access to a network were impractical, such as for wireless devices which lacked a user interface configured for communicating provisioning information, or for simple home-based intranets, such as a wireless picture frame device lacking a control interface to read or extract identification information, such as a MAC address, to facilitate wireless access provisioning. '285 patent at col. 3:13-26. Further, wireless devices that did have a dedicated user interface were incapable of, or cumbersome in, communicating device identification and exchanging provisioning information, still requiring a user to be technically proficient to properly initiate and complete a provisioning process. *Id.* at col. 3:27-36.

24. The invention of the '285 patent improved upon existent network provisioning systems by enabling provisioning without requiring a user interface for the initiation of a provisioning process—"a major technological advance." *Id.* at col. 3:37-41. The invention of the '285 patent further improved upon existent provisioning systems by providing a wireless access provisioning structure and process with minimal device requirements and/or user proficiency, whereby a wireless device is readily provisioned by the provisioning system, and whereby other unauthorized devices within an access region are prevented from being provisioned by the provisioning system. *Id.* at col. 3:42-49. The invention of the '285 patent further improved upon existent provisioning systems by providing a time-based wireless access provisioning system integrated with easily monitored parameters of a wireless device, such as the time monitoring of power on and/or start of signal transmission, for provisioning secure encrypted communication. *Id.* at col. 3:50-58.

Moreover, the structure of the devices described in the '285 patent was not conventional at the time of the invention. Specifically, a device such as an access point, comprising a provisioning activation button, time-based provisioning logic, access control list, wired network logic, a wired network connection and a transceiver were not conventional (or even available) at the time of the invention.

25. Defendant has directly infringed the '285 patent by making, using, offering to sell, selling, and/or importing the Accused Products identified above.

26. Defendant has directly infringed, either literally or under the doctrine of equivalents, at least claim 1 of the '285 patent, as detailed in Exhibit A to this Complaint (Evidence of Use Regarding U.S. Patent No. 7,177,285).

27. On information and belief, Defendant has infringed the '285 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing into the United States Wi-Fi Protected Setup ("WPS") compatible devices, such as, for example, the AVM FRITZ!Box 5590 Fiber (included in the "Accused Products").

28. For example, Defendant has infringed at least claim 1 of the '285 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which perform a process for provisioning between a wireless device and a network. *See* Exhibit A. The process for provisioning comprises the step of tracking an operating parameter of the wireless device within a service area, wherein the operating parameter of the wireless device comprises an onset of a signal transmission of the wireless device. *Id.* The process for provisioning further comprises the step of initiating provisioning of the wireless device if the tracked operating parameter occurs within a time interval. *Id.*

29. From February of 2022 to the expiry of the '285 patent, Defendant had also indirectly infringed the '285 patent by inducing others to directly infringe the '285 patent. Defendant had induced distributors and end-users, including, but not limited to, Defendant's employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the '285 patent by providing or requiring use of the Accused Products. Defendant had taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringed one or more claims of the '285 patent, including, for example, claim 1 of the '285 patent. Such steps by Defendant included, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant had performed these steps, which constitute induced infringement with the knowledge of the '285 patent and with the knowledge that the induced acts constitute infringement. Defendant had been aware that the normal and customary use of the Accused Products by others would infringe the '285 patent.

30. From February of 2022 to the expiry of the '285 patent, Defendant had also indirectly infringed by contributing to the infringement of the '285 patent. Defendant had contributed to the direct infringement of the '285 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that were specially designed to be used in an infringing way and that have no substantial uses other than ones that infringed one or more claims of the '285 patent, including, for example, claim 1 of the '285 patent. The special features constituted a material part of the invention of one or more of the claims of the '285 patent and were not staple articles of commerce suitable for substantial non-infringing use.

31. Defendant had knowledge of the '285 patent when it received the Notice Letter in February of 2022.

32. Furthermore, on information and belief, Defendant 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 CommWorks' patent rights.

33. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

34. Defendant's direct infringement of one or more claims of the '285 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

35. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that 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.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 7,463,596

36. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

37. The USPTO duly issued U.S. Patent No. 7,463,596 (the "'596 patent") on December 9, 2008, after full and fair examination of Application No. 11/673,513, which was filed on February 9, 2007. The '596 patent is entitled "Time Based Wireless Access Provisioning."

