1750Mbps 802.11ac Dual Band Ceiling-mount Enterprise Wireless Access Point

Ultra-high-speed, Enterprise-class Wireless LAN Solution

To meet enterprise demand, PLANET WDAP-C1750 has enhanced security and management features including SSID-based VLAN, SNMP, internal RADIUS Server and cost-effective NMS (Network Management System). With 3T3R MIMO IEEE 802.11ac dual-band technology, the WDAP-C1750 provides extreme wireless speed up to 450 + 1300Mbps (2.4GHz + 5GHz). The incredible wireless speed makes it ideal for handling multiple HD video streams, VoIPs and data sessions stably at the same time, specifically designed for SMBs, hotels, hospitals or anywhere with high-density network application

Central Management with NMS

The WDAP-C1750 with NMS (Network Management System) permits users to monitor and manage their entire operations when in the operation mode. When entering the NMS control platform, the dashboard displays an at-a-glance view of their wireless networks including system information, managed AP, managed AP group and active client list with real-time scanning. The graphical zone plan showing the wireless coverage including heat maps, devices and location can be customized with the floor map you uploaded. With NMS, any WDAP-C1750 can be the controller of a manageable wireless network.

Standard Compliant Hardware Interface

- Complies with IEEE 802.11ac and IEEE 802.11a/b/g/n standards
- 1 x 10/100/1000BASE-T port with IEEE 802.3at PoE PD supported
- 1 x micro USB 2.0 port for image upgrade and configuration backup/restore

RF Interface Characteristics

- 2.4GHz (802.11b/g/n) and 5GHz (802.11a/n/ac) concurrent dual band for more efficiency of carrying high traffic loads
- 3T3R MIMO technology for enhanced throughput and coverage
- Provides multiple adjustable transmit power control
- Wireless data transfer rate of up to 1.75Gbps (450Mbps at 2.4GHz + 1300Mbps at 5GHz)

Comprehensive Wireless Advanced Features

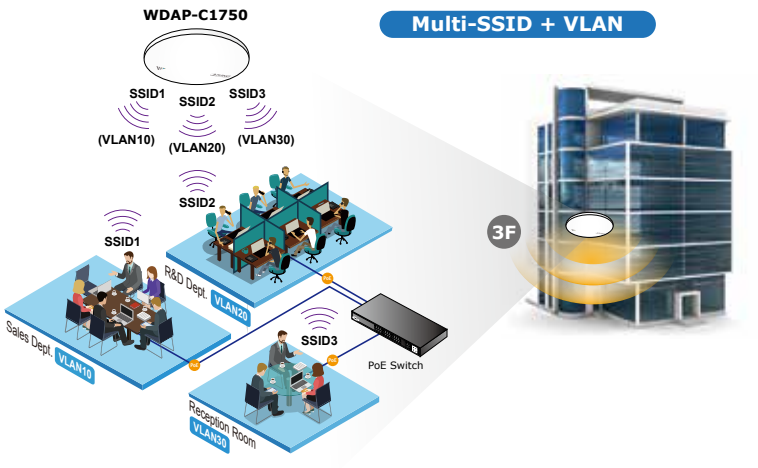
- Multiple Wireless Modes: AP, Repeater, WDS PtP, WDS PtMP
- NMS Operation Modes: AP Controller, Managed AP
- Supports up to 16 multi-SSIDs per radio (32 multi-SSIDs per AP)
- Supports SSID-based VLAN, tagged VLAN over WDS connection
- Supports WMM (Wi-Fi Multimedia) and wireless QoS to enhance the efficiency of multimedia application
- Self-healing (Schedule Reboot) mechanism for reliable connection
- Multicast rate adaptation guarantees wireless bandwidth and service quality
- Load balancing achieved through the defined number of associated clients per SSID or station idle timeout control

Secure Network Connection

- Advanced security for clients: 64/128-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK (TKIP/AES encryption) and 802.1x RADIUS authentication
- Supports WPS (Wi-Fi Protected Setup)
- Built-in RADIUS server for authenticating up to 256 user accounts

