

# USG FLEX 50H/100H/200H/500H/700H

## USG FLEX H Firewall

USG FLEX H series, named for its groundbreaking high performance, gives ultra firewall/UTM/VPN throughput with powerful multi-gig and PoE+ interfaces to get you ready for the multi-gig era. Empowered by Zyxel AI cloud, USG FLEX H series unleashes best-in-breed multi-layered protection to blank your corporate premises with seamless safety against mounting cyber threats. To make the great even greater, USG FLEX H, with enhanced SecuExtender, makes it easier to extend the same security to all your remote networks, proving that small or mid-sized business users can also enjoy enterprise-grade security at lightning speed.

### Benefits

#### Ultra high performance

With next-generation multi-core hardware and Fastpath technology, USG FLEX H series is designed with dedicated system resources to minimize packet processing time, reduce latency, and accelerate traffic flows. It is also fabricated for optimal utilization of processors to boost performance, all together to deliver superior performance catering to your needs for high speed networks.



Cloud & on-prem security integrated with smart sync



Firewall/VPN/UTM ultra high performance



User-definable Multi-gig WAN/LAN ports up to 10Gbps



High assurance multi-layered protection



Visualizing network security with AI SecuPilot



SD-WAN & traffic control capabilities



Centralized VPN provision with Nebula



## Port flexibility, Multi-G and PoE+

With 2.5GbE and 10GbE Port Speed options, the USG FLEX H also features software-defined ports, allowing you true flexibility in tailoring each USG FLEX H port as required (WAN or LAN). It offers 2 PoE+ integrated ports with total 30W power budget to simplify installations and reduce install costs by allowing you power devices directly from the USG FLEX H itself. (The USG FLEX H series models are compatible with different PoE+ integrated ports, please [click here](#).)



**Multi-Gig 2.5G / 10G**

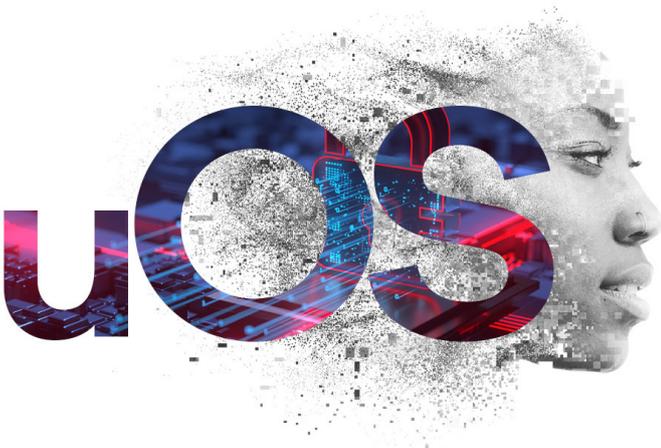
## AI-powered cloud cybersecurity

Leverages AI-powered cloud intelligence to deliver high-assurance, multi-layered protection across the network. It defends against external attacks and internal misuse with advanced services such as cloud sandboxing, anti-malware, intrusion prevention, DNS/IP/URL filtering, and application patrol. Web filtering restricts harmful or inappropriate content, while traffic shaping and geo-IP filtering enhance policy enforcement.



## Fast and powerful uOS

The USG FLEX H series introduces our latest powerful uOS. It is designed to increase security, minimize system response time, apply configuration changes instantly and optimize configuration and security policy management with its new intuitive UX design.