38. CommWorks owns all substantial rights, interest, and title in and to the '596 patent, including the sole and exclusive right to prosecute this action and enforce the '596 patent against infringers and to collect damages for all relevant times.

39. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '596 patent.

40. The claims of the '596 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

41. The written description of the '596 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

42. For example, at the time of the invention, wireless access to data networks was not yet conventional. Then existent systems for provisioning access to a network were impractical, such as for wireless devices which lacked a user interface configured for communicating provisioning information, or for simple home-based intranets, such as a wireless picture frame device lacking a control interface to read or extract identification information, such as a MAC address, to facilitate wireless access provisioning. '596 patent at col. 3:13-26. Further, wireless devices that did have a dedicated user interface were incapable of, or cumbersome in, communicating device identification and exchanging provisioning information, still requiring a user to be technically proficient to properly initiate and complete a provisioning process. *Id.* at col. 3:27-36.

43. The invention of the '596 patent improved upon existent network provisioning systems by enabling provisioning without requiring a user interface for the initiation of a provisioning

process—“a major technological advance.” *Id.* at col. 3:37-41. The invention of the ’596 patent further improved upon existent provisioning systems by providing a wireless access provisioning structure and process with minimal device requirements and/or user proficiency, whereby a wireless device is readily provisioned by the provisioning system, and whereby other unauthorized devices within an access region are prevented from being provisioned by the provisioning system. *Id.* at col. 3:42-49. The invention of the ’596 patent further improved upon existent provisioning systems by providing a time-based wireless access provisioning system integrated with easily monitored parameters of a wireless device, such as the time monitoring of power on and/or start of signal transmission, for provisioning secure encrypted communication. *Id.* at col. 3:50-58. Moreover, the structure of the devices described in the ’596 patent was not conventional at the time of the invention. Specifically, a device such as an access point, comprising a provisioning activation button, time-based provisioning logic, access control list, wired network logic, a wired network connection and a transceiver were not conventional (or even available) at the time of the invention.

44. Defendant has directly infringed the ’596 patent by making, using, offering to sell, selling, and/or importing the Accused Products identified above.

45. Defendant has directly infringed, either literally or under the doctrine of equivalents, at least claim 1 of the ’596 patent, as detailed in **Exhibit B** to this Complaint (Evidence of Use Regarding U.S. Patent No. 7,463,596).

46. On information and belief, Defendant has infringed the ’596 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing into the United States Wi-Fi Protected Setup (“WPS”) compatible

devices, such as, for example, the AVM FRITZ!Box 5590 Fiber (included in the “Accused Products”).

47. For example, Defendant, using the Accused Products, has infringed at least claim 1 of the ’596 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which perform a process for associating devices. *See Exhibit B.* The process for associating devices comprises the step of tracking an operating parameter of a first device, wherein the operating parameter of the first device comprises any of a power on of the first device, and an onset of a signal transmission of the first device. *Id.* The process for associating devices further comprises the step of automatically associating the first device with at least one other device if the tracked operating parameter occurs within a time interval. *Id.*

48. From February of 2022 to the expiry of the ’596 patent, Defendant had also indirectly infringed the ’596 patent by inducing others to directly infringe the ’596 patent. Defendant had induced distributors and end-users, including, but not limited to, Defendant’s employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the ’596 patent by providing or requiring use of the Accused Products. Defendant had taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringed one or more claims of the ’596 patent, including, for example, claim 1 of the ’596 patent. Such steps by Defendant included, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant had performed these steps, which constitute induced infringement with the knowledge of the ’596 patent and with the knowledge that the induced acts constitute infringement.

Defendant had been aware that the normal and customary use of the Accused Products by others would infringe the '596 patent.

49. From February of 2022 to the expiry of the '596 patent, Defendant had also indirectly infringed by contributing to the infringement of the '596 patent. Defendant had contributed to the direct infringement of the '596 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that were specially designed to be used in an infringing way and that have no substantial uses other than ones that infringed one or more claims of the '596 patent, including, for example, claim 1 of the '596 patent. The special features constituted a material part of the invention of one or more of the claims of the '596 patent and were not staple articles of commerce suitable for substantial non-infringing use.

