Product Specifications

1200Mbps 802.11ac Dual Band Ceiling-mount Wireless Access Point

WDAP-C7200E

Version 1.0

Change History:

Revision	Date	Author	Change List
V1.0	2018/01/02	Solo	Preliminary

Author	Solo	Editor:	Solo
Reviewed by:	Miki	Approved by:	Kent

1. PRODUCT DESCRIPTION

Ultra-high-speed, Enterprise Wireless LAN Solution

To meet enterprise demand for wireless communication, PLANET WDAP-C7200E 1200Mbps Dual Band 802.11ac Wireless AP supports central management through PLANET AP controllers. With IEEE 802.11ac 2T2R dual-band technology, the WDAP-C7200E provides a maximum wireless speed of 867Mbps at 5GHz and 300Mbps at 2.4GHz.

Powerful Dual-band WLAN Solution

PLANET WDAP-C7200E, adopting the IEEE 802.11ac standard, provides a high-speed transmission of power and data, meaning two remote nodes in the **5GHz** frequency band can be bridged. The **2.4GHz** wireless connection can also be used simultaneously. Furthermore, the WDAP-C7200E adopts the high-class Qualcomm Atheros SoC (System-on-a-Chip), which provides higher stability to meet the stringent requirements of the solution.

Advanced Security and Rigorous Authentication

The WDAP-C7200E supports 128-bit WEP, WPA / WPA2, WPA-PSK and WPA2-PSK wireless encryptions, the advanced WPA2-AES mechanism and 802.1X RADIUS authentication, 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. For management purposes, the IEEE 802.1Q VLAN supported allows multiple VLAN tags to be mapped to multiple SSIDs to distinguish the wireless access.

Ceiling-mount Design for Your Environment

With the standard IEEE802.3at Power over Ethernet (PoE) design, the WDAP-C7200E can be easily installed in the areas where power outlets are not available. By supporting the standard IEEE 802.3at PoE PD power scheme, the WDAP-C7200E 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 the PoE schedule of the WDAP-C7200E by working with the managed PoE switch.

Easy Installation and Management

With user-friendly Web UI and step-by-step Quick Setup Wizard, the WDAP-C7200E is easy to install, even for users who never experience setting up a wireless network. Furthermore, you can simply install our software controller, **PLANET SAPC** (**S**mart **AP C**ontrol), to deliver wireless profiles to multiple APs simultaneously, thus making the central management simple.

Multiple Operation Modes for Various Applications

WDAP-C7200E supports AP, Gateway, 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 points, the WDAP-C7200E offers more powerful and flexible capability for wireless clients.

2. PRODUCT FEATURES

- **Industrial Wireless LAN**
  - Compliant with the IEEE 802.11a/b/g/n/ac wireless technology
  - Equipped with 10/100/1000Mbps RJ45 ports, auto MDI/MDI-X supported
- **RF Interface Characteristics**
  - 802.11ac 2T2R MIMO architecture with data rate of up t o 1200Mbps (300Mbps at 2.4GHz and 867Mbps at 5GHz)
  - High output power with multiply-adjustable transmit power control
- **Multiple Operation Modes and Wireless Features**
  - Multiple operation modes: AP, Gateway, Repeater, WDS
  - 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
  - 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
  - Easy discovery by PLANET Smart Discovery
  - Self-healing mechanism through system auto reboot setting
  - System status monitoring through remote syslog server
  - Supports PLANET DDNS/Easy DDNS

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

CPU	Atheros QCA9563
2.4GHz RF	Atheros QCA9882
5GHz RF	Atheros QCA8334
RAM	128MB
Flash	16MB

3.2 FUNCTIONAL SPECIFICATIONS

Product	**WDAP-C7200E** 1200Mbps 802.11ac Dual Band Ceiling-mount Wireless Access Point	
Hardware Specifications		
Interfaces	LAN	2 x 10/100/1000BASE-T RJ45 port, 1 port 802.3at PoE In Auto-negotiation and auto MDI/MDI-X
Antennas	Gain:	4 x internal 5dBi antenna (2 x 2.4GHz, 2 x 5GHz)
Reset Button	Reset button on the rear side (Press over 15 seconds to reset the device to factory default)	
LED Indicators	SYS, 2.4G, 5G	
Dimensions (W x D x H)	198 x 198 x 32.9 mm	
Weight	498 ±5g	
Power Requirements	48V 0.5A, IEEE 802.3at PoE+ or 12V DC, 1.5A	
Power Consumption	< 20W	
Mounting	Ceiling mount	
Wireless Interface Specifications		
Standard	IEEE 802.11ac IEEE 802.11n IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11i IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.3x flow control	
Media Access Control	CSMA/CA	
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)	

<table>
<tr><td>Band Mode</td><td>2.4G / 5G concurrent mode</td></tr>
<tr><td>Frequency Range</td><td>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</td></tr>
<tr><td>Operating Channels</td><td>FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 (9 Channels)
ETSI: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140 (16 Channels)

