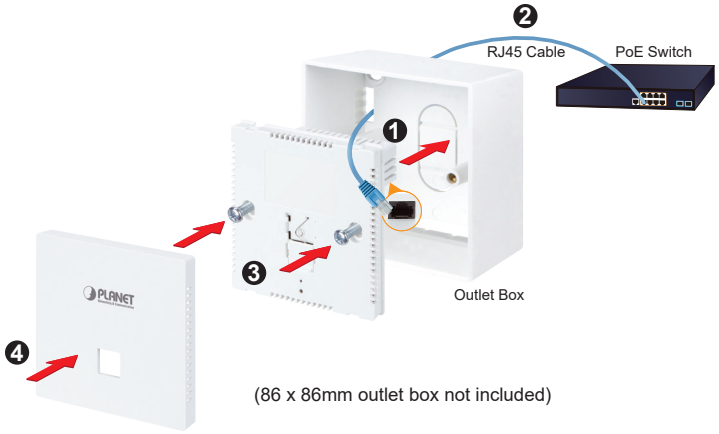
Dual Band 802.11ax 3000Mbps In-wall Wireless Access Point

Ultra-high-speed Wi-Fi 6 Wireless LAN Solution

PLANET WDAP-W3000AX **3000Mbps Dual Band 802.11ax Wireless AP**, supporting **MU-MIMO**, **OFDMA (Orthogonal Frequency Division Multiple Access)**, **Seamless Roaming**, **Beamforming and BSS Coloring technology**, provides a maximum wireless speed of 2400Mbps in the 5GHz band and 600Mbps in the 2.4GHz band. The maximum number of client users is up to 256, ensuring more secure and robust connectivity with the adoption of Wi-Fi 6 technology.

Suitable for Any Room Installation without Spoiling Interior Design

Featuring attractive in-wall design, the WDAP-W3000AX can be firmly installed into the wall via the standard 86 x 86 mm European outlet box, which makes electrical wiring invisible and convenient for room installation without affecting the original interior design. It is ideal for hotels, residences, hospitals and more to establish any kind of wireless network.



(86 x 86mm outlet box not included)

Super Power Dual band WLAN Solution

PLANET WDAP-W3000AX, adopting the IEEE 802.11ax Wi-Fi 6 standard, provides a high-speed transmission. The maximum wireless speed in 2.4GHz band is up to 574Mbps with 11ax, and in the 5GHz band is up to 2402Mbps with 11ax. Both the **2.4GHz and 5GHz** wireless connections can also be used simultaneously.

Standard Compliant Hardware Interface

- Compliant with the IEEE 802.11a/b/g/n/ac/ax wireless technology
- Equipped with 10/100/1000Mbps RJ45 ports, and auto MDI/MDI-X

RF Interface Characteristics

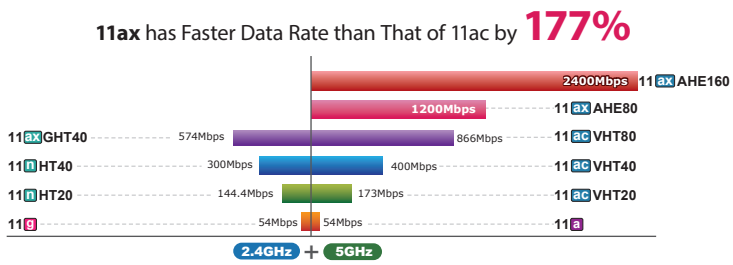
- 802.11ax 2T2R architecture with data rate of up to 3000Mbps (600Mbps in 2.4GHz and 2400Mbps in 5GHz)
- High output power with multiply-adjustable transmit power control

Multiple Operation Modes and Wireless Features

- Multiple operation modes: Gateway, AP, Repeater and WISP
- Supports OFDMA (orthogonal frequency division multiple access)
- Supports MU-MIMO (multi-user multiple-input multiple-output), Beamforming and BSS Coloring
- WMM (Wi-Fi multimedia) provides higher priority to multimedia transmitting over wireless
- Coverage threshold to limit the weak signal of clients occupying session
- Real-time Wi-Fi channel analysis chart and client limit control for better performance
- Supports Terminal Seamless Roaming with 802.11k, 802.11v, and 802.11r
- Supports Mesh connection

Secure Network Connection

- Full encryption supported: WPA3 Personal, WPA2/WPA3 Personal, WPA2 Personal (AES), WPA2 Personal (TKIP), WPA2 Personal (TKIP+AES), WPA/WPA2 Personal (AES), WPA/WPA2 Personal (TKIP), WPA/WPA2 Personal (TKIP+AES), WPA2 Enterprise and WPA/WPA2 Enterprise



Data Transmission Rates *3000Mbps*

Benefits of MU-MIMO, OFDMA, Seamless Roaming, Beamforming and BSS Coloring

The WDAP-W3000AX can be installed in public areas such as hotspots, airports and conferences as OFDMA, a multi-user version of OFDM, enables the concurrent AP to communicate (uplink and downlink) with multiple clients by assigning subsets of subcarriers called resource units (RUs) to the individual clients. With **MU-MIMO** and Seamless Roaming technologies, it provides a better Wi-Fi user experience, reducing the likelihood of users turning off Wi-Fi and putting more load on the cellular network. Beamforming is to improve your Wi-Fi signal when you are far away from your router. The BSS color is a numerical identifier of the BSS. 802.11ax radios that are able to differentiate between BSSs using **BSS color** identifier when other radios transmit on the same channel.

