Nusoft Access Point   NAP-250

Nusoft NAP-250 is an access point with IEEE 802.11n wireless networking standard, 2.4GHz frequency and 2T2R 7.76dBi directional antenna, which can deliver the speed of 300 Mbps, meeting the demands on all speed wireless networking.

As to the housing, NAP-250 utilizes flame-retardant material and it is splash proof. It can be mounted on any wall or pole which allows it to be adapted to both indoor and outdoor scenario, such as office, train station, airport, hotel, restaurant, department store, mall, campus, factory, warehouse, etc.

Besides, it can be powered by PoE and supports Mesh networking which brings more flexibility to your wireless network deployment. In addition, it equips with wireless security capability, multiple SSIDs (up to 8 SSIDs), Captive Portal, RADIUS authentication, etc., greatly enhancing your wireless network security.

As to the operation mode, NAP-250 is a two-in-one wireless access point that offers a flexible conversion between fat and thin AP. Fat AP mode enables NAP-250 to operate as a standalone AP which is perfect for small wireless network environment. On the contrary, thin AP mode supports AP-centralized control and advanced wireless network management (QoS, web filtering, etc.) which is perfect for large wireless network environment.

Product Features

Splash Proof Design & Flame-Retardant Housing

NAP-250 utilizes flame-retardant material (UL94-V0) and it can handle water splashes. With internal antenna and the pole and wall mount design, it is ideal for both indoor and outdoor locations, such as enterprises, train station, airport, hotel, campus, factory, warehouse, etc.

Power over Ethernet (PoE)

NAP-250 can be powered by PoE. Thus, it receives its power over the same cable that is used to carry datagrams. This simplifies network installation and eliminates the constraint of having AC power outlets. There is no need to make changes to the existing cable.

(Note: a dedicated PoE power supply is required)

Multiple SSIDs for Secure Access

By providing up to 8 SSIDs (providing 7 SSIDs when operating in Mesh mode), NAP-250 enables users to access different networks based on their identities (employer, employee, guest, etc.). In addition, the hardware-based AP controller allows you to deliver the access privilege to the user.

Captive Portal / RADIUS Authentication

With the support of captive portal web page and RADIUS database, the authenticated users can be forced to a designated website (e.g., commercial, online shopping, advertising, etc.) for promoting and marketing purposes.

Free Software-Based AP Controller

The LAC-100 software can be downloaded from Nusoft website (Click here to download) and be installed on your computer. Then, your computer can be used as an AP controller to centrally manage a number of access points. In addition, no user license fees are charged for operation, which greatly reduces your ownership cost of IT infrastructure.

Wireless Mesh Network

The Mesh technology enables you to wirelessly extend your network areas without pulling Ethernet cabling. This not only reduces the cost of wireless network deployment but also eliminates the need to pull cabling.

In addition, Mesh network can find the best path set between any two nodes. And the network traffic can be automatically redirected to other nodes when one node fails to operate. So the data transfer doesn't get affected.
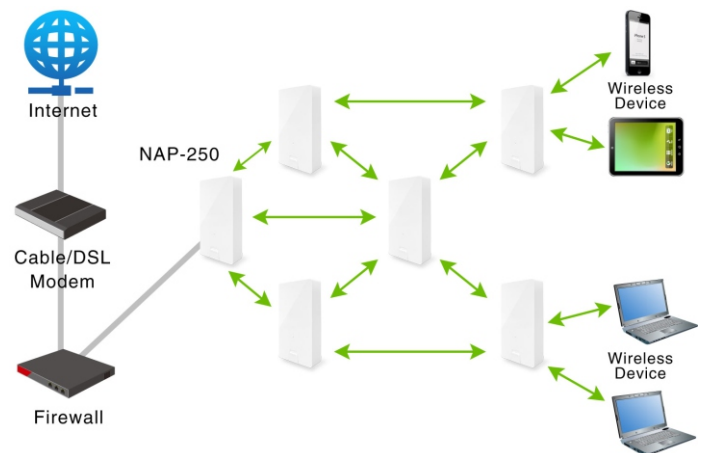
2.4GHz Operation

In the 2.4GHz frequency band, it provides up to 11 channels for your Wi-Fi device and you can use 20MHz or 40MHz wide channels according to your needs.

Hardware Watchdog

Each NAP-250 features a hardware watchdog timer to automatically reboot the non-responding system due to an unpredictable event or a radio interference, providing you with an enterprise-class wireless network with a 24/7 continuity.

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Two-in-One AP

Based on the two-in-one AP design, NAP-250 can be deployed in standalone mode (Fat AP) to act as a multi-functional AP, or be deployed in a controller-based mode (Thin AP) to be managed by the Nusoft AP controller, all of which adapts itself ideally to every network infrastructure.

Fat AP Mode - Standalone Mode

When deployed in Fat AP mode, NAP-250 can deliver complete wireless network related capabilities. This mode is ideal for a small-sized business, Small Office and Home Office (SOHO), houses, and other small-scale wireless network environment.

Thin AP Mode - Controller-based Mode

When operating in Thin AP mode, NAP-250 should be managed by Nusoft hardware-based AP controller (UTM, MHG, and NFW Series) or software-based AP controller (LAC-100). It is ideal for a deployment of a great number of APs, such as medium and large-sized enterprises, hotel, campus, train station, airport, factory, warehouse, etc.

The AP controller can centrally control and manage all of the APs, including the configuration of SSIDs, encryption, authentication, etc. And it also delivers the advanced functions like AP load balancing, auto transmit power control, AP auto-configuration, connection status notification, firmware update, etc.