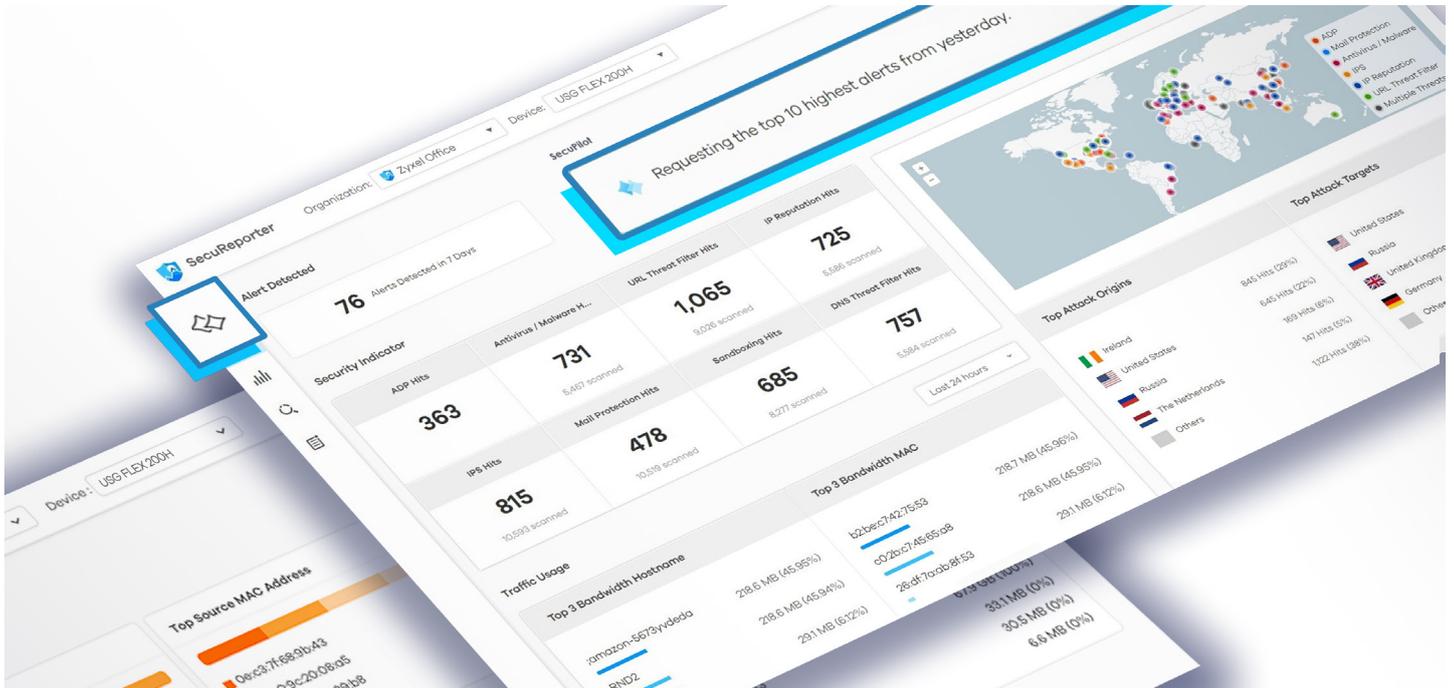
## Cloud & on-prem in sync

Nebula revolutionizes network management with Smart Sync, enabling seamless cloud-based configuration of on-premise firewalls. Effortlessly enforce unified security policies, monitor threats in real time, and optimize performance from anywhere. This cutting-edge solution delivers unmatched convenience, scalability, and robust protection across hybrid cloud environments.



## Visualizing network security with AI SecuPilot

SecuReporter offers comprehensive network security visualization with detailed traffic analysis, threat detection, and activity monitoring. It provides customizable reports, alerts, and intuitive dashboards to help you quickly identify risks and track incidents over time. Now enhanced with AI SecuPilot, SecuReporter delivers instant, AI-powered insights and natural language queries in over 40 languages. This smart assistant simplifies threat investigation and accelerates response, empowering you with clearer visibility and better control over your network security.



## SD-WAN & traffic control

The USG FLEX H Firewall provides optimized WAN and application usage control to improve network efficiency. It supports load balancing and active-backup WAN links, automatically switching to a stable link. Easily prioritize critical applications and limit bandwidth for non-essential traffic. Reserved bandwidth ensures smooth delivery of time-sensitive services. These features maintain reliable, high-performance connectivity tailored to business needs.

## Centralized VPN provision with Nebula

Nebula VPN Orchestrator simplifies the deployment and centralized management of SD-VPN, Auto-link VPN, and Manual IPSec VPN, and Remote Access VPN for remote users. It enables seamless integration across multiple sites, reduces setup complexity, and supports scalable topologies like Hub-and-Spoke or Mesh. Gain full visibility and control over your VPN infrastructure with an intuitive cloud-based interface.



# License

## License Service

The USG FLEX H series provides an indispensable feature set to perfectly fit small business requirements as well as to gain essential security services needed to protect against cyberattacks. Nebula Control Center (NCC) offers multiple subscription options to meet customers' needs. The Nebula Plus/Professional Pack give you peace of mind at more control over your network updates and visibility, or even the most advanced management of cloud networking.

Service	Gold Security Pack Included with Gold Bundle H/W	Entry Defense Pack Included with Entry Bundle H/W
Sandboxing	Yes	-
Reputation Filter	Yes	Yes
Web Filtering	Yes	-
Anti-Malware	Yes	-
IPS	Yes	-
Application Patrol	Yes	-
Device Insight	Yes	-
SecuReporter	Yes	Yes
Nebula Pro Pack	Yes	Priority Support Only*
Secure WiFi	Yes	-
Security Profile Sync	Yes	-

\*: Priority Support is available to customers with a Pro Pack organization or those using USG FLEX H series firewalls with Gold Security Pack or Entry Defense Pack licenses. Eligible customers can open support tickets for prioritized assistance.

