AIR-AP5400AX-PRO
COMMANDO AirPRO, 5378Mbps, 802.11ax/ac/b/g/n, Wave 2.0, FIT/FAT, Wi-Fi 6, Cloud Indoor Access Point Data Sheet

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Product Overview

COMMANDO AIR-AP5400AX-PRO Cloud based, enterprise-class indoor (802.11ax) Wi-Fi 6 wireless access point which works in Dual-mode fit & fat mode as Autonomous as well as Controller based mode of operation and provides wireless users with speed up to 5378Mbps with advanced Wi-Fi 6 Technology. It is standalone device, comes with dual band with 2.4GHz (574 Mbps) + 5GHz (4804Mbps), equipped with separate 2.5Gbps WAN port & 1Gbps LAN ports. It supports 4X4 MU-MIMO, Wave 2 technology and provides data rate up to 5378Mbps for wireless users and supports concurrent 160 wireless clients with simultaneous upload or download of multiple packets at same time which enhances the sharing of files, photo, audio, video, and gaming experience over wireless network. It supports Seamless Roaming, OFDMA, 1024-QAM, narrower sub-carrier spacing and longer symbol time which improves the stability and data processing efficiency. It can provide powerful wireless coverage to enterprise environments such as Small, Medium, and Large enterprises, university campus, concert venue, gymnasium, etc.

It is powerful, long range & advance Wi-Fi 6 Indoor Access Point with 2 configuration modes namely Gateway & AP mode (Default Mode is autonomous AP mode). It supports range of 20meters and above depending on surrounding conditions with up to 20dBm transmit power for 2.4G, 23dBm transmit Power for 5G. It is industrial grade Ceiling IEEE 802.3at 48V PoE+ standard, install at every place to work as a stable base station for access users. It is equipped with separate backward compatible 10/100/1000/2500Mbps Ethernet WAN & 10/100/1000Mbps LAN port. It supports (IEEE 802.3at) 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

- Support wireless RF power adjustable as per user movements from AP with data rate up to 5378Mbps.

- Access end users up to 160 max, with concurrent end users up to 160.

- 160MHz large bandwidth, 4×4 space flow.

- Support FAT and FIT mode, FAT mode support multiple operational modes like AP, routing mode (Default mode is FIT-AP mode).

- Multi SSID up to 16 with inbuilt Wi-Fi channel analysis.

- Supports IEEE 802.11ax/ac/b/g/n/a with backward compatibility for wireless clients, 2.4GHz+5GHz Wireless dual band.

- With the function of the built-in firewall, IP filter, URL filter, and MAC filter.

- Wireless dual band with radio RF Power up to 20dBm(2.4G max) ,23dBm(5G max) .

- 2.5G high-rate uplink network port with Link integrity check.

- Management with the help of WEB GUI, COMMANDO WLAN Controller as well as from Cloud portal.

- Intelligent control of terminals based on airtime fairness.

- High-density application optimization

- Supports band steering automatically move to wider 5G band for faster connections, intelligent load balance based on users.

- Support tag VLAN and VLAN management.

- Supports advance security by MAC ACL, Static DHCP, Flow control, URL Mapping, IP/MAC/URL filters, Port mapping and DMZ.

- Support Seamless Roaming, OFDMA, 1024-QAM.

- Dual purposes WAN or IEEE 802.3at Port (PoE+)port supporting

10/100/1000/2500Mbps and dedicated LAN ports 1x 10/100/1000Mbps.

- Supports Wi-Fi client distance 20meters and above depending on surrounding conditions.

- Dual input for power either PoE+ via WAN port or DC power inputs 12V, 2A.

- Support Open or encryption like WPA-PSK / WPA2-PSK /WPA-PSK+WPA2-PSK.

- N type antenna connector for high gain antenna, stronger signal strength & supports large wireless coverage (20m and above) in all directions.