50. Defendant had knowledge of the '596 patent when it received the Notice Letter in February of 2022.

51. Furthermore, on information and belief, Defendant 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 CommWorks' patent rights.

52. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

53. Defendant's direct infringement of one or more claims of the '596 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

54. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that 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.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 7,911,979

55. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

56. The USPTO duly issued U.S. Patent No. 7,911,979 (the “’979 patent”) on March 22, 2011, after full and fair examination of Application No. 12/323,399 which was filed on November 25, 2008. The ’979 patent is entitled “Time Based Access Provisioning System And Process.” A Certificate of Correction was issued on July 19, 2011.

57. CommWorks owns all substantial rights, interest, and title in and to the ’979 patent, including the sole and exclusive right to prosecute this action and enforce the ’979 patent against infringers and to collect damages for all relevant times.

58. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the ’979 patent.

59. The claims of the ’979 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

60. The written description of the ’979 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

61. For example, at the time of the invention wireless access to data networks was not yet conventional. Then existent systems for provisioning access to a network were impractical, such as for wireless devices which lacked a user interface configured for communicating provisioning information, or for simple home-based intranets, such as a wireless picture frame device lacking a control interface to read or extract identification information, such as a MAC address, to facilitate wireless access provisioning. '979 patent at col. 3:19-31. Further, wireless devices that did have a dedicated user interface were incapable of, or cumbersome in, communicating device identification and exchanging provisioning information, still requiring a user to be technically proficient to properly initiate and complete a provisioning process. *Id.* at col. 3:32-41.

62. The invention of the '979 patent improved upon existent network provisioning systems by enabling provisioning without requiring a user interface for the initiation of a provisioning process—"a major technological advance." *Id.* at col. 3:42-46. The invention of the '979 patent further improved upon existent provisioning systems by providing a wireless access provisioning structure and process with minimal device requirements and/or user proficiency, whereby a wireless device is readily provisioned by the provisioning system, and whereby other unauthorized devices within an access region are prevented from being provisioned by the provisioning system. *Id.* at col. 3:47-53. The invention of the '979 patent further improved upon existent provisioning systems by providing a time-based wireless access provisioning system integrated with easily monitored parameters of a wireless device, such as the time monitoring of power on and/or start of signal transmission, for provisioning secure encrypted communication. *Id.* at col. 3:54-62. Moreover, the structure of the devices described in the '979 patent was not conventional at the time of the invention. Specifically, a device such as an access point, comprising a provisioning activation button, time-based provisioning logic, access control list, wired network logic, a wired

network connection and a transceiver were not conventional (or even available) at the time of the invention.

63. Defendant has directly infringed the '979 patent by importing, selling, manufacturing, offering to sell, using, providing, supplying, or distributing the Accused Products identified above.

64. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 1 of the '979 patent, as detailed in **Exhibit C** to this Complaint (Evidence of Use Regarding U.S. Patent No. 7,911,979).

65. On information and belief, Defendant has infringed the '979 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing into the United States Wi-Fi Protected Setup ("WPS") compatible devices, such as, for example, the AVM FRITZ!Box 7390 (included in the "Accused Products").

66. For example, Defendant, using the Accused Products, has infringed at least claim 1 of the '979 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which perform a provisioning process performed by a provisioning system having provisioning logic. *See Exhibit C.* The provisioning process performed comprises tracking, by the provisioning logic, an operating parameter of a first device, wherein the operating parameter of the first device comprises any of a power on of the first device, and an onset of a signal transmission of the first device. *Id.* The provisioning process performed in the Accused Products further comprises sending a signal to initiate provisioning of the first device with a network if the tracked operating parameter occurs within a designated time interval. *Id.*

67. From February of 2022 to the expiry of the '979 patent, Defendant had also indirectly infringed the '979 patent by inducing others to directly infringe the '979 patent. Defendant had induced distributors and end-users, including, but not limited to, Defendant's employees, partners,

contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the '979 patent by providing or requiring use of the Accused Products. Defendant had taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringed one or more claims of the '979 patent, including, for example, claim 1 of the '979 patent. Such steps by Defendant included, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant had performed these steps, which constitute induced infringement with the knowledge of the '979 patent and with the knowledge that the induced acts constitute infringement. Defendant had been aware that the normal and customary use of the Accused Products by others would infringe the '979 patent.

