Intelligent WLAN Controller with Advanced Functions

- **Centralized WLAN management and auto provisioning**
- **Manages up to 512 APs with granular access control**
- **ZyMESH simplifies complex, inconvenient cabling Wi-Fi deployments**
- **Client Steering enhances efficiency of wireless spectrum utilization**
- **Auto Healing maximizes Wi-Fi service availability**
- **Comprehensive guest network management features**

With demand for Internet connection of mobile devices growing rapidly, high scalability WLAN and centralized management become necessary for wireless device deployments. ZyXEL's next-generation WLAN controller, the NXC5500, is capable of extending networks flexibly and fulfilling different deploy requirements with excellent 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

High Scalability

Ultimate scalability, instant provisioning

The great scalability allows ZyXEL 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.

High Performance

Unmatched performance and capacity

The next-generation WLAN controller NXC5500 is equipped with 6 Gigabit Ethernet ports, enabling both high bandwidth and flexible deployments. It can support up to 16,000 concurrent devices without compromising performance. With high performance and scalability, the NXC5500 ensures robust networking for modern networks where one person is equipped with multiple devices.

Auto Healing

Non-stop Wi-Fi services

The large demand of wireless connection increases unpredictable changes in WLAN environments. To reduce the impact of these unpredictable changes, 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.

ZyXEL green

NXC5500
Wireless LAN Controller


ZyMESH

Adaptive and resilient Wi-Fi deployments

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 high resilience for non-stop Wi-Fi services. 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 and centrally with ZyMESH along with the NXC5500 controllers.

Client Steering

WLAN optimization and enhanced RF management

All wireless networks face a major challenge: ensuring Wi-Fi clients get service levels they'd need. The difficulty to resolve is that different kinds of Wi-Fi clients exist on the network, and these users tend to make their own connectivity and roaming decisions. Client Steering enables the NXC5500 to provide network with max performance through band segmentation and signal threshold for clients. With more mobile devices in use, Wi-Fi requirement becomes more critical. Client Steering has functions that match every Wi-Fi client to the better radio band with the better AP, while band select sets 5 GHz as priority for dual-band devices to overcome heavy loading on 2.4 GHz. Client signal threshold transfer devices to APs with stronger signal. With these two functions, users can rest assured that the Wi-Fi performance is optimized.


Comprehensive Access Management

Comprehensive access management

The NXC5500 offers versatile wireless user authentication methods for different users. For example, to reduce inconvenient login for keyboard-less mobile devices in schools, MAC authentication can be adopted to provide smooth access. In hotels, the reception staff can generate dynamic accounts for clients to log into a customized HTML portal page for flexible uploads and for the users to log into a secure network with correct resource.

NAT Traversal

NAT traversal unblocks multi-site deployments

Most Wi-Fi deployments are new, or belong to extension programs on top of the existing networks. The ZyXEL NXC controller utilizes the IEFT CAPWAP protocol to minimize this issue. In addition, the connections between AP and controllers are usually established in different subnets or even across the Internet; the advanced technologies employed by ZyXEL's NXC controller can facilitate the connections traversing NAT gateways to ensure the highest robustness of WLAN networks.