A la carte License	
Nebula Pro Pack	The Pro Pack includes all of our advanced functionality, designed to cater to larger and more complex deployments, featuring advanced diagnostic tools, AI functionality, and the ability to unlock the full potential of the network hardware.
Nebula Plus Pack	The Plus Pack has been designed to expand the functionality from the Base Pack to cater for network administrators wishing to gain access to tools that speed up and simplify day-to-day operations.
Secure WiFi	Secure WiFi for USG FLEX H series supports Managed AP services, allowing you to scale your network easily by utilizing the maximum number of supported Access Points.

# Specifications

Model	USG FLEX 50H/HP	USG FLEX 100H/HP	USG FLEX 200H/HP	
Product photo				
<b>Hardware Specifications</b>				
Network interfaces	100M/1G Ethernet (RJ-45)	5	8	6
	100M/1G/2.5G Ethernet (RJ-45)	-	-	2
	1G/2.5G/5G/10G Ethernet (RJ-45)	-	-	-
	1G SFP/10G SFP+	-	-	-
	IEEE 802.3at (PoE+) Port	Port 5 (50HP only)	Port 8 (100HP only)	Port 2 (2.5G, 200HP only)
Total PoE budget (watts)		30	30	30
USB 3.0 Type-A	1	1	1	
Console port	Yes (RJ-45)	Yes (RJ-45)	Yes (RJ-45)	
Rack-mountable	-	-	Yes	
Fanless	Yes	Yes	Yes	
<b>System Capacity &amp; Performance*1</b>				
SPI firewall throughput (Mbps)*2	2,000	4,000	6,500	
VPN throughput (Mbps)*3	500	900	1,200	
IPS throughput (Mbps)*4	1,000	1,500	2,500	
Anti-Malware throughput (Mbps)*4	600	1,000	1,800	
UTM throughput (Anti-Malware and IPS)*4	600	1,000	1,800	
NGFW throughput (IPS and App Patrol)*4	1,000	1,500	2,500	
Max. TCP concurrent sessions*5	100,000	300,000	600,000	
Max. concurrent IPsec VPN tunnels*6	20	50	100	
Recommended gateway-to-gateway IPsec VPN tunnels	5	20	50	
Concurrent SSL VPN users	15	25	50	
VLAN interface	8	16	32	
<b>Speedtest Performance</b>				
SPI firewall throughput (Mbps)*7	926.76	931.61	929.97	
<b>Key Features</b>				
Security Service*8	Anti-Malware	Yes	Yes	Yes
	IPS	Yes	Yes	Yes
	Application Patrol	Yes	Yes	Yes
	Web Filtering	Yes	Yes	Yes
	Reputation Filter	Yes	Yes	Yes
	SecuReporter	Yes	Yes	Yes
	Sandboxing	Yes	Yes	Yes
	Security Profile Sync	Yes	Yes	Yes
	Device Insight	Yes	Yes	Yes
	SSL (HTTPS) Inspection	Yes	Yes	Yes
Two-Factor Authentication	Yes	Yes	Yes	
SD-WAN & VPN	WAN load balancing	Yes	Yes	Yes
	Prioritize critical applications	Yes	Yes	Yes
	VPN Protocol	IKEv2/IPsec, SSL, Tailscale*9	IKEv2/IPsec, SSL, Tailscale*9	IKEv2/IPsec, SSL, Tailscale*9
	Nebula SD-VPN	Yes	Yes	Yes
	Auto-link VPN	Yes	Yes	Yes
	Manual-link VPN	Yes	Yes	Yes
VPN Topology	Yes	Yes	Yes	