68. From February of 2022 to the expiry of the '979 patent, Defendant had also indirectly infringed by contributing to the infringement of the '979 patent. Defendant had contributed to the direct infringement of the '979 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that were specially designed to be used in an infringing way and that have no substantial uses other than ones that infringed one or more claims of the '979 patent, including, for example, claim 1 of the '979 patent. The special features constituted a material part of the invention of one or more of the claims of the '979 patent and were not staple articles of commerce suitable for substantial non-infringing use.

69. Defendant had knowledge of the '979 patent when it received the Notice Letter in February of 2022.

70. Furthermore, on information and belief, Defendant 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 CommWorks' patent rights.

71. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

72. Defendant's direct infringement of one or more claims of the '979 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

73. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that 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.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. RE44,904

74. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

75. The USPTO duly and lawfully reissued U.S. Patent No. RE44,904 (the "'904 patent") on May 20, 2014. The '904 patent is entitled "Method For Contention Free Traffic Detection."

76. CommWorks owns all substantial rights, interest, and title in and to the '904 patent, including the sole and exclusive right to prosecute this action and enforce the '904 patent against infringers and to collect damages for all relevant times.

77. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '904 patent.

78. The claims of the '904 patent are not directed to an abstract idea and are not limited to

well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

79. The written description of the '904 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

80. For example, at the time of the invention, “conventionally ... transmission differentiation based on priority was not conducted at all.” '904 patent at col. 2:9-10. Obtaining priority information for traffic transmitted through an Access Point (AP) required searching all fields in all frames for indications of the priority state of the actual data frame, resulting in all fields in all frames being checked and all headers being analyzed, starting from the outer most headers, until the right field in the header had been found. *Id.* at col. 1:63-2:2. This measure was very complex, took a long time, and required a large amount of processing, especially for complex tunneling protocols. *Id.* at col. 2:5-8. All the frame headers and protocols which can be included in the data frames transmitted via the network had to be known, hence, the amount of information needed for identifying the data was huge. *Id.* at col. 2:8-14. Such a huge amount of information was typically too heavy to handle in small and low price equipment like WLAN access points (AP). *Id.* Further, then existing systems according to the IEEE 802.11 standard did not separate traffic based on priority. *Id.* at col. 2:20-25.

81. The invention of the '904 patent improved upon conventional network traffic routing systems by providing methods by which priority traffic can easily be distinguished from normal

traffic without the need of complex processing making it possible to execute in a low cost and possibly low performance AP. *Id.* at col. 2:29-32, 3:2-4, 3:52-53. The methods of the invention of the '904 patent further improved upon conventional network traffic routing systems by easily finding higher priority traffic from the stream of MAC layer frames without necessarily requiring knowledge of the upper layer protocols. *Id.* at col. 2:62-65. The methods of the invention of the '904 patent further improved upon conventional network traffic routing systems by being protocol-independent and flexible such that their configuration may be done in an external configuration program; with the Access Point not needing to know anything about the processed traffic; further alleviating the need of complex structure of the device. *Id.* at col. 3:5-8, 3:14-21. A further advantage over conventional network traffic routing systems is that installation of new software or hardware in the network element would not be required when new protocols or modified protocols are introduced in the network. *Id.* at col. 3:22-31.

82. Defendant has directly infringed the '904 patent by importing, selling, manufacturing, offering to sell, using, providing, supplying, or distributing the Accused Products identified above.

83. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 1 of the '904 patent, as detailed in **Exhibit D** to this Complaint (Evidence of Use Regarding U.S. Patent No. RE44,904).

84. On information and belief, Defendant, using the Accused Products, has infringed the '904 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by performing methods for contention free traffic detection using Wi-Fi Multimedia ("WMM") and/or 802.11-2007+ compatible chips, such as, for example, the AVM FRITZ!Box 7390 (included in the "Accused Products").

