

DeskPod Ultra WF-810G

Product Datasheet

VERSION1.0

May, 2022

www.actiontec.com

■ Overview

The tri-band Wi-Fi 6 WF-810G is designed to extend Wi-Fi network connectivity for homes and business based on the latest 802.11ax chipset design. With the WF-810G, the user can utilize EasyMesh R4, which provides a self-configuring, self-healing and self-managing Wi-Fi network. It dynamically selects the most reliable Wi-Fi path and enables fast and seamless handoffs for end-users.

WF-810G is one of the best performing WiFi 6 router/extender in the market with up to 7.8Gbps aggregate throughput (AX7800). It supports 802.11ax on all Wi-Fi radio bands. The 2.4G radio supports 2x2 802.11b/g/n/ax MIMO. The 5G radio supports 2x2 802.11a/n/ac/ax MIMO with triple 160MHz channel width. The 6G radio supports 4x4 802.11a/ax MIMO. WF-810G can meet the requirements for high-speed real-time traffic and high-bandwidth entertainment, such as 4K video, video game streaming and VR.

With global deployments in mind, the WF-810G utilized standard USB-C AC adapter, allowing easy adaptation everywhere as locally certified USB-C AC adapters are available in every country.



Notice:

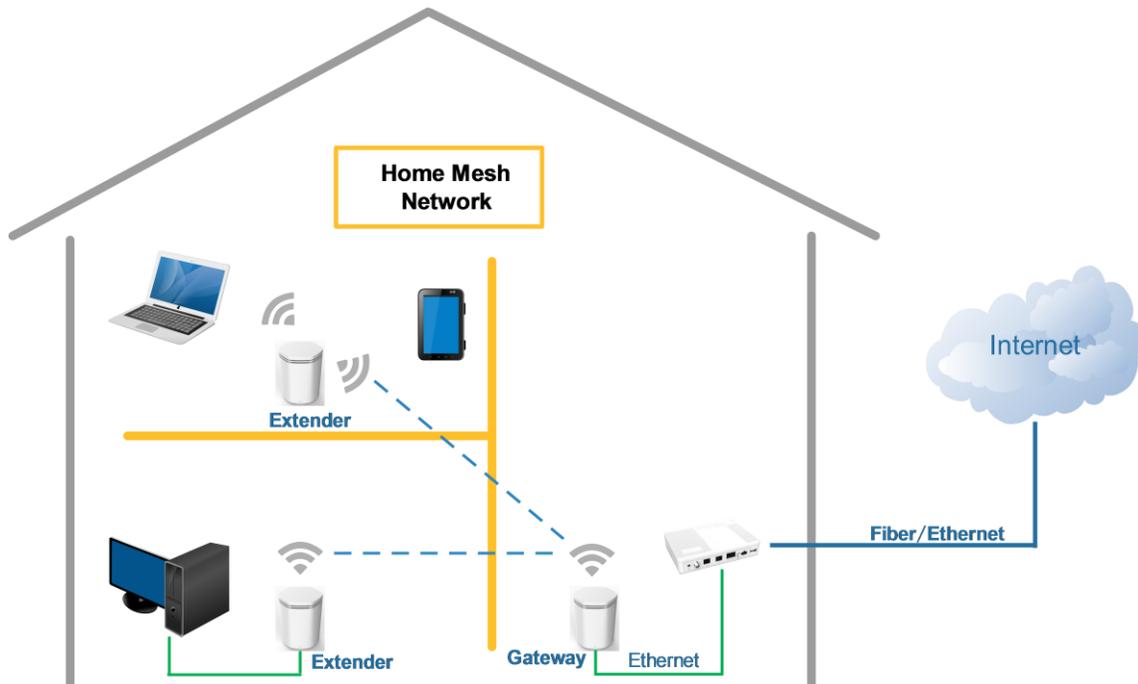
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■ Key Features

- Desktop placement
- Highest performance at 7.8Gbps aggregate throughput (AX7800)
- 2.4GHz 40MHz 2x2 802.11b/g/n/ax
- 5GHz 160MHz 2x2 802.11a/n/ac/ax
- 6GHz 160MHz 4x4 802.11a/ax
- WPA/WPA2-PSK(AES)/WPA3
- BLE 5.0
- 7 x Integrated Wi-Fi antennas
- 1 x Integrated BLE antennas
- 1 x 2.5GbE WAN
- 1 x GE RJ45 LAN
- 1 x Status LED (multi-color)
- 1 x USB-C PD AC adapter
- Supports router/extender functions
- Supports TR-069 management
- Supports EasyMesh R4