These technologies also can solve Wi-Fi congestion issues in open work spaces and conference rooms. The WDAP-W3000AX can offer more powerful throughput coverage of up to 256 client users.

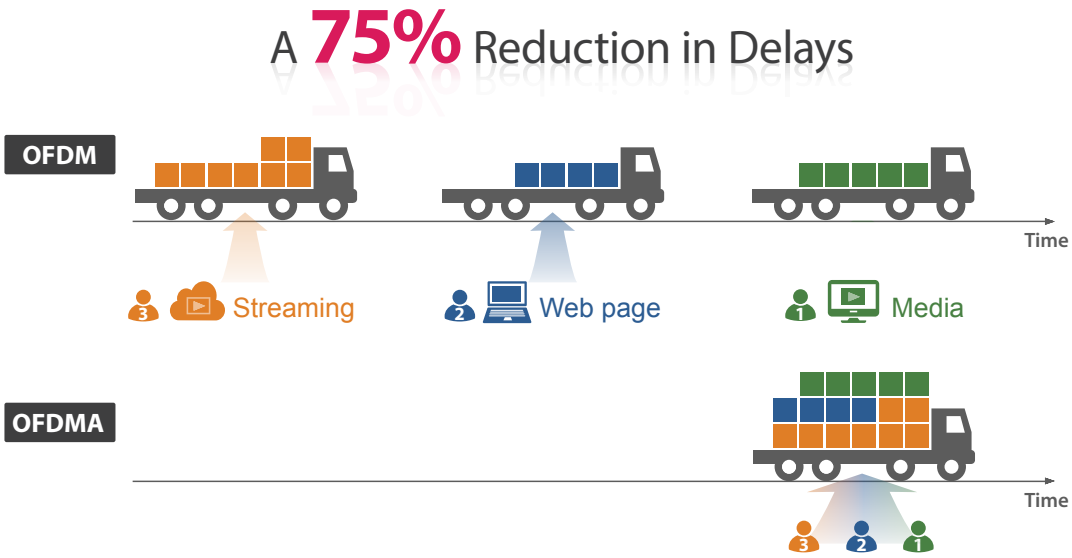
- Supports 802.1Q port VLAN, IP/Port/MAC address/URL filtering, DoS and SPI firewall
- Supports DMZ and port forwarding
- Bandwidth control per IP address to increase network stability

Easy Deployment and Management

- Supports management by using PLANET NMSViewerPro and CloudViewerPro app
- Supports PLANET AP Controllers in AP mode
- Easy discovery by PLANET Smart Discovery
- Self-healing mechanism through system auto reboot setting
- System status monitoring through remote syslog server
- Gateway mode supports PLANET DDNS/Easy DDNS, Captive Portal and RADIUS Server/Client

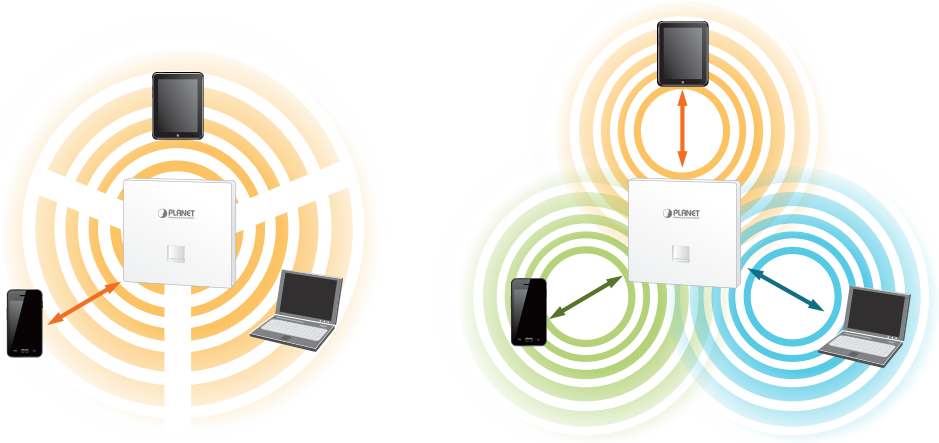
■ OFDMA (Orthogonal Frequency Division Multiple Access) Benefits

- Helps transmit small and large packets together to reduce bandwidth burden and improves data transmission performance
- Transmitting data at the same time can effectively reduce the transmission delay for longer frame and low-speed transmission.
- Improves the overall traffic quality, and effectively uses bandwidth in an environment where multiple people use the Internet.
- Increases the number of devices that can be connected to the AP.
- Reduces the power consumption of the device by way of the use of low bandwidth.



