High performance dual-band 802.11ac Wireless AP WF-180

Product Datasheet

VERSION6.0

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Partnership for the Next Generation Broadband CPE

www.cigtech.com

Overview

WF-180 is a dual-band 2x2 MIMO 802.11ac indoor Wi-Fi AP, which is designed for high-density deployments in large offices, schools, hospitals and hotels that require premium performance. Having perfect compatibility, it works with most wireless terminals to build a high capacity Wi-Fi network.

WF-180 can provide up to 1167Mbps aggregated data rates. The enhanced transmission power and receive sensitivity make it deliver the high throughput and reliable coverage required. WF-180 supports AP, AP WDS and WDS bridge operation modes. The flexible applications can meet the requirements in different scenarios.

WF-180 supports centralized management by integration with 3rd party controller or cloud management systems. It is convenient to manage and monitor the APs remotely. Multiple separate SSIDs help to control the access to the network. With the QoS policy, the service with high priority can be assured for the good experience. The 802.1x and Web authentication provide the enhanced security for the system.

WF-180

Key Features and Benefits

1. Dual band 2x2 MIMO radio

WF-180 is compliant with IEEE 802.11 n and 802.11ac standard (MIMO 2×2). Utilizes 802.11 standard speeds, up to 300Mbps on the 2.4 GHz frequency band and up to 867Mbps on the 5GHz frequency band. The antenna system is specially designed for high density, high complicity indoor deployments. It finds the most efficient path to a wireless client for media streaming, online gaming, and large file transferring. The WF-180 has perfect compatible with most wireless terminals, including the wireless adapter, the notebook, the phone, etc.

2. All-in-one Integrated AP

The integrated FAT AP software package provides complete functionalities for quick deployments. The functions include, QoS, Web authentication, MAC authentication, MAC ACL, Portal Integration, VLAN, IGMP, NTP, etc. It can meet the requirements of the various applications.

3. 3rd party integration: Open platform

WF-180 supports centralized management by integration with 3rd party controller or cloud management systems. The management data between WF-180 and the access controller is encrypted. The APs are zero configurations, before connecting to the AC. By creating the different service templates, it is easy for the manager to configure many APs in a short time. It is possible for the manager to manageWF-180 from anywhere, modifying the configurations, upgrading the software, rebooting the AP, and monitoring the AP status by the alarms or system logs.

4. Multiple operation modes

WF-180 supports multiple operation modes, including AP, AP WDS and WDS Bridge. Working in the AP mode, WF-180 provides the high capacity wireless access. By enabling the AP WDS for the radio, WF-180 can support the client with WDS to access. WDS Bridge mode on 5GHz radio and AP mode on 2.4GHz radio make it possible to establish the mesh network.

5. Prioritizes Applications and Maintains Quality of Experience

Advanced QoS (Quality of Service) prioritizes bandwidth intensive applications like HD video and gaming or bandwidth sensitive applications like VoIP telephone calls. The bandwidth limitation based on the SSID/Role helps to control the access for the different users, for example, the SSID/Role for the guest access will get less bandwidth and more bandwidth is guaranteed for the SSID/Role for the staff access.

6. Multiple SSIDs

WF-180 supports up to 32 SSIDs, 16 SSIDs for each radio. And these SSIDs are isolated. That means, it is possible to create multiple SSIDs for different users, the guest, the staff and the administrator. And the clients accessing to different SSIDs are forbidden to visit each other. The private information is protected very well. Based on each SSID, it can apply the different QoS policy and authentication method. With WF-180, it is convenient for the customer to classify the access roles. Support up to 256 users access.

7. Industry-Standard Security

WF-180 supports multiple security methods, WEP, WPA/WPA2-PSK, 802.1x Authentication (PEAP, EAP/SIM), MAC Authentication and Web Authentication. Denial of accessing by MAC ACL makes your business network safe from intruders or from malicious software attacks from the Internet.

8. Easy Installation

WF-180 is designed with indoor industry standard. And the operation temperature is 0°C to +45°C. It can be installed in most outdoor environments to support broadband access services for wired or wireless users. For example, it can be placed on a wall or on the ceiling.

Specification

Item	WF-180
Dimension (W x D x H)	160mm × 160mm × 40mm
Weight	< 1KG
Installation	Ceiling mounting or wall mounting
LEDs	RUN/ ETH/ 2.4G/ 5G
Interface	1 x GE(uplink) & PoE Interface 1 x Console 1 x Reset Button 1 x External DC power input (12VDC) 1 x USB 2.0
Input Voltage	+ 12V/1A
	802.3af PoE (PD)
Power Consumption	< 12W
Environmental Specification	
Operating Temperature	0℃ ~ +45℃
Operating Humidity (non-condensing)	5% ~ 95%
Dustproof and Waterproof	GB 4208-2008: IP30, IEC60529:2001
Safety	RoHS 2011/65/EU compliant ; WEEE 2002/96/EC recyclable materials requirements FCC compliant

