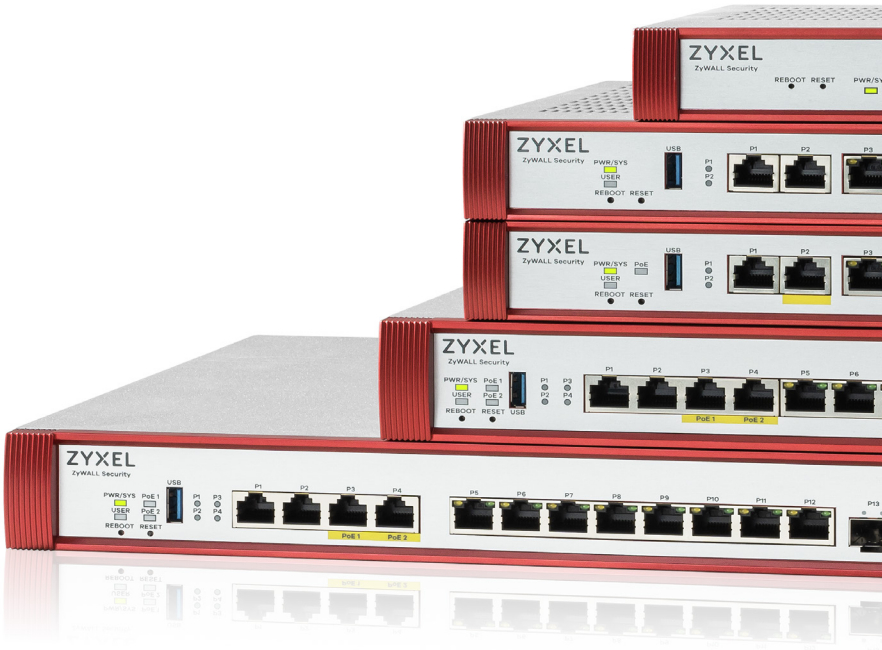


USG FLEX 50H/100H/200H/500H/700H

USG FLEX H Firewall

The award-winning Zyxel USG FLEX H series combines ultra-fast hardware performance with flexible deployment for modern, distributed networks. Powered by Nebula Auto VPN, it enables fast and consistent site-to-site connectivity without complex configuration. With centralized cloud management and security visibility through SecuReporter, organizations can easily scale across locations, apply unified policies, and respond quickly to security risks. The USG FLEX H series also delivers comprehensive cybersecurity protection against evolving threats, including zero-day attacks, while maintaining high performance for today's high-speed applications.

- AI-powered cloud cybersecurity
- Ultra-high performance without compromise
- Flexible Multi-gig and PoE+ connectivity
- Cloud and on-prem security in sync
- Visualizing network security with AI SecuPilot
- High availability built as standard

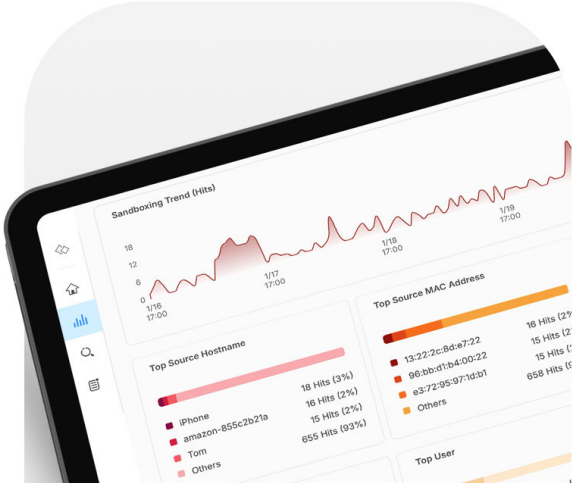
Benefits

AI-powered Cloud Cybersecurity

The Zyxel USG FLEX H series leverages a multi-layered, AI-powered cloud security architecture to protect business networks from external attacks, internal misuse, and zero-day threats. At its core, Zyxel's Security Cloud integrates global threat intelligence with leading security technologies, continuously updating protections to automatically adapt to evolving threats.

