Product Specifications

1200Mbps Dual Band 802.11ac Ceiling Mount Wireless Access Point

WDAP-C7200AC

Version 1.0

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Change History:

Revision	Date	Author	Change List
V1.0	2014/02/26	Miki	Preliminary

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

1. PRODUCT DESCRIPTION

Brand New 11ac Wireless Technology

The WDAP-C7200AC supports IEEE 802.11a/b/g/n/ac dual band standards with 2T2R MIMO technology; therefore, it provides the wireless speed up to 300+867Mbps, which is 22X faster than the traditional 11a access point. Moreover, the WDAP-C7200AC is equipped with Gigabit Ethernet Port. Compared with general wireless APs, the WDAP-C7200AC offers faster transmission speed for the network applications and less interference to enhance data throughput. The incredible wireless speed makes it ideal for handling multiple HD movie streams, high-resolution on-line games, stereo music, VoIPs and data streams at the same time stably and smoothly.

Incredibly Ultra High Speed and Perfect Coverage

The WDAP-C7200AC provides the dual-band 2.4GHz 802.11b/g/n + 5GHz 802.11a/n/ac wireless access capability with 4 built-in highly-sensitive antennas. As it is in the shape of a flying saucer, it is definitely nice to have this eye-catching access point mount on the ceilings and walls of villas, hotels, exhibit halls, and other establishments. The WDAP-C7200AC can be flexibly mounted anywhere as it is compliant with the IEEE 802.3at PoE standard.

Full Support of Wireless Security Encryption

In aspect of security, besides 64/128-bit WEP encryption, the WDAP-C7200AC is integrated with WPA / WPA2, WPA-PSK / WPA2-PSK and 802.1x Radius authority to secure and protect your wireless LAN. It provides the wireless MAC filtering and SSID broadcast control to consolidate the wireless network security and prevent unauthorized wireless connection.

Multiple Application Modes and Wireless Value-added Features

PLANET WDAP-C7200 supports AP, Client, WDS Bridge, Repeater, and Universal Repeater modes, through which it provides more flexibility for users when wireless network is established. Compared with general wireless access point, the WDAP-C7200 offers more powerful and flexible capability for wireless clients. Being an access point, the WDAP-C7200 supports the VLAN function to allow multiple SSIDs (10 sets of SSIDs) to access Internal VLAN topology. Moreover, its Wi-Fi Multimedia (WMM) mechanism provides enhanced QoS over wireless connection for better performance in multimedia transmission like on-line game and video streaming, which are classified as a top priority.

Flexible Deployment with PoE Feature

Compliant with the IEEE 802.3at Power over Ethernet standard, the WDAP-C7200AC can be powered and networked by a single UTP cable. It thus reduces the needs of extra cables and dedicated electrical outlets on the wall, ceiling or any other place where it is difficult to reach. The wireless network deployment becomes more flexible and worry-free from the power outlet locations.

Easy Installation and Management

With user-friendly Web UI and step-by-step Quick Setup Wizard, the WDAP-C7200AC is easy to install, even for users who never experience setting up a wireless network. Furthermore, with SNMP-based management interface, the WDAP-C7200AC is convenient to be managed and configured remotely in a small business wireless network.

2. PRODUCT FEATURES

- **Standard Compliant Hardware Interface**
  - Complies with IEEE 802.11ac (draft 2.0) and IEEE 802.11a/b/g/n standards
  - 1 x 10/100/1000Base-TX Port with 1-port PoE (PD, Powered Device)
  - IEEE Standard 802.3at Power Over Ethernet Design
- **RF Interface Characteristics**
  - 2.4GHz (802.11b/g/n) and 5GHz (802.11a/n/ac) concurrent dual band, more efficiency for carrying high load traffic.
  - 2T2R MIMO technology for enhanced throughput and coverage
  - Provides multiple adjustable transmit power control
  - High speed up to 1.2Gbps (300Mbps for 2.4GHz + 867Mbps for 5GHz) wireless data rate
- **Comprehensive Wireless Advanced Features**
  - Multiple Wireless Modes: AP, Client, WDS PtP/ PtMP, WDS Repeater, Universal Repeater
  - Supports up to 10 multiple-SSIDs (2.4GHz+5GHz) to allow users to access different networks through a single AP
  - Supports VLAN function to limit the clients to access the specific internal network resource.
  - Supports WMM (Wi-Fi Multimedia), Wireless QoS to enhance the efficiency of multimedia application
  - Supports IAPP (Inter Access Point Protocol), Wireless Roaming to enable clients to roam across different wireless networks
  - Supports 5-level Transmitting Power Control to adapt various environments
  - Supports **Wireless Schedule** to automatically enable or disable the wireless function based on predefined schedule.
- **Secure Network Connection**
  - Advanced security: 64/128-bit WEP, WPA/WPA2, WPA-PSK/WPA2-PSK (TKIP/AES encryption) and 802.1x Radius Authentication
  - Supports MAC address Filtering

