

# **High Performance Dual-Band WiFi 6 Wall Plate AP WF-186W Product Datasheet**

VERSION3.0

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**[www.actiontec.com](http://www.actiontec.com)**



## ■ Overview

WF-186W, is a versatile dual-band 2x2 MU-MIMO 802.11ax wall plate Wi-Fi Access Point, thoughtfully crafted to meet the demands of apartments and hotels seeking premium performance. With its support for 802.11ax 2.4G/5G Wi-Fi access, users can enjoy remarkable data rates of up to 2.974Gbps, ensuring a seamless and high-speed wireless network experience throughout their space.

Built with enhanced transmission power and receive sensitivity, the WF-186W 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.

Beyond standard Wi-Fi capabilities, the WF-186W may go the extra mile by supporting BLE 5.1 and Zigbee features, making it an excellent choice for expanding into the realm of IoT applications, such as integrating smart home devices into the network.

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-186W is designed to adapt to various regions with its universal bracket, ensuring a hassle-free installation process.

For developers, the WF-186W 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.



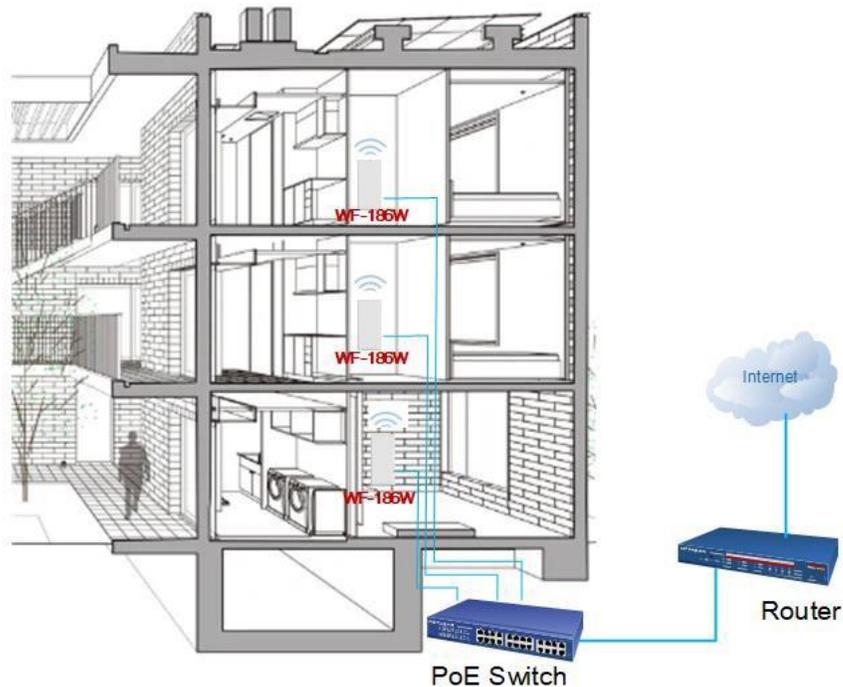
## ■ Key Features

- Wall mounting with universal bracket
- 2.4G 2x2/ 40MHz Wi-Fi (802.11b/g/n/ax), up to 574Mbps link rate
- 5G 2x2/ 160MHz Wi-Fi(802.11a/n/ac/ax), up to 2.4Gbps link rate
- BLE5.1
- 2 x Integrated dual-band antennas
- 1 x Integrated Bluetooth antenna
- 1 x GE WAN with 802.3 bt PoE ( PD )

\*\* Operates with 802.3bt PoE PoE (PD), with 802.3af PoE (PSE) working

\*\* Operates with 802.3af PoE (PD), without 802.3af PoE (PSE) working

- 4x RJ45 GbE LAN, LAN4 with 802.3af PoE(PSE)
- 1 x Reset button on the side
- 1 x RBG LEDs for visual indication
- TIP OpenWiFi development platform





