



# Unlock Networking Possibilities with Cloud

**Nebula Secure Cloud Networking Solution**  
Solution Guide



# We help you make everything easier



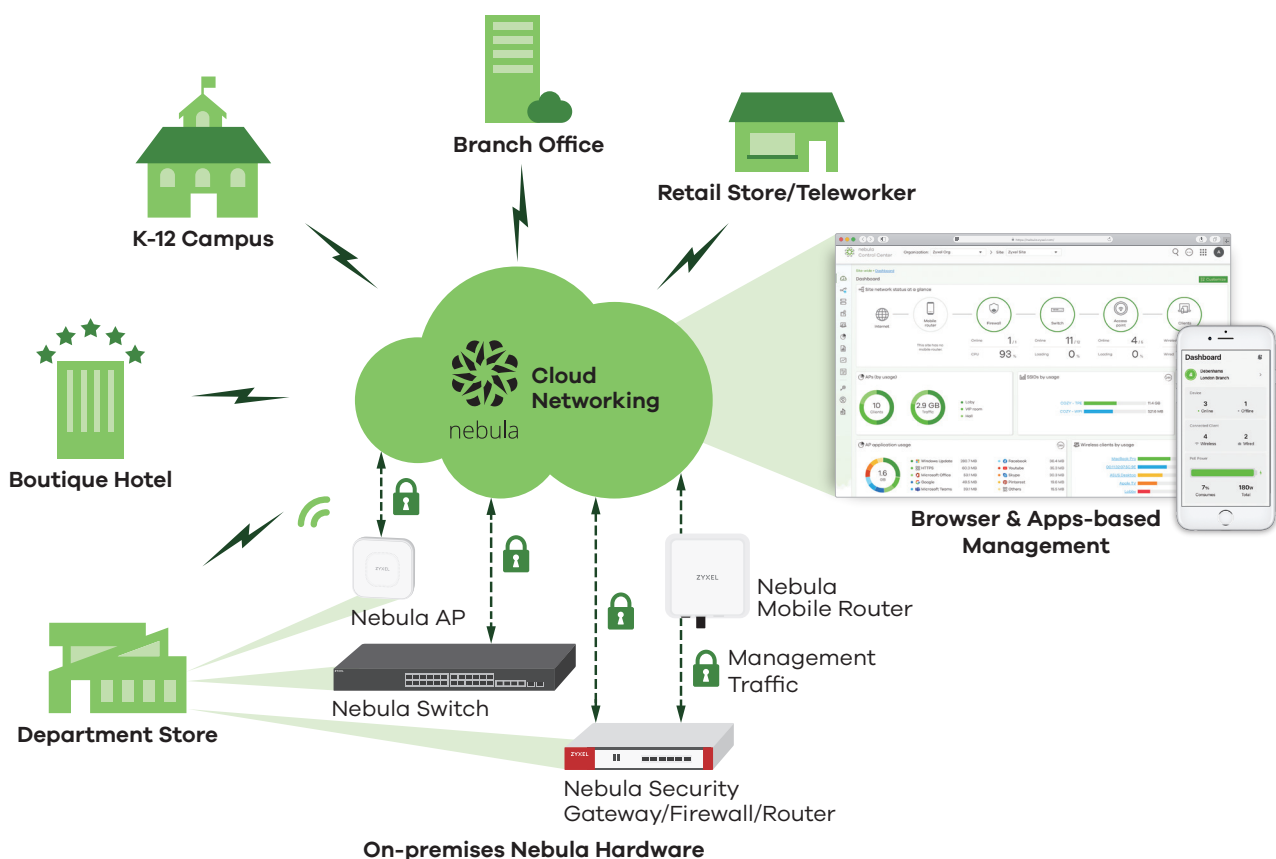
# Overview

Nebula secure cloud networking solution provides cloud-based, centralized control and visibility over all Nebula wired, wireless, security firewall, security router, and mobile router hardware — all without the cost and complexity of on-site control equipment or

overlay management systems. With comprehensive product portfolio that can be centrally managed from the cloud, Nebula offers simple, intuitive and scalable management for all networks.

## Highlights

- Intuitive, automated network management interface as well as continuous feature updates that eliminate training and labor for network implementation, maintenance and support
- Zero-touch provisioning, built-in multi-tenant, multisite network management tools accelerate deployment of large networks
- Centralized, unified and on-demand control as well as visibility that reduce capital expense for hardware and software
- Free cloud management for the life of the product without the need for ongoing costs
- Access points and switches with NebulaFlex Pro, USG FLEX firewalls (0102 bundled SKUs), ATP firewalls, SCR security router (w/Elite Pack), and Nebula 5G/4G routers are sold with bundled Professional Pack license for you to experience advanced cloud management features
- A comprehensive networking and security product portfolio from a single vendor ensures better product compatibility
- Per-device licensing model with flexible subscriptions provides rich diversity and high flexibility for customers of all sizes



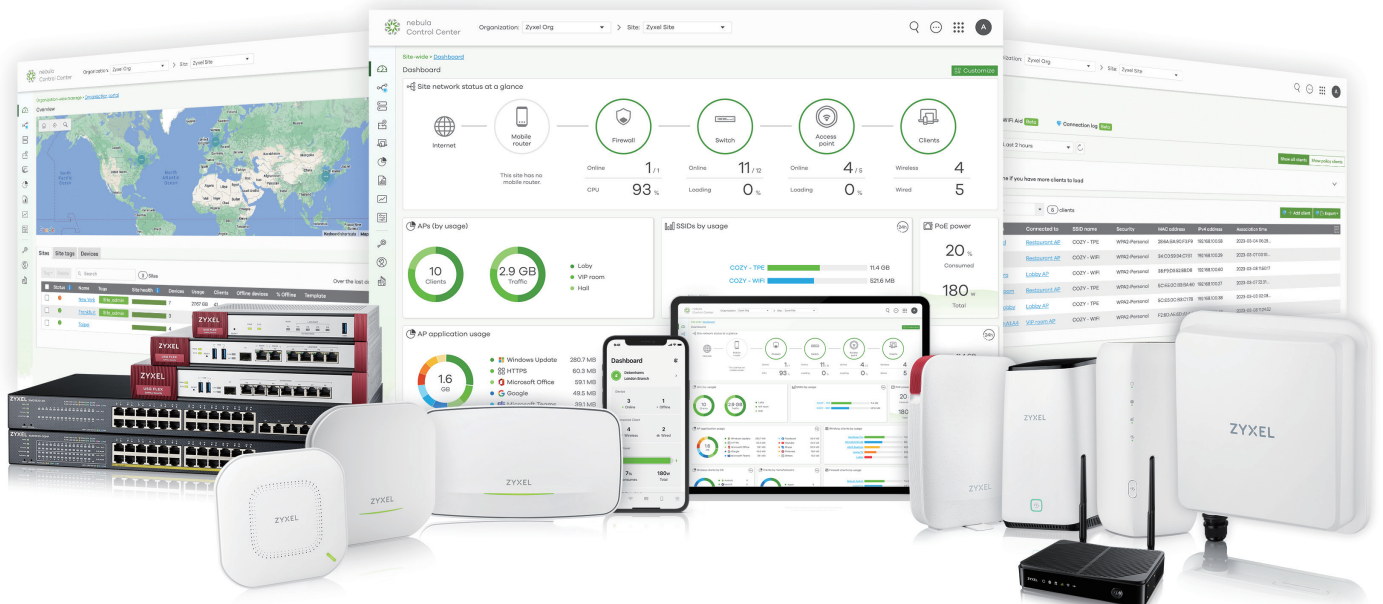
# Introduction to Nebula secure cloud networking solution

Nebula's networking and security products, including access points, switches, security firewalls, security router and 5G/4G routers, are purpose-built for cloud management. They break the traditions and come up with easy management, centralized control, auto-configuration, real-time Web-based diagnostics, remote monitoring and more.

The Nebula cloud managed networking introduces an affordable, effortless approach for network deployments with high security and scalability to provide completely control over Nebula devices and users. When an organization grows from small sites to

massive, distributed networks, the Nebula hardware with cloud-based self-provisioning enables easy, quick and plug-n-play deployment to multiple locations without IT professionals.

Through Nebula cloud services, firmware and security signature updates are delivered seamlessly, while secure VPN tunnels can be established automatically between different branches over the Web with just a few clicks. Based on a secure infrastructure, Nebula is designed with fault-tolerant properties that enable local networks to keep operating properly in WAN downtimes.



# Nebula secure cloud networking solution architecture

The Nebula Cloud provides a networking paradigm for building and managing networks over the Internet in the Software as a Service model. Software as a Service (SaaS) is defined as a way of delivering software for users to access via the Internet rather than local installation. In the Nebula architecture, network functions and management services are pushed to the cloud and delivered as a service that provides instant control to the entire network without wireless controllers and overlay network management appliances.

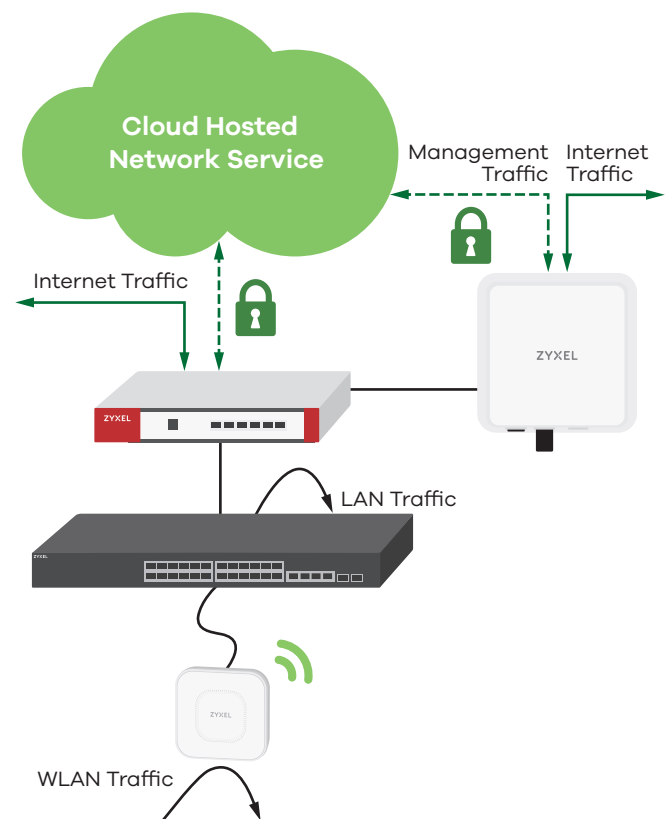
All Nebula devices are built from the ground up for cloud management with the capability to communicate with Nebula's cloud control center through the Internet. This TLS-secured connectivity between hardware and the cloud provides network-wide visibility and control for network management using the minimal bandwidth.

Over the cloud, thousands of Nebula devices around the world can be configured, controlled, monitored and managed under a single pane of glass. With multi-site network management tools, businesses are allowed to deploy new branches of any size, while administrators are able to make policy changes any time from a central control platform.

## Data Privacy and Out-of-band Control Plane

The Nebula service uses the infrastructure and services built upon the Amazon Web Service (AWS), so all Nebula security details can be referred to AWS Cloud Security. Nebula is committed to data protection, privacy and security as well as compliance with applicable regulatory frameworks in the world. Nebula's technical architecture along with its internal administrative and procedural safeguards can assist customers with design and deployment of cloud-based networking solutions that comply with EU data privacy regulations.

In Nebula's out-of-band control plane, network and management traffics are split into two different data paths. Management data (e.g. configuration, statistics, monitoring, etc.) turn towards Nebula's cloud from devices through an encrypted Internet connection of the NETCONF protocol, while user data (e.g. Web browsing and internal applications, etc.) flows directly to the destination on the LAN or across the WAN without passing through the cloud.





#### Features of the Nebula Architecture:

- End user data does not traverse through the cloud.
- Unlimited throughput, no centralized controller bottlenecks when new devices are added.
- Network functions even if connection to cloud is interrupted.
- Nebula's cloud management is backed by a 99.99% uptime SLA.

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## NETCONF Standard

Nebula is an industry-first solution that implements NETCONF protocol for safety of configuration changes in cloud management as all NETCONF messages are protected by TLS and exchanged using secure transports. Prior to NETCONF, CLI scripting and SNMP were two common approaches; but they have several limitations such as lacking of transaction management or useful standard security and commit mechanisms. The NETCONF protocol has been designed to address the shortcomings of the existing practices and protocols.

With the support of TCP and Callhome to overcome the NAT barrier, NETCONF is considered more reliable and elegant. It is also thinner than CWMP (TR-069) SOAP, which saves Internet bandwidth. With these features, the NETCONF protocol is regarded as more suitable for cloud networking.



# Nebula Control Center (NCC)

Nebula Control Center offers a powerful insight into distributed networks. Its intuitive and web-based interface illustrates an instant view and analysis of network performance, connectivity and status automatically and continuously. Integrated with organization-wide and site-wide management tools, Nebula provides a quick and remote access for administrators to ensure the network is up and performing efficiently.