- 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: 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

Easy to Use

COMMANDO AIR-AP5400AX-PRO is standalone as well as controller WEB GUI based 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 10/100/1000/2500Mbps and also for wireless devices intelligently adjusts for compatibility and optimal performance by DFS. Various options for setting channel bandwidth in 2G band like 11NG_HT20, 11NG_HT40 & 11AXG_GHE20 and also in 5G band like 11NA_HT20, 11NA_HT40, 11AC_VHT20, 11AC_VHT40, 11AC_VHT80, 11AC_VHT160, 11AXA_AHE20, 11AXA_AHE40, 11AXA_AHE80, 11AXA_AHE160, 11AXG_GHE40. 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.

Wi-Fi 6 Technology

The IEEE 802.11ax is a emerging standard, also known as High-Efficiency Wireless (HEW) or Wi-Fi 6, builds on 802.11ac. Equipped with the latest and fastest Wi-Fi 6 (802.11ax) technology, Multi-User (MU) Orthogonal Frequency Division Multiple Access (OFDMA). This subdivides the Wi-Fi channel into smaller frequency allocations (called Resource Units). Spatial reuse also known as BSSID coloring allows the access points and their clients to differentiate between other SSID, thus permitting more simultaneous transmissions. This capability permits an Access Point to synchronize communication with multiple individual client devices at the same time on the uplink and downlink when it comes to sending and receiving small packets of data. Supporting two spatial streams, MU-MIMO enables access points to split spatial streams between client devices to maximize throughput. It has 1024-QAM modulation signals which is better at penetrating solid objects like walls.

2.5 Gigabit WAN Ethernet speed

It provides with 2.5GE speed for WAN port & 1GE speed for LAN. 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 160 Max wireless users/clients with concurrent users 160. It supports distance of 20meters and above from AP in all directions for wireless clients.

Firewall

Support Flexible user Access Control Policies & 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 10/100/1000/2500Mbps 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.

Support uninterrupted critical network infrastructure

It has Dual power options with DC input power and PoE+ power input with WAN port which protect from power failures and increases life of device. With this feature protect on cost and the impact to your business by losing these network devices and thus the users/servers connected to them.

Cost Efficient

State of art quality product that can serve on real time high-speed Performance with DC 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 AIR-AP5400AX-PRO supports software functions in Autonomous/ Standalone/FAT mode are as follows.

Home

Device Information like CPU Usage, Memory Usage, LAN Information like IP Mode Get IP From AC/Gateway/Static, Status with 2G/5G Wi-Fi, Clients Status with information like SSID, Channel, Bandwidth, Encrypt, MAC Address, Operation Mode configure like AP/ Fat AP Mode with Uptime, Flow in bps for AP downstream and AP Up stream.

Wizard

Gateway Mode, AP Mode (Default Selection).

Wi-Fi

2G/5G Wi-Fi with Basic and VAP(1 to 3) ON/OFF with Wi-Fi Analyzer, SSID, Hide your SSID, Bandwidth, Channel, Encryption Open/Encryption with WPA-PSK / WPA2-PSK /WPA-PSK+WPA2-PSK, MAC ACL with Add, Delete, Apply with disable/Allow/Prohibit option, Wi-Fi Timer OFF/ON with Time Frame, Advanced setting like Country Region, 2G/5G Channels, Country Region, User Isolation, Short GI, Coverage Threshold, Packet Threshold, RTS Threshold and DFS.

Network

LAN Settings with DHCP server option, Static DHCP, Cloud Server Settings.

Firewall

URL Filter , IP Filter , MAC Filter , Port mapping and DMZ .

Manage

Configure, Reboot, Modify Password, Upgrade, Time, Log, Flow Control, IP Group, Time Group and DDNS.
COMMANDO AIR-AP5400AX-PRO supports software functions in Controller based/FIT mode are as follows.