<table>
<tr><th>Item</th><th>WF-180</th></tr>
<tr><td></td><td>UL certificate</td></tr>
<tr><td colspan="2">Chipset</td></tr>
<tr><td>SoC</td><td>QCA9557</td></tr>
<tr><td>Wi-Fi Chipset</td><td>QCA9882 (5G 2X2 802.11 ac)</td></tr>
<tr><td>Flash</td><td>512KB nor flash + 128MB NAND flash</td></tr>
<tr><td>DDR</td><td>128MB DDR2 memory (2pcs 16bit x 32MB)</td></tr>
<tr><td colspan="2">Wi-Fi Interface</td></tr>
<tr><td rowspan="2">Operating frequency</td><td>2.4G radio:2.4000GHz~2.4835GHz</td></tr>
<tr><td>5G radio:5.150~5.250,5.250~5.350,5.470~5.725, 5.725~5.850 GHz</td></tr>
<tr><td rowspan="2">Maximum Transmit power</td><td>2.4G radio:23dBm per chain</td></tr>
<tr><td>5G radio:23dBm per chain</td></tr>
<tr><td>Data Rate</td><td>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~MCS15
802.11ac: MCS0 ~ MCS9</td></tr>
<tr><td rowspan="3">Receive Sensitivity</td><td>802.11g: -91dBm@6Mbps
-77dBm@54Mbps</td></tr>
<tr><td>802.11n:
<table>
<tr><td></td><td>HT20</td><td>HT40</td></tr>
<tr><td>MCS0/8/16</td><td>-91dBm</td><td>-88dBm</td></tr>
<tr><td>MCS7/15</td><td>-74dBm</td><td>-71dBm</td></tr>
</table></td></tr>
<tr><td>802.11a: -93dBm@6Mbps
-77dBm@54Mbps</td></tr>
</table>

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<tr><th>Item</th><th>WF-180</th></tr>
<tr><td></td><td>802.11ac:
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<tr><td></td><td>VHT20</td><td>VHT40</td><td>VHT80</td></tr>
<tr><td>MCS0</td><td>-91dBm</td><td>-88dBm</td><td>-85dBm</td></tr>
<tr><td>MCS8</td><td>-70dBm</td><td>/</td><td>/</td></tr>
<tr><td>MCS9</td><td>/</td><td>-64dBm</td><td>-61dBm</td></tr>
</table></td></tr>
<tr><td>Antenna Pattern
(Built-in Antennas)</td><td>
<table>
<tr><td>Frequency(MHz)</td><td>2400 ~ 2500</td><td>5150 ~ 5850</td></tr>
<tr><td>Polarization</td><td>Vertical</td><td>Vertical</td></tr>
<tr><td>Gain(dBi)</td><td>3 +</td><td>3+</td></tr>
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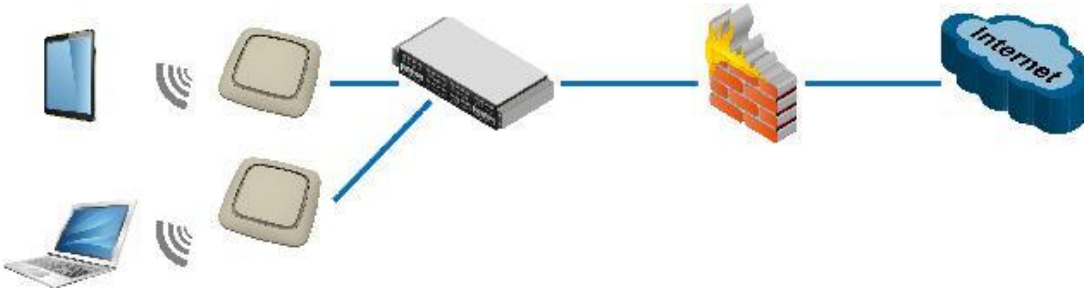
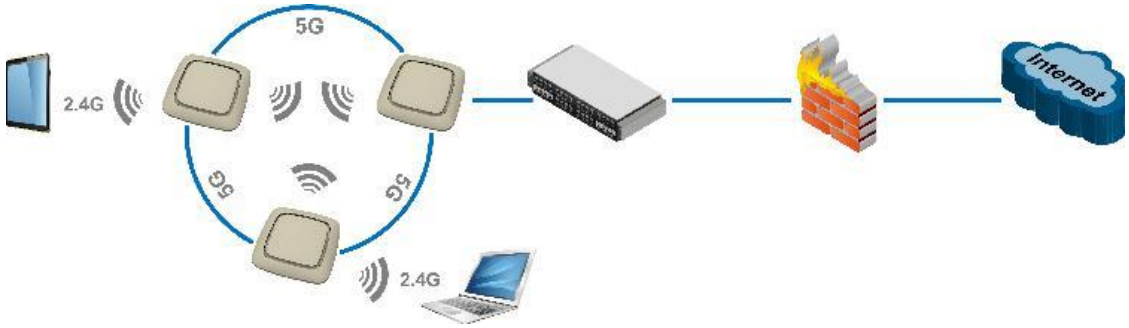
Application Scenario



Indoor coverage as stand-alone AP

As a stand-alone Wi-Fi AP, WF-180 supports up to 32 SSIDs (16 SSIDs for each radio) with enhanced high-performance and high capacity. It is a good fit for small to medium sized corporate wireless LAN network.



Wireless Mesh Network

By enable the WDS Bridge on 5GHz radio, WF-180 can establish the mesh with each other. On 2.4G Hz radio, it provides the wireless coverage for the area. And the different clients accessing to different APs can visit each other or visit the Internet by the wireless mesh network.

Contact Information

Cambridge Industries USA Inc.

2445 Augustine Dr., 6th FL.

Santa Cara, CA 95054

Tel: +1(408)606-2200

Email: nasales@cigtech.com

CIG Shanghai Co., Ltd.

5/F, Building 8, 2388 ChenHang Road

Shanghai, China 201114

Tel: +86-21-8023 3300

Email: sales@cigtech.com

www.cigtech.com