Nebula Control Center is also engineered with a number of security tools that provide optimal protection to networks, devices and users; and they also deliver the needed information to enforce security and enhance control over the entire Nebula network.



## Highlights

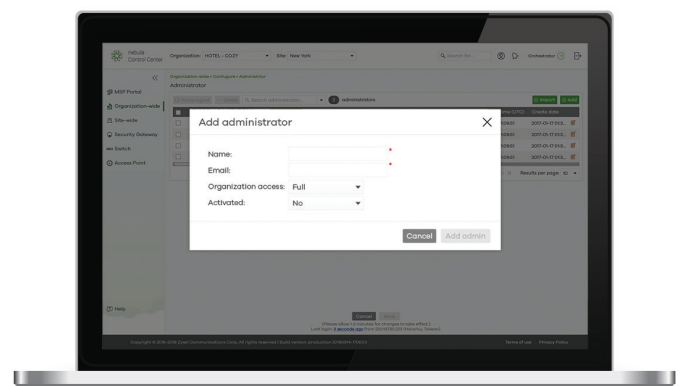
- Responsive web design and intuitive user interface with light & dark modes
- Multi-lingual management interface (English, Traditional Chinese, Japanese, German, French, Russian and more to come)
- Multi-tenant, multi-site manageability
- Role-based administration privileges
- First time setup wizard
- Powerful organization-wide management tools
- Rich site-wide management tools
- Site-based auto and smart configuration tools
- Misconfigured protection against disconnecting NCC
- Configuration changing alerts
- Login & Configure auditing
- Real-time and historical monitoring/reporting
- Granular device based information and trouble shooting tools
- Flexible firmware management

### First Time Setup Wizard

Nebula first time setup wizard helps create your organization/site and setup an integrated network with only a few simple clicks, making your devices up and running in minutes.

### Role-based Administration

Supervisors are allowed to appoint different privileges for multiple administrators to manage network and guess access. Specify management authority in the network access control function to maximize security and to avoid accidental misconfiguration.



Role-based Administration

## Organization-wide Management Tools

Powerful organization-wide features such as organizational overview, configuration backup and restore, configuration template and configuration clone are supported to allow MSP and IT admins to manage their org/sites much easier.

## Site-wide Management Tools

Integrated with the feature-rich dashboards, maps, floor plans, automatic visual and actionable network topology and site-based auto and smart configuring tools, the Nebula Control Center delivers instant network analysis and automatically performs AP authentication, configuration parity check, switch ports link aggregation and site-to-site VPN.

## Misconfiguration Protection

To prevent any connectivity interruption caused by incorrect or inappropriate configuration, the Nebula devices can intelligently identify if the order or setting from NCC is correct to ensure the connection is always up with the Nebula cloud.

## Configuration Changing Alerts

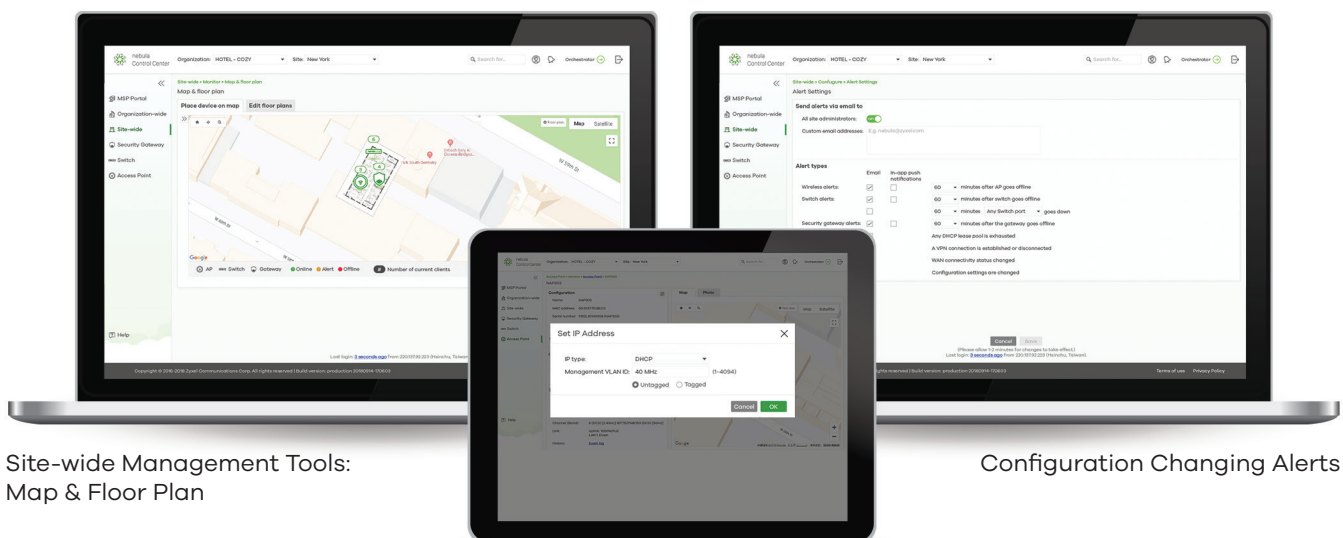
Configuration changing alerts help administrators to manage thousands of networking devices more efficiently, especially in larger or distributed sites. These real-time alerts are automatically sent from the Nebula Cloud system when configuration changes are made to keep new policies always up-to-date in the entire IT organization.

## Login & Configure Auditing

The Nebula cloud control center automatically records the time and IP address of every logged in administrators. The configure audit log lets administrators track Web-based login actions on their Nebula networks to see what configuration changes were made and who made the changes.

## Real-time & Historical Monitoring

Nebula Control center provides 24x7 monitoring over the entire network, giving administrators real-time and historical activity views with unlimited status records that can be backdated to the installation time.



Site-wide Management Tools:  
Map & Floor Plan

Configuration Changing Alerts

Misconfiguration Protection:  
Set IP Address



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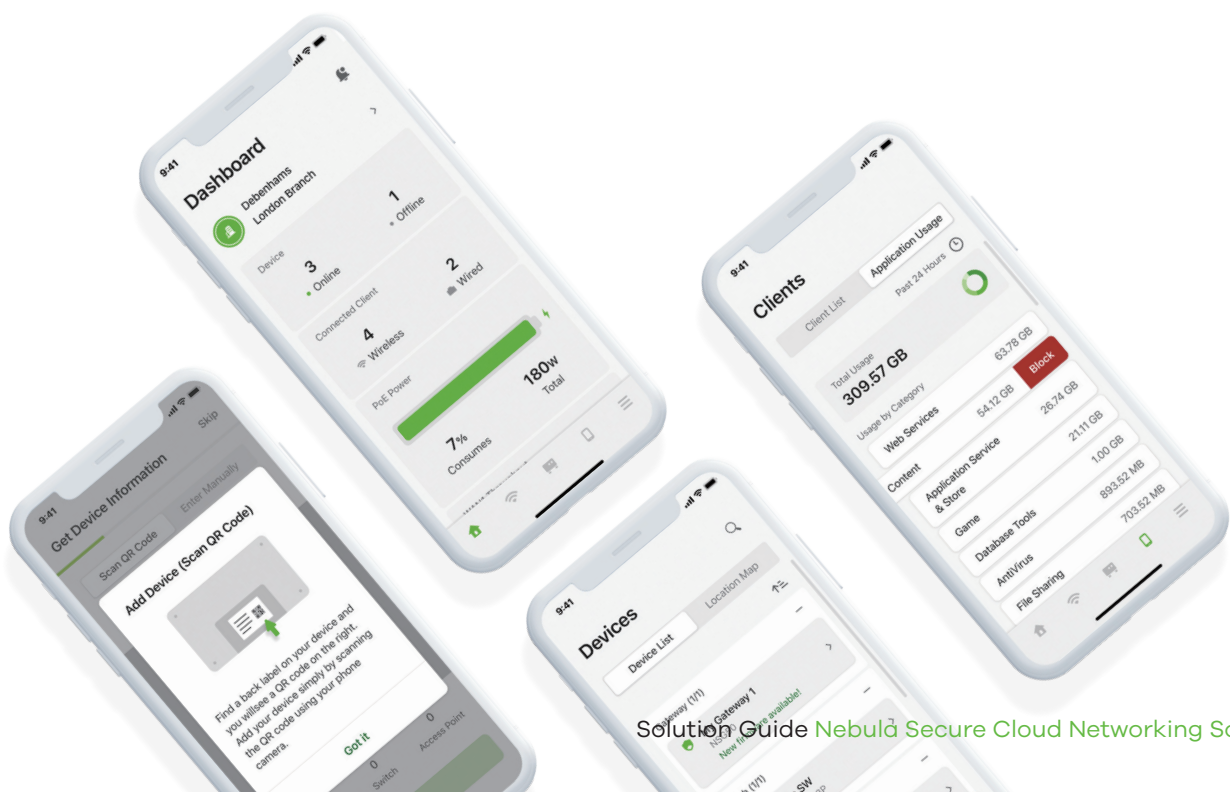
# Nebula Mobile App

The Nebula mobile app offers a fast approach to network management, providing an easy method for device registration and an instant view of real-time network status, which is particularly suitable for small business owners with little to no IT skills. With it, you can perform WiFi network configuration, break down usage by device

and client, troubleshoot with live tools, check the status of connected Nebula devices and clients at a glance, and scan device QR codes to register large numbers of devices to the Nebula Control Center all at once. The app's features and functions include:

## Highlights

- Sign up Nebula account
- Installation walk through wizard for creating org & site, adding devices (QR code or manually), setting up WiFi networks
- Hardware install guide and LED guide
- Enable/disable WiFi & sharing it via mobile messaging applications or QR code
- Switch and gateway ports info
- Mobile router WAN status
- Site-wide client monitoring with action support
- Site-wide application usage analysis with action support
- Centralize 3-in-1 device status
- Site-wide and per-device usage graph
- Site-wide and per-device PoE consumption
- Check map and photo of device location
- Live trouble shooting tools: reboot, Locator LED, switch port power reset, cable diagnostics, connection test
- Firmware upgrade schedule
- License overview and inventory
- Push notifications - Device down/up & license issue related
- Notification center up to 7 days alert history
- Nebula support request (Pro Pack license is required)



# Product families

## Access Points with NebulaFlex/ NebulaFlex Pro

Zyxel NebulaFlex solution allows the access points to be used in two modes; it's easy to switch between standalone mode and License Free Nebula Cloud management, anytime, with a few simple clicks. NebulaFlex provides true flexibility to adapt the access point to different needs in an ever-changing environment.

When used with Nebula you are able to centrally manage, access real-time network information and gain effortless control over your devices, all under a single intuitive platform without the need to install any software or add additional equipment like a controller. NebulaFlex Pro further supports triple mode functionality (standalone, hardware controller and Nebula) to give business clients true flexibility whatever their project may need.

### Access Points with NebulaFlex Product Options





| Model                      | NWA210BE  | NWA130BE  | NWA110BE  | NWA220AX-6E  |
|----------------------------|---|---|---|--|
| <b>Product name</b>        | BE12300 WiFi 7 Dual-Radio NebulaFlex Access Point   | BE11000 WiFi 7 Triple-Radio NebulaFlex Access Point   | BE6500 WiFi 7 Dual-Radio NebulaFlex Access Point  | AXE5400 WiFi 6E Dual-Radio NebulaFlex Access Point   |
|                            |    |    |   |   |
| <b>Typical deployment</b>  | Medium to high density deployments  | Entry-level wireless establishments   | Entry-level wireless establishments   | Medium to high density deployments   |
| <b>Radio specification</b> | <ul style="list-style-type: none"><li>• 1 x 802.11 b/g/n/ax/be radio</li><li>• 1 x 802.11 a/n/ac/ax/be radio</li><li>• 12.3 Gbps max rate</li><li>• Spatial Stream: 2+4</li></ul> | <ul style="list-style-type: none"><li>• 1 x 802.11 b/g/n/ax/be radio</li><li>• 1 x 802.11 a/n/ac/ax/be radio</li><li>• 11 Gbps max rate</li><li>• Spatial Stream: 2+2+2</li></ul> | <ul style="list-style-type: none"><li>• 1 x 802.11 b/g/n/ax/be radio</li><li>• 1 x 802.11 a/n/ac/ax/be radio</li><li>• 11 Gbps max rate</li><li>• Spatial Stream: 2+2+2</li></ul> | <ul style="list-style-type: none"><li>• 1 x 802.11 b/g/n/ax radio</li><li>• 1 x 802.11 a/n/ac/ax radio</li><li>• 5.375 Gbps max rate</li><li>• Spatial Stream: 2+4</li></ul> |
| <b>Power</b>               | <ul style="list-style-type: none"><li>• DC input: USB PD 15 VDC 2 A (Type C)</li><li>• PoE (802.3at): power draw 21.5 W</li></ul>   | <ul style="list-style-type: none"><li>• DC input : 12 VDC 2 A</li><li>• PoE (802.3at): power draw 24 W</li></ul>  | <ul style="list-style-type: none"><li>• DC input: USB PD 15 VDC 2 A (Type C)</li><li>• PoE (802.3at): power draw 21.5 W</li></ul>   | <ul style="list-style-type: none"><li>• DC input: 12 VDC 2 A</li><li>• PoE (802.3at): power draw 21 W</li></ul>  |
| <b>Antenna</b>             | Internal antenna  | Internal antenna  | Internal antenna  | Internal antenna   |

\* Bundled licenses are not applicable to NebulaFlex AP.