Understand network security like never before.

Zyxel SecuReporter offers a multi-dimensional approach to analytics for abnormal behaviors across your business (multi-locations). Allowing you to analyze different dimensions of network security from a single centralized dashboard giving you fast and deeper insights into what is happening on your network(s).



Ultra-High performance without compromising security.

Next-generation multi-core hardware with FastPath acceleration maximizes throughput and efficiency. High-speed traffic is fully inspected with all security services running. Performance is up to three times higher than previous generations, enabling faster intrusion prevention, anti-malware, application control, and web filtering while maintaining top-level security.

AI-powered cloud cybersecurity.

The Zyxel USG FLEX H series firewall is built on a multi-layered, AI-powered cloud security architecture. It protects business networks from external attacks, internal misuse and zero-day threats.

At the core is Zyxel's Security Cloud infrastructure, which combines global threat intelligence with technologies from leading security partners. The security cloud is continuously updated, so protection evolves automatically without manual intervention.

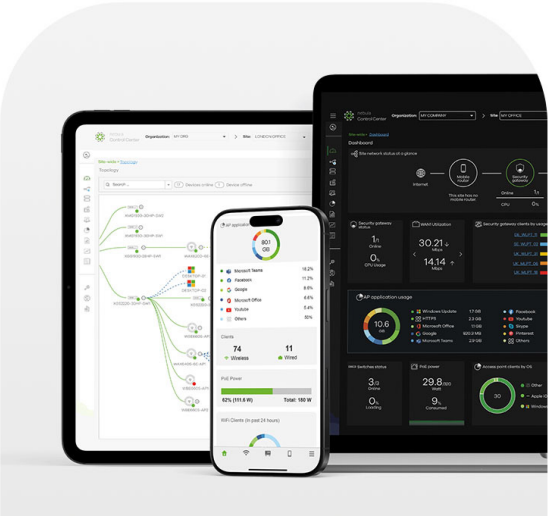
Port flexibility, Multi-gig and PoE+.

With 2.5mGig (Multi-gig) and 10 Gbps Port Speed options, The Zyxel USG FLEX H also features software-defined ports, allowing you true flexibility in the configuration and tailoring of each USG FLEX H as required (WAN or LAN).

The USG FLEX H offers up to 2x 30W PoE+ integrated ports to help reduce complexity by simplifying installations and reduce install costs by allowing you to power devices like 5G Routers, latest WiFi, or appliances like VoIP Phones directly from the USG FLEX H itself.

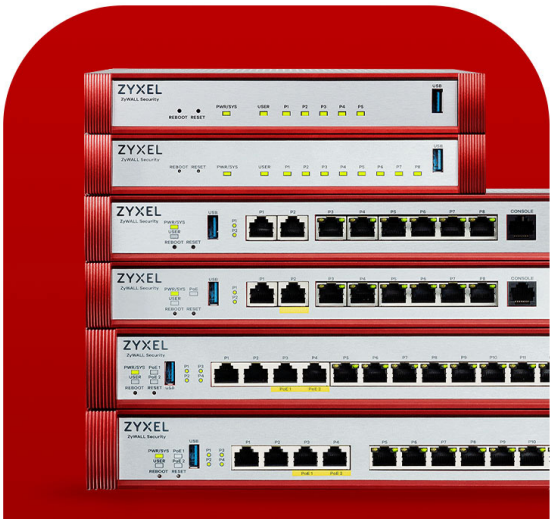
Powerful, effortless and scalable connectivity.

Nebula is a centralized cloud platform for unified management of wireless, switching, security, and FWA devices. It enables fast remote deployment without additional controllers, while providing real-time monitoring, alerts, and complete network visibility across single or multiple sites.



High availability (HA) as standard.