Moreover, the hardware-based AP controller can deliver the network management such as QoS, access privilege, web filtering, etc., bringing your wireless network security to a higher level.

Thin AP Mode - Providing AP Load Balancing

The wireless users usually connect to the AP with the strongest signal regardless of the user load on that AP. This results in increasing the burden on the specific AP.

Unlike a conventional AP, NAP-250 is capable of AP load balancing by dis-associating and re-associating mobile devices to avoid network bottleneck using a maximum client value as well as a windows threshold mechanism, effectively preventing wireless traffic from being congested to a specific AP.

Thin AP Mode - AP Auto-Configuration

When operating in Thin AP mode, NAP-250 can proactively obtain a pre-configured profile from the Nusoft AP controller and stay up-to-date with the latest configurations using the CAPWAP (Control and Provisioning of Wireless Access Points) protocol, which makes it ideal for a deployment of a great number of APs.

Thin AP Mode - Tunnel & Bridge Forwarding Modes

Tunnel Mode - (Only applicable to hardware-based AP controller) All wireless traffic are forwarded to the Nusoft AP controller to perform a client management by the means of access privilege, QoS, web filtering, etc. and then passed to their destination.

On the contrary, most of the third-party products manage the wireless access by VLAN which requires more expense and makes it more difficult to deploy and maintain the wireless network. This also enables the wireless clients using the same SSID access to each other. (This is a common problem encountered when deploying wireless network in hotels.) And, the wireless clients using the different SSIDs are unable to access to the NAS device. (This is a common problem encountered when deploying wireless network in offices.)
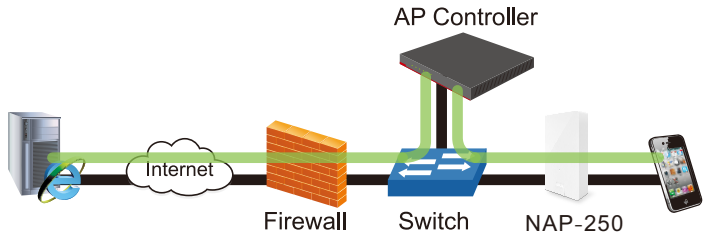
Bridge Mode – All wireless traffic are forwarded to their destination directly without being processed by the Nusoft AP controller, greatly increasing the number of associated wireless clients.
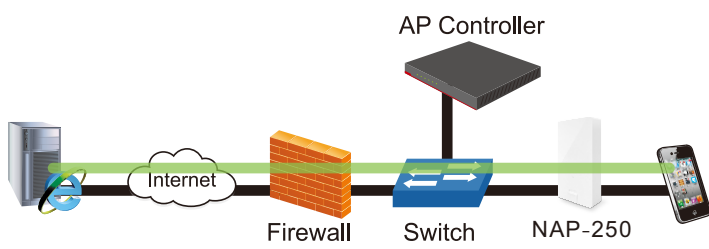
Product Feature of Thin AP and Fat AP

AP Mode		Thin AP	Fat AP
Wireless Client Management (Only applicable to tunnel mode)	SSID-based Management	○	✕
	Access Privilege	○	✕
	QoS	○	✕
AP Group Management, Push Config./ Firmware		○	✕
Connection Status Notification		○	✕
AP Load Balancing		○	✕
Auto Transmit Power Control		○	✕
RADIUS / Captive Portal Authentication		○	✕
Wi-Fi Billing		○	✕
E-MAP/ Dedicated APP		○	✕

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NAP-250 Specifications

Hardware Specifications

Mounting	Wall, Pole
LED Indicators	WiFi x 1, Ethernet x 2
Wireless Standards	IEEE 802.11 b/g/n
Reset Switch	Push-button momentary contact switch
Power Supply	PoE Power Supply AC Input: 100-240V, 0.5A@50/60Hz DC Output: 24V/0.5A, 12W
Antenna	2T2R internal directional antenna (7.76dBi, horizontal: 60, vertical: 60)
Ethernet Ports	2 x 10/100Mbps Ethernet ports IEEE 802.3, 802.3u compliant CSMA/CD 10/100/1000 auto-sensing Power over Ethernet
Operating / Storage Temperature	–20~50°C (-4 ~ 122 °F) / -40~70°C (-40 ~ 158 °F)
Operating / Storage Humidity	0~90% Non-Condensing / 0~90% Non-Condensing
Flammability Rating / ESD Protection	UL94-V0 / 2KV
Dimensions (L, W, H)	18 x 9 x 3.45 cm (7.09 x 3.54 x 1.36 in.)
Certifications	NCC, BSMI

Wireless Specifications

Frequency Band	2.4 GHz
Data Transfer Rate	IEEE802.11b: 1/2/5.5/11 Mbps (Auto-sensing) IEEE802.11g: 6/9/12/18/24/36/48/54 Mbps(Auto-sensing) IEEE802.11n: 270 Mbps (40MHz) , 130 Mbps (20MHz)
Channel Width	IEEE802.11b/g: 20 MHz IEEE802.11n: 20/40 MHz
Transmit Power	24dBm
Frequency Response	±1 dB
Receiver Sensitivity	IEEE802.11b: -85 dBm@11Mbps IEEE802.11g: -69 dBm@54 Mbps IEEE802.11n: -66 dBm@65 Mbps IEEE802.11n: -64 dBm@135 Mbps
No. of Supported SSIDs	8
No. of Associated Clients per AP	64
Wireless Security	Open System / Shared Key / 802.1x / WPA /WPA2-Personal / WPA/WPA2-Enterprise

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