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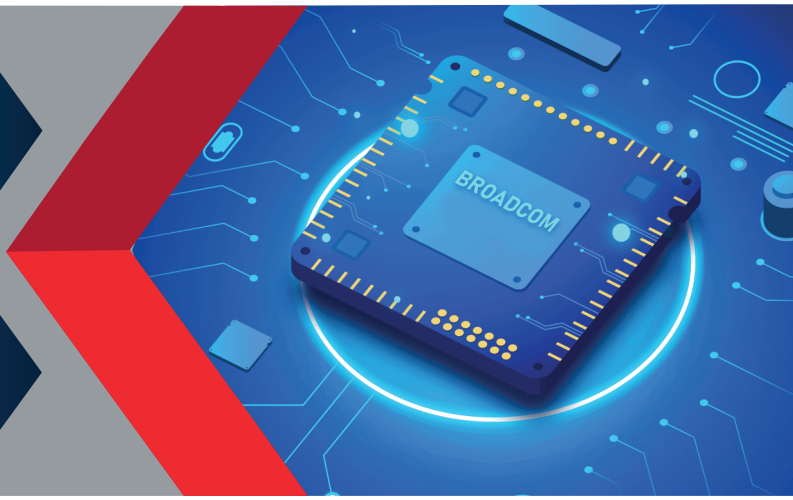
# Indoor Access Point Switch NX-AP6120-C6




## OVERVIEW

The Wi-Fi 6 (802.11ax) Access Point (AP) provides 2 x 2 MU-MIMO and can offer services on both the 2.4 GHz and 5 GHz bands at the same time. It also supports 2.4 GHz to 5 GHz switchover and can achieve a maximum throughput of up to 2400Mbps in dual-5 GHz bands. The AP is suited for high density interior applications like as hospitals, with built-in smart antennas that enable signals to follow Stations (STAs), giving improved coverage. The AP is well-suited to high-density indoor environments such as SMEs, educational institutions, cafés, and entertainment venues.

To ensure great compatibility and performance, Nodexon provides configurable dual-band dual-radio (2.4G + 5G or 5G+5G) mode. When using twin 5G radio high-performance mode, you can get up to 2.4Gbps wireless throughput, and in standard 2.4G+5G mode, it provides up to 1.775Gbps. NX-AP6120-C6 supports Wi-Fi 6 OFDMA Modulation, MU-MIMO, and BSS Color Spatial Reuse, ensuring minimum signal interference and a maximum of 512 client connections.

## FEATURES HIGHLIGHTS

- Max 2.4Gbps by selectable Dual-Band Design (2.4G + 5G or 5G+5G)
- Max 512 Client connections.
- OFDMA, MU-MIMO and BSS Technology for minimal wireless signal interference.
- IoT Ready: Integrated with BLE module and one IoT extension port with PoE Out (passive).
- AI Wireless Optimization: one-click optimization powered by Nodexon WIS technology.
- Hybrid Management: support standalone AP to over thousands of APs with deployment options of appliances, private cloud or public cloud service.
- Mobility Management: Free mobile app available for NX-MACC-Base private cloud or Nodexon Public Cloud customers.

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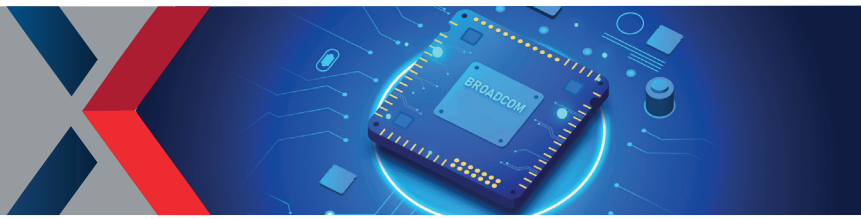


## PRODUCT FEATURES

### Wi-Fi 6 Technology

#### 1024-QAM High-speed Access

The AP is dual-band, with 2.4G+5G being the preferred configuration. The highest access rate with the next-generation 802.11ax for 5G can reach 2400Mbps.