5GHz channel list will vary in different countries according to their regulations.</td></tr>
<tr><td>Max. Transmit Power (dBm)</td><td>FCC: up to 29 ± 1dBm
ETSI: < 20dBm (EIRP)</td></tr>
<tr><td>Receive Sensitivity</td><td>
<table>
<tr><th>Network Mode</th><th>Data Rate</th><th>Receive Sensitivity (dBm)</th></tr>
<tr><td colspan="3">2.4GHz</td></tr>
<tr><td rowspan="2">802.11b</td><td>1Mbps</td><td>-99</td></tr>
<tr><td>11Mbps</td><td>-92</td></tr>
<tr><td rowspan="2">802.11g</td><td>6Mbps</td><td>-95</td></tr>
<tr><td>54Mbps</td><td>-82</td></tr>
<tr><td rowspan="2">802.11n HT20</td><td>MCS0/MCS8</td><td>-95</td></tr>
<tr><td>MCS7/MCS15</td><td>-77</td></tr>
<tr><td rowspan="2">802.11n HT40</td><td>MCS0/MCS8</td><td>-93</td></tr>
<tr><td>MCS7/MCS15</td><td>-75</td></tr>
<tr><td colspan="3">5GHz</td></tr>
<tr><td rowspan="2">802.11a</td><td>6Mbps</td><td>-92</td></tr>
<tr><td>54Mbps</td><td>-75</td></tr>
<tr><td rowspan="2">802.11n HT20</td><td>MCS0/MCS8</td><td>-91</td></tr>
<tr><td>MCS7/MCS15</td><td>-72</td></tr>
<tr><td rowspan="2">802.11n HT40</td><td>MCS0/MCS8</td><td>-88</td></tr>
<tr><td>MCS7/MCS15</td><td>-70</td></tr>
<tr><td rowspan="2">802.11ac VHT20</td><td>MCS0</td><td>-92</td></tr>
<tr><td>MCS8</td><td>-70</td></tr>
</table>
</td></tr>
</table>

	802.11ac VHT40	MCS0	-89
		MCS9	-65
	802.11ac VHT80	MCS0	-87
		MCS9	-61
Software Features			
LAN	Static IP		
	Supports IP-MAC binding		
WAN	■ Static IP ■ Dynamic IP ■ PPPoE		
Wireless Mode	■ Access Point ■ Gateway ■ Repeater ■ WDS (PtP/PtMP)		
Channel Width	20MHz, 40MHz, 80MHz		
Encryption Security	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	4		
Max. Clients	64 per radio (50 is suggested, depending on usage)		
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%, 12.5%)		
	Client Limit Control, Coverage Threshold		
	Wi-Fi channel analysis chart		
	Fast Roaming		
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
Management	Supports PLANET Hardware AP Controller/ Software AP Controller Applicable controllers[1]: WAPC-500, SAPC
	Remote management through PLANET DDNS/ Easy DDNS
	Configuration backup and restore
	Supports UPnP
	Supports IGMP Proxy
	Supports PPTP/L2TP/IPSec VPN Pass-through
	SNMP v1/v2c/v3 support, MIB I/II, Private MIB
Remarks	[1] the feature will be supported through firmware/system upgrade
Environment & Certification	
Temperature	Operating: 0 ~ 40 degrees C Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-condensing) Storage: 5 ~ 90% (non-condensing)
Regulatory	CE, RoHS

