Deploy and Manage a Highly Scalable, Worry-Free WLAN

- **Centralized WLAN management and auto provisioning**
- **Manages up to 1024 APs with granular access control**
- **ZyMesh simplifies complex, inconvenient cabling WiFi deployments**
- **Comprehensive features for WLAN performance optimization and always-on WiFi connectivity**
- **Wireless LAN performance optimization via dynamic channel selection and load balancing**
- **Guest authentication by QR code**
- **ZyXEL One Network is supported**

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 1024 APs centrally. The NXC5500 utilizes CAPWAP protocol to minimize issues of WiFi deployments that are new, or belong to extension programs on top of the existing networks.

Adaptive and resilient WiFi deployments

The ZyXEL NXC5500 features with ZyMesh to solve the complex cable deployments when extending WiFi coverage, and provide high resilience WiFi 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 WiFi service; now they can make auto provision and manage easily.

WLAN optimization and enhanced RF management

All wireless networks face a major challenge: ensuring WiFi clients get service levels they'd need. Therefore, there are several kinds of WiFi 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 WiFi service.

Secured wireless edge and access management

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

ZyXEL**one**network
Redefining network integration

NXC5500
Wireless LAN Controller

ZyXEL One Network experience

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

Aiming for relieving our customers from repetitive operations of deploying and managing a network, ZyXEL One Network is designed to simplify the configuration, management, and troubleshooting, allowing our customers to focus on the business priorities. ZyXEL One Network presents an easy-to-use tool, ZyXEL One Network Utility (ZON Utility), to realize speed network setup. ZyXEL Smart Connect* allows ZyXEL networking equipment to be aware and recognize each other and further facilitating the network maintenance via one-click remote functions such as factory reset or power cycling. ZyXEL One Network redefines the network integration across multiple networking products from switch to WiFi AP to WLAN controller and to Gateway.

** ZyXEL Smart Connect is supported on selected models. Please refer to specifications for more detail.*

Feature Highlights

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 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.

Comprehensive Access Management

Comprehensive Access Management

The NXC5500 offers easy dynamic account creation and versatile wireless user authentication methods to provide smooth and secured access. The MAC authentication and customized captive portal adapted to suit the needs of enterprises and hospitality. 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.

High Scalability

High Scalability

The great scalability allows the NXC5500 to manage up to 1024 access points centrally, and the NXC5500 also helps administrators to make auto provision without exhaustive configuration for each AP within few minutes.