Secure and Manageable Wireless Network

Besides the WEP/WPA/WPA2 encryption for stations, the WDAP-C1750 is integrated with an internal RADIUS server and MAC-based ACL to authenticate and protect your wireless LAN to prevent unauthorized wireless connections. For management purposes, the WDAP-C1750 enables the system administrator to remotely monitor the wireless network status through the SNMP and the syslog server, and the IEEE 802.1Q tagged VLAN to be mapped to multiple SSIDs (16 sets of SSIDs per radio) to distinguish the wireless access in the Internal VLAN topology. The tagged VLAN also allows to be transmitted across the WDS connection and thus it is the best Wireless LAN solution to enterprises to isolate traffic guests from internal usage.



T-rail Ceiling-mount Design Perfect for Office

The WDAP-C1750 has an elegant, ultra slim, durable ceiling-mount housing, which provides more flexible deployment options for enterprises. By supporting the standard IEEE 802.3at PoE PD power scheme, the WDAP-C1750 can be powered and networked by a single UTP cable, effectively eliminating the needs of dedicated electrical outlets on the ceiling and reducing the cabling cost. Furthermore, the system administrator is able to arrange PoE schedule by using the managed PoE switch. Besides the standard ceiling-mounting kit, the WDAP-C1750 provides an extra T-rail mounting kit allowing IT engineers to easily hang bulky APs without any construction.

- Supports MAC address filtering up to 256 entries
- Wireless Isolation between SSIDs or clients connected to the same SSID

Easy Installation & Management

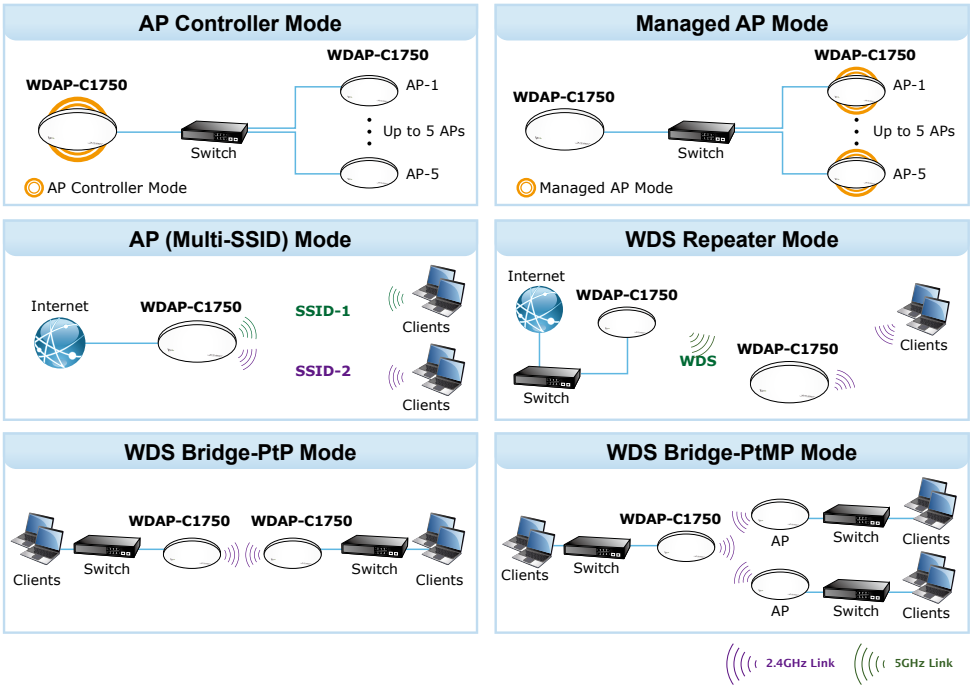
- Ultra slim and durable ceiling-mount design with extra T-rail mounting kit provided for office environment
- Flexible deployment with standard IEEE 802.3at PoE PD supported
- Web-based configuration through HTTP/HTTPS/SSH/CLI interface
- SNMP-based management interface
- Central management with firmware-based NMS (Network Management System) interface
- Diagnostic LED and built-in buzzer will sound temporarily to help identify and locate the AP
- Supports Syslog Server for sending syslog messages to the external servers for remote tracking
- System status monitoring includes DHCP Client and System Log

