



Deploy and Manage a Highly Scalable, Worry-Free WLAN

- Centralized WLAN management and auto provisioning
- Manages up to 512 APs with granular access control
- ZyMesh simplifies complex, inconvenient cabling Wi-Fi deployments
- Comprehensive features for WLAN performance optimization and always-on Wi-Fi connectivity
- Wireless LAN performance optimization via dynamic channel selection and load balancing
- Guest authentication by QR code

ZyXEL's next generation WLAN controller, the NXC5500, is capable of extending networks flexibly and fulfilling different deploy requirements with excellent Access Point (AP) compatibility; and the NXC5500 can centralize WLAN management to reduce extra efforts. The NXC5500 is easy to use and scalable for hotels, education institutions, chain stores as well as small- to-medium-size enterprises to configure network solutions that meet their specific needs.

Benefits

Centralized management and provision

With demand for Internet connection of mobile devices growing rapidly, high scalability WLAN and centralized management become necessary for wireless device deployments. The ZyXEL NXC5500 WLAN controller has great scalability to manage up to 512 APs centrally. The NXC5500 utilizes CAPWAP protocol to minimize issues of Wi-Fi deployments that are new, or belong to extension programs on top of the existing networks.

Adaptive and resilient Wi-Fi deployments

The ZyXEL NXC5500 features with ZyMesh to solve the complex cable deployments when extending Wi-Fi coverage, and provide high resilience Wi-Fi service with multiple route selections for each repeater APs. In the past, administrators had to assign a channel and MAC addresses in each AP while setting up a WDS link to extend Wi-Fi service; now they can make auto provision and manage easily.

WLAN optimization and enhanced RF management

All wireless networks face a major challenge: ensuring Wi-Fi clients get service levels they'd need. Therefore, there are several kinds of Wi-Fi clients exist on the network, and these users tend to make their own connectivity and roaming decisions. The NXC5500 can monitor the capabilities of each wireless client and steer the client to the best radio on the best AP by band select and signal threshold. Also, the NXC5500 can detect status of neighbor AP and adjust output power automatically to ensure a non-stop Wi-Fi service.

Secured wireless edge and access management

The NXC5500 features with diversified Wi-Fi security features and comprehensive access control to help enterprises and businesses address the wireless security issues that arise with BYOD.



NXC5500
Wireless LAN Controller

Feature Highlights



High Scalability

High Scalability

The great scalability allows the NXC5500 to manage up to 512 access points centrally, and the NXC5500 also helps administrators to make auto provision without exhaustive configuration for each AP within few minutes.



Comprehensive
Access
Management

Comprehensive Access Management

The NXC5500 offers easy dynamic account creation and versatile wireless user authentication methods for different application scenarios to provide smooth and secured access. The MAC authentication and customized captive portal adapted to suit the needs of enterprises, hospitality and public venues application. With captive portal via QR code access support, keyboard-less mobile devices are able to access Internet service instantly and securely.



High
Performance

High Performance

The NXC5500 is equipped with 6 Gigabit Ethernet ports, enabling both high bandwidth and flexible deployments. The high performance and scalability ensure the NXC5500 provides robust networking for modern networks where one person is equipped with multiple devices.



NAT Traversal

NAT Traversal

The NXC5500 can facilitate the connections traversing NAT gateways to solve connection issue for AP and WLAN controller deployed in different subnets and to ensure the highest robustness of WLAN networks.



Auto Healing

Auto Healing

The NXC5500 has Auto Healing feature that detects status of neighbor APs and adjust AP power automatically to provide enduring network services. If an AP is not functional, the nearby APs will increase output power to cover the void area. Once the AP outage recovers, the nearby APs decrease output power automatically.



Secured
Wireless Edge

Secured Wireless Edge

The NXC5500 features with multiple network security functions to provide the most robust protection for the wireless network edge. The rogue AP containment and detection ensures to block malicious AP, while industry-standard WPA/WPA2-Enterprise authentication, a variety of Extensible Authentication Protocol (EAP) frameworks and built-in firewall feature enables secure access against unauthorized or malicious activities in enterprise network.



ZyMESH

ZyMesh

The ZyMesh features of NXC5500 help extending Wi-Fi coverage to places where cable deployment is difficult. In addition, each repeater APs has multiple route selections to provide non-stop Wi-Fi services. ZyMesh enables to make auto provision and manage for multiple APs easily and centrally.



Wi-Fi Site Survey
and RTLS

Wi-Fi Site Survey and RTLS

The NXC5500 partners with Ekahau to provide site survey and Real-Time Location Tracking (RTLS) to best assist site selection and expedite large scale or campus deployment.