85. For example, Defendant, using the Accused Products, has infringed at least claim 1 of

the '904 patent by performing a method comprising extracting a bit pattern from a predetermined position in a frame. *See Exhibit D.* The method further comprises comparing said extracted bit pattern with a search pattern. *Id.* The method further comprises identifying a received frame as a priority frame in case said extracted bit pattern matches with said search pattern. *Id.* The method further comprises forwarding said received frame to a high priority queue in case said frame is detected to be a high priority frame during a special period for sending priority traffic. *Id.* The method further comprises adjusting the duration of the special period for sending priority traffic according to statistic information regarding sent priority frames. *Id.*

86. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that 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.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 7,027,465

87. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

88. The USPTO duly issued U.S. Patent No. 7,027,465 (the "'465 patent") on April 11, 2006, after full and fair examination of Application No. 10/167,986 which was filed on June 11, 2002. The '465 patent is entitled "Method For Contention Free Traffic Detection."

89. CommWorks owns all substantial rights, interest, and title in and to the '465 patent, including the sole and exclusive right to prosecute this action and enforce the '465 patent against infringers and to collect damages for all relevant times.

90. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the

'465 patent.

91. The claims of the '465 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

92. The written description of the '465 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

93. For example, at the time of the invention, “conventionally ... transmission differentiation based on priority was not conducted at all.” '465 patent at col. 2:9-10. Obtaining priority information for traffic transmitted through an Access Point (AP) required searching all fields in all frames for indications of the priority state of the actual data frame, resulting in all fields in all frames being checked and all headers being analyzed, starting from the outer most headers, until the right field in the header had been found. *Id.* at col. 1:53-59. This measure was very complex, took a long time, and required a large amount of processing, especially for complex tunneling protocols. *Id.* at col. 1:62-65. All the frame headers and protocols which can be included in the data frames transmitted via the network had to be known, hence, the amount of information needed for identifying the data was huge. *Id.* at col. 1:66-2:4. Such a huge amount of information was typically too heavy to handle in small and low price equipment like WLAN access points (AP). *Id.* Further, then existing systems according to the IEEE 802.11 standard did not separate traffic based on priority. *Id.* at col. 2:11-15.

94. The invention of the '465 patent improved upon conventional network traffic routing systems by providing methods by which priority traffic can easily be distinguished from normal traffic without the need of complex processing making it possible to execute in a low cost and possibly low performance AP. *Id.* at col. 2:19-23, 2:60-62, 3:43. The methods of the invention of the '465 patent further improved upon conventional network traffic routing systems by easily finding higher priority traffic from the stream of MAC layer frames without necessarily requiring knowledge of the upper layer protocols. *Id.* at col. 2:53-56. The methods of the invention of the '465 patent further improved upon conventional network traffic routing systems by being protocol-independent and flexible such that their configuration may be done in an external configuration program; with the Access Point not needing to know anything about the processed traffic; further alleviating the need of complex structure of the device. *Id.* at col. 2:63-66, col. 3:5-11. A further advantage over conventional network traffic routing systems is that installation of new software or hardware in the network element would not be required when new protocols or modified protocols are introduced in the network. *Id.* at col. 3:12-21.

95. Defendant has directly infringed the '465 patent by importing, selling, manufacturing, offering to sell, using, providing, supplying, or distributing the Accused Products identified above.

96. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 1 of the '465 patent, as detailed in **Exhibit E** to this Complaint (Evidence of Use Regarding U.S. Patent No. 7,027,465).

97. On information and belief, Defendant, using the Accused Products, has infringed the '465 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by performing methods for contention free traffic detection using Wi-Fi Multimedia (WMM) and/or

802.11-2007+ compatible chips and devices, such as, for example, the AVM FRITZ!Box 7390 (included in the “Accused Products”).