NMS Management Features

- Supports up to 5 managed APs with no additional wireless AP controller
- Dashboard display for the system, AP, AP group and associated client information
- Zone Plan with heat map view allows user to upload customized floor plan
- AP Cluster Management and AP Cluster provisioning
- AP bulk firmware upgrade
- AP/Client status monitoring

Multiple Operation Modes for Various Applications

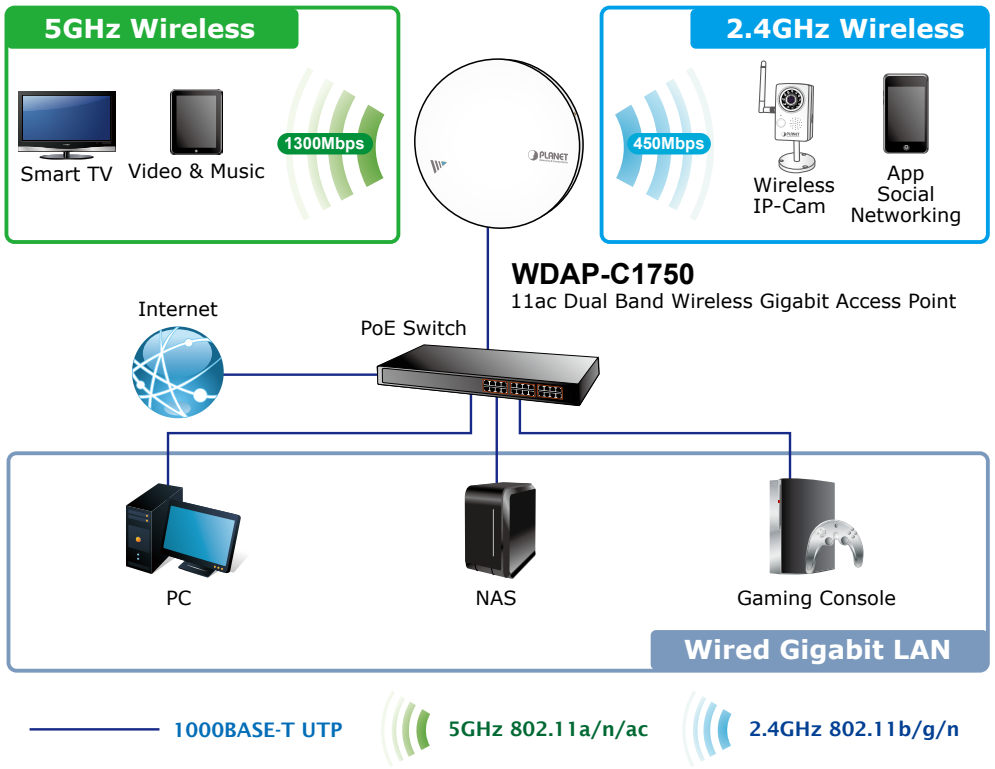
In the aspect of management, the WDAP-C1750 supports AP Controller and Managed AP modes in NMS scheme. The WDAP-C1750 being an AP Controller is able to centrally manage up to 5 WDAP-C1750 units acting as managed APs. As to common wireless application, it supports WDS Bridge PtP, WDS Bridge PtMP and Repeater modes, through which it provides more flexibility for users when wireless network is established. Compared with general wireless access point, the WDAP-C1750 offers more powerful and flexible capability for wireless clients.