Model		USG FLEX 50H/HP	USG FLEX 100H/HP	USG FLEX 200H/HP
<b>Key Features</b>				
<b>WLAN Management</b>	<b>Default Number of Managed AP</b>	8	8	8
	<b>Secure WiFi*<sup>9</sup></b>	Yes	Yes	Yes
	<b>Maximum Number of Managed AP</b>	12	24	40
	<b>Recommend max. AP in 1 AP Group</b>	10	10	20
<b>Management &amp; Connectivity</b>	<b>Nebula Centralized Management</b>	Yes	Yes	Yes
	<b>Device HA*<sup>9</sup></b>	-	-	Yes
	<b>Link Aggregation (LAG)</b>	Yes	Yes	Yes
	<b>Maximum Concurrent Devices*<sup>10</sup></b>	64	64	200
	<b>Peak Device Login Rate*<sup>11</sup></b>	64	64	200
<b>Power Requirements</b>				
<b>Power input</b>		50H: 12V DC, 2A 50HP: 19V DC, 3.42A	100H: 12V DC, 2A max. 100HP: 19V DC, 3.42A	200H: 12V DC, 2A max. 200HP: 19V DC, 3.42A
<b>Max. power consumption (Watt max.)</b>		50H: 8.86 / 50HP: 48.65	100H: 17 / 100HP: 51.2	200H: 22 / 200HP: 62
<b>Heat dissipation (BTU/hr)</b>		50H: 32.42 50HP: 175.73	100H: 40.365 100HP: 194.5	200H: 58.75 200HP: 191.9
<b>Physical Specifications</b>				
<b>Item</b>	<b>Dimensions (WxDxH) (mm/in.)</b>	216 × 143 × 33/ 8.50 × 5.63 × 1.30	216 × 143 × 33/ 8.50 × 5.80 × 1.30	272 × 187 × 36/ 10.7 × 7.36 × 1.42
	<b>Weight (kg/lb.)</b>	50H: 1.02/2.26 50HP: 1.04/2.31	100H: 1.04/2.29 100HP: 1.05/2.31	200H: 1.52/3.34 200HP: 1.52/3.35
<b>Packing</b>	<b>Dimensions (WxDxH) (mm/in.)</b>	278 × 189 × 99/ 10.94 × 7.44 × 3.89	278 × 189 × 99/ 10.94 × 7.44 × 3.89	427 × 247 × 73/ 16.81 × 9.72 × 2.87
	<b>Weight (kg/lb.)</b>	50H: 1.27/2.80 50HP: 1.55/3.41	100H: 1.62/3.57 100HP: 1.91/4.21	200H: 2.43/5.36 200HP: 2.68/5.92
<b>Included accessories</b>		<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• Power cord (50HP only)</li> <li>• RJ-45 to RS-232 cable for console connection</li> </ul>	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• Power cord (100HP only)</li> <li>• RJ-45 to RS-232 cable for console connection</li> </ul>	<ul style="list-style-type: none"> <li>• Power adapter</li> <li>• Power cord (200HP only)</li> <li>• RJ-45 to RS-232 cable for console connection</li> <li>• Rack mounting kit</li> </ul>
<b>Environmental Specifications</b>				
<b>Operating</b>	<b>Temperature</b>	0°C to 40°C/32°F to 104°F	0°C to 40°C/32°F to 104°F	0°C to 40°C/32°F to 104°F
	<b>Humidity</b>	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
<b>Storage</b>	<b>Temperature</b>	-30°C to 70°C/ -22°F to 158°F	-30°C to 70°C/ -22°F to 158°F	-30°C to 70°C/ -22°F to 158°F
	<b>Humidity</b>	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
<b>MTBF (hr)</b>		50H: 40°C/596100.85308 hr 25°C/945046.81927 hr 50HP: 40°C/402515.716 hr 25°C/665839.12962 hr	100H: 40°C/353878.1057 hr 25°C/602150.9604 hr 100HP: 40°C/289845.2327 hr 25°C/518347.4294 hr	200H: 40°C/306768.409 hr 25°C/528037.0106 hr 200HP: 40°C/227747.9662 hr 25°C/392638.3847 hr
<b>Acoustic noise</b>		-	-	-
<b>Certifications</b>				
<b>EMC</b>		FCC Part 15 (Class B), CE EMC (Class B), RCM (Class B), BSMI	FCC Part 15 (Class B), CE EMC (Class B), RCM (Class B), BSMI	FCC Part 15 (Class B), CE EMC (Class B), RCM (Class B), BSMI
<b>Safety</b>		LVD (EN62368-1), BSMI	LVD (EN62368-1), BSMI	LVD (EN62368-1), BSMI