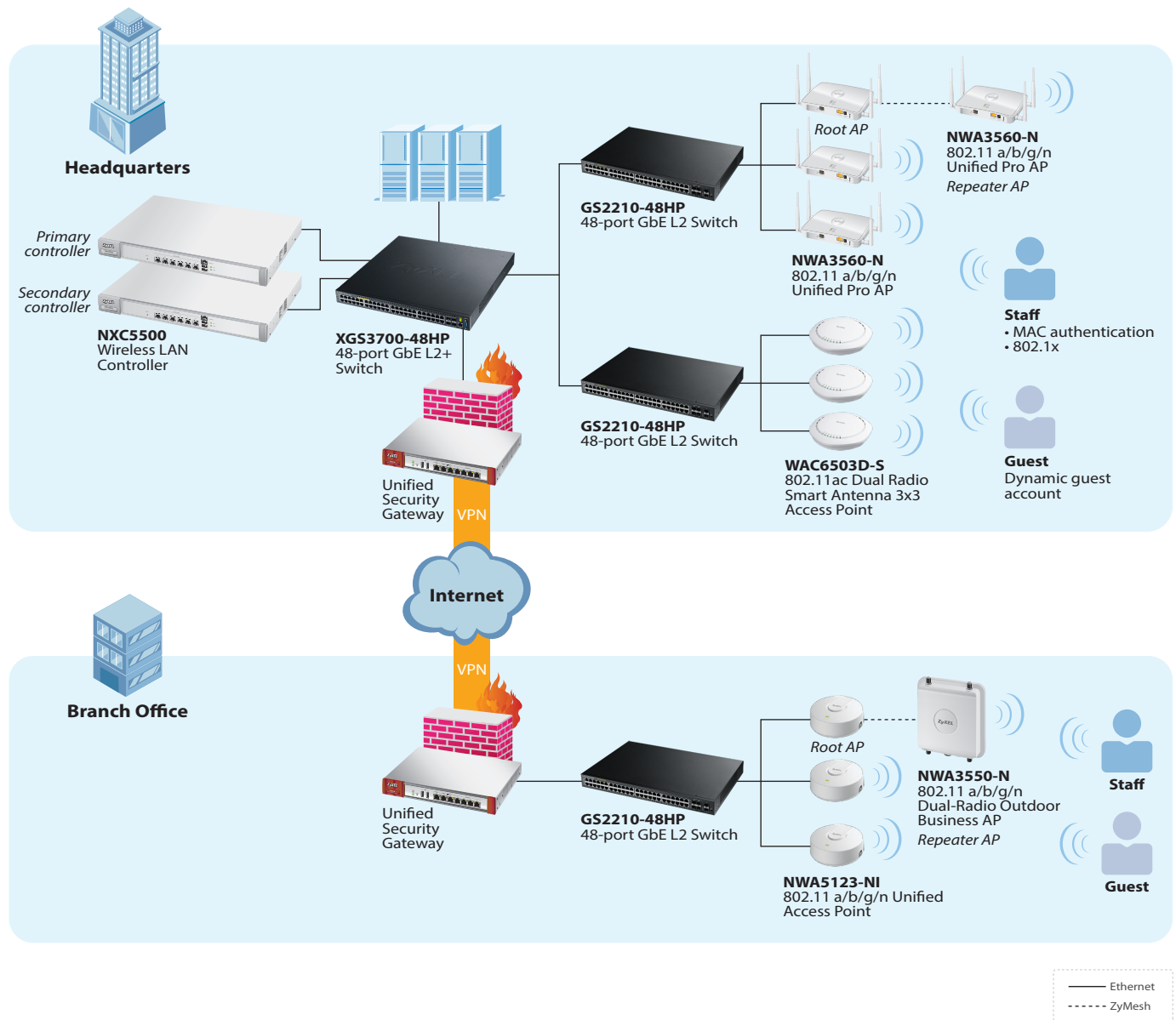


Client Steering


Client Steering

Client Steering sets 5 GHz as priority for dual-band devices to overcome heavy loading on 2.4 GHz, while client signal threshold transfer devices to APs with stronger signal. With these two functions, the NXC5500 ensures better radio resource usage to provide max wireless network performance for users.