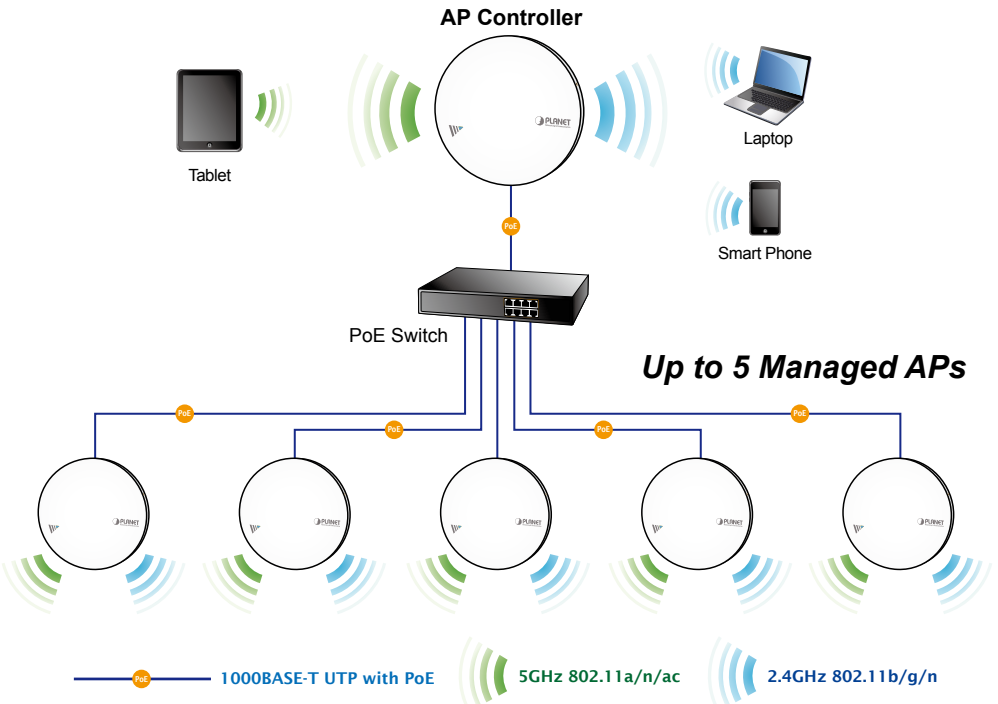


Applications

11ac Dual Band Makes Wi-Fi Transmission More Powerful

The WDAP-C1750 delivers the dual band technology to avoid signal interference and ensure the best Wi-Fi performance. It allows you to check e-mail and surf the Internet via the 2.4GHz band and simultaneously watch high-definition (HD) video or any other multimedia application via 5GHz band. Moreover, the Gigabit Ethernet port of the WDAP-C1750 offers ultra-fast wired connections that utilize the maximum wireless bandwidth to achieve the real wireless performance.