#### OFDMA High-density User Access

The AP supports 802.11ax OFDMA, which splits the WLAN channel into a number of smaller subchannels, with each user occupying one or more of these. User rivalry and back-off can be avoided by scheduling several users to receive and send packets concurrently over the AP, decreasing network latency and boosting network efficiency.

#### Bi-Directional MU-MIMO

Unlike Wi-Fi 5 (802.11ac), which only supported downlink MU-MIMO, Wi-Fi 6 allows both uplink and downlink MUMIMO (multi-user, multiple-input and multiple-output). As a result, the AP may connect several clients at the same time, greatly increasing wireless performance and experience.

#### TWT (Target Wake Time)

Target waking time (TWT) is a technique for reducing client contention and reducing the length of time a client in power savings mode is awake. The battery's energy usage is decreased by up to 70%, resulting in increased battery life.

#### Spatial Reuse with BSS Color

The NX-AP6120-C6 supports spatial reuse with basic service set (BSS) color of 802.11ax to identify the BSSs of different WLANs in the network by different coloring (BSS color), and further divide them into internal and external BSS. Different packet receiving and sending thresholds can be maintained. When receiving packets, BSS coloring is used to quickly identify the packet of the external BSS.

#### Industry-leading Local Forwarding Technology

The AP incorporates clever local forwarding technology to alleviate the AC traffic bottleneck. The AP's data forwarding mode may be pre-configured using the AC. Then, based on the SSID name or user VLAN, this AP determines whether data should be transmitted by the AC or routed to a wired network for data exchange.

#### Abundant QoS Policies

The AP is in favor of a wide range of QoS rules. It supports Wi-Fi Multimedia (WMM), which establishes priority for various service data, and WLAN/AP/STA-based bandwidth limiting. The AP authenticates the transmission of audio and video in a timely and quantifiable manner, as well as the seamless operation of multimedia services.

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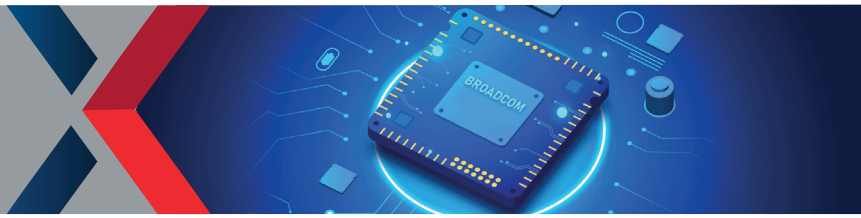


## COMPREHENSIVE SECURITY PROTECTION

### Secure User Access

Web, 802.1x, PPSK (one-time dynamic password for staff), voucher/access code, user account, and social authentication are among the authentication mechanisms supported by the AP. It offers a set of control rules in terms of user access, authorisation, equipment compliance check, network behavior monitoring, network attack prevention, and so on, all in accordance with standard network access control. For authenticated users, all of these control tools provide strong network security.

### Virtual AP Technology

The AP can support up to 32 ESSIDs using virtual AP technology. The network administrator can encrypt and isolate VLANs or subnets of the same SSID independently, allowing each SSID to have its own authentication mode and encryption technique.

### Comprehensive Wireless Protection

The AP, in conjunction with the AC, provides a wide range of security capabilities, such as WIDS (Wireless Intrusion Detection System), RF interference tracking, rogue AP contact, nmenanti-ARP spoofing, DHCP protection, and more, for all-around security protection.

## HYBRID MANAGEMENT

### Flexible Management Options

Hybrid management is supported by all APs. Whether installed as a solo AP (Fat mode) or a managed AP (Fit mode), the AP will automatically recognize the operation mode after firmware upgrading.

### Web and CLI Management Interface

For the AP and wireless controller, the AP provides both a web and command-line interface (CLI) that may be used in a variety of settings. The networking specialists can do quick troubleshooting, mass configuration import, and change thanks to the CLI architecture. The majority of typical situations for planning, operating, and maintaining a wireless network should be covered by Web GUI administration without the requirement for modification.

