Dual Band 802.11ac 1200Mbps Wave 2 Outdoor Wireless AP

Super High Speed and Wide Coverage

PLANET WDAP-850AC 1200Mbps Dual Band 802.11ac 1200Mbps Wave 2 Outdoor Wireless AP offers a wide coverage of wireless Internet access and ultimate wireless speed. With **IEEE 802.11ac Wave 2 MU-MIMO 2T2R dual-band technology**, the WDAP-850AC provides a maximum wireless speed of 867Mbps at 5GHz and 300Mbps at 2.4GHz with maximum connectivity and performance for long-range coverage. It comes with the **IP67-rated aluminum** case protected from contact with harmful dust and waterproof. By connecting high-gain antenna through the flexible **N-type** connectors, the system integrator can easily assist customers in achieving various outdoor long-distance applications under rough weather in any harsh environment. The WDAP-850AC also offers the **20KV surge protection** for wire cable interface that can greatly improve the durability of the product.

Benefits of MU-MIMO under 802.11ac Wave 2

With the MU-MIMO Wave 2 technology, the WDAP-850AC, installed in public areas such as hotspots, airports and conferences, reduces the frustration that Wi-Fi users often experience in downloading web pages, e-mail file attachments and media contents. For cellular operators, the WDAP-850AC provides a better Wi-Fi user experience, reducing the likelihood of users turning off Wi-Fi and putting more load on the cellular network. For enterprises, this technology also can solve Wi-Fi congestion issues in open work spaces and conference rooms.

Industrial Wireless LAN and LAN

- Compliant with the IEEE 802.11a/b/g/n/ac Wave 2 MU-MIMO wireless technology
- 802.11ac 2T2R architecture with data rate of up to 1200Mbps (300Mbps at 2.4GHz and 867Mbps at 5GHz)
- Equipped with 10/100/1000Mbps RJ45 port with auto MDI/MDI-X supported
- One reset button and power LED indicator

RF Interface Characteristics

- Built-in four N-type antenna connectors
- High output power with multiply-adjustable transmit power control

Outdoor Environmental Characteristics

- IP68 rating, IEEE 802.3at PoE design
- Rugged protection with aluminum extrusion case and ground terminal
- 20KV surge protection for wire cable interface
- Operating temperature: -40~70 degrees C

Multiple Operation Modes and Wireless Features

- Multiple operation modes: AP, Gateway, Repeater, WDS, WISP
- 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

Secure Network Connection

- Full encryption supported: 64-/128-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK and 802.1X RADIUS authentication
- Supports 802.1Q VLAN and SSID-to-VLAN mapping

WAVE 1
SU-MIMO
Serving one user at a time

WAVE 2
MU-MIMO
Serving multiple users simultaneously

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

Easy Deployment and Management

- Supports PLANET AP controllers in AP mode
- Nodes are easily discovered with PLANET Smart Discovery Utility
- Self-healing mechanism through system auto reboot setting
- System status monitoring through remote syslog server
- Supports PLANET DDNS/Easy DDNS

Flexible, Durable and Reliable Outdoor Characteristics

To reach maximum reliability in the harsh environment, the **WDAP-850AC** not only comes with **IP67-rated Aluminum Die-cast Housing**, but also adopts the enterprise-level Qualcomm kernel, capable of withstanding wide temperature ranging from **-40 to 70** degrees C. Designed with the **IEEE 802.3at PoE+** (**P**ower **o**ver **E**thernet) power scheme, the **WDAP-850AC** can be easily installed in the areas where power outlets are not available. Furthermore, it is also suitable to be integrated with PLANET Solar Power PoE System to offer farther wireless service in remote areas.
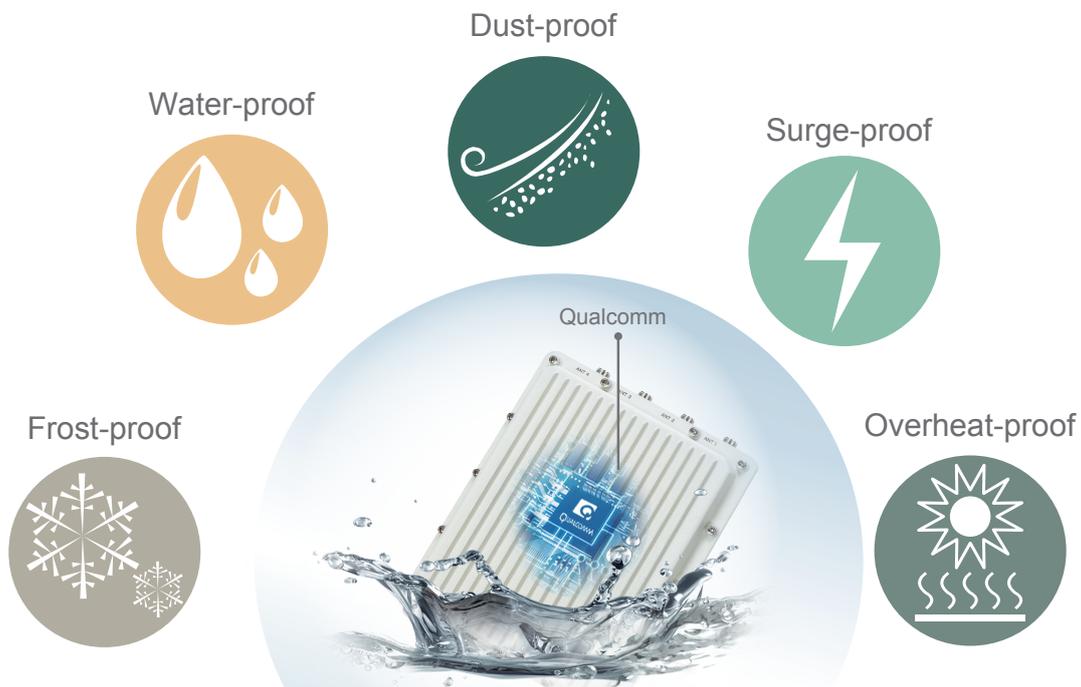
Dust-proof