Specifications

Product	WDAP-C1750 1750Mbps 802.11ac Dual Band Ceiling-mount Wireless Access Point	
Hardware Specifications		
Interfaces	LAN	1 x 10/100/1000BASE-T RJ45 port Auto-negotiation and auto MDI/MDI-X
	USB	1 x micro USB 2.0 port
Antennas	Gain	Internal PIFA antenna (3 x 2.4GHz 4dBi, 3 x 5GHz 5dBi)
Button	Reset button	
LED Indicators	PWR/Diag LED Allow LED to turn off via software control	
Other	Internal buzzer	
Material	Plastic front panel, metal rear panel	
Dimensions (Φ x H)	208 x 31.5 mm	
Weight	590g	
Power Requirements	PoE: 802.3at PoE-PD Class 4 12V DC, 2A (not included in the standard package)	
Power Consumption (Max.)	15W, 19.2W (with USB)	
Mounting	Ceiling mount	
Wireless Interface Specifications		
Standard	IEEE 802.11ac 5GHz IEEE 802.11a/n 5GHz IEEE 802.11b/g/n 2.4GHz	
Antenna Structure	802.11ac: 3T3R MU-MIMO 802.11n: 3T3R MIMO	
Modulation	DSSS	
Data Modulation	802.11ac: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM) 802.11a/g/n: OFDM (BPSK/QPSK/16QAM/64QAM) 802.11b: DSSS (DBPSK/DQPSK/CCK)	
Band Mode	2.4G/5G concurrent mode	
Frequency Range	2.4GHz	America -- FCC: 2.412~2.462GHz Europe -- ETSI: 2.412~2.484GHz
	5GHz	America -- FCC: 5.180~5.240GHz, 5.725~5.850GHz Europe -- ETSI: 5.180~5.240GHz
Operating Channels	2.4GHz	America -- FCC: 1~11 Europe -- ETSI: 1~13
	5GHz	America -- FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 Europe -- ETSI: 36, 40, 44, 48 5GHz channel list will vary in different countries according to their regulations.
Channel Width	802.11ac: 20/40/80MHz 802.11n: 20/40MHz	
Transmission Speed	450 + 1300Mbps (2.4GHz + 5GHz)	
Transmission Distance	802.11ac: up to 35m 802.11n: up to 70m 802.11a/b/g: up to 30m The estimated transmission distance is based on the theory. The actual distance will vary in different environments.	
Max. RF Power (limited by local regulation)	5GHz: 802.11ac (VHT20/40/80): 27.5dBm @MCS0 802.11ac (VHT20/40/80): 22.5dBm @MCS7 802.11ac (VHT20/40/80): 19.5dBm @MCS9 802.11n (HT20/40): 27.5dBm @MCS0/MCS8 802.11n (HT20/40): 22.5dBm @MCS7/MCS15 802.11a: 26.5dBm @6Mbps 22.5dBm @54Mbps	
	2.4GHz: 802.11n (HT20/40): 27.5dBm @MCS0 802.11n (HT20/40): 22.5dBm @MCS7 802.11g: 27.5dBm @6Mbps 802.11g: 23.5dBm @54Mbps 802.11b: 27.5dBm @1Mbps	

Receive Sensitivity	5GHz: 802.11ac (VHT20/40/80): -84dBm @MCS0 802.11ac (VHT20/40/80): -58dBm @MCS9 802.11n (HT20): -90dBm @MCS0, -70dBm @MCS7 802.11n (HT40): -87dBm @MCS0, -68dBm @MCS7 802.11a: -90dBm @6Mbps 802.11a: -71dBm @54Mbps
	2.4GHz: 802.11n (HT20/40): -83dBm @MCS0 802.11n (HT20/40): -66dBm @MCS7 802.11g: -86dBm @54Mbps 802.11g: -72dBm @54Mbps 802.11b: -93dBm @1Mbps 802.11b: -85dBm @11Mbps
Software Features	
Operation Mode (NMS)	– AP Controller – Managed AP
Wireless Mode	– AP (Access Point) – WDS PTP (Point to Point) – Repeater – WDS PTMP (Point to Multipoint)
Encryption Security	– WEP (64/128-bit) encryption security – WPA/WPA2 (TKIP/AES) – WPA-PSK/WPA2-PSK (TKIP/AES) – 802.1x authentication
Wireless Security	Wireless MAC address filtering up to 256 entries
	Wireless Client Isolation: STA separator, SSID separator
	Supports WPS (Wi-Fi Protected Setup)
	Enable/Disable SSID broadcast
Wireless Advanced	6-level adjustable Tx power (100%, 90%, 75%, 50%, 25%, 10%)
	Multiple SSIDs: up to 16 at 2.4GHz and 16 at 5GHz
	Tagged VLAN per SSID, tagged VLAN over WDS
	Auto-channel selection: enables an AP to determine the best channel available
	Rogue AP detection
	Provides wireless statistics for system administrator monitoring
Max. Clients	Wired: 253 2.4GHz Wireless: 50 5GHz Wireless: 50
Max. WDS Peers	Up to 4 at 2.4GHz and 4 at 5GHz
QoS	IEEE 802.11e WMM (Wi-Fi Multimedia)
	Station Idle Timeout: Enables and configures it to prevent inactivated clients from occupying the connection.
	AP Load Balancing: To balance the distribution of wireless client connections across multiple APs.
	Supports multicast rate adaptation mechanism to guarantee the wireless bandwidth and service quality.
LAN	Static IP, DHCP Client, DHCP Server
	Supports 802.1d Spanning Tree (RTSP)
	Supports 802.1Q tagged/untagged VLAN (VID: 1-4095)
System Management	NMS firmware-based management interface: – Supports up to 5 managed APs with no additional wireless controller – Features dashboard and zone plan with heat map, AP cluster management, AP bulk firmware upgrade, AP/client status monitoring
	Web-based (HTTP/HTTPS/SSH/CLI) management interface
	SNMP v1, v2c, v3 management interface
	Built-in RADIUS server with EAP authentication (MS-PEAP), user account up to 256
	SNTP synchronization
	Easy firmware upgrade
	Supports self-healing (schedule reboot) mechanism for reliable connection
	Supports PLANET Smart Discovery Utility
	Supports system log and syslog server
Standards Conformance	
IEEE Standards	IEEE 802.11ac (wave 1, 3T3R, up to 1300Mbps) IEEE 802.11n (3T3R, up to 450Mbps) IEEE 802.11g IEEE 802.11a IEEE 802.11b IEEE 802.11i IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.3x Flow Control IEEE 802.3az Energy Efficient Ethernet
Other Protocols and Standards	CSMA/CA, CSMA/CD, TCP/IP, DHCP, ICMP, SNTP
Environment & Certification	
Temperature	Operating: 0 ~ 50 degrees C Storage: -20 ~ 60 degrees C
Humidity	Operating: 10 ~ 90% (non-condensing) Storage: 5 ~ 90% (non-condensing)
Regulatory	FCC, CE