SU-MIMO
Serving one user at a time

MU-MIMO
Serving multiple users simultaneously



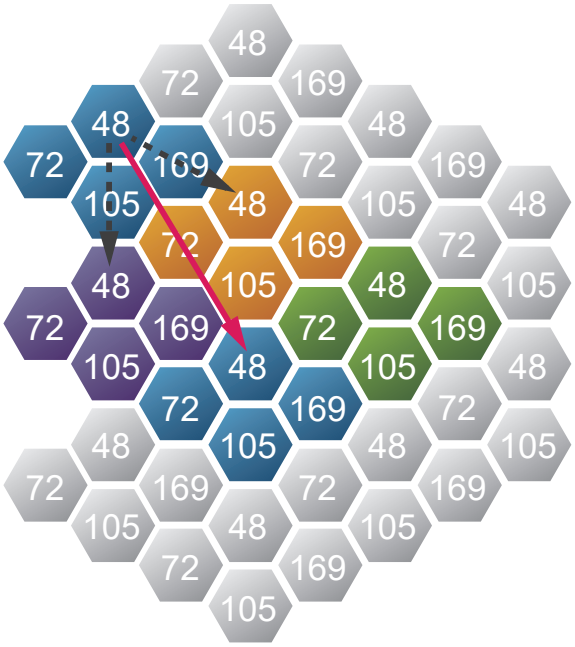
■ Beamforming

Beamforming is to improve your Wi-Fi signal when you are far away from your router. When you use beamforming, Wi-Fi beamforming narrows the focus of that router signal, sending it directly to your devices in a straight line, thus minimizing surrounding signal interference and increasing the strength of the signal that ultimately bring you the following benefits:

- Extend your Wi-Fi coverage
- Deliver a more stable Wi-Fi connection
- Deliver better Wi-Fi throughput
- Reduce router interference

■ BSS Coloring

The BSS color is a numerical identifier of the BSS. 802.11ax radios that are able to differentiate between BSSs using BSS color identifier when other radios transmit on the same channel. If the color is the same, this is considered to be an intra-BSS frame transmission. In other words, the transmitting radio belongs to the same BSS as the receiver. If the detected frame has a different BSS color from its own, then the STA considers that frame as an inter-BSS frame from an overlapping BSS.



WPA3 Next Generation Security for Your WLAN Solution

WPA3 is the next generation Wi-Fi security technology that provides the most advanced security protocol to the market. WPA3 makes your connection more secure by preventing hackers from easily cracking your password no matter how simple the password is. WPA3 can also provide more reliable password-based authentication, so it can better protect the security of individual users.

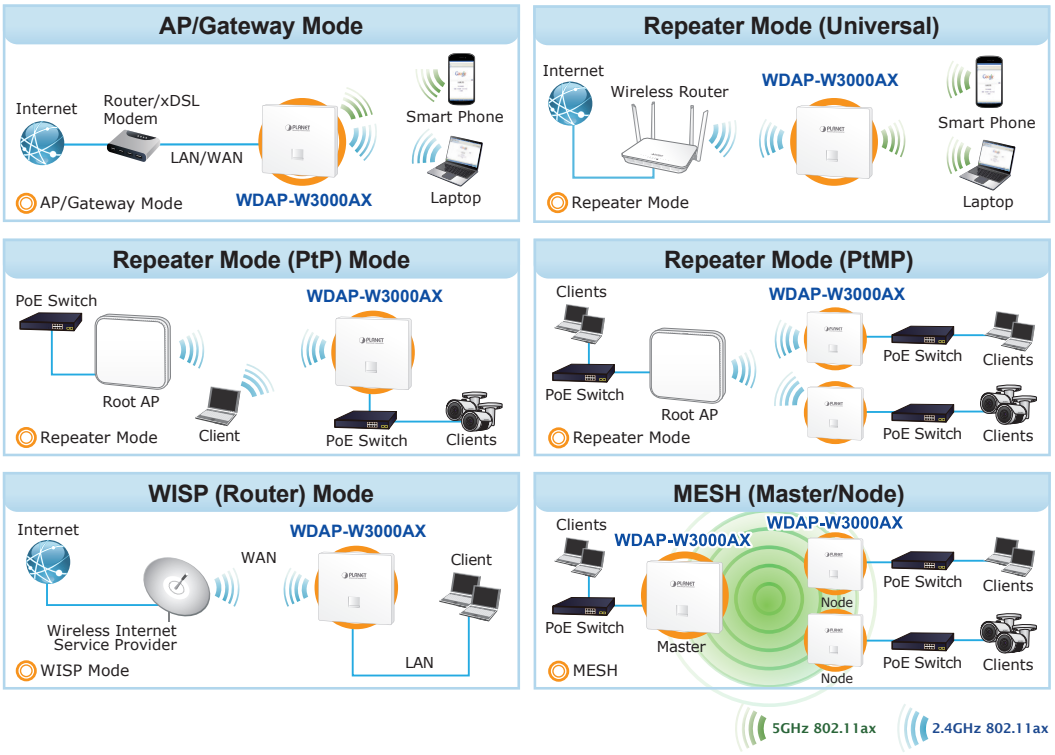
* WDAP-W3000AX only supports WPA3-Personal.