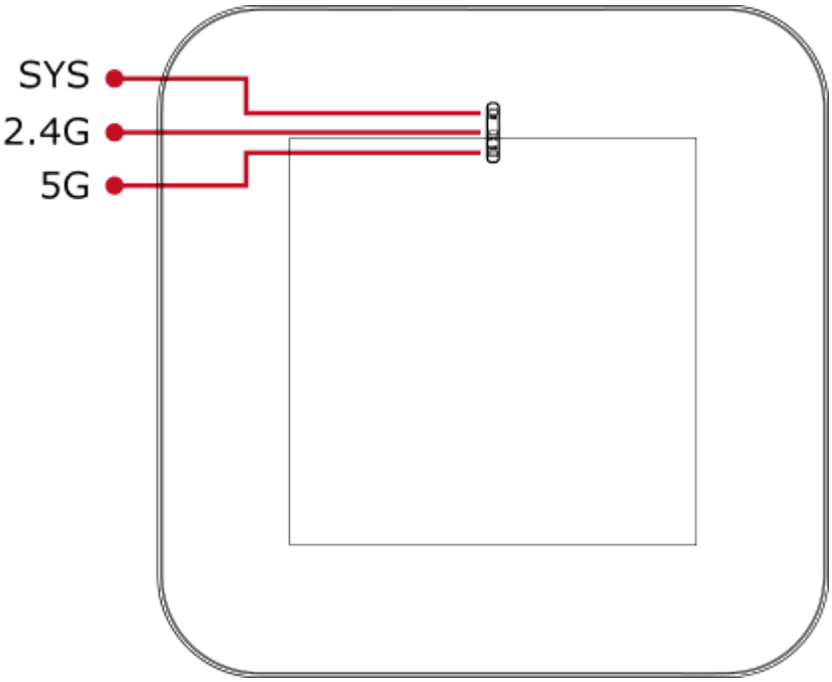
3.3 Physical Specifications

Dimensions (W x D x H)
198 x 198 x 32.9 mm

Weight
498 ±5g

Triple View

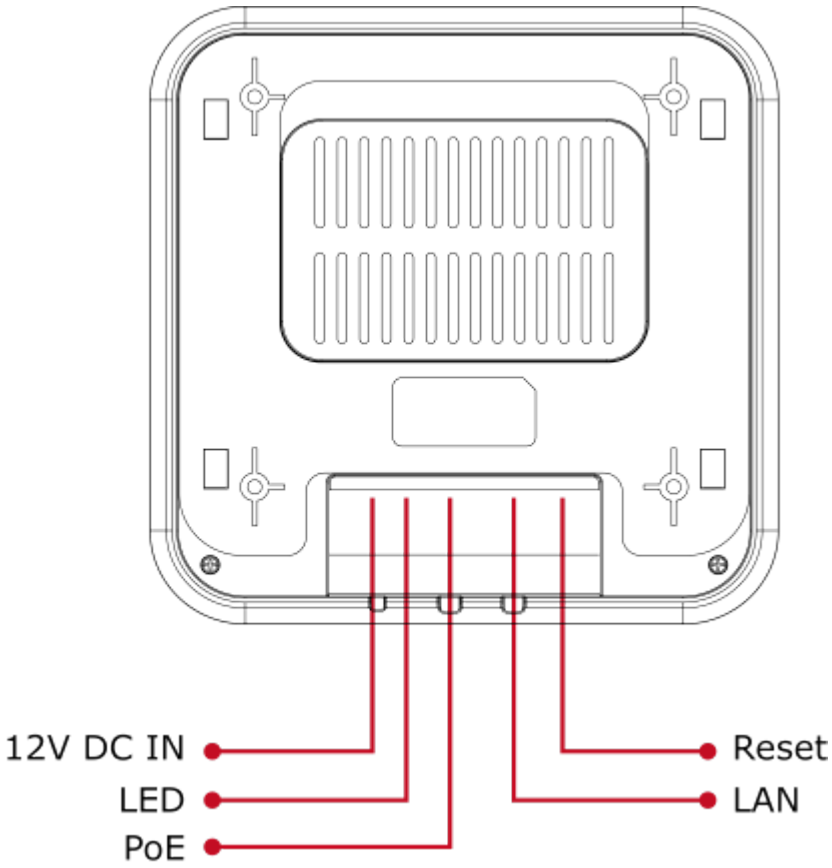
Front Panel



LED definition

LED	STATUS	FUNCTION
SYS	On	The access point is on.
	Off	System is operating.
2.4G	On	2.4GHz wireless LAN is initializing.
	Blinking	2.4GHz wireless LAN is working.
5G	On	5GHz wireless LAN is initializing.
	Blinking	5GHz wireless LAN is working.

Rear Panel



Port definition

Object	Description
12V DC	12V DC port for the power adapter
LED	The access point is on.
PoE	LAN port with Power over Ethernet (PoE) IN
LAN	LAN port connecting to the network equipment.
Reset	To restore to the factory default setting, press and hold the Reset Button for about 7 seconds, and then release it.

3.4 Environmental Specifications

Temperature

Operating:	0 ~ 40 degrees C
Storage:	-40 ~ 70 degrees C

Operating Humidity

Operating:	10 ~ 90% (non-condensing)
Storage:	5 ~ 90% (non-condensing)

3.5 Regulatory Compliance

CE, RoHS, WEEE

3.6 BASIC PACKAGING

- WDAP-C7200E x 1
- Mounting Bracket x 1
- Mounting Kit x 1
- Quick Installation Guide (QIG) x 1

3.7 PACKAGING INFORMATION

Dimensions (W x D x H)	235 x 243 x 81 mm
Weight	802 ±5g

Appendix: Default Setting

Device Name	WDAP-C7200E
IP Address	192.168.1.253
Subnet Mask	255.255.255.0
DHCP	Disabled
2.4G SSID	PLANET_2.4G
2.4G Channel	6
2.4G Channel List	FCC: 1~11 ETSI: 1~13
2.4G Channel Bandwidth	20MHz
2.4G Security	Disable
2.4G TX Power Percentage	100
5G SSID	PLANET_5G
5G Channel	FCC: 149 ETSI: 36
5G Channel List	FCC: 36, 40, 44, 48, 149, 153, 157, 161, 165 ETSI: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 132, 136, 140
5G Channel Bandwidth	40MHz
5G Security	Disable
5G TX Power Percentage	100
WMM Capable	Enable
Broadcast SSID	Enable
User Isolation	OFF
Time Zone	FCC: (GMT+8:00) ETSI: (GMT)