It's software support SSID broadcasting, Multi SSID up to 16 (8 SSID in 2.4GHz band, 8 SSID in 5GHz band) and has routing static and default along with cloud access. It also has built-in firewall with MAC, URL, IP, Ports based backlist and whitelist. It supports FIT mode works with 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/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, 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 AirPRO Ceiling AP's controller also has cloud captive portal with AirPRO Cloud Login http://commandonetworks.com.cn/#/login .

Table 1. Software functions in FAT mode

Software Functions	
Wizard	**Gateway Mode:** In Gateway mode, all Ethernet is bridged together, and wireless

Function	clients will connect ISP access point or router connecting directly to the Internet via WAN PORT. NAT is enabled and PCs in Ethernet LAN port this is the same IP to ISP through wireless LAN. **AP Mode:** In AP mode, the device works as an access point to transform your existing wired network into a wireless network.
Flow in bps	For AP downstream and AP Up stream
Network	LAN Settings with DHCP server option, Static DHCP, Cloud Server Settings
Management	Configure, Reboot, Modify Password, Upgrade firmware, Time setting with NTP and from PC, Log, Restore the factory default.
Wi-Fi	SSID name setting, Bandwidth, Channel, Encryption options like Open/Encryption like WPA-PSK / WPA2-PSK /WPA-PSK+WPA2-PSK, MAC ACL, Wi-Fi Timer OFF/ON with Time Frame. Advanced setting like Country Region, 2G/5G Channels, Country Region, User Isolation, Short GI, Coverage Threshold, Packet Threshold, RTS Threshold and DFS.

Table 2. Software features at Glance

SOFTWARE FEATURE		
	SSID Number	16
	SSID Hiding	Support
	Guest Network	Support
	SSID to VLAN Mapping	Support
	Maximum Client Connections Setting	Support
	Automatic Channel Assignment	Support
	Group Management	Support
	Channel Selection	Automatic/Manual
	WPA-PSK / WPA2-PSK / WPA-PSK+WPA2-PSK	
	ACL Filtering	Support
	Data Frame Filtering	Support blacklist and whitelist
	Authentication Method	User, Account, Password, Mobile, etc. methods.
	Network Management	WEB management
	Online Upgrade	Support
	Scheduled On/Off and Reboot	Support
	Offline Detection & Notification	Support
	User Statistics	Support

	Working Mode	FIT and FAT Mode

Hardware

Solid performance with non-blocking architecture

- With Flash: 32MB, and 128 MB DDR3 RAM greatly improved the data processing performance.

- WAN Port capable of 2.5Gbps Ethernet speed. Full speed of data transferring with (Auto-Negotiation/Auto MDI/MDIX).

- Solid performance with non-blocking architecture.

Physical Ports and Networking Interfaces

- 1x 10/100/1000Mbps Mbps LAN, 1x 10/100/1000/2500Mbps WAN RJ 45 Ethernet Ports with combined PoE+ with WAN and separate LAN port

- LED Indicators :Power/Sys, LAN, WAN.

- Reset Button

Table 3. Hardware Specifications

HARDWARE SPECIFICATION	
Standard	IEEE 802.11ax/ac/b/g/n/a Wi-Fi 6 technology
RAM	128GB
Flash	32MB
Wireless Rate	2.4G: 574Mbps 5G: 4804Mbps
Transmit Power	20dBm (2.4G max), 23dBm (5G max)
Antenna Type	Built-in Omnidirectional Antenna
Antenna Gain	4dBi(2.4GHz), 5dBi(5GHz)
Cover Radius	20meters
Power Consumption	≤18W
Antenna	N type antenna connector

Interface	10/100/1000Mbps for LAN port 10/100/1000/2500Mbp for WAN port
Data Rate	5378Mbps
Mounting	Ceiling/Wall Mounting
Reset	Hardware button
Power	DC 12V, 2A or IEEE802.3at (WAN)
User Capacity	Up to 160
Dimension	235mm×180mm×43.5mm
Environment	Operating Temperature: -10℃-45℃ Storage Temperature: -40℃~ +70℃ Humidity: 5%~90% non-condensing Storage Humidity: 5%~90% non-condensing
Warranty Period	1 Year
Indicator Light	Power/SYS, LAN, WAN