➢ **Easy Installation & Management**

- Flexible Deployment with Standard 802.3at PoE/ PD supported
- Web-based UI and Quick Setup Wizard for easy configuration
- Remote Management allows configuration from a remote site
- SNMP-based management interface
- System status monitoring includes DHCP Client, System Log

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

Item	Chipset
SOC	RTL8197DN
2.4GHz 802.11 b/g/n 2T2R	RTL8192ER
5GHz 802.11ac 2T2R	RTL8812AR
1-Port Gigabit LAN	RTL8211E-VB-CR
PA	2.4G PA: EPICOM 5G PA: Skyworks
CPU	RLX5281 660MHz (built-in)
Flash size	8MB
RAM size	64MB
Antenna	2.4GHz: 2.5dBi x 2 5GHz: 4dBi x 2
PCB Dimensions	135mm x 85mm

3.2 FUNCTIONAL SPECIFICATIONS

Product	**WDAP-C7200AC** 1200Mbps Dual Band 802.11ac Ceiling Mount Wireless Access Point	
Hardware Specifications		
Interfaces	LAN	1 x 10/100/1000Base-T RJ45 port Auto-negotiation and Auto MDI/MDI-X
Antennas	Gain:	2 x 2.4GHz 2.5dBi PCB antenna 2 x 5GHz 4dBi PCB antenna
Reset Button	Reset button at top cover Press over 7 seconds to reset the device to factory default	
LED Indicators	PWR Allow LED to turn off via software control	
Material	Plastic	
Dimensions (Φ x H)	194 x 49 mm	
Weight	280 ±5g	
Power Requirements	802.3at PoE, 48-56V DC input	
Power Consumption	20W (max.)	
Mounting	Ceiling Mount	
Wireless Interface Specifications		
Standard	IEEE 802.11**ac** (Draft 2.0) 5GHz IEEE 802.11a/n 5GHz IEEE 802.11b/g/n 2.4GHz	
Antenna Structure	802.11n: 2T2R MIMO 802.11ac: 2T2R MU-MIMO	
Modulation	DSSS	
Data Modulation	802.11b: DSSS(DBPSK/ DQPSK/ CCK) 802.11a/g/n: OFDM(BPSK/ QPSK/ 16QAM/ 64QAM) 802.11ac: OFDM(BPSK/ QPSK/ 16QAM/ 64QAM/ 256QAM)	
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	802.11n: 20/ 40MHz 802.11ac: 20/ 40/ 80MHz	