Advanced Security and Rigorous Authentication

The WDAP-W3000AX supports WPA/WPA2/WPA3 wireless encryptions, as well as WPA2 Enterprise and WPA/WPA2 Enterprise, which can effectively prevent eavesdropping by unauthorized users or bandwidth occupied by unauthenticated wireless access. Furthermore, any users are granted or denied access to the wireless LAN network based on the ACL (Access Control List) that the administrator pre-established.

Multiple Operation Modes for Various Applications

The WDAP-W3000AX supports the simplified usage modes of AP, Gateway, AP, Repeater and WISP through which they provide more flexibility for users when wireless network is established. Compared with general wireless access points, the WDAP-W3000AX offers more powerful and flexible capability for wireless clients.



Optimized Efficiency in AP Management with Cloud and NMS System

Via PLANET CloudViewerPro app or NMSViewerPro app (necessary for NMS-500/NMS-1000V), access points can be monitored and controlled in real time without a specified location and time limitation. The brand-new GUI configuration wizard helps the system administrator easily set up the WDAP-W3000AX step by step. Besides, the built-in Wi-Fi analyzer provides real-time channel utilization to prevent channel overlap to assure greater performance. With the automatic transmission power mechanism, distance control and scheduling reboot setting, the WDAP-W3000AX is easy for the administrator to deploy and manage without requiring on-site maintenance. Moreover, PLANET NMS-500 or NMS-1000V AP control function can be used to deliver wireless profiles to multiple APs simultaneously, thus making the central management simple.

Home Dashboard for Wi-Fi Status

CloudViewer Pro

Setup Wizard for Multiple Modes

Mesh Wi-Fi for More Hassle-free Network

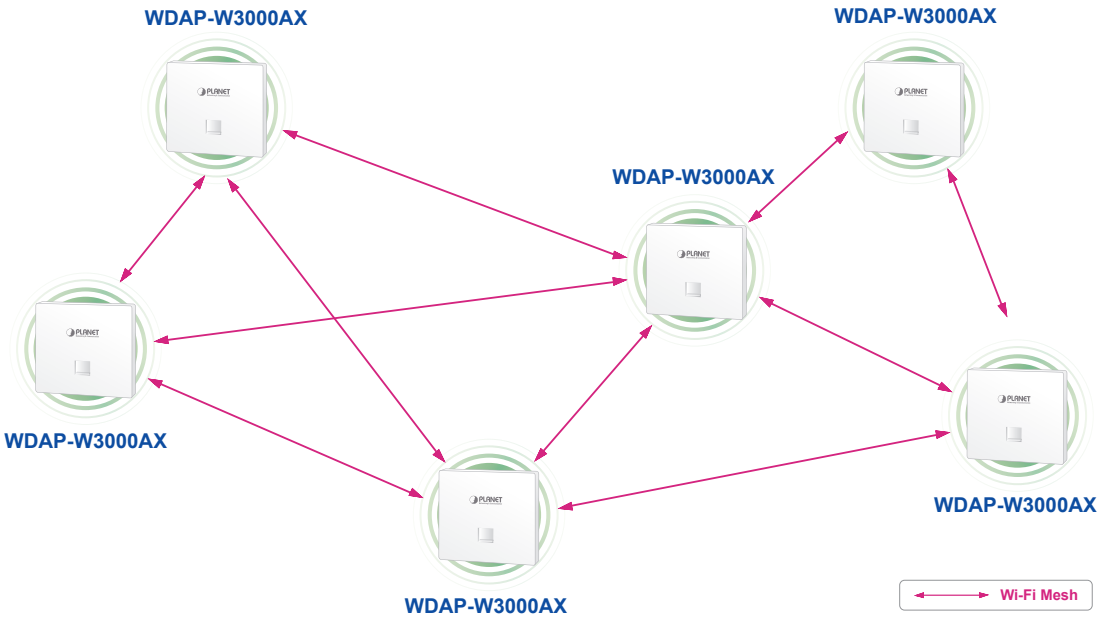
The WDAP-W3000AX supports TLSv1.3 protocols to provide strong protection against advanced threats. It includes a cybersecurity feature such as **SNMPv3** authentication, and so on to complement it as a security solution.

The WDAP-W3000AX boasts support for **802.11s Mesh** technology, an open standard wireless networking solution that takes Wi-Fi coverage and stability to the next level. It enables seamless collaboration between various router brands and Wi-Fi device brands, creating a unified and efficient network experience.

