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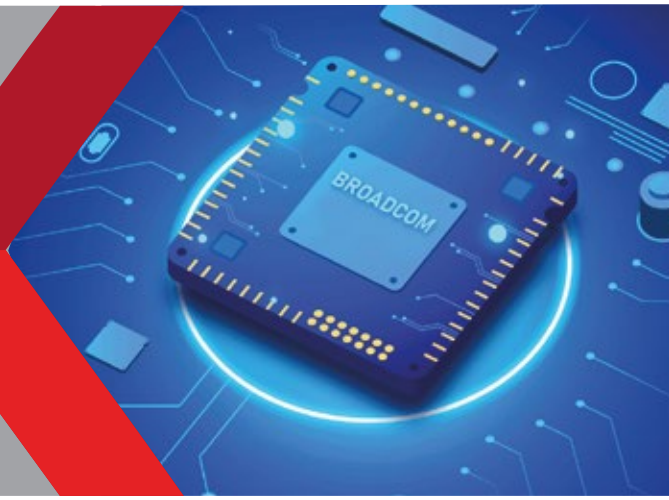
Indoor Access Point Switch NX-AP5680-W6



OVERVIEW

Nodexone NX-AP5680-W6 Wall AP Series is a next-generation Wi-Fi 6 (802.11ax) with built-in IoT module wall plate wireless access point designed for hotels, offices and dormitories with Smart IoT integration demands. The NX-AP5680-W6 Series has design for universal socket standard with integrated multiple Gigabit Ethernet LAN ports for extended connectivty for IPTV or Office Equipment application purpose. The AP has an elegant design and is simple to install on the junction box without harming the wall finishes, making it a superior choice for wireless network deployment in settings such as hotels.

All Nodexone enterprise APs offer hybrid management mode, which addresses the increasing issues of administration efficiency and wireless security. 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.

FEATURES HIGHLIGHTS

- Mobility Management: Customers of the NX-MACC-Base private cloud or the Nodexone Public Cloud can download a free mobile app
- Built-in IoT Module (with Bluetooth 5.0 and Zigbee) enabling Smart of Things integration in the future
- The hidden status LED design ensures that your customers' comfort is never disturbed
- The wall plate is designed to be universal, with a mount kit option for common US/EU sockets.
- Ensure High Definition (HD) IPTV Application - Gigabit LAN ports can link up to 4 HD TVs.
- OFDMA, MU-MIMO and BSS Technology for minimal wireless signal interference.
- AI Wireless Optimization: one-click optimization powered by Nodexone Cloud and WIS technology.
- Hybrid management: from a single AP to thousands of APs, including appliance, private cloud, and public cloud deployment choices.

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PRODUCT FEATURES

The Dual-Radio Dual-Band

Concurrent 802.11a/n/ac/ax and 802.11b/g/n/ax are supported by the NX-AP5680-W6. Both 2.4G and 5G networks can support two spatial streams at the same time. The AP supports MUMIMO, which improves the user experience for multi-user access, and is equipped with the latest 802.11ax RF chip. The NX-AP5680-W6 has four RJ45 downlink ports that provide excellent wireless network coverage as well as extra wired network connections. For future Smart Living integration, the NX-AP5680-W6 has an IoT module that supports Bluetooth 5.0 and the Zigbee protocol.

Cloud Services

Public Cloud: With integrated captive portal, authentication (such as PPSK for workers, Facebook, voucher, account, etc.) and reporting capabilities, Nodexon Cloud services is aimed at the SME market. SME clients can deploy and control their networks at their fingertips with the Nodexon Cloud Mobile App (free download).

Hybrid Cloud: Targeted for enterprise offices and campuses with single or many sites and high-density AP deployment, Nodexon NX-AP5680-W6 wireless controller (on-premises) plus Cloud Management (optional). The controller appliances are placed at the customer's location and have fully integrated wireless administration and authentication capabilities, with each cluster supporting up to 5000 APs. Optionally, the cloud management platform can provide value-added services such as centralized device configuration and monitoring, AI radio (RF) optimization, reporting, and more.

Private Cloud: Compared with the previous Wi-Fi 5 (802.11ac) with only downlink MU-MIMO support, Wi-Fi 6 supports both uplink and downlink MU-MIMO (multi-user, multiple-input and multiple-output). Therefore, Nodexon NX-AP5680-W6 Series access points can connect clients simultaneously, significantly improving the wireless performance and experience.

Intelligent Local Forwarding Employing

The NX-AP5680-W6 overcomes wireless controllers' traffic bottleneck limitations. The data forwarding mode for the NX-AP5680-W6 may be configured freely using the Nodexon Wireless Controller Series. The AP also determines whether data is sent to the wired network via the wireless controller based on the SSID or user VLAN, or is delivered directly to the wired network for data exchange. Local forwarding technology may identify and transfer delay-sensitive data that requires real-time transmission over the wired network, reducing traffic load on wireless controllers and allowing the 802.11ax network to better fulfill its high traffic transmission needs.