## ■ Specifications

Item	WF-186W
Dimension (W x D x H)	180mm x 89.5mm x 29.3mm
Weight	280g, without bracket
Installation	Wall mounting
LEDs	1 x RBG LED (Software definition)
Interface	1 x GE WAN with 802.3 bt PoE(PD) 4x RJ45 GbE LAN, LAN4 with 802.3af PoE(PSE) 1 x Reset Button
Input Voltage	<ul style="list-style-type: none"> <li>42.5V~ 57V , 802.3bt PoE (PD), with LAN4 port supporting 802.3af PoE(PSE)</li> <li>37V ~ 57V, 802.3 af PoE (PD), without supporting 802.3af PoE (PSE)</li> </ul>
Power consumption	< 12.5W, without 802.3af PoE (PSE)
<b>Environmental Specification</b>	
Temperature	Operation: 0°C ~ +40°C Storage: -40°C ~ +70°C
Operating Humidity	5% ~ 95% (non-condensing)
Elevations	86kPa ~ 106kPa altitude
Dustproof and Waterproof	IP30
Compliance	<ul style="list-style-type: none"> <li>NRTL Listed 62368-1 (US &amp; CA)</li> <li>CB with IEC/EN 62368-1 (Basic safety certificate for worldwide marketing)</li> <li>GB 9254 -2008(Class B of Product) , EN55032, CISPR 32:2010,</li> </ul>



Item	WF-186W
	EN55024, CISPR 24:2010 <ul style="list-style-type: none"> <li>• RoHS 2011/65/EU compliant (RoHS 11 compliant, no Pb)</li> <li>• WEEE 2002/96/EC recyclable materials requirements</li> </ul>
<b>Reliability</b>	
MTBF	> 300,000 Hours Telcordia SR-332: Reliability Prediction Procedures for Electronic Equipment, Issue 3, Method 1, Case 3. This is based on a GB/GC (Ground Benign, Controlled) environment with a steady state condition at a 25°C ambient
AFR	AFR (Annualized Failure Rate) < 1.5% (in continuous operation)
<b>Chipset</b>	
SoC	Qualcomm chipset (IPQ5018)
Flash	128MB NAND Flash
DDR	512MB DDR3 RAM
<b>Wi-Fi Interface</b>	
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
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 HT20/ HT40: MCS0~MCS15 802.11ac VHT20/VHT40/VHT80: MCS0 ~ MCS9 802.11ax HE20/ HE40/HE80/HE160: MSC0 ~ MCS11
Receive Sensitivity	802.11g: -90dBm@6Mbps -74dBm@54Mbps



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	<p>802.11n:</p> <table border="1" data-bbox="505 394 1057 541"> <thead> <tr> <th></th> <th>HT20</th> <th>HT40</th> </tr> </thead> <tbody> <tr> <td>MCS0/8/16</td> <td>-90dBm</td> <td>-87dBm</td> </tr> <tr> <td>MCS7/15</td> <td>-71dBm</td> <td>-68dBm</td> </tr> </tbody> </table> <p>802.11a: -90dBm@6Mbps -74dBm@54Mbps</p> <p>802.11ac:</p> <table border="1" data-bbox="505 699 1130 898"> <thead> <tr> <th></th> <th>VHT20</th> <th>VHT40</th> <th>VHT80</th> </tr> </thead> <tbody> <tr> <td>MCS0</td> <td>-90dBm</td> <td>-87dBm</td> <td>-84dBm</td> </tr> <tr> <td>MCS8</td> <td>-67dBm</td> <td>-64dBm</td> <td>-61dBm</td> </tr> <tr> <td>MCS9</td> <td></td> <td>-61dBm</td> <td>-58dBm</td> </tr> </tbody> </table> <p>802.11ax:</p> <table border="1" data-bbox="505 947 1300 1092"> <thead> <tr> <th></th> <th>HE20</th> <th>HE40</th> <th>HE80</th> <th>HE160</th> </tr> </thead> <tbody> <tr> <td>MCS0</td> <td>-90dBm</td> <td>-87dBm</td> <td>-84dBm</td> <td>-81 dBm</td> </tr> <tr> <td>MCS11</td> <td>-60dBm</td> <td>-57dBm</td> <td>-54dBm</td> <td>-51 dBm</td> </tr> </tbody> </table>						HT20	HT40	MCS0/8/16	-90dBm	-87dBm	MCS7/15	-71dBm	-68dBm		VHT20	VHT40	VHT80	MCS0	-90dBm	-87dBm	-84dBm	MCS8	-67dBm	-64dBm	-61dBm	MCS9		-61dBm	-58dBm		HE20	HE40	HE80	HE160	MCS0	-90dBm	-87dBm	-84dBm	-81 dBm	MCS11	-60dBm	-57dBm	-54dBm	-51 dBm
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## 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.

## ■ Contact Information

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