Mesh technology leverages multiple frequency bands, enabling fast roaming and intelligent network management, resulting in top-notch performance. Setting up a Mesh network is a breeze, thanks to its user-friendly installation process and automated configuration. This ensures that users can enjoy extended Wi-Fi coverage and a consistently reliable connection across their homes or workplaces.

In summary, Mesh technology is the go-to solution for those seeking to enhance their Wi-Fi coverage without the headache of complex network setups. It's a convenient and effective way to achieve a seamless and robust wireless network.

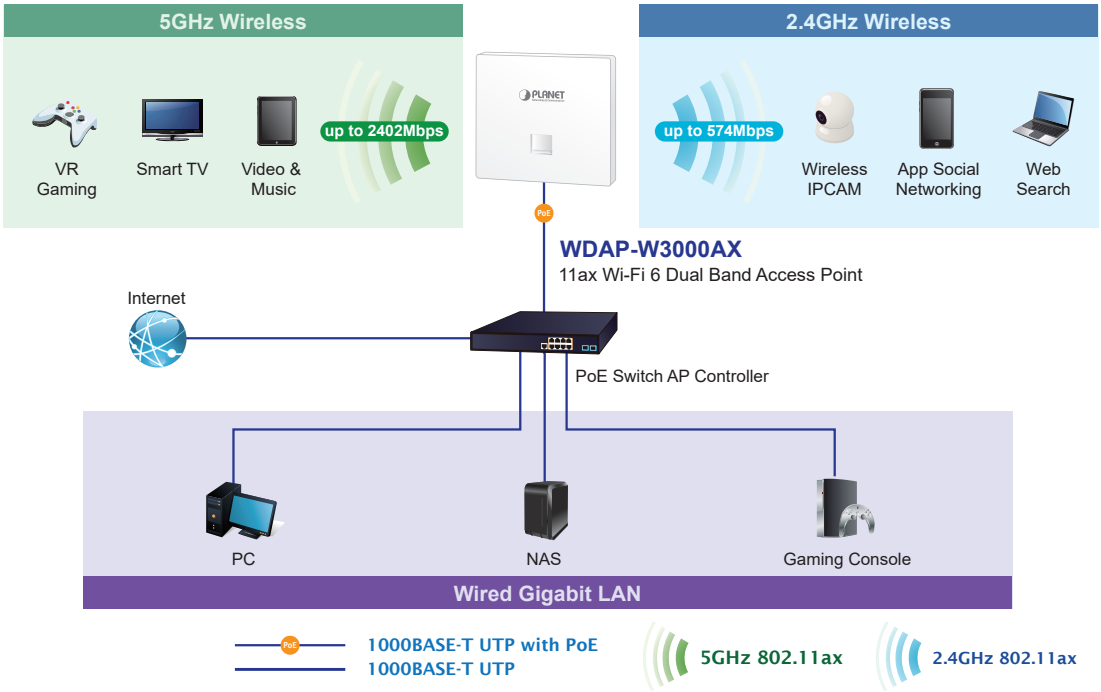
Mesh Topology



Applications

Extreme High Speed and Wi-Fi 6 Technology Make Wireless Transmission More Powerful

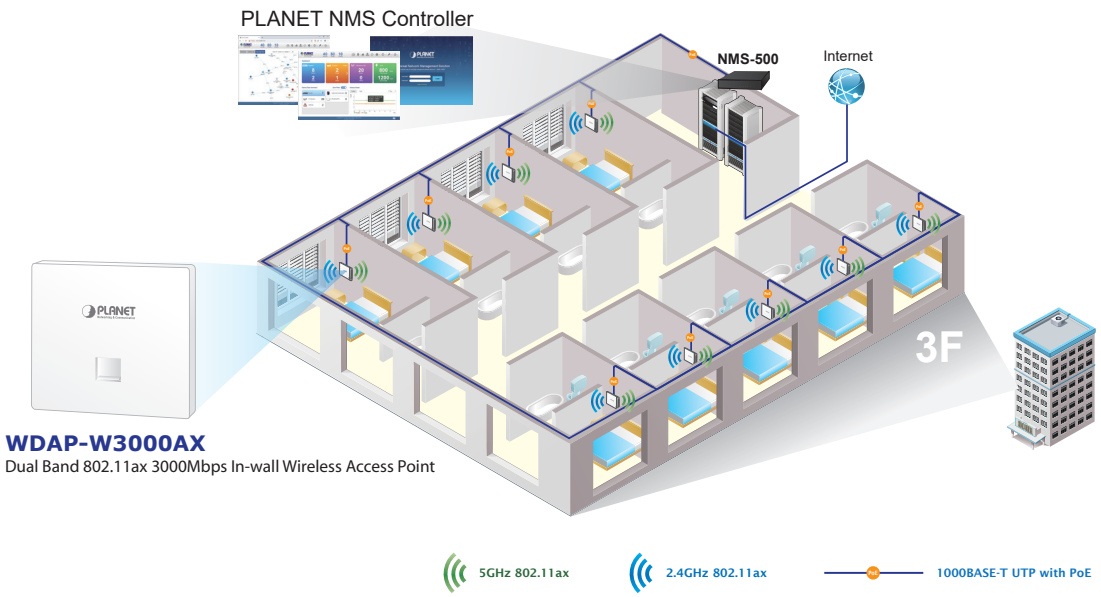
The WDAP-W3000AX delivers the dual band and more bandwidth to avoid signal interference and ensure the best Wi-Fi performance. It allows you to check e-mails and surf the Internet via the 2.4GHz band and simultaneously watch full high-definition (HD) video or any other multimedia application via one 5GHz band. Besides, many client users can be connected to Wi-Fi at the same time. The maximum number of client users is up to 256. Moreover, the Gigabit Ethernet port of the WDAP-W3000AX offers ultra-fast wired connections that utilize the maximum wireless bandwidth; therefore, users will experience a fast wireless speed of over 700Mbps. With the outstanding stability of high-speed wireless transmission, the WDAP-W3000AX can provide users with excellent experience in multimedia streaming with your mobile devices anywhere, anytime.