## Highlights




- Enjoy cloud features like zero-touch deployment, real-time configurations with Nebula
- Easy setup on SSID/SSID schedule/VLAN/Rate limiting.
- DPPSK (Dynamic Personal Pre-Shared Key) and standard-based WPA Personal support
- Enterprise wireless security and RF optimization
- Secure WiFi solution provides remote workers the same access to the corporate network and resources while being protected with the enterprise-grade security.
- Connect and Protect (CNP) service provides small business environments with a trusted and application visible WiFi hotspot network to enhance wireless user protection and experience.
- DCS, smart load balancing and client roaming/steering
- Rich Captive Portal support Nebula Cloud Authentication Server accounts, social login with Facebook accounts, and Voucher
- Support smart mesh and wireless bridge
- Wireless health monitoring and report
- WiFi Aid gives insights into the client's connection issues to optimize connectivity and troubleshoot

## Access Points with NebulaFlex Product Options

| Model                      | NWA210AX  | NWA110AX  | NWA90AX Pro   | NWA50AX Pro   |
|----------------------------|---|---|---|---|
| <b>Product name</b>        | AX3000 WiFi 6 Dual-Radio NebulaFlex Access Point  | AX1800 WiFi 6 Dual-Radio NebulaFlex Access Point  | AX3000 WiFi 6 Dual-Radio NebulaFlex Access Point  | AX3000 WiFi 6 Dual-Radio NebulaFlex Access Point  |
|                            |    |    |    |    |
| <b>Typical deployment</b>  | Medium to high density deployments  | Entry-level wireless establishments   | Small business, Entry-level establishments  | Small business, Entry-level establishments  |
| <b>Radio specification</b> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 2.975 Gbps max rate</li> <li>• Spatial Stream: 2+4</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 1.775 Gbps max rate</li> <li>• Spatial Stream: 2+2</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 2.975 Gbps max rate</li> <li>• Spatial Stream: 2+3</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 2.975 Gbps max rate</li> <li>• Spatial Stream: 2+3</li> </ul> |
| <b>Power</b>               | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 2 A</li> <li>• PoE (802.3at): power draw 19 W</li> </ul>  | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 1.5 A</li> <li>• PoE (802.3at): power draw 17 W</li> </ul>  | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 2 A</li> <li>• PoE (802.3at): power draw 20.5 W</li> </ul>  | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 2 A</li> <li>• PoE (802.3at): power draw 20.5 W</li> </ul>  |
| <b>Antenna</b>             | Internal antenna  | Internal antenna  | Internal antenna  | Internal antenna  |




\* Bundled licenses are not applicable to NebulaFlex AP.

### Access Points with NebulaFlex Product Options

| Model                      | NWA90AX   | NWA50AX   | NWA55AXE  |
|----------------------------|---|---|---|
| <b>Product name</b>        | AX1800 WiFi 6 Dual-Radio NebulaFlex Access Point  | AX1800 WiFi 6 Dual-Radio NebulaFlex Access Point  | AX1800 WiFi 6 Dual-Radio NebulaFlex Outdoor Access Point  |
|                            |    |    |   |
| <b>Typical deployment</b>  | Small business, Entry-level establishments  | Small business, Entry-level establishments  | Outdoor, Entry-level establishments   |
| <b>Radio specification</b> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 1.775 Gbps max rate</li> <li>• Spatial Stream: 2+2</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 1.775 Gbps max rate</li> <li>• Spatial Stream: 2+2</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 1.775 Gbps max rate</li> <li>• Spatial Stream: 2+2</li> </ul> |
| <b>Power</b>               | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 1.5 A</li> <li>• PoE (802.3at): power draw 16 W</li> </ul>  | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 1.5 A</li> <li>• PoE (802.3at): power draw 16 W</li> </ul>  | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 1.5 A</li> <li>• PoE (802.3at): power draw 16 W</li> </ul>  |
| <b>Antenna</b>             | Internal antenna  | Internal antenna  | External antenna  |




\* Bundled licenses are not applicable to NebulaFlex AP.

### Access Points with NebulaFlex Pro Product Options

| Model                      | WBE660S  | WBE530   | WAX640S-6E  |
|----------------------------|--|--|---|
| <b>Product name</b>        | BE22000 WiFi 7 Triple-Radio NebulaFlex Pro Access Point  | BE11000 WiFi 7 Triple-Radio NebulaFlex Pro Access Point  | AXE7800 WiFi 6E Triple-Radio NebulaFlex Pro Access Point  |
|                            |   |   |    |
| <b>Typical deployment</b>  | High density and interference-laden indoor environments  | Medium to high density deployments   | High density and interference-laden indoor environments   |
| <b>Radio specification</b> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax/be radio</li> <li>• 1 x 802.11 a/n/ac/ax/be radio</li> <li>• 22 Gbps max rate</li> <li>• Spatial Stream: 4+4+4</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax/be radio</li> <li>• 1 x 802.11 a/n/ac/ax/be radio</li> <li>• 11 Gbps max rate</li> <li>• Spatial Stream: 2+2+2</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 7.775 Gbps max rate</li> <li>• Spatial Stream: 2+2+4</li> </ul> |
| <b>Power</b>               | <ul style="list-style-type: none"> <li>• DC input: USB PD 15 VDC 3 A (Type C)</li> <li>• PoE (802.3bt): power draw 41 W</li> </ul>   | <ul style="list-style-type: none"> <li>• DC input : 12 VDC 2 A</li> <li>• PoE (802.3bt): power draw 24 W</li> </ul>  | <ul style="list-style-type: none"> <li>• DC input : 12 VDC 2.5 A</li> <li>• PoE (802.3bt): power draw 28 W</li> </ul>   |
| <b>Antenna</b>             | Internal smart antenna   | Internal antenna   | Internal smart antenna  |




\* 1-year Professional pack license is bundled in NebulaFlex Pro AP.

### Access Points with NebulaFlex Pro Product Options

| Model                      | WAX620D-6E  | WAX650S  | WAX630S   |
|----------------------------|---|--|---|
| <b>Product name</b>        | AX5400 WiFi 6E Dual-Radio NebulaFlex Pro Access Point   | AX3600 WiFi 6 Dual-Radio NebulaFlex Pro Access Point   | AX3000 WiFi 6 Dual-Radio NebulaFlex Pro Access Point  |
|                            |   |    |   |
| <b>Typical deployment</b>  | High density and interference-laden indoor environments   | High density and interference-laden indoor environments  | High density and interference-laden indoor environments   |
| <b>Radio specification</b> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 5.375 Gbps max rate</li> <li>• Spatial Stream: 2+4</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 1 x monitoring radio</li> <li>• 3.55 Gbps max rate</li> <li>• Spatial Stream: 4+4</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 2.975 Gbps max rate</li> <li>• Spatial Stream: 2+4</li> </ul> |
| <b>Power</b>               | <ul style="list-style-type: none"> <li>• DC input : 12 VDC 2 A</li> <li>• PoE (802.3at): power draw 21 W</li> </ul>   | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 2.5 A</li> <li>• PoE (802.3bt): power draw 31 W</li> </ul>   | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 2 A</li> <li>• PoE (802.3at): power draw 19 W</li> </ul>  |
| <b>Antenna</b>             | Dual-optimized internal antenna   | Internal smart antenna   | Internal smart antenna  |



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### Access Points with NebulaFlex Pro Product Options

| Model                      | WAX610D   | WAX510D   | WAX655E   |
|----------------------------|---|---|---|
| <b>Product name</b>        | AX3000 WiFi 6 Dual-Radio NebulaFlex Pro Access Point  | AX1800 WiFi 6 Dual-Radio NebulaFlex Pro Access Point  | AX5400 WiFi 6 Dual-Radio NebulaFlex Pro Outdoor Access Point  |
|                            |    |    |    |
| <b>Typical deployment</b>  | Medium to high density deployments  | Medium to high density deployments  | Outdoor   |
| <b>Radio specification</b> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 2.975 Gbps max rate</li> <li>• Spatial Stream: 2+4</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 1.775 Gbps max rate</li> <li>• Spatial Stream: 2+2</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 5.4 Gbps max rate</li> <li>• Spatial Stream: 2+4</li> </ul> |
| <b>Power</b>               | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 2 A</li> <li>• PoE (802.3at): power draw 19 W</li> </ul>  | <ul style="list-style-type: none"> <li>• DC input: 12 VDC 1.5 A</li> <li>• PoE (802.3at): power draw 17 W</li> </ul>  | <ul style="list-style-type: none"> <li>• 802.3at PoE only</li> </ul>  |
| <b>Antenna</b>             | Dual-optimized internal antenna   | Dual-optimized internal antenna   | External antenna  |

\* 1-year Professional pack license is bundled in NebulaFlex Pro AP.

## Access Points with NebulaFlex Pro Product Options

| Model                      | WAX300H   | WAC500H   |
|----------------------------|---|---|
| <b>Product name</b>        | AX3000 WiFi 6 Dual-Radio<br>NebulaFlex Pro Wall-Plate Access Point  | AC1200 WiFi 5 Wave 2 Dual-Radio<br>NebulaFlex Pro Wall-Plate Access Point   |
|                            |    |   |
| <b>Typical deployment</b>  | Per-room deployments  | Per-room deployments  |
| <b>Radio specification</b> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n/ax radio</li> <li>• 1 x 802.11 a/n/ac/ax radio</li> <li>• 2.975 Gbps max rate</li> <li>• Spatial Stream: 2+2</li> </ul> | <ul style="list-style-type: none"> <li>• 1 x 802.11 b/g/n radio</li> <li>• 1 x 802.11 a/n/ac radio</li> <li>• 1.2 Gbps max rate</li> <li>• Spatial Stream: 2+2</li> </ul> |
| <b>Power</b>               | <ul style="list-style-type: none"> <li>• PoE (802.3at): power draw 25.5 W (include 4 W for PoE PSE)</li> </ul>  | <ul style="list-style-type: none"> <li>• DC input: 12 VDC, 1 A</li> <li>• PoE (802.3at/af): power draw 18 W</li> </ul>  |
| <b>Antenna</b>             | Internal antenna  | Internal antenna  |

\* 1-year Professional pack license is bundled in NebulaFlex Pro AP.








# Switches with NebulaFlex/ NebulaFlex Pro

Zyxel switches with **NebulaFlex** allow you to easily switch between standalone and our license-free Nebula cloud management platform anytime with just a few simple clicks. **NebulaFlex Pro** switches are further bundled with a 1-year Professional Pack license. XS3800-28, XGS2220 and GS2220 Series switches come with NebulaFlex Pro which provides advanced IGMP technology, network analytics alerts and more, that allow resellers, MSPs, and network admins to experience the simplicity, scalability, and flexibility of Zyxel's Nebula networking solution.

Meanwhile, GS1350 Series further focus on surveillance applications, giving you the flexibility to monitor and manage your surveillance network via the cloud. Both **NebulaFlex/NebulaFlex Pro** switches protect your investment on wired technology by offering the flexibility to transition to the cloud in your own time, without worrying about additional ongoing licensing costs.

## Switches with NebulaFlex Product Options





| Model                          | XMG1915-10E   | XMG1915-10EP   | XMG1915-18EP  |
|--------------------------------|---|--|---|
| Product name                   | 8-port 2.5GbE Smart Managed Switch with 2 SFP+ Uplink                               | 8-port 2.5GbE Smart Managed PoE Switch with 2 SFP+ Uplink                            | 16-port 2.5GbE Smart Managed PoE Switch with 2 SFP+ Uplink                            |
|                                |  |  |  |
| Switch class                   | Smart Managed   | Smart Managed  | Smart Managed   |
| Total port count               | 10  | 10   | 18  |
| 100M/1G/2.5G (RJ-45)           | 8   | 8  | 16  |
| 100M/1G/2.5G (RJ-45, PoE++)    | -   | 8  | 8   |
| 1G/10G SFP+                    | 2   | 2  | 2   |
| Switching capacity (Gbps)      | 80  | 80   | 120   |
| Total PoE power budget (watts) | -   | 130  | 180   |

\* Bundled licenses are not applicable to NebulaFlex switches.