ZyMESH

ZyMesh

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

Wi-Fi Site Survey and RTLS

WiFi 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

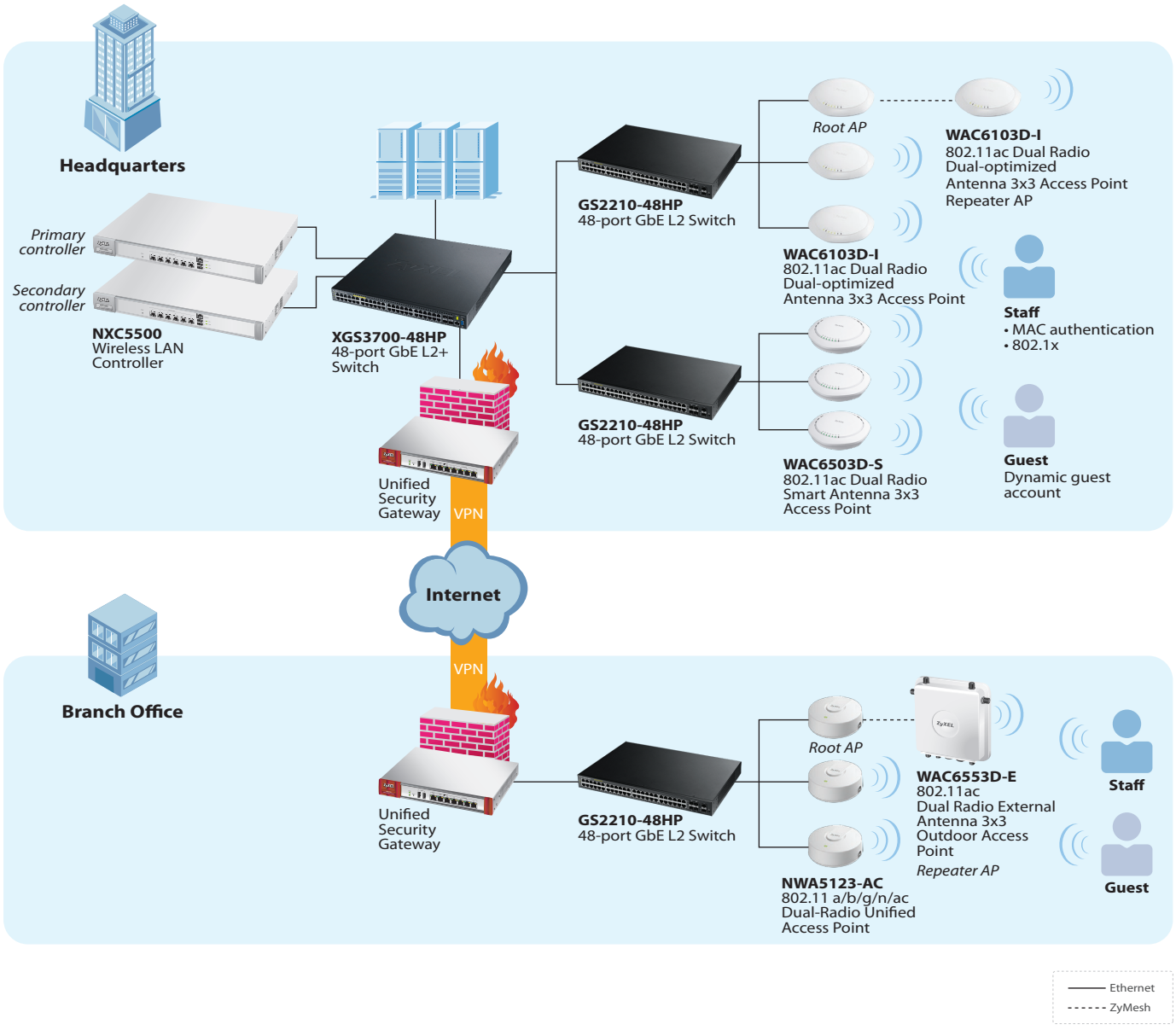
Client Steering

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.

ZON Utility

ZyXEL One Network Utility

To streamline the management process, the NXC Series comes with the ZyXEL One Network (ZON) utility, allowing administrators to assign IP addresses to multiple WLAN controllers through just one platform. Administrators can avoid the hassle logging into each WLAN controller to change the default IP addresses before physical installation.


Headquarters
Primary controller
Secondary controller
NXC5500
Wireless LAN Controller
XGS3700-48HP
48-port GbE L2+ Switch
Unified Security Gateway
VPN
Internet
VPN
Branch Office
Unified Security Gateway
GS2210-48HP
48-port GbE L2 Switch
GS2210-48HP
48-port GbE L2 Switch
Root AP
WAC6103D-I
802.11ac Dual Radio Dual-optimized Antenna 3x3 Access Point Repeater AP
WAC6103D-I
802.11ac Dual Radio Dual-optimized Antenna 3x3 Access Point
Staff
• MAC authentication
• 802.1x
WAC6503D-S
802.11ac Dual Radio Smart Antenna 3x3 Access Point
Guest
Dynamic guest account
Root AP
WAC6553D-E
802.11ac Dual Radio External Antenna 3x3 Outdoor Access Point
Repeater AP
Staff
Guest
NWA5123-AC
802.11 a/b/g/n/ac Dual-Radio Unified Access Point
Ethernet
ZyMesh

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.)	64/1024
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
Fast roaming	Pre-authentication, PMK caching and 802.11r/k/v
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

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, Limited Admin, Guest Manager
ZyXEL One Network		
ZON Utility		• Discovery of ZyXEL switches, APs, WLAN controllers and gateways • Centralized and batch configurations ▪ IP configuration ▪ IP renew ▪ Device reboot ▪ Device factory reset ▪ Device locating ▪ Web GUI access ▪ Firmware upgrade ▪ Password configuration ▪ One-click quick association with ZyXEL AP Configurator (ZAC)
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		• 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		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		• 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

ZyXEL

NXC5500
Wireless LAN Controller

Access Point Compatibility List

Series	WAC6500 Series	WAC6300 Series	WAC6100 Series	WAC5300 Series	NWA5120 Series
	Unified Pro Access Point	Unified Pro Access Poin	Unified Pro Access Point	Unified Access Point	Unified Access Point
Model	WAC6503D-S WAC6502D-S WAC6502D-E WAC6553D-E WAC6552D-S	WAC6303D-S	WAC6103D-I	WAC5302D-S	NWA5123-AC NWA5123-AC HD NWA5121-NI NWA5121-N NWA5123-NI NWA5301-NJ
Functions					
Auto provisioning over WAN & LAN	Yes	Yes	Yes	Yes	Yes
CAPWAP	Yes	Yes	Yes	Yes	Yes
Auto channel selection	Yes	Yes	Yes	Yes	Yes
AP load-balancing	Yes	Yes	Yes	Yes	Yes
Rogue AP detection	Yes	Yes	Yes	Yes	Yes
Packet capture	Yes	Future support	Yes	Future support	Yes*
Data forwarding	Local bridge/ Data tunnel	Local bridge/ Data tunnel	Local bridge/ Data tunnel	Local bridge	Local bridge
ZyMesh	Yes	Future support	Yes	Future support	Yes*

**Future support on NWA5123-AC HD*

Other Information

Managed AP License

Model	Part number	Description	Note
NXC5500	LIC-AP-ZZ0004F	E-iCard AP Upgrade License 8 APs for NXC5500	The maximum number of APs supported is 1024
	LIC-AP-ZZ0005F	E-iCard AP Upgrade License 64 APs for NXC5500	
NXC2500	LIC-AP-ZZ0003F	E-iCard AP Upgrade License 8 APs for NXC2500	The maximum number of APs supported is 64
	LIC-AP-ZZ0006F	E-iCard AP Upgrade License 32 APs for NXC2500	

ZyMesh License

Model	Part number	Description
NXC5500	LIC-MESH-ZZ0002F	This license enables the ZyMesh function on the NXC5500
NXC2500	LIC-MESH-ZZ0001F	This license enables the ZyMesh function on the NXC2500

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

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