OpenSync^{TM} Wi-Fi DeskPod Ultra WF-810B

Product Datasheet

VERSION 1.0

May, 2023

Partnership for the Next Generation Broadband Solution

■ Overview

The Dual-band Wi-Fi 6 WF-810B is designed to extend Wi-Fi network connectivity for homes and business based on the latest 802.11ax chipset design. With the WF-810B, the user can utilize Plume HomePass and WorkPass, 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. It is also able to interoperate with other OpenSync™ devices like the Plume SuperPod.

WF-810B is one of the best performing WiFi 6 Plume router/extender in the market with up to 5.4Gbps aggregate throughput . It supports 802.11ax on all Wi-Fi radio bands. The 2.4G radio supports 2x2 802.11b/g/n/ac/ax MIMO. The 5G radio supports 4x4 802.11a/n/ac/ax MIMO with 160MHz channel width. WF-810B can meet the requirements for high-speed real-time traffic and high-bandwidth entertainment, such as 4K video, video game streaming and VR.

WF-810B integrates OpenSync™ control plane launched by Plume. OpenSync™ creates a multi-industry, open service curation, delivery, management and support framework. WF-810B supports to be managed by Plume cloud remotely. This allows for curation, rapid and scalable delivery, comprehensive back office management, and enhanced support of cloud-based services to the consumer.

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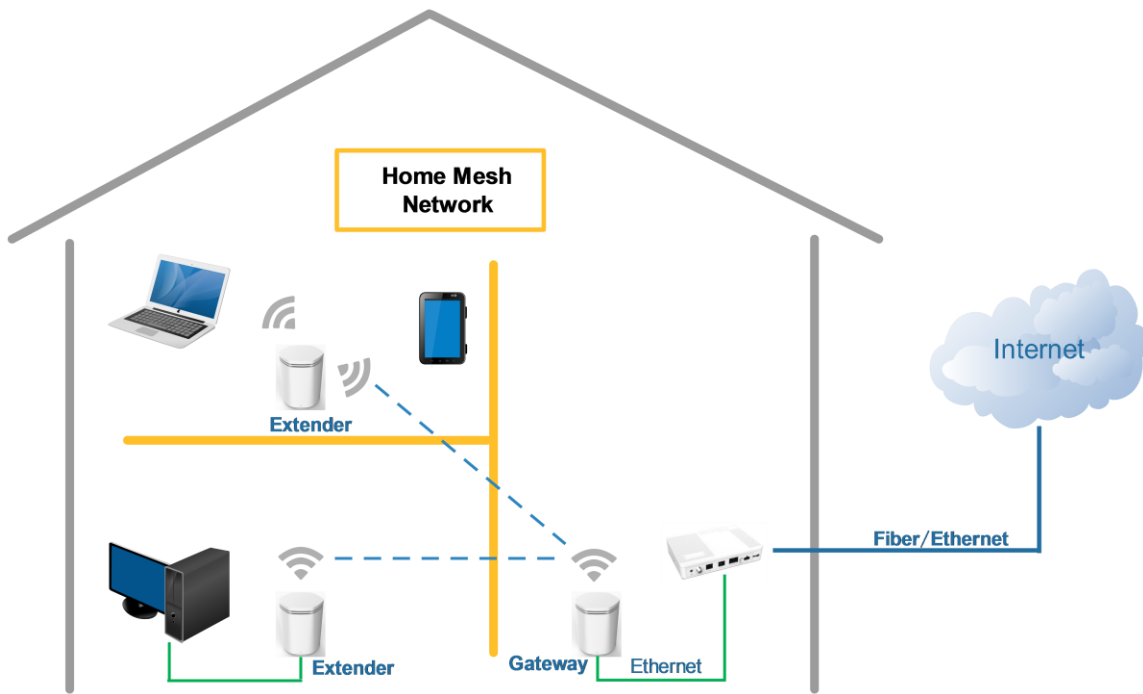
Key Features

- Desktop placement
- Highest performance at 4.8Gbps aggregate throughput
- 2.4GHz 40MHz 2x2 802.11b/g/n/ac/ax
- 5GHz 160MHz band 4x4 802.11a/n/ac/ax
- WPA/WPA2-PSK(AES)
- BLE 5.0
- 5 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 OpenSync^{TM} control plane
- Integrated with Plume Cloud management and Plume mobile management application

Application Scenario

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

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■ **Software Features**

Category	Features

Network	Bridge Mode
	   - DHCP Client
	   - Backhaul with 2.4G/5G Wi-Fi/Ethernet

	Router Mode
	   - IPv4/IPv6
	   - NAT/NATv6
	   - WAN DHCP client
	   - WAN PPPoE client
	  - LAN DHCP server
	  - DNS server
	  - DHCP reservation
	  - uPNP
	  - Port forwarding
	  - Backhaul with Ethernet

	IGMP Snooping
Wi-Fi	2.4GHz bandwidth: 20/ 40MHz, 5GHz bandwidth: 20/40/80/160MHz
	802.11 k/ v/ r
	Band steering
	Channel scan
	DFS
	SSID broadcast
	WPA/WPA2/WPA3 PSK security
	uAPSD

Cloud Management	Network topology display
	   - Device connected
	   - Client accessed
	   - Channel
	   - Backhaul type

	Network optimize
	Network SSID based on the location
	WPA/WPA2 PSK security
	Freeze client

	Device information
	   - Status
	   - Online time
	   - IP address
	   - MAC address
	   - Firmware version
	   - Channel

	Client information
	   - Status
	   - Online time
	   - IP address
	   - MAC address
	   - Channel

	Network statistic chart
	   - Bandwidth usage
	   - RSSI
	   - Channel congestion
	   - Event

	Utilities
	   - Reboot device
	   - Upgrade remotely
	   - Speed Test

Mobile App Management	Device discovery
	Add/ Delete the device
	Configure SSID
	Configure password
	Auto upgrade
	Antivirus
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-810B
Dimension (D x H)	94mm (Diameter) × 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 USB 3.0 type-C power input operating at 12V/3A
Input Voltage	12V/3A
Power consumption	< 24W
Environmental Specification	
Temperature	Operation: 0℃ ~ +40℃ Storage: -40℃ ~ +85℃
Operating Humidity	5% ~ 95% (non-condensing)
Elevations	86kPa ~ 106kPa altitude
Dustproof and Waterproof	IP20
Compliance	• 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

Item	WF-810B
	• 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, 25ºC 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	512M DDR3L
Wi-Fi Interface	
Operating frequency	2.4G radio:2.4000GHz~2.4835GHz
	5G radio: 5.150~5.250, 5.250~5.350, 5.470~5.725, 5.725~5.850GHz
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
Receive Sensitivity	802.11g: -90dBm@6Mbps -74dBm@54Mbps

Item	WF-810B

802.11n:

	HT20	HT40
MCS0/8/16	-90dBm	-87dBm
MCS7/15	-71dBm	-68dBm

802.11a: -90dBm@6Mbps

-74dBm@54Mbps

802.11ac:

	VHT20	VHT40	VHT80
MCS0	-90dBm	-87dBm	-84dBm
MCS8	-67dBm	/	/
MCS9	/	-61dBm	-58dBm

802.11ax:

	VHT20	VHT80	VHT160
MCS0	-89dBm	-83dBm	-80dBm
MCS11	-60dBm	-54dBm	-51dBm

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 44 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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