



AIR-APO1200

**COMMANDO AirX 1200Mbps, 2.4GHz+5GHz 802.11ac
Wave 2, 128 Users, Cloud Outdoor Access Point
Data Sheet**



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Product Overview

COMMANDO AirX AIR-APO1200 is a dual Radio, Cloud Outdoor Access Point with works in standalone as well as AirX Controller based mode of operation. It is industrial grade Outdoor AP with weather resistant IP65 case specifically for outdoor installations. It enables communication between wireless users with speed up to 1200Mbps with beamforming Wave 2 technology. It is standalone as well as controller-based device, comes with dual band with 2.4GHz (300Mbps) and 5GHz (867Mbps), equipped with separate 1G WAN port and 1G LAN port. It can provide powerful wireless access in large-scale, low-density, high-bandwidth environments such as hotels, supermarkets, offices, restaurants, enterprise environments such as Small, Medium enterprises, university campus, concert venue, gymnasium, etc.

It is industrial grade APO which can install at every place to work as a stable base station for wireless users. Its ceiling-mounted design, integrated Ethernet interface, and sleek appearance make it easy to deploy, and it can be seamlessly integrated into the ceiling or wall without disrupting the overall interior design layout. It is an ideal choice for wireless access in large-scale, low-density, high-bandwidth environments. It supports (IEEE 802.3af/at) PoE/PoE+, which helps in easy installation by eliminating the need of a dedicated power source and need of a power adapter. It can identify and determine the correct transmission speed and half/full duplex mode of the attached devices. It also supports standard Auto-MDI/MDI-X that can detect the type of connection to any Ethernet device without requiring special straight or crossover cables, Store-and-Forward forwarding scheme to ensure low latency and high data integrity.

Product Highlights

- FIT/FAT mode operation. FAT mode support multiple operational modes like AP, WDS, Routing mode (Default mode is FAT-AP mode).
- Multi SSID up to 10 with 2G and 5G band with inbuilt Wi-Fi channel analysis.
- Management with the help of WEB GUI, AirX WLAN Controller and from Cloud portal.
- Supports IEEE 802.11ac/b/g/n with backward compatibility for wireless clients, 2.4GHz+5GHz Wireless dual band.
- Built-in 2dBi FPC Antenna with wireless RF power adjustable as per user movements from AP.
- With Wave 2 MIMO technology, it adopts 256QAM modulation with 2 Spatial steams greatly improves communication efficiency.
- Access end users up to 128 max.
- Supports band steering automatically moves to wider 5G band for faster connections, intelligent load balance based on users.
- Dual purposes WAN or IEEE 802.3af/at Port (PoE/PoE+) port supporting 1x 10/100/1000Mbps and dedicated LAN ports 1x 10/100/1000Mbps.
- Supports Wi-Fi client distance 110 meters and above depending on surrounding conditions.
- Dual input for power either PoE/PoE+ via WAN port or DC power inputs 12V, 1.5A.
- Support Open or encryption like WPA/WPA2PSK_TKIPAES.
- Supports remote management via cloud platforms and WeChat mini-programs. Enables real-time remote viewing, configuration, upgrades, and maintenance.
- With the function of the built-in firewall, IP filter, URL filter, and MAC filter.
- Industrial grade IP65 case, weather resistant
- Comply with IEEE 802.3az standard
- Plug and Play design simplifies installation with self-adaption.
- Compact, silent design perfect for noise sensitive environments.
- With Zero Touch Provisioning with plug and play and no setup. Affordable, Easy-to-Use AP for all sized business networks, with Zero Configuration Required.
- Comes with one-year default warranty – optionally extendable up to 3 years.

Features and Benefits

FIT and FAT Mode

It supports FIT/FAT operation mode. In FIT mode, AP works with the AirX Controller and all configuration is centrally managed by controller. In FAT mode, AP can use WEBGUI and configure AP, WDS and routing mode.

Wave 2 MU-MIMO Technology

It adopts 256QAM modulation, supports MU-MIMO (Multi-User Multiple-Input Multiple-Output), 2 Spatial streams greatly improve communication efficiency. Beamforming technology that concentrates the wireless signal in specific directions, enhancing the transmission and reception performance of the signal.

Dual Power Option

It supports Power over Ethernet IEEE802.3at (PoE/PoE+), as well as power can be fed from 12V, 1.5Amp adaptor for easy installation and lower cost. So, it can be installed in areas where power outlets are not readily available.

Weatherproof Enclosure with IP65

It has IP65 resilient weatherproof enclosure protects the access points against harsh outdoor condition. Lightning Protection $\pm 6\text{KV}$ with no Ingress of dust as well as waterproof enclosure.