98. For example, Defendant has infringed at least claim 1 of the ’465 patent by performing a method for detecting priority of data frames in a network. *See Exhibit E.* The method for detecting priority of data frames comprises the step of extracting a bit pattern from a predetermined position in a frame. *Id.* The method for detecting priority of data frames further comprises the step of comparing said extracted bit pattern with a search pattern. *Id.* The method for detecting priority of data frames further comprises the step of identifying a received frame as a priority frame in case said extracted bit pattern matches with said search pattern. *Id.* In the method for detecting priority of data frames, the predetermined position in said frame is defined by the offset of said bit pattern in said frame. *Id.*

99. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that 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.

COUNT VI: INFRINGEMENT OF U.S. PATENT NO. 6,891,807

100. CommWorks repeats and re-alleges the allegations in the paragraphs above as though fully set forth in their entirety.

101. The USPTO duly issued U.S. Patent No. 6,891,807 (the “’807 patent”) on May 10, 2005, after full and fair examination of Application No. 10/341,847 which was filed on January 13, 2003. The ’807 patent is entitled “Time Based Wireless Access Provisioning.”

102. CommWorks owns all substantial rights, interest, and title in and to the ’807 patent, including the sole and exclusive right to prosecute this action and enforce the ’807 patent against

infringers and to collect damages for all relevant times.

103. CommWorks or its predecessors-in-interest have satisfied all statutory obligations required to collect pre-filing damages for the full period allowed by law for infringement of the '807 patent.

104. The claims of the '807 patent are not directed to an abstract idea and are not limited to well-understood, routine, or conventional activity. Rather, the claimed inventions include inventive components that improve upon the function and operation of preexisting network provisioning systems.

105. The written description of the '807 patent describes in technical detail each limitation of the claims, allowing a skilled artisan to understand the scope of the claims and how the non-conventional and non-generic combination of claim limitations is patently distinct from and improved upon what may have been considered conventional or generic in the art at the time of the invention.

106. For example, at the time of the invention, wireless access to data networks was not yet conventional. Then existent systems for provisioning access to a network were impractical, such as for wireless devices which lacked a user interface configured for communicating provisioning information, or for simple home-based intranets, such as a wireless picture frame device lacking a control interface to read or extract identification information, such as a MAC address, to facilitate wireless access provisioning. '807 patent at col. 3:5-18. Further, wireless devices that did have a dedicated user interface were incapable of, or cumbersome in, communicating device identification and exchanging provisioning information, still requiring a user to be technically proficient to properly initiate and complete a provisioning process. *Id.* at col. 3:19-28.

107. The invention of the '807 patent improved upon existent network provisioning systems

by enabling provisioning without requiring a user interface for the initiation of a provisioning process—“a major technological advance.” *Id.* at col. 3:29-33. The invention of the ’807 patent further improved upon existent provisioning systems by providing a wireless access provisioning structure and process with minimal device requirements and/or user proficiency, whereby a wireless device is readily provisioned by the provisioning system, and whereby other unauthorized devices within an access region are prevented from being provisioned by the provisioning system. *Id.* at col. 3:34-41. The invention of the ’807 patent further improved upon existent provisioning systems by providing a time-based wireless access provisioning system integrated with easily monitored parameters of a wireless device, such as the time monitoring of power on and/or start of signal transmission, for provisioning secure encrypted communication. *Id.* at col. 3:42-50. Moreover, the structure of the devices described in the ’807 patent was not conventional at the time of the invention. Specifically, a device such as an access point, comprising a provisioning activation button, time-based provisioning logic, access control list, wired network logic, a wired network connection and a transceiver were not conventional (or even available) at the time of the invention.

108. Defendant has directly infringed either literally or under the doctrine of equivalents, at least claim 17 of the ’807 patent, as detailed in **Exhibit F** to this Complaint (Evidence of Use Regarding U.S. Patent No. 6,891,807).

109. On information and belief, Defendant has infringed the ’807 patent pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering for sale, selling, and/or importing into the United States Wi-Fi Protected Setup (“WPS”) compatible consumer electronics chips, such as, for example, the AVM FRITZ!Box 5590 Fiber (included in the “Accused Products”).