High Availability (HA) is standard on the 200H model and above, with no extra licenses or hidden costs. Deploying two devices creates a resilient, failover-ready network with automatic configuration synchronization, seamless failover, and uninterrupted security enforcement, providing enterprise-grade reliability out of the box.



Cloud and on-prem in sync.

The Zyxel USG FLEX H series features an industry-first Smart Sync capability to seamlessly bridge cloud and on-premises environments.

Smart Sync automatically synchronises security policies, network objects, and HA settings between Nebula and the local interface. Smart Sync eliminates manual updates, maintains consistency, and simplifies network management as your business scales.

Security and performance validated by the Tolly Group.

Independent testing by The Tolly Group confirms that USG FLEX H series delivers strong security and performance, outperforming other leading networking security gateways in malware detection and overall protection. Powered by the new uOS platform, AI-driven Security Cloud, and enhanced UTM and VPN throughput, it is designed for modern SMB and SME networks.

Download the full reports to see the detailed test results and benchmarks.

Security Across Edge, Network, and Cloud

Advanced threat protection, high-performance networking, hybrid cloud management, and AI-driven insights designed to secure and optimize modern enterprise networks.

Core Firewall

- **Threat Defense & Inspection**: Zone-based DPI firewall, TLS inspection, IP reputation, Geo filtering.
- **SD-WAN**: Multi-site connectivity, Traffic prioritization, Application routing, failover.
- **VPN**: IKEv2, SSL VPN, Remote access VPN, Tailscale mesh VPN.
- **Identity & Access Control**: Captive Portal, Authentication, MFA, Nebula Identity Federation Service (NID FS).
- **Quality of Service**: Bandwidth control, traffic prioritization, 802.1p marking.

AI-Powered Cloud Security

- **Intrusion Prevention System (IPS)**: vulnerability prevention, exploit protection.
- **Zero-day protection**: Cloud sandboxing, unknown threat detection.
- **Anti-Malware**: malware scanning, file reputation, protocol inspection.
- **Application Patrol**: Application visibility, GenAI control, usage monitoring.
- **Web Filtering**: URL filtering, Google SafeSearch.
- **DNS Threat Filter**: DNS protection, malicious domain blocking.
- **Endpoint Security Integrations**: Avast SMB and Bitdefender GravityZone API Integration.
- **Governance GenAI usage**: GenAI prompt and response management, plus defense against emerging AI threats.

Visibility & Insights

- **Device Insight**: Device discovery, classification, asset visibility.
- **Security Analytics:** AI insights, anomaly detection, actionable reporting.
- **Network Topology:** Network mapping, VPN topology, connection visibility.
- **Auditing and Compliance:** Syslog, event alerts, log retention.

Nebula centralized cloud management

- **Nebula Centralized Management**: Network visibility, zero-touch deployment, cloud-on-prem integration.
- **Central Orchestration**: Unified policy control, SD-WAN/VPN orchestration, remote access enablement.
- **Collaborative Detection & Response**: Coordinated threat detection, automated containment, security response.

Network Resilience

- **Business Continuity:** Device HA, High availability VPN, SD-WAN resilience, uninterrupted connectivity.
- **Physical Link Resilience:** Multi-WAN redundancy, failover protection, link aggregation.
- **System Resilience:** System recovery, configuration rollback, dual firmware protection.

Integrated WiFi Controller

- **WLAN Management**: Centralized AP control, secure AP tunneling for Remote AP and Campus AP, WPA3 security, 802.1X authentication, fast roaming, RF optimization, Smart Mesh, multi-SSID VLAN, load balancing, and wireless Storm Control.

Expert Support Access

- **Priority Support**: Priority support, expert access, fast response.

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
Reputation Filter	Yes	Yes
IPS	Yes	-
Sandboxing	Yes	-
Anti-Malware	Yes	-
Application Patrol	Yes	-
Web Filtering	Yes	-
Device Insight	Yes	-
SecuReporter	Yes	Yes
Nebula Pro Pack	Yes	Priority Support Only*
Security Profile Sync	Yes	-
CDR	Yes	-
Secure WiFi	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.