User-Friendly Interface

It is standalone Web GUI based as well as controller-based cloud access point which is easy to use and manage device. It requires minimal configuration, so setup is simple and hassle-free. Auto-negotiation senses the link speed of a network device in wired 10/100/1000Mbps and also for wireless devices intelligently adjusts for compatibility and optimal performance by DFS. It can check free channels available with inbuilt Wi-Fi analysis. It is ideal for installation to any desktops/wall/ceiling with limited space. Dynamic LED lights provide real-time work status display and basic fault diagnosis. Easy Installation, Plug-and-play installation with no configuration required.

Gigabit Ethernet speed

It provides with Gigabit Ethernet speed for LAN and WAN port. It Comply with IEEE 802.3az standard, energy efficient AP is well built, rigorously tested and can sustain very rough environment and provides reliable performance.

Wireless client supported

Supports up to 128 wireless users/clients and supports distance of 110meters and above from AP in all directions for wireless clients.

Firewall

Support Flexible user Access Control Policies and network Security to meet varied Customer needs. MAC Filtering function to block the access of illegal hosts. Supporting One-Click IP-MAC Binding to avoid ARP spoofing. Access Rules can be applied like URL Filter, IP Filter, MAC Filter, Port Mapping and DMZ to permit or deny Wi-Fi users.

Auto MDIX Capabilities

Auto sensing 10/100/1000Mbps ports with auto MDIX capabilities which also removes speed and duplex mismatches automatically.

Compact and Silent Performance

It operates quietly, making it ideal for use in virtually any room or office. Perfect for noise sensitive environments.

Supports uninterrupted critical network infrastructure

It is equipped with dual power options, including DC input and PoE/PoE+ support, providing redundancy to safeguard against power failures. This dual-power architecture ensures continuous operation of the device, mitigating potential downtime and extending its operational lifespan. By integrating this feature, businesses can protect against the financial and operational risks associated with power disruptions, ensuring uninterrupted connectivity for critical network devices, users, and servers.

Value for Money

State of art quality product that can serve on real time high-speed performance with AC input power, highly reliable, conformance to international open standards, durable, serviceable, aesthetics, perceived quality, enhanced performance leads to value to money.

Green Technology

It features the IEEE 802.3az standard, energy-efficient Ethernet that can save power. It automatically adjusts power consumption according to the link status to limit the carbon footprint of your network. It also complies with RoHS, prohibiting the use of certain hazardous materials. Besides that, most of the packaging material can be recycled and reused.

Software

COMMANDO AirX AIR-APO1200 Supports FIT mode works with AirX Controller, which can provide cloud-based access and functions as follows.

Monitoring

Interface, Terminal, Protocol, Policy, System, Flow Control.

System Setup

Basic Setting, Disk management, Cloud Account, Advanced Settings like ALG Set, Administration, Upgrading, Reboot.

Network

Interfaces, DHCP, DNS, IP/MAC Group, Static Routes, VLAN, VPN Client, UPNP NAT, Port Mapping, IPv6, IGMP Agent.

Flow Control

Multi-WAN features Load Balancing/Protocol/Port Forward/Domain Name/Upload/Download, Smart Flow Control, IP/MAC Limiters, Protocol Library.

Access Controller

Wireless overview, AP Configuration, AP group, AP Firmware Upgrades, Wireless blacklist and whitelist, User Information.

1. Wireless overview: Open Access Controller with ON/OFF button. The connected AP will automatically enter the AP device list and can Manage AP. Running State of AP status with Online AP, Offline AP, fast roaming, 5G first along with terminal statistics like 2.4G online, 5G online, peak online, active terminal, inactive terminal. Wireless Network Rating with traffic statistics, terminal association details with Access evaluation, Access times, Average access success rate with Network transmission quality.

2. AP Configuration: Access Point Configuration with All groupings, All Status like Online/Offline/Upgrading, All Frequency like (2.4G+5G) and IP/MAC/Model/Remarks.

Interference Analysis with Start Searching AP, MAC, Remarks, BSSID, BSSID Remark, SSID, Signal Value, Channel along with Import or Export configuration files.

Default Configuration for 2.4G, 5G Radio with other Setting like SSID1 Name - COMMANDO01

SSID1 Security No Password, SSID1 VLAN Close, Hide SSID1 Name Open, SSID rate limit Open, Guest Mode Open (Isolate guest devices discovery and access to wired network) Channel Auto, AP Signal 80% default Channel width 20 MHz can change to 40MHz or self-adaptation, Airtime scheduling, Advanced settings like Beacon frame power

Follow AP signal strength Beacon frame interval 200ms, RTS threshold 0, Low-rate access license Allow all, Management frame rate 1Mbps.