QoS Policies

NX-AP5680-W6 supports a wide range of quality-of-service policies WLAN/AP/STA-based bandwidth restrictions, for example, are available, as well as Wi-Fi multimedia (WMM), which establishes various priority for various types of service data. The NX-AP5680-W6 ensures the seamless functioning of multi-media applications by ensuring timely and quantitative audio and video transmission. The NX AP5680-W6's multicast to unicast technology eliminates visual lag caused by packet loss or excessive latency in wireless networks, and greatly improves the user experience of multicast video services in wireless networks.

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Easy and Fast Deployment

NX-AP5680-W6's convinient doployment by leveraging existing network cables, breaks through standard wireless network development methods and reduces the impact of network development on hotels and other similar situations. The Wall AP provides optimum company agility and investment protection because no extra cabling is required. Nodexon also provides a variety of extra accessories to fulfill your specific deployment requirements.

Full Signal Coverage

Traditional APs are situated in corridors (ceiling), and following wall penetration, the interior network signals are poor or perhaps entirely degraded. The NX-AP5680-W6 Wall Plate AP, on the other hand, may be put within the room and therefore provides complete coverage for the finest voice, video, and Internet browsing experience.

High Definition IPTV Application

IPTV services, particularly VoD (Video on Demand), are now frequently used by hotel chains to provide quality entertainment to its loyal customers. Sufficient IP bandwidth and a low-latency IP network are required to provide high-quality IPTV service. Up to 4 High Definition TVs may be connected through the Gigabit (1000M) LAN ports on the NX-AP5680-W6, and it fully supports video streaming and multicast protocols such as QoS, IGMP Snooping, 802.1q, and others. With Nodexon's patent-pending CPP (CPU Protection Policy) technology, which protects CPUs from misuse and assault, the most reliable IPTV service connectivity is possible.

Screen Mirroring Control

Screen Mirroring Isolation3 by Nodexon is an Easy yet Secure countermeasure against Personal Screen Casting/Mirroring. The Nodexone Screen Mirroring Isolation limits guests to broadcasting their screen on an approved Smart TV. On the TV screen, a QR-Code (produced by the Nodexon WLAN Controller) will be shown (API connectivity with the hotel's TV manufacturer is required). The TV will be linked to the individual smart device once the guest scans the QR-Code, and the Smart TV will be offered as a screen casting option. Meanwhile, without a QR-Code binding permission method, other TV will never be available for mirroring.

High Availability Design

Offloading and Acceleration of Authentication Captive portal and account & voucher authentication may be handled by Cloud, while all security policy and enforcement will be handled locally at EG security gateway, thanks to Nodexon Cloud and EasyGate (EG) security gateway. Providing extra service availability protection for when Cloud or WLAN Controller becomes unavailable.

Mobile Monitoring and Optimizing

Nodexon is committed to providing customers with a more simple networking experience by launching a free mobile app (called Nodexon Cloud) for unified device lifecycle management, which includes provisioning, monitoring, configurations, and optimization for Nodexon access points, switches, and security gateways.

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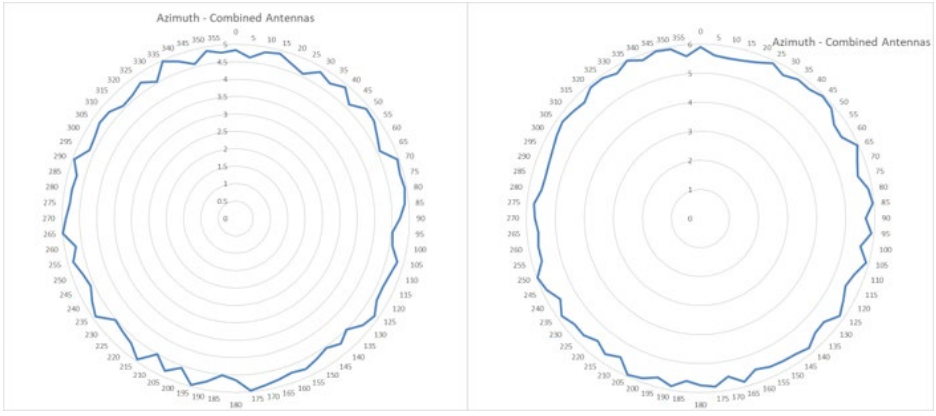
ANTENNA PATTERNS

Horizontal planes (top view)