Model		USG FLEX 500H	USG FLEX 700H
<b>Product photo</b>			
			
<b>Hardware Specifications</b>			
Network interfaces	100M/1G Ethernet (RJ-45)	8	8
	100M/1G/2.5G Ethernet (RJ-45)	4	2
	1G/2.5G/5G/10G Ethernet (RJ-45)	-	2
	1G SFP/10G SFP+	-	2
	IEEE 802.3at (PoE+) Port	Port 3, 4 (2.5G)	Port 3, 4 (10G)
	Total PoE budget (watts)	30	30
USB 3.0 Type-A		1	1
Console port		Yes (RJ-45)	Yes (RJ-45)
Rack-mountable		Yes	Yes
Fanless		-	-
<b>System Capacity &amp; Performance*<sup>1</sup></b>			
SPI firewall throughput (Mbps)* <sup>2</sup>		10,000	15,000
VPN throughput (Mbps)* <sup>3</sup>		2,000	3,000
IPS throughput (Mbps)* <sup>4</sup>		4,500	7,000
Anti-Malware throughput (Mbps)* <sup>4</sup>		3,000	4,000
UTM throughput (Anti-Malware and IPS)* <sup>4</sup>		3,000	4,000
NGFW throughput (IPS and App Patrol)* <sup>4</sup>		4,500	7,000
Max. TCP concurrent sessions* <sup>5</sup>		1,000,000	2,000,000
Max. concurrent IPsec VPN tunnels* <sup>6</sup>		300	1,000
Recommended gateway-to-gateway IPsec VPN tunnels		150	300
Concurrent SSL VPN users		150	500
VLAN interface		64	128
<b>Speedtest Performance</b>			
SPI firewall throughput (Mbps)* <sup>7</sup>		938.1	921.64
<b>Key Features</b>			
Security Service* <sup>8</sup>	Anti-Malware	Yes	Yes
	IPS	Yes	Yes
	Application Patrol	Yes	Yes
	Web Filtering	Yes	Yes
	Reputation Filter	Yes	Yes
	SecuReporter	Yes	Yes
	Sandboxing	Yes	Yes
	Security Profile Sync	Yes	Yes
	Device Insight	Yes	Yes
	SSL (HTTPS) Inspection	Yes	Yes
Two-Factor Authentication	Yes	Yes	
SD-WAN & VPN	WAN load balancing	Yes	Yes
	Prioritize critical applications	Yes	Yes
	VPN Protocol	IKEv2/IPsec, SSL, Tailscale* <sup>9</sup>	IKEv2/IPsec, SSL, Tailscale* <sup>9</sup>
	Nebula SD-VPN	Yes	Yes
	Auto-link VPN	Yes	Yes
	Manual-link VPN	Yes	Yes
	VPN Topology	Yes	Yes

Model		USG FLEX 500H	USG FLEX 700H
<b>Key Features</b>			
<b>WLAN Management</b>	<b>Default Number of Managed AP</b>	8	8
	<b>Secure WiFi*<sup>9</sup></b>	Yes	Yes
	<b>Maximum Number of Managed AP</b>	72	520
	<b>Recommend max. AP in 1 AP Group</b>	60	200
<b>Management &amp; Connectivity</b>	<b>Nebula Centralized Management</b>	Yes	Yes
	<b>Device HA*<sup>9</sup></b>	Yes	Yes
	<b>Link Aggregation (LAG)</b>	Yes	Yes
	<b>Maximum Concurrent Devices*<sup>10</sup></b>	500	2000
	<b>Peak Device Login Rate*<sup>11</sup></b>	220	220
<b>Power Requirements</b>			
<b>Power input</b>		19V DC, 4.736A	100 - 240V AC, 50/60Hz, 2A
<b>Max. power consumption (Watt max.)</b>		68	86.7
<b>Heat dissipation (BTU/hr)</b>		211.3	235
<b>Physical Specifications</b>			
<b>Item</b>	<b>Dimensions (WxDxH)(mm/in.)</b>	300 × 182 × 43.5/11.81 × 7.17 x 1.71	430 × 250 × 43.5/16.93 × 9.84 x 1.71
	<b>Weight (Kg/lb.)</b>	1.64/3.62	3.14/6.93
<b>Packing</b>	<b>Dimensions (WxDxH)(mm/in.)</b>	350 × 149 × 244/13.78 × 5.87 x 9.61	512 × 395 × 162/20.16 × 15.55 x 6.38
	<b>Weight (kg/lb.)</b>	2.93/6.46	4.90/10.81
<b>Included accessories</b>		<ul style="list-style-type: none"> <li>• Power adapter &amp; Power cord</li> <li>• RJ-45 to RS-232 cable for console connection</li> <li>• Rack mounting kit</li> </ul>	<ul style="list-style-type: none"> <li>• Power cord</li> <li>• RJ-45 to RS-232 cable for console connection</li> <li>• Rack mounting kit</li> </ul>
<b>Environmental Specifications</b>			
<b>Operating</b>	<b>Temperature</b>	0°C to 40°C/32°F to 104°F	0°C to 40°C/32°F to 104°F
	<b>Humidity</b>	10% to 90% (non-condensing)	10% to 90% (non-condensing)
<b>Storage</b>	<b>Temperature</b>	-30°C to 70°C/-22°F to 158°F	-30°C to 70°C/-22°F to 158°F
	<b>Humidity</b>	10% to 90% (non-condensing)	10% to 90% (non-condensing)
<b>MTBF (hr)</b>		40°C/346653.298 hr 25°C/491775.8384 hr	40°C/431877.9743 hr 25°C/669031.2966 hr
<b>Acoustic Noise</b>		16.86dBA on < 25°C operating temperature, 43.76dBA on full FAN speed	16.85dBA on < 25°C operating temperature, 47.84dBA on full FAN speed
<b>Certifications</b>			
<b>EMC</b>		FCC Part 15 (Class A), CE EMC (Class A), RCM (Class A), BSMI	FCC Part 15 (Class A), CE EMC (Class A), RCM (Class A), BSMI
<b>Safety</b>		LVD (EN62368-1), BSMI	LVD (EN62368-1), BSMI