3. AP group: AP Group Add/Delete with Group name, Number of AP, channel, Maximum belt capacity, SSID, Actions. With Add button click we can set Group name with 2.4G/5G control state information.

4. AP Firmware Upgrades: Access Point Upgrades with MAC/Model, Upgrade All, Batch Upgrade with information like MAC Address, Current Version, Latest Version, Status, AP Remarks, Actions

5. Wireless blacklist and whitelist: With Add, Import, Export, Enable, Disable, Delete which also shows Mode, Terminal MAC address, SSID, AP, week, time, comment, Status, Actions

6. User Information: User Information with IP/MAC/SSID, All Frequency (2.4G/5G), All users along with weak signal users and normal users showing information like IP Address, MAC, AP Information, SSID, Signal, Connect Time, Tx, Rx, Comment, Actions.

Authentication

Captive Portal, VPN Server, Authentication Account, Push Notification.

Behavior

Behavior Audit with Mark MAC Address, MAC Control, Website Control, URL Control, Application Protocol Control, Secondary Routing, QQ, Blacklist/Whitelist.

Firewall

ACL Rules, ARP binding, Connection Limiter, Advanced Firewall. Advanced application->Dynamic DNS, SNMP, Application across three layers, Wake on LAN, FTP Server, HTTP Server, UDPXY Set.

Services

Ping Test, Capture Packet, Trace Route, IP Sub-netting, Speed Test, Diagnostics, Watchdog.

Log

User Logs, Function Logs, System Logs.

COMMANDO AirX Ceiling APO's also can be controlled from cloud captive portal with AirX Cloud Login <http://commandonetworks.com.cn/#/login> .

COMMANDO AIR-APO1200 supports FAT mode works as autonomous / standalone and functions as follows.

Table 1. Software Highlights

Software Functions	
Working Mode	FAT/FIT Mode
Capacity	128 Users
Management mode	Web-GUI AirX WLAN Controller Cloud platform Mini Program Management
Status	Device Status: CPU usage, remaining memory, number of wireless users, device information (device name, device model, software version, serial number, MAC address, system time, total memory, remaining memory, uptime) System Log
Basic Management	LAN Settings: Automatic/Static IP, WAN Port VLAN, LAN Port VLAN, MAC Address DHCP Configuration: Disabled/Normal/Advanced Settings Mode Switching: Router/AP, DHCP Server(Enable/Disable)
Wireless	2.4GHz Wireless Configuration: SSID Settings: SSID, VLAN ID, Encryption, Wi-Fi password (supports up to 5 SSIDs) Basic Settings: Wireless Network On/Off, Region, Channel, Bandwidth, Transmission Power, AP Advanced(Network Mode/AP Isolation/Multicast [Off/Multicast to Multicast/Multicast to Unicast]/Weak Signal Disconnection) WDS Settings: WDS Mode (Off/Self-learning Mode/Bridge Mode/Repeater Mode), Connection Status User List (IP Address, MAC Address, Signal Strength, Transmission Rate, Reception Rate)

	<p>5.8GHz Wireless Configuration:</p> <p>SSID Settings: SSID, VLAN ID, Encryption, Wi-Fi password (supports up to 5 SSIDs)</p> <p>Basic Settings: Wireless Network On/Off, Region, Channel, Bandwidth, VHT Bandwidth, Transmission Power, AP Advanced (Network Mode/AP Isolation/Multicast [Off/Multicast to Multicast/Multicast to Unicast]/Weak Signal Disconnection)</p> <p>WDS Settings: WDS Mode (Off/Self-learning Mode/Bridge Mode/Repeater Mode), Connection Status</p> <p>User List (IP Address, MAC Address, Signal Strength, Transmission Rate, Reception Rate)</p>
ARP List	<p>ARP List (IP Address, MAC Address, Interface, Type, Status, Action [Static/Unique])</p> <p>Supports All Unique, All Static, All Dynamic, Export List Information, Export Binding Information, Import Binding Information, Add Binding, Refresh</p>
AC Platform Client	<p>Status switch, Server Address, Device Name, Group Name, Maximum Number of Users, Maximum Number of 5G Users, Transmission Power, AP Isolation, Remark, DHCP Defense, Current Connection Status</p>
Network Tools	<p>Ping Test, TraceRoute</p>
System Management	<p>Configuration Management: Backup and Import, Factory Reset</p> <p>System Upgrade: Local Upgrade</p> <p>Device Restart: Immediate Restart/Scheduled Restart</p> <p>Device Name: Project Name, Device Name, Host Name, Internal Domain Name</p>

Hardware

Solid performance with non-blocking architecture

- With Flash 16MB with 256MB DDR2 RAM memory greatly improved the data processing performance.
- All ports capable of Gigabit Ethernet speed. Full speed of data transferring with (Auto-Negotiation/Auto MDI/MDIX).
- Solid performance with non-blocking architecture.