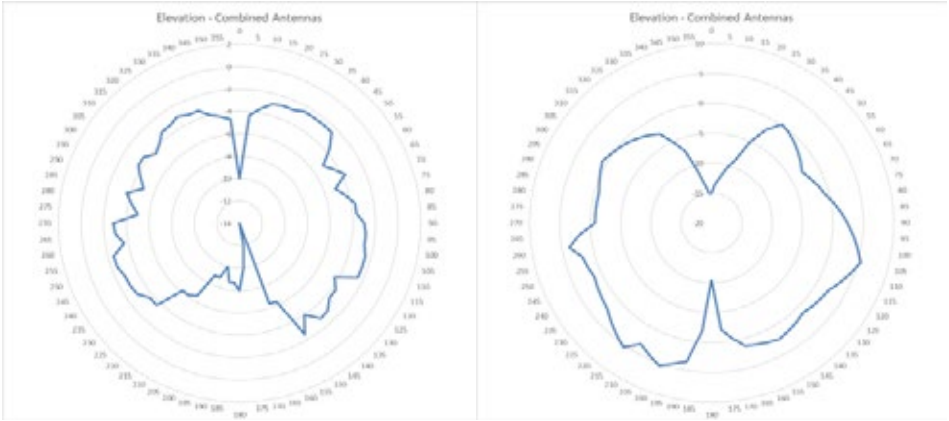
Below are the NX-AP5680-W6 2.4GHz and 5GHz azimuth antenna patterns:



NX-AP5680-W6 2.4GHz (Left) and 5GHz (Right) Azimuth Antenna Patterns

Vertical (elevation) planes (side view, AP facing down)

Below are the NX-AP5680-W6 2.4GHz and 5GHz elevation antenna patterns:



NX-AP5680-W6 2.4GHz (Left) and 5GHz (Right) Elevation Antenna Patterns

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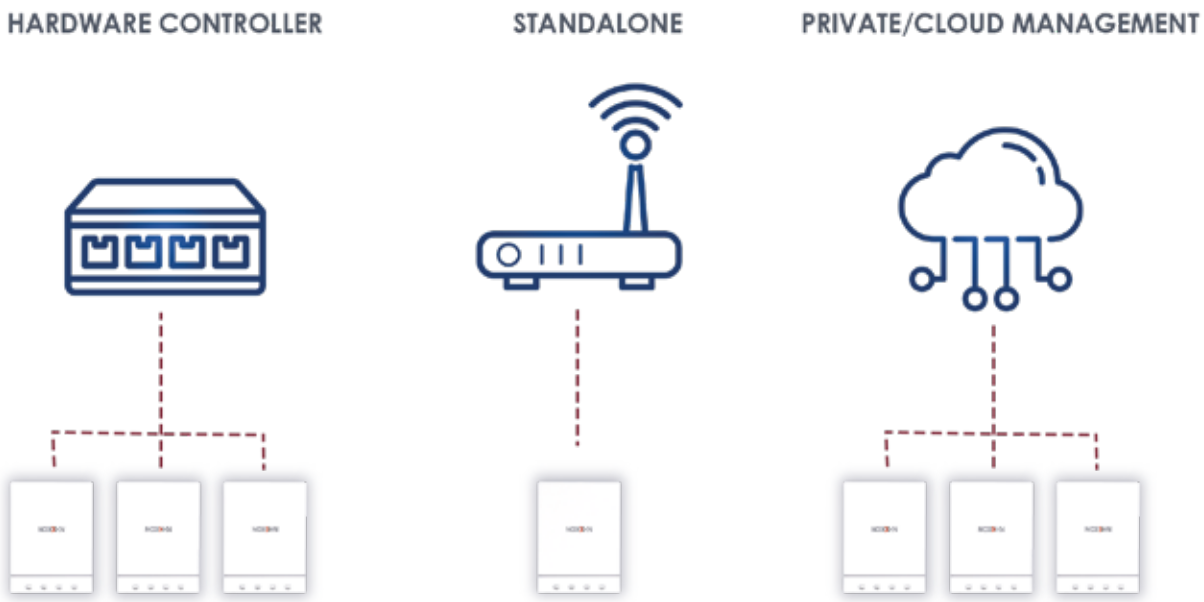
HYBRID MANAGEMENT

Flexible Management Options

All Nodexon enterprise APs support hybrid management modeWhether installed as a solo AP (Fat mode) or as a managed AP (Fit and MACC mode), the AP will automatically recognize the operating mode after firmware upgrading. Depending on the functionality and capacity, we recommend business clients pick one of the wireless controller choices below for added security and operation.