\*: This matrix with firmware uOS1.37 or later.

\*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 measurement are based on RFC2544 (1,424-byte UDP packet).

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

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

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

\*7: The Speedtest result is conducted with 1Gbps WAN link in real world and it is subject to fluctuate due to quality of the ISP link.

\*8: Requires a Zyxel service license to enable or extend feature capacity. SSL (HTTPS) inspection and Two-Factor Authentication are default supported features for any registered USG FLEX H device.

\*9: Local GUI only.

\*10: The maximum number of endpoint devices the gateway can keep online simultaneously, ensuring stable performance under heavy user load. (Baseline condition: UTM services not in use)

\*11: How quickly the gateway can handle surges of new device login request — for example, when many users try to get authenticated at the same time.

# Software Features

## Security Service

### Firewall

- Routing and transparent (bridge) modes
- Stateful packet inspection
- Source IP Spoofing Prevention
- FTP ALG/SIP Pinhole
- Dos Prevention (Preventing Flood and Sweep Attacks)
- Per host session limit
- Support External IP Block List
- Flooding detection and protection
- Protocol anomaly detection and protection

### Security Policy

- Unified policy management interface
- Support Content Filtering, Application Patrol, firewall (ACL)
- Firewall: SSL inspection
- Policy criteria: source and destination IP address, user group, time
- Policy criteria: zone, user

### Intrusion Prevention System (IPS)

- Streamed-based engine
- Signature-based scanning
- Support both intrusion detection and prevention
- Support allow list (whitelist) to deal with false positives involving known benign activity
- Support exploit-based and vulnerability-based protection
- Support Web attacks like XSS and SQL injection
- Automatic new signature update mechanism support

### Application Patrol

- Smart single-pass scanning engine
- Identifies and control thousands of applications and their behaviors
- Support more than 50 application categories
- GenAI App Visibility & Control
- Granular control over the most popular applications
- Real-time application statistics and reports
- Identify and control the use of DoH (DNS over HTTPS)

### Anti-Malware

- High performance query-based scan engine (Express Mode)
- Works with over 30 billion of known malicious file identifiers and still growing

- SHA-256 File Fingerprint Control (Block and Allow List)
- Wild range file type examination
- Support HTTP/SMTP/POP3/FTP scan

### Sandboxing

- Cloud-based multi-engine inspection
- Support HTTP/SMTP/POP3/FTP scan
- Wild range file type examination
- Real-time threat synchronization

### IP Reputation Filter

- IP-based reputation filter
- Supports 9 Cyber Threat Categories
- Inbound & Outbound traffic filtering
- Support Block and Allow List
- Support External IP Block List

### DNS Threat Filter

- Block clients to access malicious domain
- Block and Allow List support
- Monitoring or blocking the use of DoH/DoT

### URL Threat Filter

- Botnet C&C websites blocking
- Malicious URL blocking
- Support Block and Allow List

### External Block List

- Importing malicious IP/URL from external sources
- Works with IP Reputation and URL Threat Filter

### Web Filtering

- HTTPs domain filtering
- DNS domain filtering
- Allow List websites enforcement
- Customizable warning messages and redirect URL
- URL categories increased to 111
- CTIRU (Counter-Terrorism Internet Referral Unit) support
- Support Block and Allow List
- DNS SafeSearch

### SSL Inspection

- Deep packet inspection for TLS
- Support inspect TLS1.3
- Support untrusted certificate blocking
- Works with IPS/Anti-Malware/Sandboxing/Application Patrol/Web Filtering

