



## 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 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 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.



ZyXEL **one**network  
Redefining network integration

**NXC5500**  
Wireless LAN Controller

### ZyXEL One Network experience

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.

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 Wi-Fi 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.



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.



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.



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.



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.



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.



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.



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.



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.

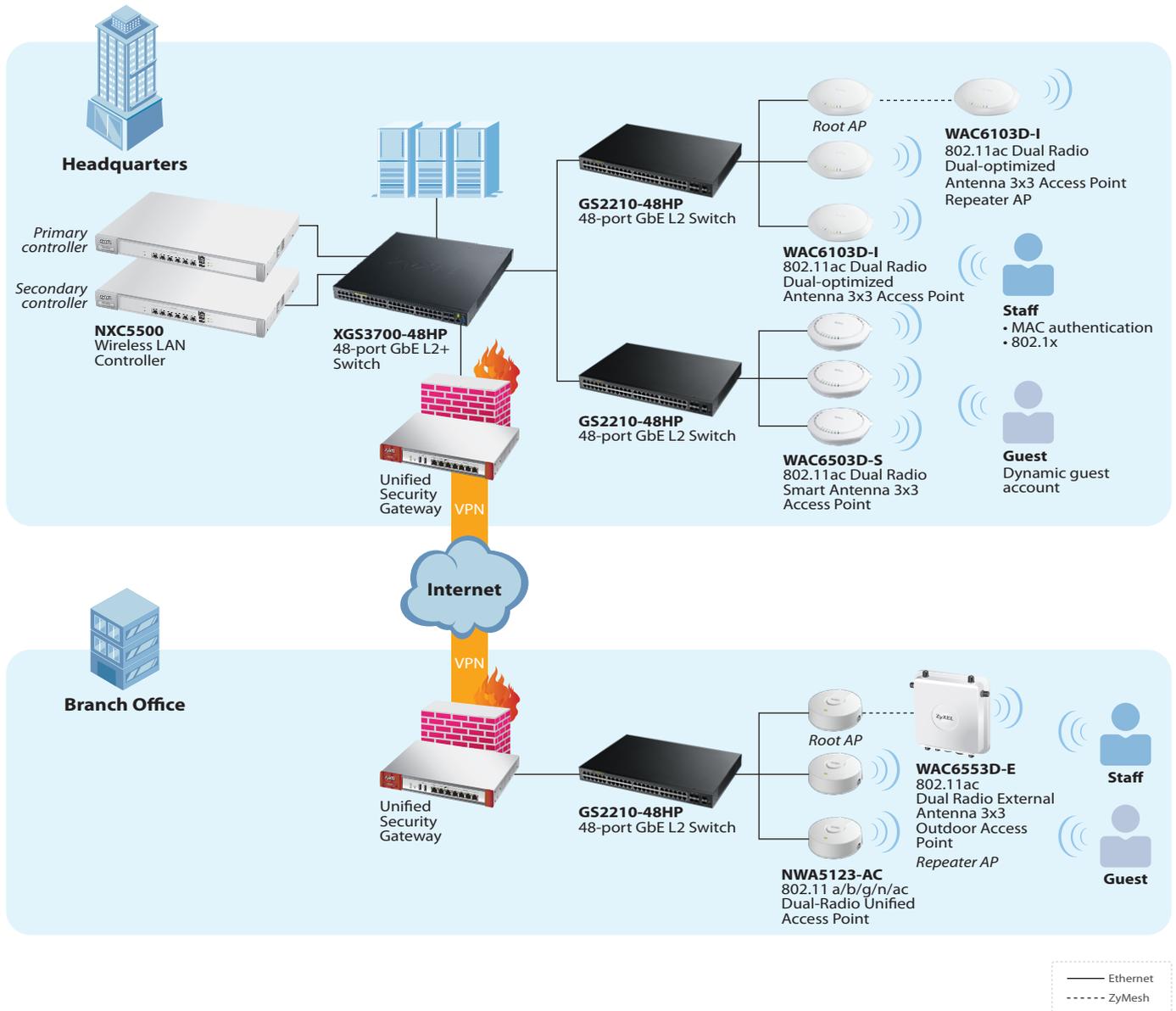


ZON Utility

#### 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.

### Application Diagram





# NXC5500

## Wireless LAN Controller

### Specifications

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

\* Supports on firmware version V4.20 or above

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

\* Supports on firmware version V4.20 or above

\*\* Supports on firmware version V4.21 or above

## Access Point Compatibility List

Series	WAC6500 Series*	WAC6100 Series*	NWA3000-N Series	NWA5000 Series	NWA5120 Series
	Unified Pro Access Point	Unified Pro Access Point	Unified Pro Access Point	Managed Access Point	Unified Access Point
Model	WAC6503D-S WAC6502D-S WAC6502D-E WAC6553D-E	WAC6103D-I	NWA3160-N NWA3560-N NWA3550-N	NWA5160N NWA5560-N NWA5550-N	NWA5123-AC* NWA5121-NI NWA5121-N NWA5123-NI NWA5301-NJ
<b>Functions</b>					
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
Monitoring mode	Yes	Yes	Yes	Yes	Yes
Rogue AP detection	Yes	Yes	Yes	Yes	Yes
Packet capture	Yes	Yes	Yes	Yes	Yes
Data forwarding	Local bridge/ Data tunnel	Local bridge/ Data tunnel	Local bridge/ Data tunnel	Local bridge/ Data tunnel	Local bridge
ZyMesh**	Yes	Yes	Yes	Yes	Yes

\*WAC6500 Series AP is supported with firmware version V4.20 or above; WAC6103D-I is supported with firmware version V4.21 or above; NWA5123-AC is supported with firmware version V4.22 or above.  
 \*\*ZyMesh supports on WAC6500 Series and WAC6103D-I with firmware V4.21 or above; supports on NWA5123-AC with firmware V4.22 or above.

## 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 512
	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](http://www.ZyXEL.com)



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