Seamless Roaming and Better Coverage

Moving between a traditional Wi-Fi AP or router and range extender, Wi-Fi signal can experience lag or a dropped connection. With Seamless Roaming and intuitive technology, moving from room to room is never a problem now that the devices are switched to the strongest Wi-Fi signal automatically. The WDAP-W3000AX features advanced 2T2R MU-MIMO technology which reduces the effect of dead spot, so that it can get better coverage of the existing wireless network. Furthermore, the repeater mode supported by the WDAP-W3000AXU helps to minimize the effort of installation, thus reducing cabling cost.

Hotel Wi-Fi Solution for Networking



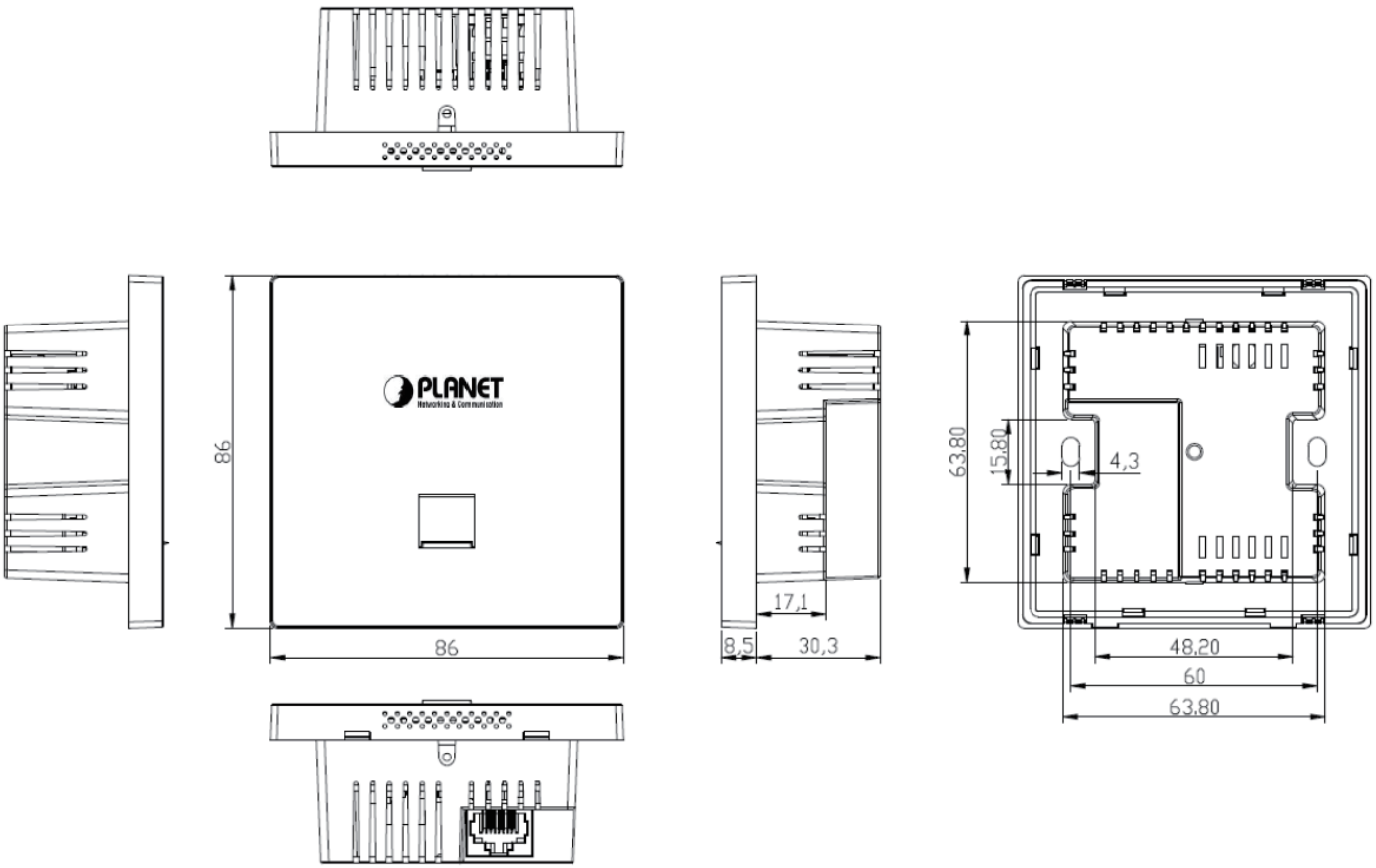
Specifications

Product	WDAP-W3000AX		
Hardware Specifications			
Interfaces	PoE WAN/LAN 10/100/1000BASE-T, auto-MDI/MDIX, 802.3at PoE In		
Antennas	Gain: 4 x Internal 1.7dBi antenna (2.4GHz x2, 5GHz x2)		
Reset Button	Reset button *1 Press over 5 seconds to reset the device to factory default		
Dimensions (W x D x H)	86 x 86 x 38.8 mm		
Weight	150 ± 5g		
Power Requirements	48~54V 0.5A, IEEE 802.3at PoE+		
Power Consumption	< 12W		
Installation	In-wall mount		
LED Indicators	Power, SYS		
Wireless Interface Specifications			
Standard	IEEE 802.11ax IEEE 802.11ac IEEE 802.11n IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.3x flow control IEEE 802.11k, 802.11v, and 802.11r		
Media Access Control	CSMA/CA		
Band Mode	2.4GHz / 5GHz concurrent mode		
Data Modulation	802.11ax: MIMO-OFDMA (BPSK / QPSK / 16QAM / 64QAM / 256QAM, 1024QAM) 802.11ac: MIMO-OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) 802.11a/g/n: OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11b: DSSS (DBPSK / DQPSK / CCK)		
Frequency Range	**2.4GHz:** FCC: 2.412~2.462GHz ETSI: 2.412~2.472GHz **5GHz:** FCC: 5.180~5.240GHz, 5.745~5.825GHz ETSI: 5.180~5.700GHz		