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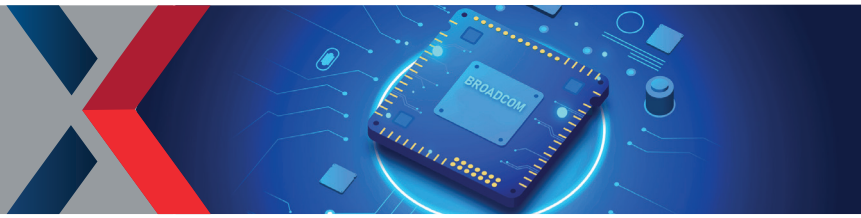
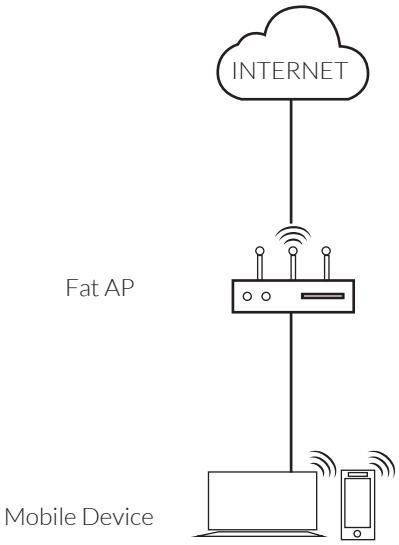



## TYPICAL NETWORKING

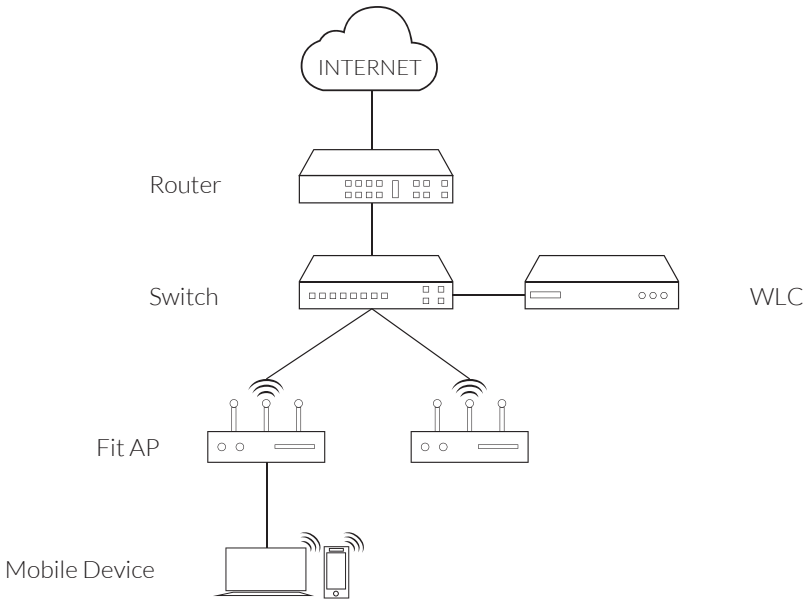
### FAT AP

The AP-W6D2400C functions as a fat AP in the following networking to provide user access, authentication, data security, service forwarding, and QoS.




### FIT AP

The AP-W6D2400C serves as a fit AP to bearer bridge forwarding function in the below networking, while the AC handles user access, AP online, authentication, routing, AP administration, security protocol, and QoS.



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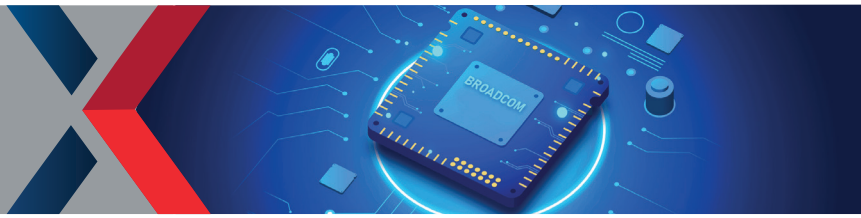