## Highlights






- Comprehensive Switch product portfolio includes wide-range port selection, multiple speed options (1G, 2.5G, 10G), PoE or non-PoE, and all fiber models.
- Smart fan and fanless designs offer silent operations in the office
- Check real-time status intuitively by cloud and PoE LED indicators
- The Multi-Gigabit switches that can step up the network bandwidth via the cloud
- GS1350 Series Surveillance switches are designed with specialized PoE features for IP cameras and surveillance report that can be monitor and manage the surveillance networks via the Cloud
- Flexible to switch between standalone and Nebula Cloud management without additional costs
- Enjoy cloud features like zero-touch deployment, real-time configurations with Nebula
- Efficient network provisioning with multiple ports configuration all at once
- User-friendly ACL and PoE schedule configuration
- Intelligent PoE technology and network topology
- RADIUS, static MAC forwarding and 802.1X authentication
- Advanced Switch Control (Vendor Based VLAN, IP Interfacing & Static Routing, Remote CLI access)
- Advanced IGMP multicast functionality and IPTV report
- Auto PD Recovery to detect and recover failed powered devices automatically

## Switches with NebulaFlex Product Options

| Model                                 | GS1915-8  | GS1915-8EP  | GS1915-24E   | GS1915-24EP   |
|---------------------------------------|---|---|--|---|
| <b>Product name</b>                   | 8-port GbE Smart Managed Switch   | 8-port GbE Smart Managed PoE Switch   | 24-port GbE Smart Managed Switch   | 24-port GbE Smart Managed PoE Switch  |
|                                       |  |  |  |  |
| <b>Switch class</b>                   | Smart Managed   | Smart Managed   | Smart Managed  | Smart Managed   |
| <b>Total port count</b>               | 8   | 8   | 24   | 24  |
| <b>100M/1G (RJ-45)</b>                | 8   | 8   | 24   | 24  |
| <b>100M/1G (RJ-45, PoE+)</b>          | -   | 8   | -  | 12  |
| <b>Switching capacity (Gbps)</b>      | 16  | 16  | 48   | 48  |
| <b>Total PoE power budget (watts)</b> | -   | 60  | -  | 130   |






\* Bundled licenses are not applicable to NebulaFlex switches.

### Switches with NebulaFlex Product Options

| Model                                 | GS1920-8HPv2   | GS1920-24v2   | GS1920-24HPv2  | GS1920-48v2   | GS1920-48HPv2   |
|---------------------------------------|--|---|--|---|---|
| <b>Product name</b>                   | 8-port GbE Smart Managed PoE Switch<br> | 24-port GbE Smart Managed Switch<br> | 24-port GbE Smart Managed PoE Switch<br> | 48-port GbE Smart Managed Switch<br> | 48-port GbE Smart Managed PoE Switch<br> |
| <b>Switch class</b>                   | Smart Managed  | Smart Managed   | Smart Managed  | Smart Managed   | Smart Managed   |
| <b>Total port count</b>               | 10   | 28  | 28   | 50  | 50  |
| <b>100M/1G (RJ-45)</b>                | 8  | 24  | 24   | 44  | 44  |
| <b>100M/1G (RJ-45, PoE+)</b>          | 8  | -   | 24   | -   | 48  |
| <b>1G SFP</b>                         | -  | -   | -  | 2   | 2   |
| <b>1G combo (SFP/RJ-45)</b>           | 2  | 4   | 4  | 4   | 4   |
| <b>Switching capacity (Gbps)</b>      | 20   | 56  | 56   | 100   | 100   |
| <b>Total PoE power budget (watts)</b> | 130  | -   | 375  | -   | 375   |





\* Bundled licenses are not applicable to NebulaFlex switches.

### Switches with NebulaFlex Product Options

| Model                                 | XS1930-10  | XS1930-12HP  | XS1930-12F   | XMG1930-30   | XMG1930-30HP  |
|---------------------------------------|--|--|--|--|---|
| <b>Product name</b>                   | 8-port 10G Multi-Gig Lite-L3 Smart Managed Switch with 2 SFP+<br> | 8-port 10G Multi-Gig PoE Lite-L3 Smart Managed Switch with 2 10G Multi-Gig Ports & 2 SFP+<br> | 10-port 10G Lite-L3 Smart Managed Fiber Switch with 2 10G Multi-Gig Ports<br> | 24-port 2.5G Multi-Gig Lite-L3 Smart Managed Switch with 6 10G Uplink<br> | 24-port 2.5G Multi-Gig Lite-L3 Smart Managed PoE++/PoE+ Switch with 6 10G Uplink<br> |
| <b>Switch class</b>                   | Smart Managed  | Smart Managed  | Smart Managed  | Smart Managed  | Smart Managed   |
| <b>Total port count</b>               | 10   | 12   | 12   | 30   | 30  |
| <b>100M/1G/2.5G (RJ-45)</b>           | -  | -  | -  | 24   | 24  |
| <b>100M/1G/2.5G (RJ-45, PoE+)</b>     | -  | -  | -  | -  | 20  |
| <b>100M/1G/2.5G (RJ-45, PoE++)</b>    | -  | -  | -  | -  | 4   |
| <b>1G/2.5G/5G/10G (RJ-45)</b>         | 8  | 10   | 2  | 4  | 4   |
| <b>1G/2.5G/5G/10G (RJ-45, PoE++)</b>  | -  | 8  | -  | -  | 4   |
| <b>1G/10G SFP+</b>                    | 2  | 2  | 10   | 2  | 2   |
| <b>Switching capacity (Gbps)</b>      | 200  | 240  | 240  | 240  | 240   |
| <b>Total PoE power budget (watts)</b> | -  | 375  | -  | -  | 700   |





\* Bundled licenses are not applicable to NebulaFlex switches.

### Switches with NebulaFlex Product Options

| Model                                 | XGS1930-28  | XGS1930-28HP  | XGS1930-52   | XGS1930-52HP  |
|---------------------------------------|---|---|--|---|
| <b>Product name</b>                   | 24-port GbE Lite-L3 Smart Managed Switch with 4 10G Uplink                        | 24-port GbE Lite-L3 Smart Managed PoE+ Switch with 4 10G Uplink                   | 48-port GbE Lite-L3 Smart Managed Switch with 4 10G Uplink                         | 48-port GbE Lite-L3 Smart Managed PoE+ Switch with 4 10G Uplink                     |
|                                       |  |  |  |  |
| <b>Switch class</b>                   | Smart Managed   | Smart Managed   | Smart Managed  | Smart Managed   |
| <b>Total port count</b>               | 28  | 28  | 52   | 52  |
| <b>100M/1G (RJ-45)</b>                | 24  | 24  | 48   | 48  |
| <b>100M/1G (RJ-45, PoE+)</b>          | -   | 24  | -  | 48  |
| <b>1G/10G SFP+</b>                    | 4   | 4   | 4  | 4   |
| <b>Switching capacity (Gbps)</b>      | 128   | 128   | 176  | 176   |
| <b>Total PoE power budget (watts)</b> | -   | 375   | -  | 375   |





\* Bundled licenses are not applicable to NebulaFlex switches.

### Switches with NebulaFlex Product Options

| Model                                 | XGS1935-28  | XGS1935-28HP  | XGS1935-52   | XGS1935-52HP  |
|---------------------------------------|---|---|--|---|
| <b>Product name</b>                   | 24-port GbE Lite-L3 Smart Managed Switch with 4 10G Uplink                          | 24-port GbE PoE Lite-L3 Smart Managed Switch with 4 10G Uplink                      | 48-port GbE Lite-L3 Smart Managed Switch with 4 10G Uplink                           | 48-port GbE PoE Lite-L3 Smart Managed Switch with 4 10G uplink                        |
|                                       |  |  |  |  |
| <b>Switch class</b>                   | Smart Managed   | Smart Managed   | Smart Managed  | Smart Managed   |
| <b>Total port count</b>               | 28  | 28  | 52   | 52  |
| <b>100M/1G (RJ-45)</b>                | 24  | 24  | 48   | 48  |
| <b>100M/1G (RJ-45, PoE+)</b>          | -   | 24  | -  | 48  |
| <b>1G/10G SFP+</b>                    | 4   | 4   | 4  | 4   |
| <b>Switching capacity (Gbps)</b>      | 128   | 128   | 176  | 176   |
| <b>Total PoE power budget (watts)</b> | -   | 375   | -  | 375   |





\* Bundled licenses are not applicable to NebulaFlex switches.

### Switches with NebulaFlex Pro Product Options

| Model                                 | GS1350-6HP   | GS1350-12HP  | GS1350-18HP  | GS1350-26HP   |
|---------------------------------------|--|--|--|---|
| <b>Product name</b>                   | 5-port GbE Smart Managed PoE Switch with GbE Uplink<br> | 8-port GbE Smart Managed PoE Switch with GbE Uplink<br> | 16-port GbE Smart Managed PoE Switch with GbE Uplink<br> | 24-port GbE Smart Managed PoE Switch with GbE Uplink<br> |
| <b>Switch class</b>                   | Smart Managed  | Smart Managed  | Smart Managed  | Smart Managed   |
| <b>Total port count</b>               | 6  | 12   | 18   | 26  |
| <b>100M/1G (RJ-45)</b>                | 5  | 10   | 16   | 24  |
| <b>100M/1G (RJ-45, PoE+)</b>          | 5 (port 1-2 PoE++)   | 8  | 16   | 24  |
| <b>1G SFP</b>                         | 1  | 2  | -  | -   |
| <b>1G combo (SFP/RJ-45)</b>           | -  | -  | 2  | 2   |
| <b>Switching capacity (Gbps)</b>      | 12   | 24   | 36   | 52  |
| <b>Total PoE power budget (watts)</b> | 60   | 130  | 250  | 375   |



\* 1-year Professional pack license is bundled in NebulaFlex Pro switch.

### Switches with NebulaFlex Pro Product Options

| Model                                 | GS2220-10   | GS2220-10HP   | GS2220-28   | GS2220-28HP  |
|---------------------------------------|---|---|---|--|
| <b>Product name</b>                   | 8-port GbE L2 Switch with GbE Uplink<br> | 8-port GbE L2 PoE Switch with GbE Uplink<br> | 24-port GbE L2 Switch with GbE Uplink<br> | 24-port GbE L2 PoE Switch with GbE Uplink<br> |
| <b>Switch class</b>                   | Layer 2 Plus  | Layer 2 Plus  | Layer 2 Plus  | Layer 2 Plus   |
| <b>Total port count</b>               | 10  | 10  | 28  | 28   |
| <b>100M/1G (RJ-45)</b>                | 8   | 8   | -   | 24   |
| <b>100M/1G (RJ-45, PoE+)</b>          | -   | 8   | -   | 24   |
| <b>1G SFP</b>                         | -   | -   | -   | -  |
| <b>1G combo (SFP/RJ-45)</b>           | 2   | 2   | 4   | 4  |
| <b>Switching capacity (Gbps)</b>      | 20  | 20  | 56  | 56   |
| <b>Total PoE power budget (watts)</b> | -   | 180   | -   | 375  |




\* 1-year Professional pack license is bundled in NebulaFlex Pro switch.

## Switches with NebulaFlex Pro Product Options

| Model                                 | GS2220-50   | GS2220-50HP  |
|---------------------------------------|---|--|
| <b>Product name</b>                   | 48-port GbE L2 Switch with GbE Uplink   | 48-port GbE L2 PoE Switch with GbE Uplink  |
|                                       |  |  |
| <b>Switch class</b>                   | Layer 2 Plus  | Layer 2 Plus   |
| <b>Total port count</b>               | 50  | 50   |
| 100M/1G (RJ-45)                       | 44  | 44   |
| 100M/1G (RJ-45, PoE+)                 | -   | 48   |
| 1G SFP                                | 2   | 2  |
| 1G combo (SFP/RJ-45)                  | 4   | 4  |
| <b>Switching capacity (Gbps)</b>      | 100   | 100  |
| <b>Total PoE power budget (watts)</b> | -   | 375  |

\* 1-year Professional pack license is bundled in NebulaFlex Pro switch.




## Switches with NebulaFlex Pro Product Options

| Model                                 | XGS2220-30  | XGS2220-30HP   | XGS2220-30F   |
|---------------------------------------|---|--|---|
| <b>Product name</b>                   | 24-port GbE L3 Access Switch with 6 10G Uplink                                      | 24-port GbE L3 Access PoE+ Switch with 6 10G Uplink (400 W)                          | 24-port SFP L3 Access Switch with 6 10G Uplink  |
|                                       |  |  |  |
| <b>Switch class</b>                   | Layer 3 Access  | Layer 3 Access   | Layer 3 Access  |
| <b>Total port count</b>               | 30  | 30   | 30  |
| 100M/1G (RJ-45)                       | 24  | 24   | -   |
| 100M/1G (RJ-45, PoE+)                 | -   | 16   | -   |
| 100M/1G (RJ-45, PoE++)                | -   | 8  | -   |
| 1G/2.5G/5G/10G (RJ-45)                | 2   | 2  | 2   |
| 1G/2.5G/5G/10G (RJ-45, PoE++)         | -   | 2  | -   |
| 1G SFP                                | -   | -  | 24  |
| 1G/10G SFP+                           | 4   | 4  | 4   |
| <b>Switching capacity (Gbps)</b>      | 168   | 168  | 168   |
| <b>Total PoE power budget (watts)</b> | -   | 400  | -   |
| <b>Physical stacking</b>              | 4   | 4  | 4   |

\* 1-year Professional pack license is bundled in NebulaFlex Pro switch.