Core Firewall

Essential network security and control for modern business environments.

Threat Defense & Inspection
Enhances network protection with advanced inspection and policy control, including Geo Enforcer for location-based blocking, IP reputation filtering, zone-based firewall policies, and TLS 1.3 inspection for encrypted traffic visibility.

SD-WAN
Enables secure connectivity across multiple locations with centralized SD-WAN orchestration. Supports mesh or hub-and-spoke topology, application-aware policy routing, and high availability with automatic failover.

VPN
Provides secure connectivity through site-to-site and remote access VPN. Supports multiple protocols including IKEv2, SSL VPN, and Tailscale VPN for point-to-point mesh connectivity. Policy-based IPSec site-to-site tunnels also support DNS zone forwarding, enabling secure connectivity across distributed networks and remote users.

Identity & Access Control
Provides centralized identity and access management across on-premises and cloud identity sources, including AD/LDAP, Microsoft Entra ID, Google ID, and Nebula Cloud Auth Server (NCAS). Nebula Identity Federation Service (NID FS) enables federated authentication with cloud identity providers, while NCAS Passkeys, Google Authenticator, Microsoft Authenticator, and DUO Security strengthen authentication for captive portal access. Built-in Let's Encrypt (ACME) certificate automation and API-driven DDNS integration with Cloudflare DNS simplify secure connectivity and administration.

Quality of Service
Optimizes network performance with bandwidth management and 802.1p priority marking to ensure reliable delivery of critical applications and services.

AI-Powered Cloud Security

Advanced threat protection powered by AI and cloud intelligence.

Intrusion Prevention System (IPS)
Detects and blocks malicious traffic using a stream-based engine with signature-based scanning. Supports intrusion detection and prevention with protection against exploit-and vulnerability-based threats, including web attacks such as XSS and SQL injection.

Zero-day protection
Detects unknown threats using cloud-based multi-engine sandbox inspection. It analyzes a wide range of file types across HTTP, SMTP, POP3, and FTP traffic and synchronizes threat intelligence in real time to protect against zero-day attacks.

Anti-Malware
Detects and blocks malicious files using a high-performance query-based scan engine (Express Mode) with a database of over 30 billion known malicious file identifiers. Supports SHA-256 file fingerprint control and scans HTTP, SMTP, POP3, and FTP traffic to prevent malware from entering the network.

Application Patrol
Identifies and controls thousands of applications using a smart single-pass scanning engine. Supports over 50 application categories, including GenAI applications, real-time statistics, and detection of DoH (DNS over HTTPS) traffic.

Web Filtering
Controls access to websites through HTTPS and DNS domain filtering. Supports allow list enforcement, customizable warning and redirect pages, over 111 URL categories including GenAI applications, CTIRU protection, and DNS SafeSearch.

DNS Threat Filter
Blocks access to malicious domains by inspecting DNS requests. Supports block and allow lists and enables monitoring or blocking of encrypted DNS traffic such as DoH and DoT.

Endpoint Security Integration
Enables REST API integration with Avast Business and Bitdefender GravityZone for license management and free trial activation. For Bitdefender GravityZone, the integration also provides synchronized endpoint visibility, including installation status, OS, OS version, category, and device type.

Governance GenAI usage
Web filtering adds new GenAI categories to help organizations manage and govern generative AI usage. For deeper visibility, Zyxel also integrates with Heartbot AnyInsight — an independently subscribed third-party service — which monitors GenAI prompts and responses to help defend against emerging threats such as prompt injection.

Visibility & Insights

Comprehensive network visibility with actionable security insights.

Device Insight
Agentless scanning to discover and classify all devices on the network, including wired, wireless, BYOD, and IoT devices.

Security Analytics
Provides AI-driven security analytics through SecuReporter to deliver intelligent insights into network activity and device behavior. It learns normal usage patterns and detects anomalies to help administrators quickly identify and respond to potential security threats.