Physical Ports and Networking Interfaces

- Up to 2 x 10/100/1000Mbps RJ 45 Ethernet Ports with combined PoE/PoE+ with WAN and separate LAN port
- LED Indicators: Power/Sys, LAN, WAN.
- Reset Button

Extra Long operational life

- High Quality PCB Circuit Board and PCB Surface Treatment Using Gold Sinking Process.
- Support temperature range -10°C ~ 45°C.
- Desktop, Ceiling and Wall mount design Which enables horizontal and vertical wall mounting.

Noise-free Operation

- The ports support reduced power modes for silent operation. Perfect for noise sensitive environments.

Table 2. Hardware Highlights

Hardware Highlights	
Main Chip	MT7621DAT+MT7603EN+MT7613BEN
Frequency	MIPS dual-core 880MHz
RAM	256MB
Flash	16MB
Hardware Specifications	1x10/100/1000Mbps auto-negotiation WAN port or IEEE 802.3af/at PoE/PoE+ port 1x10/100/1000Mbps auto-negotiation LAN port 1x Reset button/Restore to factory default 1xDC Port
Interface	10/100/1000Mbps LAN/WAN
Data Rate	1200Mbps
Reset	Hardware Reset button
Input Power	DC 12V 1.5A or IEEE802.3at (WAN)
User Capacity	128
Dimension	188mmx33mm
ENVIRONMENTAL	Operating Temperature: 20~45 °C Limit working temperature: --20°C~70°C Storage Temperature: -20°C~70 °C Humidity: 5%~90% non-condensing

Weight	<1Kg
Warranty Period	1 Year
Indicator Light	Power/SYS, LAN, WAN

Specifications

Technical Specifications

Supports 2.4GHz+5GHz, IEEE 802.11ac/b/g/n with backward compatible wireless clients, wave 2.0 technology, Standalone model with Multi SSIDs up to 10 with either open or WPA/WPA2PSK_TKIPAES encryption with Dual option for input Power supply with either 48V PoE/PoE+ (IEEE 802.3af/at) or DC input power.

Table 3. Specifications Highlights

Technical Parameters	Specification
Frequency Range	2.4G: 2.4~2.4835GHz 5G: UNII-1: 5.15~5.35GHz UNII-2: 5.47~5.725GHz UNII-3: 5.725~5.825GHz
Channel	2.4G Channels Supported: 1-13 5G Channels Supported: 36, 40, 44, 48, 52, 60, 64, 149, 153, 157, 161, 165
Modulation	802.11b: DSSS (DQPSK, DBPSK, CCK) 802.11g: OFDM (BPSK, QPSK,16-QAM) 802.11n: OFDM (BPSK, QPSK,16-QAM, 64-QAM) 802.11ac: OFDM (BPSK, QPSK,64-QAM, 256-QAM)
Transmission Rate	11b up 11Mbps 11g up 54Mbps 11n up 300Mbps 11ac up 867Mbps