## Switches with NebulaFlex Pro Product Options

| Model                                 | XGS2220-54  | XGS2220-54HP   | XGS2220-54FP  |
|---------------------------------------|---|--|---|
| <b>Product name</b>                   | 48-port GbE L3 Access Switch with 6 10G Uplink                                    | 48-port GbE L3 Access PoE+ Switch with 6 10G Uplink (600 W)                        | 48-port GbE L3 Access PoE+ Switch with 6 10G Uplink (960 W)                         |
|                                       |  |  |  |
| <b>Switch class</b>                   | Layer 3 Access  | Layer 3 Access   | Layer 3 Access  |
| <b>Total port count</b>               | 54  | 54   | 54  |
| 100M/1G (RJ-45)                       | 48  | 48   | 48  |
| 100M/1G (RJ-45, PoE+)                 | -   | 40   | 40  |
| 100M/1G (RJ-45, PoE++)                | -   | 8  | 8   |
| 100M/1G/2.5G/5G/10G (RJ-45)           | 2   | 2  | 2   |
| 100M/1G/2.5G/5G/10G (RJ-45, PoE++)    | -   | 2  | 2   |
| 1G SFP                                | -   | -  | -   |
| 1G/10G SFP+                           | 4   | 4  | 4   |
| <b>Switching capacity (Gbps)</b>      | 261   | 261  | 261   |
| <b>Total PoE power budget (watts)</b> | -   | 600  | 960   |
| <b>Physical stacking</b>              | 4   | 4  | 4   |


\* 1-year Professional pack license is bundled in NebulaFlex Pro switch.

## Switches with NebulaFlex Pro Product Options

| Model   | XS3800-28   |
|---|---|
| <b>Product name</b>                                 | 28-port 10GbE L3 Aggregation Switch   |
|   |  |
| <b>Switch class</b>                                 | Layer 3 Aggregation   |
| <b>Total port count</b>                             | 28  |
| 1G/2.5G/ 5G/10G (RJ-45)                             | 4   |
| 10G Multi-Gig combo (1G/2.5G/5G/10G RJ-45/10G SFP+) | 8   |
| 1G/10G SFP+   | 16  |
| <b>Switching capacity (Gbps)</b>                    | 560   |
| <b>Physical stacking</b>                            | 4   |

\* 1-year Professional pack license is bundled in NebulaFlex Pro switch.

## Switch Accessory with Nebula Monitor Functions

| Model   | PoE12-3PD   |
|---|---|
| <b>Product name</b>                               | Cloud Outdoor/Indoor PoE Extender   |
|   |  |
| <b>Total port count</b>                           | 4   |
| <b>PoE in port</b>                                | 1 x 10/100/1000BASE-T Ethernet with IEEE 802.3bt PoE++                                |
| <b>PoE out port</b>                               | 3 x 10/100/1000BASE-T Ethernet with IEEE 802.3at PoE+                                 |
| <b>Max. PoE power budget</b>                      | 45 W  |
| <b>Enclosure</b>                                  | IP55, plastic   |
| <b>Installation</b>                               | Pole and Wall   |
| <b>Power input</b>                                | 802.3bt (60 W) PoE input only   |
| <b>Operating temperature</b>                      | -20°C to 50°C/-4°F to 122°F   |
| <b>Ethernet port surge protection</b>             | 6 KV  |
| <b>Ethernet port ESD protection (air/contact)</b> | 8 KV/6 KV   |

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# Firewall Series

Zyxel's firewalls are the newest addition to the Nebula cloud management family, and it further optimizes Nebula with holistic security and protection for SMB business networks. Zyxel's firewalls are capable of authenticating individuals and devices for all scenarios, especially for remote applications. This enables it to extend and secure your distributed network anywhere easily and affordably. Zyxel's firewalls deliver high performance, ensure comprehensive protection as a self-evolving solution, and synchronize your security to fit into all kinds of networks. Our integrated cloud threat intelligence will automatically stop threats

at the network edge by blocking or quarantining, preventing damage to the network. We also provide up-to-the-minute protection with detailed reporting on investigations, threat preventions, active monitoring, and high visibility of network activities in today's ever-changing, ever-more-complex network environments.


The Nebula centralized management for USG FLEX H series now includes monitor device on/off status, firmware upgrades operation, access remote GUI (requires Nebula Pro Pack), and backup/restore of firewall configurations.

## Highlights

- High assurance multi-layered protection includes IP/URL/DNS reputation filter, App Patrol, Web Filtering, Anti-malware and IPS
- Collaborating policy enforcement devices and eliminating repetitive logins with Collaborative Detection & Response
- Best practices for remote access with Secure WiFi and VPN management consolidates and ensures the same network control and security across multiple sites
- Level up security with two-factor authentication (2FA) network access let you quickly and easily verify users' identities with users accessing their networks through the edge devices
- Cloud sandboxing technology prevents zero-day attacks of all sorts
- Comprehensive summary reports for security events and network traffic through SecuReporter service
- Flexible to switch between on-premise and Nebula Cloud management without additional costs



## Product Options

| Model   | ATP100  | ATP200  | ATP500   | ATP700  | ATP800  |
|---|---|---|--|---|---|
| Product name  | ATP Firewall  | ATP Firewall  | ATP Firewall   | ATP Firewall  | ATP Firewall  |
|   |  |  |  |  |  |
| <b>System Capacity &amp; Performance<sup>*1</sup></b>     |   |   |  |   |   |
| SPI firewall throughput <sup>*2</sup> (Mbps)              | 1,000   | 2,000   | 2,600  | 6,000   | 8,000   |
| VPN throughput <sup>*3</sup> (Mbps)                       | 300   | 500   | 900  | 1,200   | 1,500   |
| IPS throughput <sup>*4</sup> (Mbps)                       | 600   | 1,200   | 1,700  | 2,200   | 2,700   |
| Anti-Malware throughput <sup>*4</sup> (Mbps)              | 380   | 630   | 900  | 1,600   | 2,000   |
| UTM throughput <sup>*4</sup> (Anti-Malware and IPS, Mbps) | 380   | 600   | 890  | 1,500   | 1900  |
| Max. TCP concurrent sessions <sup>*5</sup>                | 300,000   | 600,000   | 1,000,000  | 1,600,000   | 2,000,000   |
| Max. concurrent IPsec VPN tunnels <sup>*6</sup>           | 40  | 100   | 300  | 500   | 1,000   |
| Recommended gateway-to-gateway IPsec VPN tunnels          | 20  | 50  | 150  | 300   | 300   |
| Concurrent SSL VPN users                                  | 30  | 60  | 150  | 150   | 500   |
| VLAN interface  | 8   | 16  | 64   | 128   | 128   |
| <b>Security Service</b>                                   |   |   |  |   |   |
| Sandboxing <sup>*7</sup>                                  | Yes   | Yes   | Yes  | Yes   | Yes   |
| Web Filtering <sup>*7</sup>                               | Yes   | Yes   | Yes  | Yes   | Yes   |
| Application Patrol <sup>*7</sup>                          | Yes   | Yes   | Yes  | Yes   | Yes   |
| Anti-Malware <sup>*7</sup>                                | Yes   | Yes   | Yes  | Yes   | Yes   |
| IPS <sup>*7</sup>   | Yes   | Yes   | Yes  | Yes   | Yes   |
| Reputation Filter <sup>*7</sup>                           | Yes   | Yes   | Yes  | Yes   | Yes   |
| SecuReporter <sup>*7</sup>                                | Yes   | Yes   | Yes  | Yes   | Yes   |
| Collaborative Detection & Response <sup>*7</sup>          | Yes   | Yes   | Yes  | Yes   | Yes   |
| Device Insight  | Yes   | Yes   | Yes  | Yes   | Yes   |
| Security Profile Synchronize (SPS) <sup>*7</sup>          | Yes   | Yes   | Yes  | Yes   | Yes   |
| Geo Enforcer  | Yes   | Yes   | Yes  | Yes   | Yes   |
| SSL (HTTPS) Inspection                                    | Yes   | Yes   | Yes  | Yes   | Yes   |
| 2-Factor Authentication                                   | Yes   | Yes   | Yes  | Yes   | Yes   |
| <b>VPN Features</b>                                       |   |   |  |   |   |
| VPN   | IKEv2, IPsec, SSL, L2TP/IPsec   | IKEv2, IPsec, SSL, L2TP/IPsec   | IKEv2, IPsec, SSL, L2TP/IPsec  | IKEv2, IPsec, SSL, L2TP/IPsec   | IKEv2, IPsec, SSL, L2TP/IPsec   |
| Microsoft Azure   | Yes   | Yes   | Yes  | Yes   | Yes   |
| Amazon VPC  | Yes   | Yes   | Yes  | Yes   | Yes   |
| <b>Secure WiFi Service<sup>*7</sup></b>                   |   |   |  |   |   |
| Maximum Number of Tunnel-Mode AP                          | 6   | 10  | 18   | 66  | 130   |
| Maximum Number of Managed AP                              | 24  | 40  | 72   | 264   | 520   |
| Recommend max. AP in 1 AP Group                           | 10  | 20  | 60   | 200   | 300   |

\*1: Actual performance may vary depending on system configuration, network conditions, and activated applications.

\*2: Maximum throughput based on RFC 2544 (1,518-byte UDP packets).

\*3: VPN throughput measured based on RFC 2544 (1,424-byte UDP packets).








\*4: Anti-Malware (with Express mode) and IPS throughput measured using the industry standard HTTP performance test (1,460-byte HTTP packets). Testing done with multiple flows.

\*5: Maximum sessions measured using the industry standard IXIA IxLoad testing tool.

\*6: Including Gateway-to-Gateway and Client-to-Gateway.

\*7: Enable or extend feature capacity with Zyxel service license.

## Product Options

| Model   | USG FLEX 50   | USG FLEX 50AX   | USG FLEX 100  | USG FLEX 100AX  | USG FLEX 200  | USG FLEX 500  | USG FLEX 700  |
|---|---|---|---|---|---|---|---|
| Product name  | ZyWALL USG FLEX 50 Firewall   | ZyWALL USG FLEX 50AX Firewall   | ZyWALL USG FLEX 100 Firewall  | ZyWALL USG FLEX 100AX Firewall  | ZyWALL USG FLEX 200 Firewall  | ZyWALL USG FLEX 500 Firewall  | ZyWALL USG FLEX 700 Firewall  |
|   |  |  |  |  |  |  |  |
| <b>System Capacity &amp; Performance<sup>*1</sup></b>   |   |   |   |   |   |   |   |
| SPI firewall throughput <sup>*2</sup> (Mbps)            | 350   | 350   | 900   | 900   | 1,800   | 2,300   | 5,400   |
| VPN throughput <sup>*3</sup> (Mbps)                     | 90  | 90  | 270   | 270   | 450   | 810   | 1,100   |
| IPS throughput <sup>*4</sup> (Mbps)                     | -   | -   | 540   | 540   | 1,100   | 1,500   | 2,000   |
| Anti-Malware throughput <sup>*4</sup> (Mbps)            | -   | -   | 360   | 360   | 570   | 800   | 1,450   |
| UTM throughput <sup>*4</sup> (Anti-Malware & IPS, Mbps) | -   | -   | 360   | 360   | 550   | 800   | 1,350   |
| Max. TCP concurrent sessions <sup>*5</sup>              | 20,000  | 20,000  | 300,000   | 300,000   | 600,000   | 1,000,000   | 1,600,000   |
| Max. concurrent IPSec VPN tunnels <sup>*5</sup>         | 20  | 20  | 50  | 50  | 100   | 300   | 500   |
| Recommended gateway-to-gateway IPSec VPN tunnels        | 5   | 5   | 20  | 20  | 50  | 150   | 250   |
| Concurrent SSL VPN users                                | 15  | 15  | 30  | 30  | 60  | 150   | 150   |
| VLAN interface  | 8   | 8   | 8   | 8   | 16  | 64  | 128   |
| <b>Wireless Specifications</b>                          |   |   |   |   |   |   |   |
| Standard compliance                                     | -   | 802.11 ax/ac/n/g/b/a  | -   | 802.11 ax/ac/n/g/b/a  | -   | -   | -   |
| Wireless frequency                                      | -   | 2.4/5 GHz   | -   | 2.4/5 GHz   | -   | -   | -   |
| Radio   | -   | 2   | -   | 2   | -   | -   | -   |
| SSID number   | -   | 4   | -   | 4   | -   | -   | -   |
| No. of antenna  | -   | 2 detachable antennas   | -   | 2 detachable antennas   | -   | -   | -   |
| Antenna gain  | -   | 3 dBi @2.4 GHz/5 GHz  | -   | 3 dBi @2.4 GHz/5 GHz  | -   | -   | -   |
| Data rate   | -   | 2.4 GHz: up to 600 Mbps<br>5 GHz: up to 1200 Mbps                                 | -   | 2.4 GHz: up to 600 Mbps<br>5 GHz: up to 1200 Mbps                                 | -   | -   | -   |
| <b>Security Service</b>                                 |   |   |   |   |   |   |   |
| Sandboxing <sup>*7</sup>                                | -   | -   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Web Filtering <sup>*7</sup>                             | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Application Patrol <sup>*7</sup>                        | -   | -   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Anti-Malware <sup>*7</sup>                              | -   | -   | Yes   | Yes   | Yes   | Yes   | Yes   |
| IPS <sup>*7</sup>                                       | -   | -   | Yes   | Yes   | Yes   | Yes   | Yes   |
| SecuReporter <sup>*7</sup>                              | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Collaborative Detection & Response <sup>*7</sup>        | -   | -   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Device Insight  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Security Profile Synchronize (SPS) <sup>*7</sup>        | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Geo Enforcer  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| SSL (HTTPS) inspection                                  | -   | -   | Yes   | Yes   | Yes   | Yes   | Yes   |
| 2-Factor Authentication                                 | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| <b>VPN Features</b>                                     |   |   |   |   |   |   |   |
| VPN   | IKEv2, IPSec, SSL, L2TP/IPSec   | IKEv2, IPSec, SSL, L2TP/IPSec   | IKEv2, IPSec, SSL, L2TP/IPSec   | IKEv2, IPSec, SSL, L2TP/IPSec   | IKEv2, IPSec, SSL, L2TP/IPSec   | IKEv2, IPSec, SSL, L2TP/IPSec   | IKEv2, IPSec, SSL, L2TP/IPSec   |
| Microsoft Azure   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| Amazon VPC  | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   | Yes   |
| <b>Secure WiFi Service<sup>*7</sup></b>                 |   |   |   |   |   |   |   |
| Maximum Number of Tunnel-Mode AP                        | -   | -   | 6   | 6   | 10  | 18  | 130   |
| Maximum Number of Managed AP                            | -   | -   | 24  | 24  | 40  | 72  | 520   |
| Recommend max. AP in 1 AP Group                         | -   | -   | 10  | 10  | 20  | 60  | 200   |