Network Topology
Provides visual insights into network structure with Nebula Topology and VPN Topology, helping administrators quickly understand device connectivity and VPN tunnel status.

Auditing and Compliance
Enables logging and monitoring through Syslog and SNMP with event notifications and email alerts. Supports retention of event and traffic logs for up to one year for auditing and compliance.

Nebula, Cloud and on-prem in sync

Unified cloud and on-prem management for simplified network operations.

Nebula Centralized Management
Provides centralized monitoring of devices, clients, and application usage through the Nebula platform, including application policy enforcement (block/BWM). Supports pre-configuration without unboxing and integrates cloud and on-prem security with smart synchronization. Enhances security visibility with unusual device admin login detection and alerts.

Central Orchestration
Simplifies network deployment through centralized orchestration in Nebula. Supports security profile synchronization, Nebula SD-VPN for site connectivity, and provisioning of remote access VPN clients.

Collaborative Detection & Response
Enhances threat response with coordinated alert, block, and quarantine actions. Supports blocking malicious wireless clients, customizable warning and redirect messages, and IP or MAC-based exempt lists for trusted devices.

Network Resilience

Reliable connectivity and system protection for continuous operations.

Business Continuity
Delivers uninterrupted business continuity with device-level High Availability (HA) and VPN HA, enabling seamless automatic failover and intelligent fallback. SD-WAN further strengthens network resilience by dynamically orchestrating optimal paths across distributed remote sites.

Physical Link Resilience
Ensures reliable connectivity with multi-WAN load balancing and failover using Round Robin, LLF, and Split over modes. Supports link aggregation (LAG) to increase bandwidth and improve network availability.

System Resilience
Enhances system reliability with configuration rollback and dual firmware images, enabling quick recovery from configuration errors or firmware issues.

Integrated WiFi Controller

Built-in AP controller improves deployment and management efficiency of Zyxel access points with integrated security and wireless optimization.

WLAN Management
Provides centralized wireless management through the integrated AP Controller (APC) for simplified deployment and optimized wireless performance. Secure tunneling for Remote AP and Campus AP enables easy deployment across remote and distributed locations while providing secure access to corporate networks. Advanced WiFi security, fast roaming, and intelligent wireless optimization help maintain reliable and efficient wireless connectivity.

Expert Support Access

Expert technical assistance for faster issue resolution and continuity.

Priority Support
Provides prioritized technical assistance with direct access to Zyxel security experts. Eligible customers with a Nebula Pro Pack organization or USG FLEX H series firewalls using Gold Security Pack or Entry Defense Pack licenses can submit support tickets, engage in web chat, and receive faster response.

USG FLEX H Series Firewalls

Product matrix highlighting hardware specifications and security performance

Tech Specs

Model	PoE Budget (watts)	Fanless	Network Interfaces
USG FLEX 50H	-	Yes	5 x 1G
USG FLEX 50HP	30W	Yes	5 x 1G
USG FLEX 100H	-	Yes	8 x 1G
USG FLEX 100HP	30W	Yes	8 x 1G
USG FLEX 200H	-	Yes	6 x 1G, 2 x 2.5G
USG FLEX 200HP	30W	Yes	6 x 1G, 2 x 2.5G
USG FLEX 500H	30W	-	8 x 1G, 4 x 2.5G
USG FLEX 700H	30W	-	8 × 1G, 2 × 2.5G, 2 × 10G, 2 x 10G SFP+

Throughput

Model	Firewall (Mbps)	VPN (Mbps)	NGFW (Mbps)	UTM (Mbps)
USG FLEX 50H	2,000	500	1,000	600
USG FLEX 50HP	2,000	500	1,000	600
USG FLEX 100H	4,000	900	1,500	1,000
USG FLEX 100HP	4,000	900	1,500	1,000
USG FLEX 200H	6,500	1,200	2,500	1,800
USG FLEX 200HP	6,500	1,200	2,500	1,800
USG FLEX 500H	10,000	2,000	4,500	3,000
USG FLEX 700H	15,000	3,000	7,000	4,000