<p>Receiver Sensitivity</p>	<p>2.4G:</p> <p>11b: $<-90\pm 1.5\text{dBm @1Mbps}$, $<-84\pm 1.5\text{dBm dBm@11Mbps}$</p> <p>11g: $<-86\pm 1.5\text{dBm@6Mbps}$, $<-69\pm 1.5\text{dBm @54Mbps}$</p> <p>11n 20MHz: $<-85\pm 1.5\text{dBm@MCS0}$, $<-67\pm 1.5\text{dBm @MCS7}$</p> <p>11n 40MHz: $<-82\pm 1.5\text{dBm @MCS0}$, $<-64\pm 1.5\text{dBm @MCS7}$</p> <p>5G:</p> <p>11a: $<-86\pm 1.5\text{dBm @6Mbps}$, $<-69\pm 1.5\text{dBm @54Mbps}$</p> <p>11n 20MHz: $<-85\pm 1.5\text{dBm@MCS0}$, $<-67\pm 1.5\text{dBm @MCS7}$</p> <p>11n 40MHz: $<-82\pm 1.5\text{dBm @MCS0}$, $<-64\pm 1.5\text{dBm @MCS7}$</p> <p>11ac 20MHz: $<-84\pm 1.5\text{dBm @MCS0}$, $<-59\pm 1.5\text{dBm @MCS8}$</p> <p>11ac 40MHz: $<-82\pm 1.5\text{dBm @MCS0}$, $<-56\pm 1.5\text{dBm @MCS9}$</p>
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	11ac 80MHz: $<-78\pm 1.5\text{dBm @MCS0,}$ $<-52\pm 1.5\text{dBm @MCS9}$
Transmit Power	11b: $25\text{dBm}\pm 1.5\text{dBm}@11\text{Mbps}$ 11g: $23\text{dBm}\pm 1.5\text{dBm}@54\text{Mbps}$ 11n(20/40MHz): $20\text{dBm}\pm 1.5\text{dBm}@MCS7$ 11ac(40/80MHz): $20\text{dBm}\pm 1.5\text{dBm}@MCS9$
Data Transfer Rates	Dual band IEEE 802.11b up to 11Mbps IEEE 802.11g up to 54Mbps IEEE 802.11n up to 300Mbps IEEE 802.11ac up to 867Mbps
Frequency	Radio 2.4GHz+5GHz
Throughput	Up to 1200Mbps
Wi-Fi Operational Modes	AP, WDS and Routing mode
Wireless Security	Open or Encryption WPA/WPA2PSK_TKIPAES option
Multiple SSID	Up to 10 SSIDs.
Access control Features	MAC Access Control
Enclosure Type	IP65 Outdoor Desktop/Ceiling/Wall mounted
Firewall	DoS, SPI Firewall, IP Address Filter/MAC Address Filter/Domain Filter, IP and MAC Address Binding

Table 4. LED indication

LED Indicator	LED Status
Power/SYS	Green Blinking: Power ON Indication Blue and Blinking: Wi-Fi indication that SSID now available for use.
WAN	Upper LED WAN: Connect with Gateway or PoE/PoE+ devices and Green Blinking shows activity on WAN port.
LAN	Lower LED LAN: Connect to end users and Green ON shows activity on LAN port.

Included in the bundle/box

COMMANDO AirX AIR-APO1200 comes with following accessories.

1x AirX Wireless Outdoor AP Model AIR-APO1200

1x Fastener

3x Plug

4x Self-tapping screws

1x User Manual

Support and Warranty

- Same-day assistance.
- Comprehensive 24-hour support using common communication/chat platforms, Email and Telephone.
- Provide FAQs and troubleshooting help online (self-service) through cloud-based solutions.
- Highly technical and trained representatives to resolve issues.
- One-year default warranty with option of warranty extension up to 3 years

Table 6. Support and Warranty

Warranty and Support	
Products covered	COMMANDO AirX 1200Mbps, 2.4GHz+5GHz 802.11ac Wave 2, 128 Users, Cloud Outdoor Access Point
Warranty duration	One Year RTB (Return To Base) replacement warranty – optionally extendable up to 3 years.
Hardware replacement	COMMANDO, its resellers or its service center will use commercially reasonable efforts to replace the product subject to stock availability. Otherwise, a replacement will be arranged within 15 working days after receipt of the Return Materials Authorization (RMA) request.
End-of-life policy	In case of discontinuation of the product, support is limited to 3 years from announcement date.
Effective date	Hardware warranty commences from the date of shipment to customer (and in case of resale by a COMMANDO reseller, not more than 90 days after original shipment by COMMANDO).
Support duration	Lifetime support.
COMMANDO	COMMANDO will provide 24x7 support for basic configuration, diagnosis, and troubleshooting of device-level problems for up to one year from the date of shipment of the originally purchased product. This support does not include solution or network-level support beyond the specific device under consideration.
Online Portal Access	Warranty allows guest access to commandonetworks.com for all available technical queries.

Ordering Information

To place an order, please contact your local reseller/distributor or COMMANDO Sales Representative at www.commandonetworks.com/ordering

Table 7. Ordering Information

Product Code	Information
AIR-APO1200	COMMANDO AirX 1200Mbps, 2.4GHz+5GHz 802.11ac Wave 2, 128 Users, Cloud Outdoor Access Point
AIR-APO3000AX	COMMANDO AirX 3000Mbps, 2.4GHz+5GHz 802.11ax, 128 Users, Wi-Fi 6 Cloud Outdoor Access Point

Document History

Release	Remark	Date
Release 1	First Release	August 10, 2024