Water-proof

Surge-proof

Qualcomm

Frost-proof

Overheat-proof

Environmental Adaptations in Outdoor Area

Central Management Simplifies High-density Deployment

For wireless deployment in high-density environments such as campuses, communities, warehouses, etc., the **dual-radio** design and **coverage threshold** make the **WDAP-850AC** capable of utilizing dual band to relay signal and limit specific clients so as to provide maximum bandwidth to those authenticated users. Moreover, you can simply install our NMS controller, such as NMS-500 or NMS-1000V, to deliver wireless profiles to multiple APs simultaneously, thus making the central management simple.

Multiple SSIDs with VLAN Tagging

In the aspect of security, the WDAP-850AC supports WPA/WPA2, and the 802.1X RADIUS authentication to secure the wireless connection. Besides, the supported IEEE 802.1Q VLAN allows multiple VLAN tags to be mapped to multiple SSIDs to distinguish the wireless access. This makes it possible for the WDAP-850AC to work with managed Ethernet switches to have VLANs assigned for a different access level and authority.
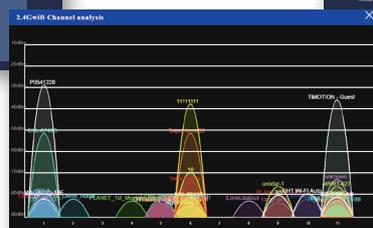
Multi-SSIDs + VLANs

More User-friendly, Higher Efficiency and Better Experience

The WDAP-850AC is designed to reduce the difficulty of the outdoor configuration and optimize user experience. With the graphical Web GUI and setup wizard assisting administrator quickly in configuring suitable operation modes for various applications, the built-in **Wi-Fi analyzer** provides real-time channel utilization to prevent channel occupation among APs. With the automatic transmission power mechanism, distance control and reboot setting, the WDAP-850AC is easier for administrator to deploy and manage without on-site maintenance.

Setup Wizard for Multiple Modes   **Home Dashboard for Wi-Fi Status**
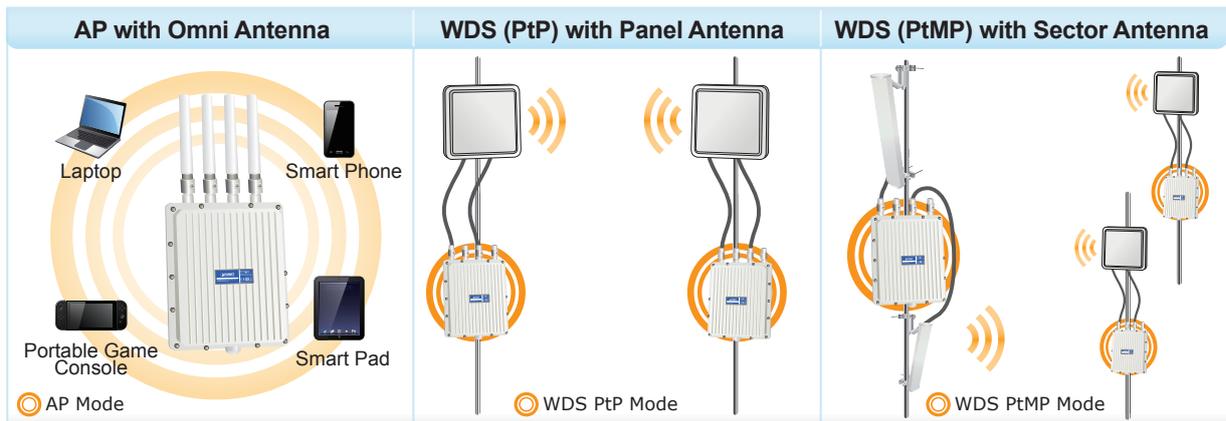