Secured Wireless Edge

Secured wireless edge blocks threats from mobile devices

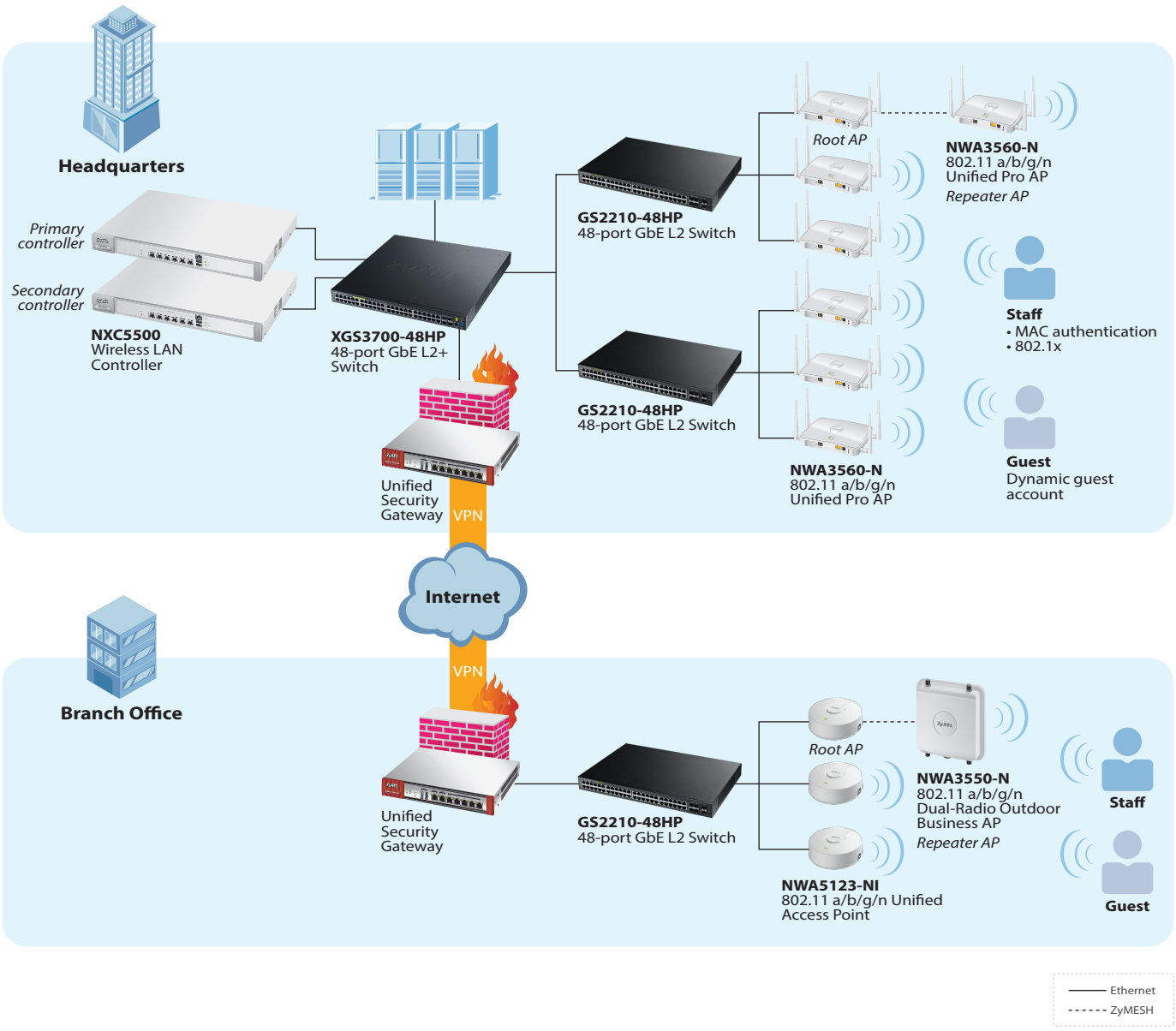
The ZyXEL NXC5500 Wireless LAN Controller and Managed APs can help enterprises and businesses address the wireless security issues that arise with BYOD. They can guard company networks and resources against incoming threats from mobile Internet devices with industry-standard WPA/WPA2-Enterprise authentication and a variety of Extensible Authentication Protocol (EAP) frameworks. The monitoring mode of rogue AP includes both detection and containment to ensure blocking malicious AP. The built-in -firewall of the NXC5500 can perform stateful inspection of data streams to reject illegitimate packets coming from mobile Internet devices. With multiple network security, the NXC5500 can provide the most robust protection for the wireless network edge.


Wi-Fi Site Survey and RTLS

Elaborate Wi-Fi site survey and location tracking

In large scale or campus Wi-Fi deployments, it is essential to locate the best spots to install APs for optimized service. The NXC5500 partners with Ekahau to provide site survey and Real-Time Location Tracking (RTLS) to best assist site selection and expedite the deployment.

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
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	1024
Policy routing	1024

Model		NXC5500
Access Control		
MAC access control list		Yes
MAC authentication		Yes, nternal 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
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
Captive portal		Yes
External portal page		Yes
Page upload		Yes
Other		
System diagnostic tool		Yes
Certification		
EMC		• EMI and susceptibility (Class A) • FCC Part 15.107 and 15.109 • CE EN55022, EN55024 • ERP Lot 6 • BSMI CNS13438
Safety		• LVD EN60950-1: A12 • BSMI CNS14336
Power Requirements		
Power supply		12 VDC, 100 - 240 VAC
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
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%
MTBF (hr)		43,800

Access Point Compatibility List

Series	NWA3000-N Series	NWA5000 Series	NWA5120 Series
	Unified Pro Access Point	Managed Access Point	Unified Access Point
Model	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
CAPWAP	Yes	Yes	Yes
Auto channel selection	Yes	Yes	Yes
AP load-balancing	Yes	Yes	Yes
Monitoring mode	Yes	Yes	Yes
Rogue AP detection	Yes	Yes	Yes
Rogue AP containment	Yes	Yes	Yes
Packet capture	Yes	Yes	Yes
Data forwarding	Local bridge/Data tunnel	Local bridge/Data tunnel	Local bridge
ZyMESH	Yes	Yes	Yes

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, supporting unlimited root APs for wireless mesh deployments.

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