Operating Channels	**ETSI:** 2.4GHz: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 (13 Channels) 5GHz: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120,124,128,132, 136, 140 (19 Channels) **FCC:** 2.4GHz: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 (11 Channels) 5GHz: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116,120,124,128,132, 136, 140, 149, 153, 157, 161,165 (24Channels) **5GHz channel list may vary in different countries according to their regulations.**		
Max. Transmit Power (dBm)	FCC: up to 20 ± 1dBm ETSI: < 19dBm (EIRP)		
Max. Transmit Power (dBm)	**Network Mode**	**Data Rate**	**Max. Transmit Power (dBm)**
	2.4G Power		
	802.11b	11M	18±2
		1M	20±2
	802.11g	54M	16 ±2
		6 M	18±2
	802.11n HT20	MCS 7	15 ±2
		MCS 0	17±2
	802.11n HT40	MCS 7	15 ±2
		MCS 0	17±2
	802.11ax HT20	MCS 11	13 ±2
		MCS 0	15 ±2
	802.11ax HT40	MCS 11	13 ±2
		MCS 0	15 ±2

Max. Transmit Power (dBm)	**Network Mode**	**Data Rate**	**Receive Sensitivity (dBm)**
	5G Power		
	802.11a	54 M	15±2
		6 M	17±2
	802.11n HT20	MCS 7	14±2
		MCS 0	16±2
	802.11n HT40	MCS 7	14±2
		MCS 0	16±2
	802.11ac HT20	MCS 7	13±2
		MCS 0	15±2
	802.11ac HT40	MCS 7	13±2
		MCS 0	15±2
	802.11ac HT80	MCS 9	13±2
		MCS 0	15±2
	802.11ax HT20	MCS 11	12±2
		MCS 0	14±2
	802.11ax HT40	MCS 11	12±2
		MCS 0	14±2
	802.11ax HT80	MCS 11	12±2
		MCS 0	14±2
	802.11ax HT160	MCS 11	12±2
		MCS 0	14±2
Receive Sensitivity	**Network Mode**	**Data Rate**	**Receive Sensitivity (dBm)**
	2.4GHz		
	802.11b	11Mbps	-83
		1Mbps	-90
	802.11g	54Mbps	-70
		6Mbps	-84
	802.11n HT20	MCS 7	-68
		MCS 0	-83
	802.11n HT40	MCS 7	-66
		MCS 0	-83
	802.11ax HT20	MCS 11	-56
		MCS 0	-83
	802.11ax HT40	MCS 11	-53
		MCS 0	-83
	5GHz		
	802.11a	54Mbps	-70
		6Mbps	-83
	802.11n HT20	MCS 7	-67
		MCS 0	-83
	802.11n HT40	MCS 7	-64
		MCS 0	-83
	802.11ac HT20	MCS 7	-58
		MCS 0	-83
	802.11ac HT40	MCS 7	-57
		MCS 0	-83
	802.11ac HT80	MCS 9	-56
		MCS 0	-85
	802.11ax HT20	MCS 11	-57
		MCS 0	-83
	802.11ax HT40	MCS 11	-56
		MCS 0	-83
	802.11ax HT80	MCS 11	-53
		MCS 0	-82
	802.11ax HT160	MCS 11	-51
		MCS 0	-88
Encryption Security	WPA3 Personal, WPA2/WPA3 Personal WPA2 Personal (AES), WPA2 Personal (TKIP), WPA2 Personal (TKIP+AES) WPA/WPA2 Personal (AES), WPA/WPA2 Personal (TKIP), WPA/WPA2 Personal (TKIP+AES) WPA2 Enterprise, WPA/WPA2 Enterprise		