110. For example, Defendant has infringed at least claim 17 of the '807 patent by making, using, offering to sell, selling, and/or importing the Accused Products, which include a time based network access provisioning system between a wireless device and a network. *See Exhibit F.* The time based network access provisioning system comprises a network access point connected to the network, the network access point comprising logic for tracking operation of the wireless device. *Id.* The time based network access provisioning system further comprises logic for provisioning the wireless device if the operation of the wireless device occurs within an activatable time interval. *Id.*

111. From February of 2022 to the expiry of the '807 patent, Defendant had also indirectly infringed the '807 patent by inducing others to directly infringe the '807 patent. Defendant had induced distributors and end-users, including, but not limited to, Defendant's employees, partners, contractors, or customers, to directly infringe, either literally or under the doctrine of equivalents, the '807 patent by providing or requiring use of the Accused Products. Defendant had taken active steps, directly or through contractual relationships with others, with the specific intent to cause them to use the Accused Products in a manner that infringed one or more claims of the '807 patent, including, for example, claim 17 of the '807 patent. Such steps by Defendant included, among other things, advising or directing personnel, contractors, or end-users to use the Accused Products in an infringing manner; advertising and promoting the use of the Accused Products in an infringing manner; or distributing instructions that guide users to use the Accused Products in an infringing manner. Defendant had performed these steps, which constitute induced infringement with the knowledge of the '807 patent and with the knowledge that the induced acts constitute infringement. Defendant had been aware that the normal and customary use of the Accused Products by others would infringe the '807 patent.

112. From February of 2022 to the expiry of the '807 patent, Defendant had also indirectly infringed by contributing to the infringement of the '807 patent. Defendant had contributed to the direct infringement of the '807 patent by its personnel, contractors, distributors, and customers. The Accused Products have special features that were specially designed to be used in an infringing way and that have no substantial uses other than ones that infringed one or more claims of the '807 patent, including, for example, claim 17 of the '807 patent. The special features constituted a material part of the invention of one or more of the claims of the '807 patent and were not staple articles of commerce suitable for substantial non-infringing use.

113. Defendant had notice of the '807 patent when it received the Notice Letter in February of 2022.

114. Furthermore, on information and belief, Defendant 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 CommWorks' patent rights.

115. Defendant's actions are at least objectively reckless as to the risk of infringing a valid patent and this objective risk was either known or should have been known by Defendant.

116. Defendant's direct infringement of one or more claims of the '807 patent is, has been, and continues to be willful, intentional, deliberate, or in conscious disregard of CommWorks' rights under the patent.

117. CommWorks has been damaged as a result of the infringing conduct by Defendant alleged above. Thus, Defendant is liable to CommWorks in an amount that 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

118. CommWorks hereby requests a trial by jury on all issues so triable by right.

PRAYER FOR RELIEF

119. CommWorks requests that the Court find in its favor and against Defendant, and that the Court grant CommWorks the following relief:

- a. Judgment that one or more claims of each of the Asserted Patents has been infringed, either literally or under the doctrine of equivalents, by the Defendant or others acting in concert therewith;
- b. Judgment that Defendant account for and pay to CommWorks all damages to and costs incurred by CommWorks because of Defendant's infringing activities and other conduct complained of herein;
- c. Judgment that Defendant's infringements of the '285, '596, '979, and '807 patents during their life be found willful, and that the Court award treble damages for the period of such willful infringement pursuant to 35 U.S.C. § 284;
- d. Pre-judgment interest on the damages caused by Defendant's infringing activities and other conduct complained of herein;
- e. That this Court declare this an exceptional case and award CommWorks its reasonable attorneys' fees and costs in accordance with 35 U.S.C. § 285; and
- f. All other and further relief as the Court may deem just and proper under the circumstances.

Dated: January 13, 2025

Respectfully submitted,

By: /s/ C. Matthew Rozier

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* Admitted to the Eastern District of Texas

List of Exhibits

- A. Evidence of Use Regarding U.S. Patent No. 7,177,285
- B. Evidence of Use Regarding U.S. Patent No. 7,463,596
- C. Evidence of Use Regarding U.S. Patent No. 7,911,979
- D. Evidence of Use Regarding U.S. Patent No. RE44,904
- E. Evidence of Use Regarding U.S. Patent No. 7,027,465
- F. Evidence of Use Regarding U.S. Patent No. 6,891,807