

High Performance Tri-Band WiFi 7 Wall Plate AP WF-189W Product Datasheet

VERSION 7.0

March, 2025

www.actiontec.com

■ Overview

WF-189W, is a versatile tri-band 2x2 MU-MIMO Wi-Fi7 wall-plate Wi-Fi access point, thoughtfully crafted to meet the demands of apartments and hotels seeking premium performance. It supports advanced Wi-Fi7 technologies such as multi-link operation (MLO), up to 320MHz bandwidth for 6GHz radio, OFDMA, MU-MIMO, and 4096-QAM, all within the 802.11be protocol. With its support for 802.11be 2.4G/5G/6GHz Wi-Fi access, users can enjoy remarkable data rates of up to 9.334Gbps, ensuring a seamless and high-speed wireless network experience throughout their space.

Built with enhanced transmission power and receive sensitivity, the WF-189W delivers the high throughput and reliable coverage required to keep everyone connected. Its compatibility with most wireless terminals makes it easy to establish a high-capacity Wi-Fi network, catering to diverse connectivity needs.

Furthermore, this Wi-Fi AP supports PoE power supply, allowing simultaneous provisioning of 802.3af PoE PSE for other devices, streamlining power management and reducing clutter.

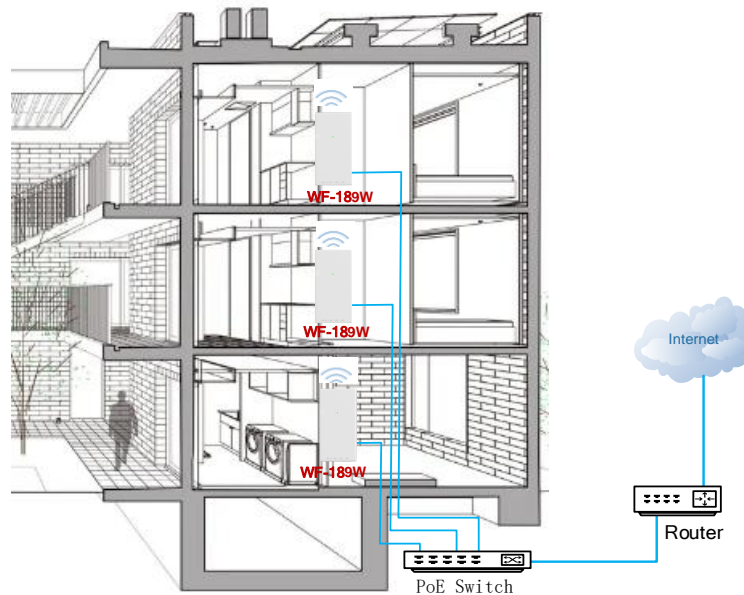
The WF-189W is designed to adapt to various regions with its universal bracket, ensuring a hassle-free installation process.

For developers, the WF-189W offers support for Qualcomm's QSDK and OpenWiFi development platforms. This opens the door to streamlined software development, thanks to standardized interfaces, well-defined APIs, and pre-integrated stacks, reducing complexities and enhancing reliability. Additionally, OpenWiFi's active community support provides valuable troubleshooting assistance, ensuring a future-proof and cost-efficient solution for innovative Wi-Fi applications.



■ Key Features

- Supports both wall-mounting and wall-plate installation
- Access Points with tri-band 2x2:2 concurrent radios:
 - 2.4G 2x2 Wi-Fi (802.11b/g/n/ax/be), 20/40MHz, up to 688Mbps
 - 5G 2x2 Wi-Fi (802.11a/n/ac/ax/be), 20/40/80/160MHz, up to 2.882Gbps
 - 6G 2x2 Wi-Fi (802.11a/ax/be), 20/40/80/160/320MHz, up to 5.764Gbps
- Supports BLE 5.0 (hardware ready)
- 2 x Integrated 2.5G/5G dual-band antennas
- 2 x Integrated 6G single-band antennas
- 1 x Integrated Bluetooth antenna
- 1 x RJ45 2.5GbE WAN port (rear)
- 1 x RJ45 2.5GbE LAN port with 802.3af PoE out
- 2 x RJ45 GbE LAN ports
- 1 x Factory reset button (side)
- 1 x RGB LED status Indicator
- TIP OpenWiFi compatible



■ Specifications

Item	WF-189W
Dimension (W x D x H)	180mm x 89.5mm x 29.3mm
Weight	280g (without bracket)
Installation	Wall mounting, with general bracket
LEDs	1 x RGB (Software-defined)
Interface	<ul style="list-style-type: none"> • 1 x 2.5GbE WAN port • 1 x 2.5GbE LAN port, with 802.3af PoE Out(PSE) • 2 x 1GbE LAN ports • 1 x Factory reset button
Input Voltage	<ul style="list-style-type: none"> • With PoE PSE output: 802.3bt PoE input is required • Without PoE PSE output: 802.3at PoE input is required
Max Power consumption	< 25.5W (without PoE Out) < 40W (with 12.95W PoE Out)
Startup power Drain	< 12.95W
Environmental Specification	
Temperature	Operation: 0°C ~ +40°C Storage: -40°C ~ +70°C
Operating Humidity	5% ~ 95% (non-condensing)
Dustproof and Waterproof	IP30
Compliance	<ul style="list-style-type: none"> • ETL Listed (NRTL): Conforms to UL 62368-1 and CSA C22.2 No. 62368-1 • FCC Part 15 Class B: Digital device emissions (DoC), suitable for residential and commercial environments (USA) • FCC Part 15 Subpart C, Section 15.247: Operation within 2.4 GHz ISM band (USA) • FCC Part 15 Subpart E, Section 15.407: Operation within 5 GHz

Item	WF-189W
	and 6 GHz bands (USA)
Reliability	
AFR	AFR (Annualized Failure Rate) < 1.5%
Chipset	
SoC	Qualcomm IPQ5322
Flash	256MB NAND Flash
DDR	2GB DDR4 RAM
Wi-Fi	
Operating frequency	2.4G radio: 2.4000GHz~2.4835GHz
	5G radio: 5.150~5.250,5.250~5.350,5.470~5.725, 5.725~5.850 GHz
	6G radio: 6G radio: 5.945 ~ 7.125GHz
Data Rate	802.11b: 1, 2, 5.5, and 11Mbps
	802.11g: 6, 9, 12, 18, 24, 36, 48, and 54Mbps
	802.11a: 6, 9, 12, 18, 24, 36, 48 and 54Mb/s
	802.11n: MCS0 - MCS7
	802.11ac: MCS0 - MCS9
	802.11ax: MCS0 - MCS11
Concurrent Users	802.11be: MCS0 – MCS13
	128 per radio
Security	Hardware ready for DPSK3 (DPSK + WPA3) and Secure Boot
MLO	Hardware ready for MLO (multi-link operation)

■ **Federal Communications Commission (FCC) Interference Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generate, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

RF exposure warning

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

FCC regulations restrict operation of this device to indoor use only.

The operation of this device is prohibited on oil platforms, cars, trans, boats, and aircraft, except that operation of this device is permitted in large aircraft while flying above 10000 feet in the 5.925-6.425 GHz band.

Transmitters in the 5.925-7.125 GHz band are prohibited from operating to control or communicate with unmanned aircraft systems.

■ Contact Information

Actiontec Electronics, Inc.

2445 Augustine Dr., 6th FL.

Santa Clara, CA 95054

Tel: +1(408) 837-4800

Email: broadband-sales@actiontec.com