Data Transmission Rates	802.11ac (VHT20, Nss2-MCS8): Up to 173.3Mbps 802.11ac (VHT40, Nss2-MCS9): Up to 400Mbps 802.11ac (VHT80, Nss2-MCS9): Up to 867Mbps
	802.11n (HT40): 270/243/216/162/108/81/54/27Mbps 135/121.5/108/81/54/40.5/27/13.5Mbps (dynamic)
	802.11n (HT20): 130/117/104/78/52/39/26/13Mbps 65/58.5/52/39/26/19.5/13/6.5Mbps (dynamic)
	802.11g: 54/48/36/24/18/12/9/6Mbps (dynamic)
	802.11b: 11/5.5/2/1Mbps (dynamic)
Transmission Distance	802.11ac (draft): up to 30m 802.11n: up to 70m 802.11g: up to 30m **The estimated transmission distance is based on the theory. The actual distance will vary in different environments.**
Max. RF Power	**5GHz:** 802.11a: 20 ±2dBm 802.11n (HT20): 20 ±2dBm 802.11n (HT40): 20 ±2dBm 802.11ac (VHT20): 20 ±2dBm 802.11ac (VHT40): 20 ±2dBm 802.11ac (VHT80): 20 ±2dBm
	2.4GHz: 802.11b/g: 22 ±2.5dBm 802.11n: 19 ±2.5dBm
Receive Sensitivity	**5GHz:** 802.11a: -93 @ 6Mbps, -75dBm @ 54Mbps 802.11n (HT20): -92dBm @ MCS0, -71dBm @ MCS7 802.11n (HT40): -89dBm @ MCS0, -66dBm @ MCS15 802.11ac (VHT20): -91dBm @ Nss1-MCS0, -64dBm @ Nss2-MCS8 802.11ac (VHT40): -89dBm @ Nss1-MCS0, -59dBm @ Nss2-MCS9 802.11ac (VHT80): -86dBm @ Nss1-MCS0, -56dBm @ Nss2-MCS9
	2.4GHz: 802.11b (11Mbps): -88dBm @10% PER 802.11g (54Mbps): -74dBm @10% PER 802.11n 20MHz (MCS7): -69dBm @10% PER 802.11n 40MHz (MCS15): -66dBm @10% PER
Software Features	
Wireless Mode	■ Universal Repeater (AP+Client) ■ Repeater (WDS+AP) ■ AP (Access Point) ■ WDS PTP (Point to Point) ■ WDS PTMP (Point to Multipoint) ■ Client
Encryption Security	■ WEP (64/128-bit) encryption security ■ WPA / WPA2 (TKIP/AES) ■ WPA-PSK / WPA2-PSK (TKIP/AES)
Wireless Security	Provides wireless LAN ACL (Access Control List) filtering
	Wireless MAC address filtering

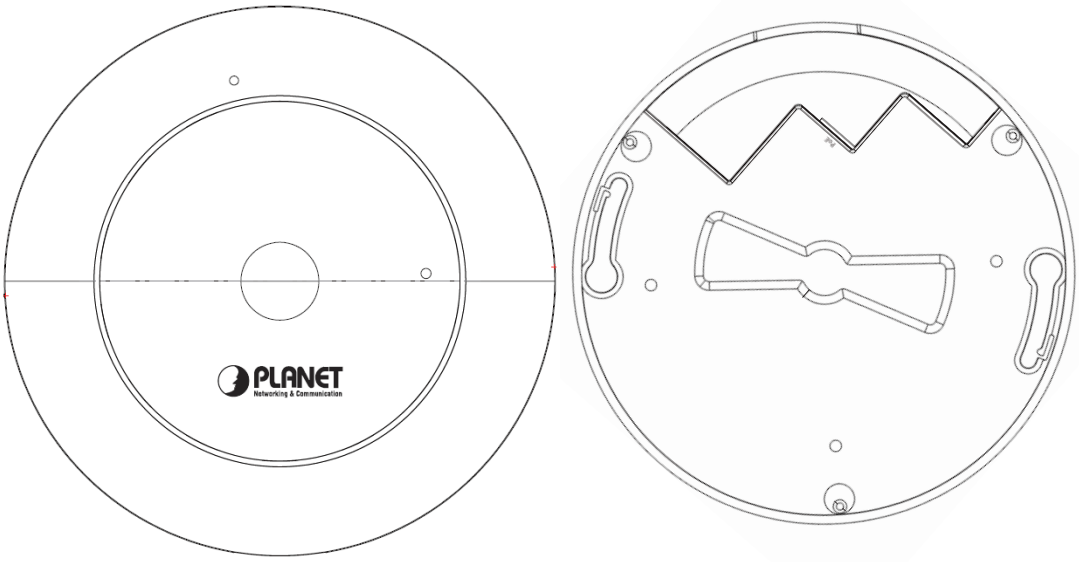
	Supports WPS (Wi-Fi Protected Setup)
	Enable/ Disable SSID Broadcast
Wireless Advanced	WMM (Wi-Fi Multimedia): 802.11e Wireless QoS
	Multiple SSID: up to 5 at 2.4GHz and 5 at 5GHz
	Wireless Isolation: Enable it to isolate each connected wireless clients from communicating with each other
	IAPP (Inter Access Point Protocol): 802.11f Wireless Roaming
	Provides Wireless Statistics
Max. Clients	Wire: 253 2.4GHz Wireless: 32 5GHz Wireless: 32
LAN	Built-in DHCP server supporting static IP address distributing
	Supports UPnP
	Supports 802.1d Spanning Tree
	Supports 802.1Q VLAN
	Supports IGMP Proxy
System Management	Web-based (HTTP) management interface
	SNTP time synchronize
	Easy firmware upgrade
	Supports Scheduling Reboot
	Supports Smart Discovery Utility
Standards Conformance	
IEEE Standards	IEEE 802.11ac (Draft 2.0, 2T2R, up to 867Mbps) IEEE 802.11n (2T2R, up to 300Mbps) IEEE 802.11g 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
Other Protocols and Standards	CSMA/CA, CSMA/CD, TCP/IP, DHCP, ICMP, SNTP
Environment & Certification	
Temperature	Operating: 0 ~ 50 degrees C Storage: -40 ~ 70 degrees C
Humidity	Operating: 10 ~ 90% (non-condensing) Storage: 5 ~ 90% (non-condensing)
Regulatory	FCC Part 15B & 15C, IC, RoHS