Management Functions	
Basic Management Interfaces	Gateway Access Point (default) Repeater WISP Mesh
LAN	Static IP / Dynamic IP
WAN	Static IP Dynamic IP PPPoE/PPTP/L2TP
VLAN	IEEE 802.1Q VLAN (VID: 1~4094) SSID-to-VLAN mapping to up to 4 SSIDs
Wireless Security	Enable/Disable SSID Broadcast Wireless Max. 32 MAC address filtering User Isolation
Max. SSIDs	8 (4 per radio)
Max. Clients	256 (200 is suggested, depending on usage)
Wireless Advanced	Auto Channel Selection 5-level Transmit Power Control : - Max (100%) - Efficient (75%) - Enhanced (50%) - Standard (25%) or Min (15%) Client Limit Control, Coverage Threshold Wi-Fi channel analysis chart Seamless Roaming Beamforming BSS Coloring
Self-healing	Supports auto reboot settings per day/hour
Management	
Basic Management Interfaces	Web browser SNMP v1, v2c PLANET Smart Discovery utility and NMS controller supported
Secure Management Interfaces	TLSv1.3 , SNMP v3
System Log	System Event Log
Others	Setup wizard Dashboard System status/service Statistics Connection status Auto reboot/Diagnostics Remote management through PLANET DDNS/Easy DDNS Configuration backup and restore Supports UPnP Supports IGMP Proxy Supports PPTP/L2TP/IPSec VPN Pass-through Supports Captive Portal, RADIUS Server/Client
Central Management	Applicable controllers: NMS APC, WS APC, VR/IVR APC, ICG APC, PLANET NMSViewerPro, PLANET CloudViewerPro
Environment & Certification	
Temperature	Operating: -20~ 55 degrees C Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-condensing) Storage: 5 ~ 90% (non-condensing)
Regulatory	CE, RoHS
Remarks [*]: The feature will be supported through firmware/system upgrade.	

Dimensions



Ordering Information

WDAP-W3000AX	Dual Band 802.11ax 3000Mbps In-wall Wireless Access Point

Related Wireless Products

WDAP-C7210E	1200Mbps 802.11ac Wave 2 Dual Band Ceiling-mount Wireless Access Point w/802.3at PoE+ and 2 10/100/1000T LAN Ports
WDAP-C3000AX	Dual Band 802.11ax 3000Mbps Ceiling-mount Wireless Access Point w/802.3at PoE+ and 2 10/100/1000T LAN Ports

* To have the best performance and wireless connection, matching it with the above-related products is recommended.

Related PoE & APC Products

WS-1032P	Wireless AP Managed Switch with 8-Port 802.3at PoE + 2-Port 10G SFP+
VR-300P	Enterprise 4-Port 10/100/1000T 802.3at PoE + 1-Port 10/100/1000T VPN Security Router (AP controller)
VR-300FP	Enterprise 4-Port 10/100/1000T 802.3at PoE + 1-Port 1000X SFP VPN Security Router (AP controller)
FWA-2100-NR	Industrial 5G NR Outdoor Unit (ODU) with 1-port Gigabit PoE PD (AP controller)
NMS-500	Enterprise-class Universal Network Management Controller - 500 nodes, 5 10/100/1000T LAN Ports
NMS-1000V-10	Universal Network Management Controller with 10" LCD Touch screen - 1024 nodes, 2 10/100/1000T LAN Ports
NMS-1000V-12	Universal Network Management Controller with 12" LCD Touch Screen - 1024 nodes, 2 10/100/1000T LAN Ports
UNC-NMS	Universal Network Management Central Controller with LCD & 6 10/100/1000T LAN Ports (1024 x 100 nodes)
PLANET CloudViewerPro	PLANET CloudViewerPro App
PLANET NMSViewerPro	PLANET NMSViewerPro App

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