### Device Insight

- Agentless Scanning for discovery and classification of devices
- View all devices on the network, including wired, wireless, BYOD, IoT, and SecuExtender (remote endpoint) on SecuReporter

- Visibility of network devices (switches, wireless access points, firewalls) from Zyxel or 3rd party vendors
- Visibility of networks devices from Astra Client

### Geo Enforcer

- Geo IP blocking
- Geographical visibility on logs

### IP Exception

- Provides granular control for target source and destination IP
- Supports security service scan bypass for IPS, Anti-Malware and URL Threat Filter

## VPN

### IPSec VPN

- Route-based and Policy-based Site to Site
- Client remote access (IKEv2 MS-CHAPv2)
- IKEv2 (EAP, configuration payload)
- Encryption: DES, 3DES, AES (256-bit), AES-GCM (256-bit)
- Authentication: MD5, SHA1, SHA2 (512-bit)
- Perfect forward secrecy (DH groups) support 2, 5, 14-16, 19-21, 28-32
- PSK and PKI (X.509) certificate authentication
- IPSec NAT traversal (NAT-T)
- Dead Peer Detection (DPD) and relay detection
- VPN High Availability (HA) with failover and fallback
- NAT over IPSec
- SecuExtender VPN Client provision
- Support native Windows, iOS/macOS and Android (StrongSwan) client provision
- Support 2FA Google Authenticator/Microsoft Authenticator

### SSL VPN

- Client remote access\*
- Full/Split tunnel mode
- SecuExtender VPN client provision
- Support 2FA Google Authenticator/Microsoft Authenticator
- SSL VPN authentication with Microsoft Entra ID/Google (OIDC)

### Tailscale VPN\*<sup>2</sup>

- Mesh-capable VPN
- Supports native identity providers, including Google, Microsoft Entra ID, Apple ID, etc.
- Supports Windows, Linux, Android, and iOS agents

## Networking

### Connection

- Routing/Transparent mode
- Ethernet and PPPoE
- NAT and PAT
- VLAN tagging (802.1Q)
- Static route
- Policy-based routing (user-aware)
- Policy-based NAT (SNAT)
- Application-Aware Policy Routing
- IGMP Proxy / mDNS Proxy
- DHCP client/server/relay
- Dynamic DNS support
- Multi-WAN load balancing/failover (Round Robin, LLF, Split over)
- Bandwidth Management
- Bandwidth Management with 802.1p Marking
- Link Aggregation support (LAG)

### WLAN Management\*<sup>2</sup>

- Supports AP Controller (APC)
- WPA3 support on 802.11ax AP
- WPA2 Enterprise (802.1x)
- 802.11r/k/v support
- Support auto AP firmware update
- Dynamic Channel Selection (DCS)
- Band steering (Band select)
- Wireless L2 Isolation
- CAPWAP discovery method
- Multiple SSID with VLAN
- Support Multi-Link Operation (MLO)
- Support AP Load Balancing
- Support MAC Filtering (Block/Allow)
- Supports Smart Mesh
- 802.1x Authentication
- Per AP radio setting

## Management

### Nebula Centralized Management

- Centralized device, client, and application usage monitoring (logs and statistics)
- Pre-configure settings in Nebula
- Cloud & on-prem security integrated with smart sync
- Security Profile Sync
- Nebula SD-VPN
- Auto-link VPN
- Manual-link VPN
- Remote access IPsec/SSL VPN
- VPN Topology
- Monitor device on/off status

- Keep event log up to 1 year
- Firmware upgrade operation
- Remote SSH for accessing device GUI
- Backup and restore firewall configurations (requires Nebula Pro Pack)

### SD-WAN

- Orchestration of secure connections across multiple locations
- Supporting mesh or hub-and-spoke topology
- Prioritizing mission-critical applications
- High availability and failover
- Application-Aware Policy Routing

### Authentication

- Local user database
- External user database (RADIUS, AD/LDAP)
- IKEv2 with EAP-MSCHAPv2 VPN authentication
- Supports 2FA authentication (Google Authenticator, Microsoft Authenticator)
- Captive Portal Web Authentication
- OIDC SSO – Microsoft Entra ID & Google (Captive Portal & SSL VPN)

### System Management

- Multi-lingual Web GUI (HTTPS and HTTP)
- Command line interface (console, SSH)
- SNMP v1, v2c, v3
- System configuration rollback
- Configuration auto backup
- Recovery Manager (one-click full backup of configuration, certificates)
- Firmware upgrade via FTP, FTP-TLS
- Firmware upgrade via Web GUI
- New firmware notifications and auto upgrade
- Dual firmware images