Specifications

Technical Specifications

Supports 2.4GHz+5GHz, IEEE 802.11ax/ac/b/g/n/a with backward compatible wireless clients, wave 2.0 technology, Standalone model with Multi SSIDs up to 16 with either open or WPA-PSK / WPA2-PSK /WPA-PSK+WPA2-PSK encryption with Dual option for input Power supply with either 48V PoE+ (IEEE 802.3at) or DC input power.

Table 4. Specifications

Technical Parameters	Specification
Hardware Specifications	1*10/100/1000/2500Mbps auto-negotiation WAN port or IEEE 802.3at PoE+ port
	1*10/100/1000Mbps auto-negotiation LAN port
	1* Reset button/Restore to factory default
	1*DC Port
Memory	128GB RAM
Flash	32MB
IEEE Standard	IEEE 802.11a, IEEE 802.11b ,IEEE 802.11g ,IEEE 802.11n, IEEE 802.11ac, IEEE 802.11ax
Data Transfer Rates	Dual band
	IEEE 802.11a up to 54Mbps
	IEEE 802.11b up to 11Mbps
	IEEE 802.11g up to 54Mbps
	IEEE 802.11n up to 400Mbps
	IEEE 802.11ac up to 900Mbps
	IEEE 802.11ax up to 5400Mbps

Frequency	Radio 2.4GHz+5GHz
Throughput	Up to 5378Mbps
Network Functions	DHCP Server , Static, LAN and Gateway.
Wi-Fi Operational Modes	AP & Gateway Mode in FAT Controller and cloud based in FIT
Wireless Security	Open or Encryption WPA-PSK / WPA2-PSK /WPA-PSK+WPA2-PSK option
Multiple SSID	Up to 16 SSIDs.
Access control Features	MAC Access Control
Enclosure Type	Ceiling/Wall mounted
Wi-Fi Transmit Power	20dBm(2.4G max) ,23dBm(5G max)
Input Power Supply	WAN port PoE+ IEEE802.3at Or DC 12V ,2A
Management	Web based management Backup & Restore to default Settings
ENVIRONMENTAL	Operating Temperature: -10℃-45℃ Storage Temperature: -40℃~ +70℃ Humidity: 5%~90% non-condensing Storage Humidity: 5%~90% non-condensing
Weight	580 grams

Table 5. 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+ 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 AIR-AP5400AX-PRO

All COMMANDO AIR-AP5400AX-PRO made available for use globally along with accessory used to facilitate or enhance operations. COMMANDO AIR-AP5400AX-PRO Comes with following Accessories.

1x   AIR-AP5400AX-PRO Wi-Fi 6 AP
1x   Patch Cord
1x   Wall Mount with Mounting Screws
1x   LAN cable

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 AirPRO, 5378Mbps, 802.11ax/ac/b/g/n, Wave 2.0, FIT/FAT, Wi-Fi 6, Cloud Indoor 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	2 Years
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

Ordering information for the COMMANDO AIR-AP5400AX-PRO, To place an order, please contact your local reseller/distributor or COMMANDO Sales Representative at www.commandonetworks.com/ordering

Table 7. COMMANDO AIR-AP5400AX-PRO Ordering Information

Product Code	Information
AIR-AP1800AX-PRO	COMMANDO AirPRO 1175Mbps, 802.11ax/ac/b/g/n, Wave 2.0, FIT/FAT, Wi-Fi 6, Cloud Indoor Access Point
AIR-AP5400AX-PRO	COMMANDO AirPRO, 5378Mbps, 802.11ax/ac/b/g/n, Wave 2.0, FIT/FAT, Wi-Fi 6, Cloud Indoor Access Point

Document History

Release	New or Revision	Described in	Date
Release 1	First Release	First Release	December 24, 2023