■ Application Scenario

- Three WF-810Gs forms a Wi-Fi mesh network. One configured as the Gateway and the other two configured as the Wi-Fi Extender:



■ Software Features

Category	Features
Network	Bridge Mode <ul style="list-style-type: none"> - DHCP Client - Backhaul with 2.4G/5G/6G Wi-Fi/Ethernet
	Router Mode <ul style="list-style-type: none"> - IPv4 - IPv6 - NAT - WAN DHCP client - LAN DHCP server - DNS server - DHCP reservation - uPNP - Port forwarding - Backhaul with Ethernet
	IGMP Snooping
Wi-Fi	2.4GHz bandwidth: 20/40MHz, 5/6GHz bandwidth: 20/40/80/160MHz
	802.11 k/ v/ r
	Band steering
	Channel scan
	DFS
	SSID broadcast
TR-069 Management	WPA/WPA2/WPA3 PSK security
	Network topology display <ul style="list-style-type: none"> - Device connected - Client accessed - Channel - Backhaul type
	Network optimize
	WPA/WPA2/WPA3 PSK security
	Freeze client
Device information <ul style="list-style-type: none"> - Status - Online time - IP address - MAC address - Firmware version - Channel 	

	Client information <ul style="list-style-type: none"> - Status - Online time - IP address - MAC address - Channel
	Network statistic chart <ul style="list-style-type: none"> - Bandwidth usage - RSSI - Channel congestion - Event
	Utilities <ul style="list-style-type: none"> - Reboot device - Upgrade remotely - Speed Test
LED	Green Solid: Device power on.
	Blue Blinks: Device is connecting to the Cloud.
	OFF: Device has been connected to the Cloud.
	Blue Double Blinks: Network optimization in progress or locate device.

■ Specification

Item	WF-810G
Dimension (D x H)	94mm (Diameter) x 124mm (High)
Weight	390g
Installation	Desktop placement
LEDs	1x Status LED (multi-color)
Interface	1 x 2.5GbE RJ45 WAN 1 x GE RJ45 LAN 1 x DC jack, support USB-C PD DC 12V in
Input Voltage	+12V/3A
Power consumption	< 25W

Item	WF-810G
Environmental Specification	
Temperature	Operation: 0°C ~ +40°C Storage: -40°C ~ +85°C
Operating Humidity	5% ~ 95% (non-condensing)
Elevations	86kPa ~ 106kPa altitude
Dustproof and Waterproof	IP20
Compliance	<ul style="list-style-type: none"> • IEC 62368-1:2014 (Second Edition)+A11: 2017 • UL 62368-1, 2nd Ed, 2014-12-01 (Audio/video, information and communication technology equipment Part 1: Safety requirements) • CAN/CSA C22.2 No. 62368-1-14, 2nd Ed (Audio/video, information and communication technology equipment Part 1: Safety requirements) • FCC • CE • RoHS 2011/65/EU compliant (RoHS 10 compliant, no Pb)
Reliability	
MTBF	> 300,000 Hours Telcordia SR-332, Reliability Prediction Procedures for Electronic Equipment, Issue 3, Method 1, Case 3, GB/GC (Ground Benign, Controlled) environment, 25°C ambient temperature. Steady state, not including software failure.
AFR	AFR (Annualized Failure Rate) < 1.5% (in continuous operation)
Chipset	
Wi-Fi SoC	Qualcomm
Flash	256MB NAND flash
DDR	512MB DDR3L RAM
Wi-Fi Interface	
Operating frequency	2.4G radio: 2.4000GHz~2.4835GHz

Item	WF-810G																		
	5G radio: 5.150~5.250,5.250~5.350,5.470~5.725, 5.725~5.850 GHz																		
	6G radio: 5.925~7.125 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: MCS0~MCS15 802.11ac: MCS0 ~ MCS9 802.11ax: MCS0~MCS11																		
Receive Sensitivity	802.11g: -90dBm@6Mbps -74dBm@54Mbps																		
	802.11n: <table border="1" data-bbox="472 905 1021 1052"> <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>					HT20	HT40	MCS0/8/16	-90dBm	-87dBm	MCS7/15	-71dBm	-68dBm						
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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.

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. Operation of transmitters in the 5.925-7.125 GHz band is prohibited for control of or communications with unmanned aircraft systems.

■ Contact Information

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