## Logging and Monitoring

- Comprehensive local logging
- Syslog (to up to 4 servers\*<sup>1</sup>)
- Event Notification and Email alerts
- Real-time traffic monitoring
- Built-in daily report
- SecuReporter supported

## External Integration

### Tailscale VPN\*<sup>2</sup>

- Mesh-capable VPN
- Supports native identity providers, including Google, Microsoft Entra ID, Apple ID, etc.
- Supports Windows, Linux, Android, and iOS agents

### Avast SMB\*<sup>3</sup>

- Online management platform
- Endpoint Protection
- Ransomware & Data Protection
- Phishing Protection
- Web Control
- Personal VPN
- USB Protection
- Patch Management

\*: Compatible with OpenVPN Connect

\*1: Up to 4 servers via CLI, default 2 servers

\*2: Local GUI only

\*3: Requires an active Avast license. Features listed are provided and managed by Avast

# Compatibility & Accessories

## Managed AP Service

Model	Managed APs (Default/Max)	Supported Managed APs
USG FLEX 50H/HP	8/12	<ul style="list-style-type: none"><li>WAX640S-6E</li><li>WBE660S</li></ul>
USG FLEX 100H/HP	8/24	<ul style="list-style-type: none"><li>WAX630S</li><li>WBE630S</li></ul>
USG FLEX 200H/HP	8/40	<ul style="list-style-type: none"><li>WAX620D-6E</li><li>WBE530</li></ul>
USG FLEX 500H	8/72	<ul style="list-style-type: none"><li>WAX610D</li><li>WBE510D</li></ul>
USG FLEX 700H	8/520	<ul style="list-style-type: none"><li>WAX510D</li><li>WAX655E</li><li>WAX300H</li><li>WAX650S</li><li>WAC500H</li><li>IAP500BE</li></ul>

## IPSec and SSL VPN Client

Item	Description	Supported OS
<b>SecuExtender Zero Trust IPSec and SSL VPN Client*</b>	SecuExtender supports popular VPN protocols including IKEv2/EAP, SSL VPN. Building secure tunnel with industry-leading strong cipher, the SecuExtender guarantees your confidentiality and data integrity.	<ul style="list-style-type: none"><li>Windows 10 64-bit</li><li>macOS 10.15 or above</li></ul>

\*: One subscription license to activate IPSec or SSL VPN from selected OS Windows/macOS.

## Transceivers (Optional)

Model	Speed*	Connector	Wavelength (nm)	Max. Distance (km/yd)	DDMI	Optical Fiber Type
<b>SFP10G-T*<sup>1</sup></b>	10-Gigabit SFP+	RJ-45	-	0.03/32.8	-	-
<b>SFP10G-SR*<sup>2</sup></b>	10-Gigabit SFP+	Duplex LC	850	0.3/328	Yes	Multi mode
<b>SFP10G-SR-E*<sup>2</sup></b>	10-Gigabit SFP+	Duplex LC	850	0.3/328	Yes	Multi mode
<b>SFP10G-LR*<sup>2</sup></b>	10-Gigabit SFP+	Duplex LC	1310	10/10936	Yes	Single mode
<b>SFP10G-LR-E*<sup>2</sup></b>	10-Gigabit SFP+	Duplex LC	1310	10/10936	Yes	Single mode
<b>SFP-1000T</b>	Gigabit	RJ-45	-	0.1/109	-	-
<b>SFP-SX-D*<sup>2</sup></b>	Gigabit	Duplex LC	850	0.55/601	Yes	Multi mode
<b>SFP-SX-E*<sup>2</sup></b>	Gigabit	Duplex LC	850	0.55/601	Yes	Multi mode
<b>SFP-LX-10-D*<sup>2</sup></b>	Gigabit	Duplex LC	1310	10/10936	Yes	Single mode
<b>SFP-LX-10-E*<sup>2</sup></b>	Gigabit	Duplex LC	1310	10/10936	Yes	Single mode

\*: Only USG FLEX 700H supports 10-Gigabit SFP+. Please note that Direct Attach Copper (DAC) cables are not supported. For optimal performance, use compatible SFP+ optical modules.

\*1: Works with Cat6a/7 Cable up to 30 m. Switch fan speed will speed up to dissipate the addition heat generated by 10G BASE-T transceiver. The maximum number of 10G copper transceivers a switch can support depends on its thermal design.

\*2: Only connections with patch cords with PC or UPC connectors are supported.

For more product information, visit us on the web at [www.zyxel.com](http://www.zyxel.com)

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27/01/26