\*1: Actual performance may vary depending on system configuration, network conditions, and activated applications.

\*2: Maximum throughput based on RFC 2544 (1,518-byte UDP packets).

\*3: VPN throughput measured based on RFC 2544 (1,424-byte UDP packets); IMIX: UDP throughput based on a combination of 64 byte, 512 byte and 1424 byte packet sizes.



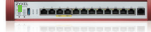

\*4: Anti-malware (with Express Mode) and IPS throughput measured using the industry standard HTTP performance test (1,460-byte HTTP packets). Testing done with multiple flows.

\*5: Maximum sessions measured using the industry standard IXIA IxLoad testing tool

\*6: Including Gateway-to-Gateway and Client-to-Gateway.

\*7: With Zyxel service license to enable or extend the feature capacity.

## Product Options

| Model   | USG FLEX 100H/HP   | USG FLEX 200H/HP  | USG FLEX 500H   | USG FLEX 700H   |
|---|--|---|---|---|
| Product name  | USG FLEX 100H/HP Firewall  | USG FLEX 200H/HP Firewall   | USG FLEX 500H Firewall  | USG FLEX 700H Firewall  |
|   |   |    |  |  |
| <b>Hardware Specifications</b>                          |  |   |   |   |
| Interface/Ports   | <ul style="list-style-type: none"> <li>• 100H: 8 x 1GbE</li> <li>• 100HP: 7 x 1GbE 1 x 1GbE/PoE+ (802.3at, 30 W max.)</li> </ul> | <ul style="list-style-type: none"> <li>• 200H: 2 x 2.5mGig 6 x 1GbE</li> <li>• 200HP: 1 x 2.5mGig 1 x 2.5mGig/PoE+ (802.3at, 30 W max.) 6 x 1GbE</li> </ul> | 2 x 2.5mGig 2 x 2.5mGig/PoE+ (802.3at, total 30 W) 8 x 1GbE                         | 2 x 2.5mGig 2 x 10mGig/PoE+ (802.3at, total 30 W) 8 x 1GbE 2 x 10G SFP+             |
| USB 3.0 ports   | 1  | 1   | 1   | 1   |
| Console port  | Yes (RJ-45)  | Yes (RJ-45)   | Yes (RJ-45)   | Yes (RJ-45)   |
| Rack-mountable  | -  | Yes   | Yes   | Yes   |
| Fanless   | Yes  | Yes   | -   | -   |
| <b>System Capacity &amp; Performance<sup>*1</sup></b>   |  |   |   |   |
| SPI firewall throughput <sup>*2</sup> (Mbps)            | 4,000  | 6,500   | 10,000  | 15,000  |
| VPN throughput <sup>*3</sup> (Mbps)                     | 900  | 1,200   | 2,000   | 3,000   |
| IPS throughput <sup>*4</sup> (Mbps)                     | 1,500  | 2,500   | 4,500   | 7,000   |
| Anti-Malware throughput <sup>*4</sup> (Mbps)            | 1,000  | 1,800   | 3,000   | 4,000   |
| UTM throughput <sup>*4</sup> (Anti-Malware & IPS, Mbps) | 1,000  | 1,800   | 3,000   | 4,000   |
| Max. TCP concurrent sessions <sup>*5</sup>              | 300,000  | 600,000   | 1,000,000   | 2,000,000   |
| Max. concurrent IPSec VPN tunnels <sup>*6</sup>         | 50   | 100   | 300   | 1,000   |
| Recommended gateway-to-gateway IPSec VPN tunnels        | 20   | 50  | 150   | 300   |
| Concurrent SSL VPN users                                | 25   | 50  | 150   | 500   |
| VLAN interface  | 16   | 32  | 64  | 128   |
| <b>Security Service</b>                                 |  |   |   |   |
| Sandboxing <sup>*7</sup>                                | Yes  | Yes   | Yes   | Yes   |
| Web Filtering <sup>*7</sup>                             | Yes  | Yes   | Yes   | Yes   |
| Application Patrol <sup>*7</sup>                        | Yes  | Yes   | Yes   | Yes   |
| Anti-Malware <sup>*7</sup>                              | Yes  | Yes   | Yes   | Yes   |
| IPS <sup>*7</sup>                                       | Yes  | Yes   | Yes   | Yes   |
| SecuReporter <sup>*7</sup>                              | Yes  | Yes   | Yes   | Yes   |
| Collaborative Detection & Response <sup>*7</sup>        | Yes <sup>*8</sup>  | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   |
| Device Insight  | Yes  | Yes   | Yes   | Yes   |
| Security Profile Synchronize (SPS) <sup>*7</sup>        | Yes  | Yes   | Yes   | Yes   |
| Geo Enforcer  | Yes  | Yes   | Yes   | Yes   |
| SSL (HTTPS) Inspection                                  | Yes  | Yes   | Yes   | Yes   |
| 2-Factor Authentication                                 | Yes <sup>*8</sup>  | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   |
| <b>VPN Features</b>                                     |  |   |   |   |
| VPN   | IKEv2, IPSec, SSL  | IKEv2, IPSec, SSL   | IKEv2, IPSec, SSL   | IKEv2, IPSec, SSL   |
| Microsoft Azure   | -  | -   | -   | -   |
| Amazon VPC  | -  | -   | -   | -   |
| <b>Secure WiFi Service<sup>*7</sup></b>                 |  |   |   |   |
| Maximum Number of Tunnel-Mode AP                        | Yes <sup>*8</sup>  | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   |
| Maximum Number of Managed AP                            | Yes <sup>*8</sup>  | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   |
| Recommend max. AP in 1 AP Group                         | Yes <sup>*8</sup>  | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   | Yes <sup>*8</sup>   |

\*1: Actual performance may vary depending on system configuration, network conditions, and activated applications.

\*2: Maximum throughput based on RFC 2544 (1,518-byte UDP packets).

\*3: VPN throughput measured based on RFC 2544 (1,424-byte UDP packets).

\*4: Anti-Malware (with Express Mode) and IPS throughput measured using the industry standard HTTP performance test (1,460-byte HTTP packets). Testing done with multiple flows.

\*5: Maximum sessions measured using the industry standard IXIA IxLoad testing tool.

\*6: Including Gateway-to-Gateway and Client-to-Gateway.

\*7: With Zyxel service license to enable or extend the feature capacity.

\*8: Features will be available later and are subject to changes.

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# Security Router Series

The USG LITE and SCR series are secure, cloud-managed routers that provide business-class firewall protection, VPN gateway capabilities, high-speed WiFi, and built-in security to safeguard against ransomware and other threats. These routers are ideal for teleworkers or small businesses/offices seeking easy-to-manage, subscription-free network security.

Powered by Zyxel Security Cloud, the USG LITE and SCR series feature best-in-class threat management capabilities. They detect malicious network activities, prevent ransomware and malware, block intrusions and exploits, and protect against threats from the dark web, ads, VPN proxies, mail fraud, and phishing. This offers small business owners comprehensive security without any subscription fees.



## Highlights

- Subscription-free Security built-in as standard (inc. Ransomware/Malware Protection)
- The latest WiFi technology provides the fastest wireless connection speed possible.
- Self-configuring, plug-and-play deployment by Nebula Mobile app
- Central management via Zyxel Nebula Platform
- Auto VPN for easy deployment for site-to-site VPN Connectivity
- Up to 8 SSIDs with intergrade enterprise security and personal/guest access
- 2.5GbE ports provide premium wired connections
- Access security status and analytics through an informative dashboard
- Optional Elite Pack Licensing to increase functionality and security





## Product Options

| Model   | USG LITE 60AX   | SCR 50AXE   |
|---|---|---|
| Product name  | AX6000 WiFi 6 Security Router   | AXE5400 WiFi 6E Security Router   |
|   |    |  |
| <b>Hardware</b>   |   |   |
| Wireless standard                                       | IEEE 802.11 ax/ac/n/a 5 GHz<br>IEEE 802.11 ax/n/b/g 2.4 GHz   | IEEE 802.11 ax 6 GHz<br>IEEE 802.11 ax/ac/n/a 5 GHz<br>IEEE 802.11 ax/n/b/g 2.4 GHz |
| CPU   | Quad-core, 2.00 GHz   | Dual-core, 1.00 GHz, Cortex A53   |
| RAM/FLASH   | 1 GB/512 MB   | 1 GB/256 MB   |
| Interface   | 1 x WAN: 2.5 GbE RJ-45 port<br>1 x LAN: 2.5 GbE RJ-45 port<br>4 x LAN: 1 GbE RJ-45 ports  | 1 x WAN: 1 GbE RJ-45 port<br>4 x LAN: 1 GbE RJ-45 ports                             |
| <b>System Capacity &amp; Performance<sup>*1</sup></b>   |   |   |
| SPI firewall throughput LAN to WAN (Mbps) <sup>*2</sup> | 2,000   | 900   |
| Throughput with threat intelligence on (Mbps)           | 2,000   | 900   |
| VPN throughput <sup>*3</sup>                            | 300   | 55  |
| <b>Security Service</b>                                 |   |   |
| Ransomware/Malware Protection                           | Yes   | Yes   |
| Intrusion Blocker                                       | Yes   | Yes   |
| Dark Web Blocker  | Yes   | Yes   |
| Stop Mail Fraud & Phishing                              | Yes   | Yes   |
| Block Ads   | Yes   | Yes   |
| Block VPN Proxy   | Yes   | Yes   |
| Web Filtering   | Yes   | Yes   |
| Firewall  | Yes   | Yes   |
| Country Restriction (GeoIP)                             | Yes   | Yes   |
| Allowlist/Blocklist                                     | Yes   | Yes   |
| Identify Traffic (Applications & Clients)               | Yes   | Yes   |
| Block Applications or Clients                           | Yes   | Yes   |
| Throttle Application Usage (BWM)                        | Yes   | -   |
| Security Event Analytics                                | Nebula Threat Report  | Nebula Threat Report  |
| <b>VPN Features</b>                                     |   |   |
| Site2site VPN   | IPSec   | IPSec   |
| Remote VPN  | Yes   | -   |
| <b>Wireless Features</b>                                |   |   |
| Site-wide SSID provisioning from Nebula cloud           | Yes   | Yes   |
| See wireless client info from the Nebula dashboard      | Yes   | Yes   |
| WiFi encryption   | WPA2-PSK, WPA3-PSK  | WPA2-PSK, WPA3-PSK  |
| SSID number   | 8   | 4   |
| Auto/Fixed channel selection                            | Yes   | Yes   |
| MU-MIMO/Explicit beamforming                            | Yes   | Yes   |
| <b>Networking</b>                                       |   |   |
| WAN type  | DHCP/Static IP/PPPoE  | DHCP/Static IP/PPPoE  |
| Networking features                                     | Reserve IP (static DHCP)<br>Block clients<br>NAT - Virtual server<br>DHCP server and DHCP relay<br>Dynamic DNS (DDNS)<br>Static route<br>Guest Network<br>VLAN Segmentation | Port forwarding<br>Guest VLAN<br>DHCP<br>IP/MAC binding<br>MAC filter               |
| IPTV/MOD support  | Yes   | -   |
| <b>Management</b>                                       |   |   |
| Site-wide SSID management                               | Yes   | Yes   |
| Multi-site management                                   | Yes   | Yes   |
| Topology  | Yes   | Yes   |
| Diagnostics   | Yes   | Yes   |
| Remote support  | Yes   | Yes   |

\*1: Actual performance may vary depending on system configuration, network conditions, and activated applications.