Performance Testing Methodology

All performance metrics are measured using industry-standard testing methodologies to ensure consistent and reliable results.
Firewall throughput: Maximum throughput based on RFC 2544 (1,518-byte UDP packets).
VPN throughput: VPN Throughput measurement are based on RFC2544 (1,424-byte UDP packet).
NGFW Throughput: Measured with IPS and App Patrol enabled using the industry standard HTTP performance test with 1,460 byte HTTP packets and multiple flows.
UTM Throughput: Measured with Anti Malware (Express Mode) and IPS enabled using the industry standard HTTP performance test with 1,460 byte HTTP packets and multiple flows.

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

Model List

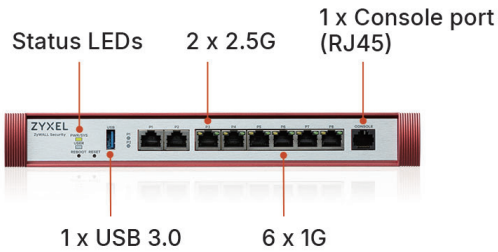
USG FLEX 50H

USG FLEX 50HP

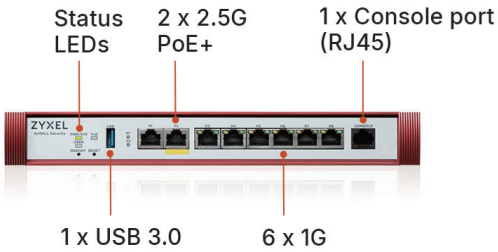
USG FLEX 100H

USG FLEX 100HP

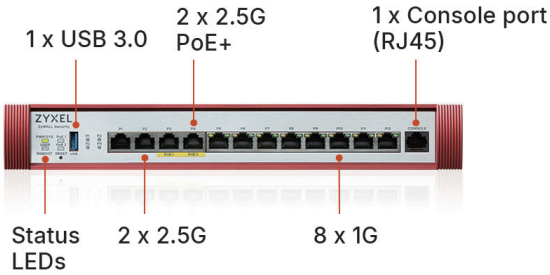
USG FLEX 200H



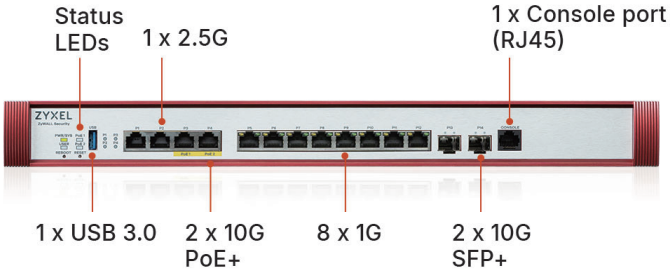
USG FLEX 200HP



USG FLEX 500H



USG FLEX 700H



Specifications

Model		USG FLEX 50H/HP	USG FLEX 100H/HP	USG FLEX 200H/HP
Product photo				
Physical Specifications				
Item	**Dimensions (WxDxH) (mm/in.)**	216 x 143 x 33/ 8.50 x 5.63 x 1.30	216 x 143 x 33/ 8.50 x 5.80 x 1.30	272 x 187 x 36/ 10.7 x 7.36 x 1.42
	Weight (kg/lb.)	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
Packing	**Dimensions (WxDxH) (mm/in.)**	278 x 189 x 99/ 10.94 x 7.44 x 3.89	278 x 189 x 99/ 10.94 x 7.44 x 3.89	427 x 247 x 73/ 16.81 x 9.72 x 2.87
	Weight (kg/lb.)	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
Included accessories		• Power adapter • Power cord (50HP only) • RJ-45 to RS-232 cable for console connection	• Power adapter • Power cord (100HP only) • RJ-45 to RS-232 cable for console connection	• Power adapter • Power cord (200HP only) • RJ-45 to RS-232 cable for console connection • Rack mounting kit
Power Requirements				
Power input		50H: 12V DC, 2A 50HP: 19V DC, 3.42A	100H: 12V DC, 2A 100HP: 19V DC, 3.42A	200H: 12V DC, 2A 200HP: 19V DC, 3.42A
Max. power consumption (Watt Max.)		50H: 8.86 50HP: 48.65	100H: 17 100HP: 51.2	200H: 22 200HP: 62
Heat dissipation (BTU/hr)		50H: 32.42 50HP: 175.73	100H: 40.365 100HP: 194.5	200H: 58.75 200HP: 191.9
Hardware Specifications				
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
System Capacity & Performance*[1]				
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