3.3 Physical Specifications

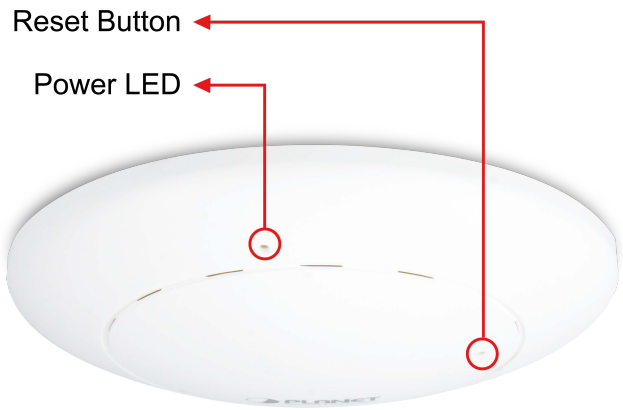
Dimensions (Φ x H)
194 x 49 mm

Weight
280 ±5g

Drawing



Front Panel



Button definition

Object	Description
Reset	To restore to the factory default setting, press and hold the Reset Button for about 10 seconds, and then release it.

LED definition

LED	COLOR	STATUS	FUNCTION
PWR	**Green**	On	Device power on
	Green	Off	Device power off (control by S/W)
	Orange	On	System initializing, turned it off when system completed
	Orange	Blinking	Detect and identify the LED (control by S/W) 1) Position LED on: LED blinks continuously. 2) Position LED off: the LED is off.

Rear Panel

H/W Interface definition

Object	Description
PoE Port (802.3at PoE)	10/100/1000Mbps RJ-45 port , Auto MDI/ MDI-X Connect PoE port to the IEEE 802.3at PSE to power on the device.

3.4 Environmental Specifications

Temperature

Operating:	0 ~ 50 degrees C
Storage:	-10 ~ 70 degrees C

Operating Humidity

Operating:	20 ~ 80% (non-condensing)
Storage:	20 ~ 90% (non-condensing)

3.5 Regulatory Compliance

FCC, RoHS, WEEE

3.6 BASIC PACKAGING

- WDAP-C7200AC x 1
- Mounting Bracket x 1
- Mounting Kit x 1
- Quick Installation Guide (QIG) x 1
- CD (Including User's Manual) x 1

3.7 PACKAGING INFORMATION

Dimensions (W x D x H)	295 x 245 x 76 mm
Weight	532 ±5g

Appendix: Default Setting

Device Name	WDAP-C7200AC
IP Address	192.168.1.253
Gateway	192.168.1.254
Subnet Mask	255.255.255.0
DHCP	Disabled
2.4G SSID	Planet AP 2.4G
2.4G Domain	FCC
2.4G Wireless Mode	11b/g/n mixed
2.4G Channel	11
2.4G Channel List	1~11
2.4G Channel Bandwidth	40MHz
2.4G Security	Disable
2.4G TX Power Percentage	100
5G SSID	Planet AP 5G
5G Country	FCC
5G Wireless Mode	11a/n/ac
5G Channel	149
5G Channel List	36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 149, 153, 157, 161
5G Channel Bandwidth	80MHz
5G Security	Disable
5G TX Power Percentage	100
WMM Capable	Enable
SSID Broadcast	Enable
WLAN Partition	Disable
Enable Universal Repeater Mode	Disable
Time Zone	(GMT) Greenwich Mean Time
LED Control – Power LED	On
LED Control – Position LED	Off