## TECHNICAL SPECIFICATIONS

| SPECIFICATIONS | NX-AP6120-C6 |
|---|---|
| Service Port | Front panel: 4x100/1000Mbps Ethernet ports \| 1x RJ45 pass-through port \| 1x USB port \| 1x Console port<br>Back panel:1x uplink GE port (100/1000Mbps) \| 1 x RJ45 pass-through port |
| Console Port | 1 |
| Built-in Bluetooth | Built-in Bluetooth 5.0(Support to switch RFID through software)，Support iBeacon standard |
| DRAM | 256MB |
| Flash Memory | 128MB |
| 5GHz Operating Bands | 802.11ax/ac/n/a : 5.725GHz-5.850GHz ; 5.47～5.725GHz; 5.15~5.35GHz |
| 2.4GHz Operating Bands | 802.11ax/b/g/n : 2.4GHz-2.483GHz |
| Reset/restoration to factory default | Supported |
| MIMO | 2.4G 11ax/5G 11ax: 2x2 MIMO, 5G 11ax: 2x2 MIMO |
| Spatial Streams | 2.4GHz: 2x2:2, 5GHz 2x2:2 |
| Antenna | Built-in omni-directional antenna |
| Antenna Gain | 2.4G: 3dBi, 5G: 3dBi |
| Coverage Radius | 30m ( in an open environment) |
| Power Supply | 802.3af PoE; DC 54V/0.3 A |
| Power Consumption | ≤12.95W（excluding IoT modules） |
| Transmit Power | ≤100mw (20dBm) |
| Adjustable Power | 1dBm |
| Installation Mode | Ceiling/wall-mountable |
| IP Rating | IP31 |
| Dimensions (HxWxD) | 160mm×86mm×30mm |
| Operating Temperature | -10°C to 55°C |
| Storage Temperature | -40°C to 70°C |
| Operating Humidity | 5% to 95% (non-condensing) |
| Storage Humidity | 5% to 95% (non-condensing) |
| Multicast routing | Multicast to unicast conversion |

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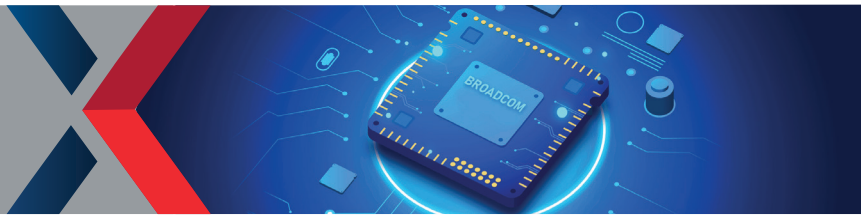


## TECHNICAL SPECIFICATIONS

| SPECIFICATIONS | NX-AP6120-C6 |
|---|---|
| WLAN | 802.11a/b/g/n/ac/ax Wave2/ax, Maximum throughput (5G+5G mode) per AP: 512Mbps, Radio 1: 5G low band 1024Mbps, Maximum throughput (2.4G+5G mode)<br>Recommended number of connected STAs: 64, BSSID capacity: Up to 32, SSID hiding, 5G Priority (Band Steering), Configuring the authentication mode, encryption mechanism and VLAN attributes for each SSID, Remote Intelligent Perception Technology (RIPT), Intelligent device recognition technology, Intelligent load balancing based on the number of users or traffic, STA control: SSID/radio-based, Bandwidth control: STA/SSID/AP-based bandwidth control |
| WLAN | Bandwidth control: STA/SSID/AP-based bandwidth control, PSK and web authentication, PPSK authentication: Require wireless controller, 802.1x authentication, PEAP authentication, Data frame filtering: Whitelist, static/dynamic blacklist, User isolation, Rogue AP detection and countermeasure, Dynamic ACL assignment, RADIUS, CPU Protection Policy (CPP), Network Foundation Protection Policy (NFPP) |
| IP | IPv4 and IPv6 address, Multicast routing: Multicast to unicast conversion, DHCP service: DHCP Snooping, Option 82, Server, Client |
| Management and Maintenance | Supported wireless LAN controller: AC-224AP Wireless Controller, Management protocol: Telnet, SSH, TFTP, Web, Wireless Intelligent AI Optimization Service (WIS), Support SNMPV1, V2c, V3 (FAT&FIT AP mode) , Syslog / Debug, When the AP works in fit mode, it can be switched to fat mode via an AC, When the AP works in fat mode, it can be switched to fit mode through the local control port or Telnet mode |


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