Wi-Fi Channel Analyzer

Frequency Band	**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	**2.4GHz:** FCC: 1~11 Channels ETSI: 1~13 Channels **5GHz:** FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 (9 Channels) ETSI: 36, 40, 44, 48, 100, 104, 108, 112, 116, 132, 136, 140 (12 Channels) **5GHz channel list may vary in different countries depending on their regulations.**		
Max. Transmit Power (dBm)	FCC: up to 29 ± 1dBm ETSI: < 20dBm (EIRP)		
Receive Sensitivity	**Network Mode**	**Data Rate**	**Receive Sensitivity (dBm)**
	2.4GHz		
	802.11b	1Mbps	-99
		11Mbps	-92
	802.11g	6Mbps	-95
		54Mbps	-82
	802.11n HT20	MCS0/MCS8	-95
		MCS7/MCS15	-77
	802.11n HT40	MCS0/MCS8	-93
		MCS7/MCS15	-75
	5GHz		
	802.11a	6Mbps	-92
		54Mbps	-75
	802.11n HT20	MCS0/MCS8	-91
		MCS7/MCS15	-72
	802.11n HT40	MCS0/MCS8	-88
		MCS7/MCS15	-70
	802.11ac VHT20	MCS0	-92
		MCS8	-70
	802.11ac VHT40	MCS0	-89
		MCS9	-65
	802.11ac VHT80	MCS0	-87
		MCS9	-61

Environment & Certification			
Operating Temperature	-40~70 degrees C		
Operating Humidity	10~90% (non-condensing)		
IP Level	IP67		
ESD Protection	±8kV air gap discharge ±4kV contact discharge		
Surge Protection	±20kV		
Regulatory	CE, RoHS		
Software			
LAN	Static IP / DHCP Client Supports IP-MAC binding		
WAN Type (GW/WISP mode)	■ Static IP ■ Dynamic IP ■ PPPoE		
Wireless Modes	■ Access Point ■ Gateway ■ Repeater ■ Super WDS ■ WISP		
Channel Width	20MHz, 40MHz, 80MHz		
Encryption Type	64-/128-bit WEP, WPA, WPA-PSK, WPA2, WPA2-PSK, 802.1X		
Wireless Security	Enable/Disable SSID Broadcast Wireless MAC address filtering User Isolation		

Max. SSIDs	8 (4 per radio)
Max. Wireless Clients	128 (64 per radio)
Max. WDS Peers	4
Wireless QoS	Supports Wi-Fi Multimedia (WMM)
Wireless Advanced	Auto channel selection 5-level transmit power control (100%, 75%, 50%, 25% and 12.5%) Client limit control, coverage threshold Distance control (Auto Ack Timeout) Wi-Fi channel analysis chart
Status Monitoring	Device status, wireless client List PLANET Smart Discovery DHCP client table System Log supports remote syslog server
VLAN	IEEE 802.1Q VLAN (VID: 3~4094) SSID-to-VLAN mapping up to 4 SSIDs
Self-healing	Supports auto reboot settings per day/hour

Ordering Information

WDAP-850AC	Dual Band 802.11ac 1200Mbps Wave 2 Outdoor Wireless AP

Related Products

WDAP-8350	600Mbps Dual Band 802.11n Outdoor Wireless CPE
WAP-252N	2.4GHz 802.11n 300Mbps Outdoor Wireless AP
WAP-552N	5GHz 802.11a/n 300Mbps Outdoor Wireless AP
WBS-202N	2.4GHz 802.11n 300Mbps Outdoor Wireless CPE
WBS-502N	5GHz 802.11a/n 300Mbps Outdoor Wireless CPE
WBS-512AC	5GHz 802.11ac 900Mbps Outdoor Wireless CPE
BSP-360	Industrial Renewable Power 5-Port Gigabit Managed Switch/Router with 4-Port 802.3at PoE+

Accessories

WL-NM-0.6	0.6 meter N-male (male pin) to N-male (male pin) Cable
ANT-OM5D-KIT	2.4G/5GHz Dual Band Omni-directional Antenna
ANT-OM8	2.4GHz 8dBi Omni-directional Antenna
ANT-OM10A	5GHz 10dBi Omni-directional Antenna
ANT-OM15	2.4GHz 15dBi Omni-directional Antenna
ANT-SE17D	2x2 MIMO 2.4GHz 17dBi Sector Antenna
ANT-SE17AD	2x2 MIMO 5GHz 17dBi Sector Antenna
ANT-FP14D	2x2 MIMO 2.4GHz 14dBi Flat Panel Dual Polarization Directional Antenna
ANT-FP14AD	2x2 MIMO 5GHz 14dBi Flat Panel Dual Polarization Directional Antenna
ANT-FP14AD	5GHz 14dBi Flat Panel Dual Polarization Directional Antenna
ANT-FP18	2.4GHz 18dBi Flat Panel Directional Antenna
ANT-FP18A	5GHz 18dBi Flat Panel Directional Antenna
WL-LTNA	2.4/5GHz Lightning Arrester (N-male to N-female)

WDAP-850AC