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TECHNICAL SPECIFICATIONS

SPECIFICATIONS	NX-AP5680-WS
Radio	Dual-radio dual-band: Radio 1: 2.4G 11ax: 2×2 MIMO, Radio 2: 5G 11ax: 2x2 MIMO
Protocol	Support concurrent 802.11a/n/ac/ax and 802.11b/g/n/ax
Operating Bands	802.11b/g/n/ax: 2.4G ~ 2.483GHz, 802.11a/n/ac/ax: 5.150~5.350GHz, 5.47~5.725GHz, 5.725~5.850GHz (vary depending on different countries)
Spatial Streams	4 spatial streams, 2x2 MIMO
Max Throughput	Maximum throughput of 2.4G: 574Mbps, 5G: 1.2Gbps, 1.775Gbps
Modulation	OFDM: BPSK@6/9Mbps, QPSK@12/18Mbps, 16-QAM@24Mbps, 64-QAM@48/54Mbps DSSS: DBPSK@1Mbps, DQPSK@2Mbps, and CCK@5.5/11MbpsMIMO-OFDM: BPSK, QPSK, 16QAM, 64QAM, 256QAM and 1024QAMOFDMA (up to 1024-QAM)
Receiver Sensitivity	11b: DSS:CCK@5.5/11Mbps,DQPSK@2Mbps,DBPSK@1Mbps 11a/g: OFDM:64QAM@48/54Mbps,16QAM@24Mbps,QPSK@12/18Mbps,BPSK@6/9Mbps, 11n: MIMO-OFDM:BPSK,QPSK,16QAM,64QAM 11ac: MIMO-OFDM:BPSK,QPSK,16QAM,64QAM,256QAM 11ax: MIMO-OFDM:BPSK,QPSK,16QAM,64QAM,256QAM,1024QAM
Transmit Power	≤100mw (20dBm, radio transmit power only)
Dimensions	116mm * 86mm *40mm
Management Port	1 Micro USB port (hidden)
Service Ports	Front: 4 10/100/1000Mbps Ethernet ports Rear: 1 10/100/1000Mbps uplink port
Power Supply	Support PoE, Local power supply (DC) supported
11ax Feature	Support 802.11ax, Support MU-MIMO
Reset Button	Support (hidden)
LED indicator	Support (hidden) The indicator can be switched off
Wi-Fi Alliance	Wi-Fi CERTIFIED™ a, b, g, n, ac - Wi-Fi CERTIFIED 6™ - WPA3™-Enterprise, Personal - Wi-Fi Enhanced Open™ - Wi-Fi Agile Multiband™ - WMM®
Anti-theft	Standard: ordinary screws
Color of AP Enclosure	White
Installation Mode	Compatible with UK/US/EU - Junction box *Universal Mount Kit need to purchase separately for US/EU junction box
MTBF	250,000 hours
IP Rating	IP41
Power Consumption	<10W

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SPECIFICATIONS	DESCRIPTION
IoT Protocol	Support Bluetooth5.0 (BLE), Zigbee
Built-in Antenna	Built-in low-radiation omnidirectional antenna (antenna gain 3.5dBi)
Saftey Standard	EN/IEC 62368-1
EMC Standard	EN301 489, EN55032, EN55035
Health Standard	EN 62311
Radio Standard	EN300 328, EN301 893
Operating temperature	0°C~45°C
Storage temperature	-40°C~70°C
Operating Humidity	5%~95% (non-condensing)
Storage Humidity	5%~95% (non-condensing)
Maximum clients per AP	1024
BSSID capacity	8 (recommended to configure a maximum of 5 BSSIDs per radio in actual application)
SSID hiding	Support
Remote Intelligent Perception Technology (RIPT)	Support
STA Control	SSID/radio-based
Bandwidth control	STA/SSID/AP-based speed control
PSK, Web, and 802.1x authentication	Support
Data encryption	WPA (TKIP), WPA2 (AES), WPA-PSK, and WEP (64 or 128 bits)
QR code authentication	Support (integration with NX-WS series wireless controller)
SMS authentication	Support (integration with NX-WS series wireless controller)
PEAP authentication	Support (integration with NX-WS series wireless controller)
Data frame filtering	Whitelist, static/dynamic blacklist
User isolation	Support
NFPP	Support
WSID	Support

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TECHNICAL SPECIFICATIONS

SPECIFICATIONS	DESCRIPTION
Rogue AP detection and countermeasure	Support
Dynamic ACL assignment	Support
RADIUS	Support
CPU Protection Policy (CPP)	Support
IPv4 address	Static IP address or DHCP
IPv6	Support
Multicast – IGMP Snooping	Support
Supported wireless LAN controllers	Nodexon WS Series Wireless Controller, Nodexon MACC-Base Software Controller Nodexon Cloud (Public Cloud)
Management protocol	Telnet, SSH, TFTP, Web
Wireless Intelligent AI Optimization Service (WIS)	Support
SNMP	SNMPV1,V2c,V3
Syslog / Debug	Support
FAT/FIT/MACC mode switching	Factory default firmware supports FAT (standalone) or FIT mode (WS controller) or MACC mode (Nodexon MACC-Base or Nodexon Cloud) management

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