\*2: Maximum throughput is measured using FTP with a 2 GB file and 1,460-byte packets across multiple sessions.

\*3: VPN throughput is measured based on RFC 2544 using 1,424-byte UDP packets

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## 5G/4G Router Series

Zyxel provides a broad portfolio of 5G NR and 4G LTE products, catering to diverse deployment scenarios and network infrastructures, freeing users from the constraints of wired installations. Our outdoor routers leverage cutting-edge wireless technology, enabling seamless internet connectivity even in harsh

environments. Whether as a backup or primary connection, our indoor routers offer reliable 5G/4G connectivity for businesses. Experience superior mobile networking in any situation and effortlessly expand your business with our wireless broadband solutions.




### Highlights

- 5G NR downlink up to 5 Gbps\* (FWA710, FWA510, FWA505, NR5101)
- IP68-rated weather protection (FWA710, LTE7461-M602)
- Deploys WiFi 6 AX3600 (FWA510), AX1800 (FWA505, NR5101)
- Supports SA/NSA mode and network slicing function (FWA710, FWA510, FWA505, NR5101)
- Easily provision and manage networks in real-time from anywhere at any time, all centrally and seamlessly
- Free from wired connection
- Failover function (FWA510, FWA505, NR5101, LTE3301-PLUS)

\* The maximum data rate is a theoretical value. The actual data rate depends on the operator and network environment






## Product Options

| Model               | Nebula FWA710   |            | Nebula FWA510   |                                       | Nebula FWA505   |                                       |
|---------------------|---|------------|---|---------------------------------------|---|---------------------------------------|
| Product Name        | Nebula 5G NR Outdoor Router   |            | Nebula 5G NR Indoor Router  |                                       | Nebula 5G NR Indoor Router  |                                       |
|                     |  |            |  |                                       |  |                                       |
| Download Data Rates | 5 Gbps*   |            | 5 Gbps*   |                                       | 5 Gbps*   |                                       |
| 5G                  | Band  | Freq (MHz) | Duplex  |                                       |   |                                       |
|                     | 1   | 2100       | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 3   | 1800       | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 5   | 850        | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 7   | 2600       | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 8   | 900        | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 20  | 800        | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 28  | 700        | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 38  | 2600       | TDD   | Yes                                   | Yes   | Yes                                   |
|                     | 40  | 2300       | TDD   | Yes                                   | Yes   | Yes                                   |
|                     | 41  | 2500       | TDD   | Yes                                   | Yes   | Yes                                   |
|                     | 77  | 3700       | TDD   | Yes                                   | Yes   | Yes                                   |
|                     | 78  | 3500       | TDD   | Yes                                   | Yes   | Yes                                   |
|                     | DL 4x4 MIMO   |            |   | Yes<br>(n5/8/20/28 supports 2x2 only) | Yes<br>(n5/8/20/28 supports 2x2 only)   | Yes<br>(n1/n3/n7/n38/n40/n41/n77/n78) |
|                     | DL 2x2 MIMO   |            |   | -                                     | -   | (n5/n8/n20/n28)                       |
| LTE                 | 1   | 2100       | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 2   | 1900       | FDD   | -                                     | -   | -                                     |
|                     | 3   | 1800       | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 4   | 1700       | FDD   | -                                     | -   | -                                     |
|                     | 5   | 850        | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 7   | 2600       | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 8   | 900        | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 12  | 700a       | FDD   | -                                     | -   | -                                     |
|                     | 13  | 700c       | FDD   | -                                     | -   | -                                     |
|                     | 20  | 800        | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 25  | 1900+      | FDD   | -                                     | -   | -                                     |
|                     | 26  | 850+       | FDD   | -                                     | -   | -                                     |
|                     | 28  | 700        | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 29  | 700d       | FDD   | -                                     | -   | -                                     |
|                     | 38  | 2600       | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 40  | 2300       | TDD   | Yes                                   | Yes   | Yes                                   |
|                     | 41  | 2500       | TDD   | Yes                                   | Yes   | Yes                                   |
|                     | 42  | 3500       | TDD   | Yes                                   | Yes   | Yes                                   |
|                     | 43  | 3700       | TDD   | Yes                                   | Yes   | Yes                                   |
|                     | 66  | 1700       | FDD   | -                                     | -   | Yes                                   |
| 3G                  | DL CA   |            |   | Yes                                   | Yes   | Yes                                   |
|                     | UL CA   |            |   | Yes                                   | Yes   | Yes                                   |
|                     | DL 4x4 MIMO   |            |   | B1/B3/B7/B32/B38/B40/B41/B42          | B1/B3/B7/B32/B38/B40/B41/B42  | B1/B3/B7/B32/B38/B40/B41/B42          |
|                     | DL 2x2 MIMO   |            |   | Yes                                   | Yes   | Yes                                   |
|                     | DL 256-QAM  |            |   | Yes                                   | Yes   | 256-QAM/256-QAM                       |
|                     | DL 64-QAM   |            |   | Yes                                   | Yes   | Yes                                   |
|                     | UL 64-QAM   |            |   | Yes (supports 256QAM)                 | Yes (supports 256QAM)   | Yes (supports 256QAM)                 |
|                     | UL 16-QAM   |            |   | Yes                                   | Yes   | Yes                                   |
|                     | MIMO (UL/DL)  |            |   | 2x2/4x4                               | 2x2/4x4   | 2x2/4x4                               |
|                     | 1   | 2100       | FDD   | Yes                                   | Yes   | Yes                                   |
| WiFi                | 3   | 1800       | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 5   | 2100       | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 8   | 900        | FDD   | Yes                                   | Yes   | Yes                                   |
|                     | 802.11n 2x2   |            |   | Yes**                                 | Yes   | Yes                                   |
| Ethernet            | 802.11ac 2x2  |            |   | -                                     | Yes   | Yes                                   |
|                     | 802.11ax 2x2  |            |   | -                                     | Yes   | Yes                                   |
|                     | 802.11ax 4x4  |            |   | -                                     | Yes   | -                                     |
|                     | Number of users   |            |   | -                                     | Up to 64  | Up to 64                              |
| Power               | GbE LAN   |            |   | 2.5GbE x1 (PoE)                       | 2.5GbE x2   | 1GbE x2                               |
|                     | WAN   |            |   | -                                     | 2.5GbE x1 (reuse LAN 1)   | x1 (reuse LAN 1)                      |
| SIM slot            | Micro/Nano SIM slot   |            |   | Micro SIM                             | Micro SIM   | Micro SIM                             |
| Power               | DC input  |            |   | PoE 48 V                              | DC 12 V   | DC 12 V                               |
| Ingress protection  | Network processor   |            |   | IP68                                  | -   | -                                     |

\* The maximum data rate is a theoretical value. The actual data rate depends on the operator.

\*\* WiFi is used for management purpose only.

| Model               | Nebula NR5101   |            | Nebula LTE7461  |  | Nebula LTE3301-PLUS   |  |
|---------------------|---|------------|---|--|---|--|
| Product Name        | Nebula 5G NR Indoor Router  |            | Nebula 4G LTE-A Outdoor Router  |  | Nebula 4G LTE-A Indoor Router   |  |
|                     |  |            |  |  |  |  |
| Download Data Rates | 5 Gbps*   |            | 300 Mbps*   |  | 300 Mbps*   |  |
| 5G                  | Band  | Freq (MHz) | Duplex  |  |   |  |
|                     | 1   | 2100       | FDD   | Yes  | -   | -  |
|                     | 3   | 1800       | FDD   | Yes  | -   | -  |
|                     | 5   | 850        | FDD   | Yes  | -   | -  |
|                     | 7   | 2600       | FDD   | Yes  | -   | -  |
|                     | 8   | 900        | FDD   | Yes  | -   | -  |
|                     | 20  | 800        | FDD   | Yes  | -   | -  |
|                     | 28  | 700        | FDD   | Yes  | -   | -  |
|                     | 38  | 2600       | TDD   | Yes  | -   | -  |
|                     | 40  | 2300       | TDD   | Yes  | -   | -  |
|                     | 41  | 2500       | TDD   | Yes  | -   | -  |
|                     | 77  | 3700       | TDD   | Yes  | -   | -  |
|                     | 78  | 3500       | TDD   | Yes  | -   | -  |
|                     | DL 4x4 MIMO   |            | Yes (n5/8/20/28 supports 2x2 only)  |  | -   | -  |
|                     | DL 2x2 MIMO   |            | -   | Yes  | -   | Yes  |
| LTE                 | 1   | 2100       | FDD   | Yes  | -   | Yes  |
|                     | 2   | 1900       | FDD   | -  | Yes   | -  |
|                     | 3   | 1800       | FDD   | Yes  | -   | Yes  |
|                     | 4   | 1700       | FDD   | -  | Yes   | -  |
|                     | 5   | 850        | FDD   | Yes  | Yes   | Yes  |
|                     | 7   | 2600       | FDD   | Yes  | Yes   | Yes  |
|                     | 8   | 900        | FDD   | Yes  | -   | Yes  |
|                     | 12  | 700a       | FDD   | -  | Yes   | -  |
|                     | 13  | 700c       | FDD   | -  | Yes   | -  |
|                     | 20  | 800        | FDD   | Yes  | -   | Yes  |
|                     | 25  | 1900+      | FDD   | -  | Yes   | -  |
|                     | 26  | 850+       | FDD   | -  | Yes   | -  |
|                     | 28  | 700        | FDD   | Yes  | -   | Yes  |
|                     | 29  | 700d       | FDD   | -  | Yes   | -  |
|                     | 38  | 2600       | FDD   | Yes  | -   | -  |
|                     | 40  | 2300       | TDD   | Yes  | -   | Yes  |
|                     | 41  | 2500       | TDD   | Yes  | -   | Yes  |
|                     | 42  | 3500       | TDD   | Yes  | -   | -  |
|                     | 43  | 3700       | TDD   | -  | -   | -  |
|                     | 66  | 1700       | FDD   | -  | Yes   | -  |
|                     | DL CA   |            | Yes   | B2+B2/B5/B12/B13/B26/B29; B4+B4/B5/B12/B13/B26/B29; B7+B5/B7/B12/B13/B26/B29; B25+B5/B12/B13/B25/B26/B29; B66+B5/B12/B13/B26/B29/B66 (B29 is only for secondary component carrier) |   | B1+B1/B5/B8/B20/B28 B3+B3/B5/B7/B8/B20/B28 B7+B5/B7/B8/B20/B28 B38+B38; B40+B40; B41+B41 |
|                     | UL CA   |            | Yes   | -  | -   | -  |
|                     | DL 4x4 MIMO   |            | B1/B3/B7/B32/B38/B40/B41/B42  | -  | -   | -  |
|                     | DL 2x2 MIMO   |            | Yes   | Yes  | -   | Yes  |
|                     | DL 256-QAM  |            | Yes   | -  | -   | -  |
|                     | DL 64-QAM   |            | Yes   | Yes  | -   | Yes  |
|                     | UL 64-QAM   |            | Yes (supports 256QAM)   | -  | -   | -  |
|                     | UL 16-QAM   |            | Yes   | Yes  | -   | -  |
|                     | MIMO (UL/DL)  |            | 2x2/4x4   | -  | -   | 2x2  |
| 3G                  | 1   | 2100       | FDD   | Yes  | -   | Yes  |
|                     | 3   | 1800       | FDD   | Yes  | -   | -  |
|                     | 5   | 2100       | FDD   | Yes  | -   | Yes  |
|                     | 8   | 900        | FDD   | Yes  | -   | Yes  |
| WiFi                | 802.11n 2x2   |            | Yes   | Yes**  | -   | Yes  |
|                     | 802.11ac 2x2  |            | Yes   | -  | -   | Yes  |
|                     | 802.11ax 2x2  |            | Yes   | -  | -   | -  |
|                     | 802.11ax 4x4  |            | -   | -  | -   | -  |
|                     | Number of users   |            | Up to 64  | -  | -   | Up to 32   |
| Ethernet            | LAN   |            | 1GbE x2   | 1GbE x1 (PoE)  |   | 1GbE x4  |
|                     | WAN   |            | 1GbE x1 (reuse LAN 1)   | -  |   | 1GbE x1 (reuse LAN 1)  |
| SIM slot            | Micro/Nano SIM slot   |            | Micro SIM   | Micro SIM  |   | Micro SIM  |
| Power               | DC input  |            | DC 12 V   | PoE 48 V   |   | DC 12 V  |
| Ingress protection  |   |            | -   | IP68   |   | -  |

\* The maximum data rate is a theoretical value. The actual data rate depends on the operator.