Ordering Information

WDAP-C1750	1750Mbps 802.11ac Dual Band Ceiling-mount Enterprise Wireless Access Point

Related Wireless Products

WDAP-1750AC	1750Mbps 802.11ac Dual Band Wall-mount Enterprise Wireless Access Point
WDAP-C7200AC	1200Mbps 802.11ac Dual Band Ceiling-mount Wireless Access Point
WDAP-W7200AC	1200Mbps 802.11ac Dual Band Wall-mount Wireless Access Point
WDRT-1200AC	1200Mbps 802.11ac Dual Band Wireless Gigabit Router
WDL-U601AC	433Mbps 802.11AC Dual Band Wireless USB Adapter

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

Related PoE Products

POE-161	IEEE 802.3at Gigabit High Power over Ethernet Injector (external power)
POE-163	IEEE 802.3at Gigabit High Power over Ethernet Injector (internal power)
WGSD-10020HP	8-Port 10/100/1000Mbps + 2 100/1000X SFP Managed 802.3at PoE Switch
WGSW-20160HP	16-Port 10/100/1000Mbps 802.3at PoE + 4-Port Gigabit TP/SFP Combo Managed Switch
WGSW-24040HP/ WGSW-24040HP4	24-Port 10/100/1000Mbps 802.3at PoE+ & 4-Port Shared SFP Managed Switch
XGSW-28040HP	L2+ 24-Port 10/100/1000Mbps 802.3at PoE + 4-Port 10G SFP+ Managed Switch
GS-4210-24P2S	24-Port 10/100/1000Mbps 802.3at PoE + 2-Port 100/1000X SFP Managed Switch
HPOE-460	4-Port IEEE 802.3at High Power over Ethernet Injector Hub
IGS-10020HPT	Industrial 8-Port 10/100/1000T 802.3at PoE + 2-Port 100/1000X SFP Managed Switch with Wide Operating Temperature
IGS-504HPT	Industrial 5-Port Gigabit Switch w/4-Port 802.3at PoE+
IGS-624HPT	Industrial 4-Port 10/100/1000T 802.3at PoE+ & 2-Port 100/1000X SFP Ethernet Switch

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