Application Diagram



Specifications

Model	NXC5500
Product name	Wireless LAN Controller 
Port Density	
10/100/1000 Mbps LAN ports	6
USB port	2
Performance	
Throughput (Gbps)	6
Managed AP number (default/max.)	64/512
WLAN Features	
Wireless security (WPA/WPA2-PSK, Enterprise)	Yes
Dynamic channel selection	Yes
Wireless multicast setting	Yes
AP load balancing	Yes
AP planning and site-survey	Yes (AP planning and coverage detection)
ZyMesh	Licensed service
Band select	Yes
Client signal threshold	Yes
Auto healing	Yes
Security Features	
IEEE 802.1X	Yes
IEEE 802.11w	Yes*
Layer-2 isolation	Yes
Web authentication	Yes
Stateful firewall	Yes
MAC filtering	Yes
RADIUS authentication	Yes
Microsoft AD authentication	Yes
LDAP authentication	Yes
Embedded RADIUS server	Yes (4096 user)
Identity-based user security management	Yes
Wireless intrusion detection	Rogue AP detection and containment
Control and Provisioning	
Managed AP discovery	Broadcast/DHCP option/DNS/Manual
CAPWAP	Yes
AP data forwarding mode	Distributed (local bridge) and Centralized (data tunnel)
Management interface	HTTP/HTTPS/Telnet/SSH/SNMP
Output power control	Yes
Wire/wireless packet capture	Yes
Network	
VLANs	Yes
DHCP client	Yes
DHCP relay, server	Yes
NAT	Yes
Static routing	256
Policy routing	1000

* Supports on firmware version V4.20 or above



NXC5500

Wireless LAN Controller

Model		NXC5500
Access Control		
MAC access control list		Yes
MAC authentication		Yes, internal and external RADIUS
Guest account generator		Yes (2048 user)
Customizable web login portal		Yes
QoS		
WMM/power save		Yes
DiffServ marking		Yes
AP load balancing		Yes
Management Features		
CLI with SSH		Yes
Web UI with SSL		Yes
myZyXEL.com 2.0		Yes*
SNMP		v1, v2c, v3
Multi-level administration roles		Admin, guest operator
User/Application Management		
Authentication		RADIUS/Microsoft AD/LDAP/Local
Local user database		Yes (4096)
User/group policy		Yes
Authentication by QR code		Yes*
Captive portal		Yes
External portal page		Yes
Page upload		Yes
Other		
System diagnostic tool		Yes
Certification		
EMC		<ul style="list-style-type: none"> • EMI and susceptibility (Class A) • FCC Part 15.107 and 15.109 • CE EN55022, EN55024 • ERP Lot 6 • BSMI CNS13438
Safety		<ul style="list-style-type: none"> • LVD EN60950-1: A12 • BSMI CNS14336
Power Requirements		
Power supply		100 - 240 VAC
Max. power consumption (watt)		138
Physical Specifications		
Item	Dimensions (WxDxH)(mm/in.)	438 x 302.7 x 44/17.24 x 11.92 x 1.73
	Weight (kg/lb.)	4.750/10.47
Packing	Dimensions (WxDxH)(mm/in.)	680 x 425 x 190/26.77 x 16.73 x 7.48
	Weight (kg/lb.)	8.525/18.79
Included accessories		<ul style="list-style-type: none"> • Ethernet cable • Console cable • Power cord • Rack mounting kit
Environmental Specifications		
Operating	Temperature	0°C to 40°C/32°F to 104°F
	Humidity	10% to 90% (non-condensing)
Storage	Temperature	-30°C to 70°C/-22°F to 158°F
	Humidity	10% to 90% (non-condensing)
MTBF (hr)		43,800

* Supports on firmware version V4.20 or above

Access Point Compatibility List

Series	WAC6500 Series*	NWA3000-N Series	NWA5000 Series	NWA5120 Series
	Unified Pro Access Point	Unified Pro Access Point	Managed Access Point	Unified Access Point
Model	WAC6503D-S WAC6502D-S WAC6502D-E WAC6553D-E	NWA3160-N NWA3560-N NWA3550-N	NWA5160N NWA5560-N NWA5550-N	NWA5121-NI NWA5121-N NWA5123-NI NWA5301-NJ
Functions				
Auto provisioning over WAN & LAN	Yes	Yes	Yes	Yes
CAPWAP	Yes	Yes	Yes	Yes
Auto channel selection	Yes	Yes	Yes	Yes
AP load-balancing	Yes	Yes	Yes	Yes
Monitoring mode	Yes	Yes	Yes	Yes
Rogue AP detection	Yes	Yes	Yes	Yes
Rogue AP containment	Yes	Yes	Yes	Yes
Packet capture	Yes	Yes	Yes	Yes
Data forwarding	Local bridge/Data tunnel	Local bridge/Data tunnel	Local bridge/Data tunnel	Local bridge
ZyMesh	Yes**	Yes	Yes	Yes

* WAC6500 series AP is supported with firmware version V4.20 or above

** ZyMesh on firmware V4.20 for WAC6500 series is beta function. The official support is scheduled for future release

Other Information

License

Item	Description
Managed AP scalability	The NXC5500 Managed AP License increases the number of APs that can be managed by the NXC5500 WLAN controller by increments of 64 APs at a time. The maximum number of APs supported is 512.
ZyMesh	This license enables the ZyMesh function on the NXC5500.

For more product information, visit us on the web at www.ZyXEL.com



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