\*\* WiFi is used for management purpose only.

# License information

## Per-device License Model

Nebula’s per-device licensing allows IT teams to maintain various expiration dates across devices, sites or organizations. Each Organization can have a single

shared expiration, which will be manageable through our new Circle license management platform for channel partners, namely Subscription Alignment.

## Flexible Management License Subscription

Nebula Control Center (NCC) offers multiple subscription options to meet customers’ needs. Whether you are looking for a complimentary option giving you some peace of mind at no extra cost, more control over your network updates and visibility, or even the most advanced management of cloud networking, Nebula is here to help you.

However, the devices must maintain the same NCC management License Pack Type across the organization.

Nebula MSP Pack further provides cross-organization management functionality, helping MSP streamlines multi-tenant, multi-site, multi-level network deployment and management, and deliver superior service to their customers.



### MSP Pack

Per-admin account license that include cross-org. management features and can be used in conjunction with existing Packs (Base/Plus/Pro)

- MSP portal
- Admins & teams
- Cross-org synchronization
- Backup & restore
- Alert templates
- Firmware upgrades
- MSP branding



### Base Pack

License-free feature set/service with a rich set of management features



### Plus Pack

An add-on feature set/service that includes all the features from free Nebula Base Pack as well as the most frequently requested advanced features to enable additional control of network updates and visibility



### Pro Pack

A full feature set/service that includes all the features from Nebula Plus Pack as well as additional advanced functionality and management features to enable maximum manageability of NCC for devices, sites, and organizations

# NCC Organization Management License Pack Feature Table

| M | R | F | S | W | Feature Name   | Base Pack      | Plus Pack    | Pro Pack      |
|---|---|---|---|---|--|----------------|--------------|---------------|
| • | ✓ | ✓ | ✓ | ✓ | Unlimited Registration & Central Management (Configuration, Monitoring, Dashboard, Location Map & Floor Plan Visual) of Nebula Devices | •              | •            | •             |
| • | ✓ | ✓ | ✓ | ✓ | Zero Touch Auto-Deployment of Hardware/Configuration from Cloud  | •              | •            | •             |
| • | ✓ | ✓ | ✓ | ✓ | Over-the-air Firmware Management   | •              | •            | •             |
| • | ✓ | ✓ | ✓ | ✓ | IOS and Android APP (Deployment, Management and Push Notifications)  | •              | •            | •             |
| • | ✓ | ✓ | ✓ | ✓ | Central Device and Client Monitoring (Log and Stat Information) and Reporting  | 24HR (Rolling) | 7D (Rolling) | 1YR (Rolling) |
| • | ✓ | ✓ | ✓ | ✓ | Admin Accounts per Organization (Full Access for Administration Rights)  | 5              | 8            | NO LIMIT      |
| • |   | ✓ | ✓ | ✓ | User Authentication Entries (via built-in Nebula Cloud Authentication Server)  | 50             | 100          | NO LIMIT      |
|   |   | ✓ | ✓ | ✓ | Network Function Scheduling (SSID/PoE/Firewall Rules)  | •              | •            | •             |
|   |   |   | ✓ | ✓ | MAC-Based and 802.1X Authentication  | •              | •            | •             |
|   |   | ✓ |   | ✓ | Captive Portal Authentication  | •              | •            | •             |
| • | ✓ | ✓ | ✓ | ✓ | Email Users and Alert Notifications  | •              | •            | •             |
| • | ✓ | ✓ | ✓ | ✓ | Exempted from Cloud Saving Mode  |                | •            | •             |
| • | ✓ | ✓ | ✓ | ✓ | Advanced Firmware Scheduling (Org/Site/Device)   |                | •            | •             |
| • |   | ✓ | ✓ | ✓ | Advanced Reporting Features (including Export/Email Reports/Scheduled Reports – Custom Logo)   |                | •            | •             |
| • | ✓ | ✓ | ✓ | ✓ | Automatic Network Topology (Visual and Actionable)   |                | •            | •             |
|   |   |   |   | ✓ | WiFi Vouchers (Auto-Gen Vouchers for Access/Authentication with User Defined Time Limits)  |                | •            | •             |
|   |   |   | ✓ |   | Advanced Switch Control (Vendor Based VLAN, Auto PD Recovery)  |                | •            | •             |
| • | ✓ | ✓ | ✓ | ✓ | Organizational User Audit/Change Logs  |                |              | •             |

M = Management Feature (NCC)

R = 5G/4G Mobile Router Feature

F = Firewall Feature

S = Switch Feature

W = Wireless Feature

| M | R | F | S | W | Feature Name   | Base Pack | Plus Pack | Pro Pack |
|---|---|---|---|---|--|-----------|-----------|----------|
| • |   |   | ✓ | ✓ | Organizational-wide Configuration Sync, Clone and Template   |           |           | •        |
| • | ✓ | ✓ | ✓ | ✓ | Configuration Backup/Restore   |           |           | •        |
| • | ✓ | ✓ | ✓ | ✓ | Remote CLI Access/Configurator   |           |           | •        |
| • | ✓ | ✓ | ✓ | ✓ | Priority Nebula Support Request (Direct NCC incl. Web Chat)  |           |           | •        |
| • | ✓ | ✓ | ✓ | ✓ | Open API for Ecosystem Partner Application Integration   |           |           | •        |
| • |   | ✓ |   | ✓ | Advanced Client Connection Monitoring & Trouble Shooting (WiFi Aid, Connection Log)  |           |           | •        |
|   |   |   |   | ✓ | Advanced WiFi AAA Security (Dynamic Personal PSK, Dynamic VLAN Assignment via NCAS, 3rd Party AAA Integration incl. Captive Portal MAC Auth. Fallback) |           |           | •        |
|   |   |   |   | ✓ | Advanced WiFi Control & Management (RSSI Threshold Setting per AP, Export NAT AP Traffic Log, Programmable SSID & PSK)                                 |           |           | •        |
| • |   |   |   | ✓ | Advanced Client Connection Monitoring & Trouble Shooting (WiFi Aid, Connection Log)  |           |           | •        |
|   |   |   |   | ✓ | WiFi Health Monitoring and Report (AI/Machine Learning for Wireless)   |           |           | •        |
|   |   |   | ✓ |   | Switch IP Interfacing & Static Routing   |           |           | •        |
|   |   |   | ✓ |   | Switch Stacking (Physical Stacking)  |           |           | •        |
|   |   |   | ✓ |   | Switch Surveillance Monitoring   |           |           | •        |
|   |   |   | ✓ |   | Switch IPTV Feature Set (Advanced IGMP, IPTV Report w. AI/ML Alert)  |           |           | •        |
|   |   | ✓ |   |   | Zyxel CNM SecuReporter Traffic Log Archiving   |           |           | •        |
|   |   | ✓ |   |   | Firewall Advanced VPN Feature Set (VPN Topology, VPN Traffic Usage, Smart VPN, L2TP/IPSec VPN Client Script Provisioning)                              |           |           | •        |
|   |   | ✓ |   | ✓ | Collaborative Detection & Response (CDR) with Automatically Respond Action (USG FLEX & ATP Series Only)  |           |           | •        |
|   | ✓ |   |   |   | Client Device Heartbeat (LAN Device Alive Monitoring)  |           |           | •        |

M = Management Feature (NCC)  
 R = 5G/4G Mobile Router Feature  
 F = Firewall Feature  
 S = Switch Feature  
 W = Wireless Feature



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# Flexible Security License Subscription

With the addition of ATP, USG FLEX and USG FLEX H series firewall to the Nebula cloud management family, Nebula security solution further expands its offerings with holistic security and protection for SMB business networks.

Furthermore, the new cloud-based access point security service — Connect & Protect (CNP) provides a value-added protection to ensure a secure and smooth small business WiFi.



## Gold Security Pack

A complete feature set for ATP, USG FLEX and USG FLEX H series to perfectly fit SMBs' requirements as well as to enable the maximum performance and security with an all-in-one appliance. This pack not only supports all Zyxel security services but also Nebula Professional Pack.



## Elite Pack

Security Router license to provide access to full Web Filtering, categories, allowing for tracking and regulating website access based on content. It also upgrades Ransomware Prevention Premium for real-time threat intelligence and unlocks advanced Nebula Pro features.



## Entry Defense Pack

Entry Defense Pack offers fundamental protection for USG FLEX H series. It features Reputation Filter to block cyberthreats, SecuReporter for clear visual insights into your network's security, and Priority Support for expert assistance when you need it most.



## Secure WiFi

"An a la carte" USG FLEX license to manage remote access points (RAP) with the support of secured tunnel to extend corporate network to remote workplace.



## UTM Security Pack

All-in-one UTM security service license add-on(s) to USG FLEX Series Firewall, which includes Web Filtering, IPS, Application Patrol, Anti-Malware, SecuReporter, Collaborative Detection & Response, and Security Profile Sync.



## Connect & Protect (CNP)

Cloud-mode access point license to provide Threat Protection & App Visibility with throttling to ensure a secure and smooth wireless network.



## Content Filter Pack

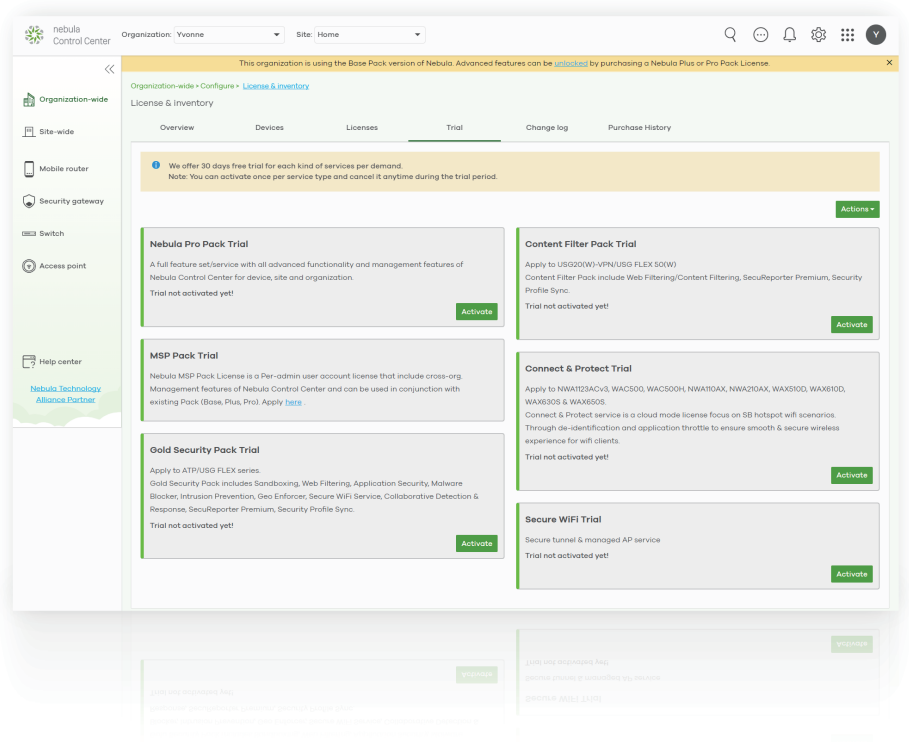
Three-in-one security service license add-on(s) to USG FLEX 50, which includes Web Filtering, SecuReporter, and Security Profile Sync.

# Service related information

## 30-day Free Trial

Nebula offers the flexibility, on a per organization basis, to users for them to decide which license(s) they want to trial and when they want to trial according to their needs. For both new and existing organizations, users

can freely choose the license(s) they want to trial at their preferable time as long as they didn't use the license(s) before.



## Nebula Community

The Nebula community is a great place where users can come together to share tips and ideas, get problems solved and learn from fellow users around the world. Join the conversations to know more about everything the Nebula products can do. Visit Nebula community to explore more.

URL: <https://community.zyxel.com/en/categories/nebula>

## Support Request

The Support Request channel allows users to submit request tickets directly on NCC. It is a tool that provides an easy way for users to send and track an inquiry for help on a problem, request or service, to find answers to their questions quickly. The request will go directly to the Nebula support team, and will be reviewed and followed by a dedicated group until the proper resolutions are found.

\* Available for Professional Pack users.

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