Model		USG FLEX 50H/HP	USG FLEX 100H/HP	USG FLEX 200H/HP
WiFi Controller & Captive Portal				
Default Number of Managed AP		8	8	8
Maximum Number of Tunnel-Mode AP		3	6	10
Maximum Number of Managed AP		12	24	40
Recommend max. AP in 1 AP Group		10	10	20
Maximum Concurrent Devices*[7]		64	64	200
Peak Device Login Rate*[8]		64	64	200
Environmental Specifications				
Operating	**Temperature**	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
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
Storage	**Temperature**	-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
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)	10% to 90% (non-condensing)
MTBF (hr)		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
Acoustic noise		-	-	-
Certifications				
EMC		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
Safety		LVD (EN62368-1), BSMI	LVD (EN62368-1), BSMI	LVD (EN62368-1), BSMI

Model		USG FLEX 500H	USG FLEX 700H
Product photo			
Physical Specifications			
Item	Dimensions (WxDxH) (mm/in.)	300 x 182 x 43.5/ 11.81 x 7.17 x 1.71	430 x 250 x 43.5/ 16.93 x 9.84 x 1.71
	Weight (kg/lb.)	1.64/3.62	3.14/6.93
Packing	Dimensions (WxDxH) (mm/in.)	350 x 149 x 244/ 13.78 x 5.87 x 9.61	512 x 395 x 162/ 20.16 x 15.55 x 6.38
	Weight (kg/lb.)	2.93/6.46	4.90/10.81
Included accessories		• Power adapter & Power cord • RJ-45 to RS-232 cable for console connection • Rack mounting kit	• Power cord • RJ-45 to RS-232 cable for console connection • Rack mounting kit
Power Requirements			
Power input		19V DC, 4.736A	100-240V AC, 50/60Hz, 2A
Max. power consumption (Watt Max.)		68	86.7
Heat dissipation (BTU/hr)		211.3	235
Hardware Specifications			
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		-	-
System Capacity & Performance*1			
SPI firewall throughput (Mbps)*2		10,000	15,000
VPN throughput (Mbps)*3		2,000	3,000
IPS throughput (Mbps)*4		4,500	7,000
Anti-Malware throughput (Mbps)*4		3,000	4,000
UTM throughput (Anti-Malware and IPS)*4		3,000	4,000
NGFW throughput (IPS and App Patrol)*4		4,500	7,000
Max. TCP concurrent sessions*5		1,000,000	2,000,000
Max. concurrent IPSec VPN tunnels*6		300	1,000
Recommended gateway-to-gateway IPSec VPN tunnels		150	300
Concurrent SSL VPN users		150	500
VLAN interface		64	128
WiFi Controller & Captive Portal			
Default Number of Managed AP		8	8
Maximum Number of Tunnel-Mode AP		18	130
Maximum Number of Managed AP		72	520
Recommend max. AP in 1 AP Group		60	200
Maximum Concurrent Devices*7		500	2000
Peak Device Login Rate*8		220	220

Model		USG FLEX 500H	USG FLEX 700H
Environmental Specifications			
Operating	**Temperature**	0°C to 40°C/32°F to 104°F	0°C to 40°C/32°F to 104°F
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)
Storage	**Temperature**	-30°C to 70°C/-22°F to 158°F	-30°C to 70°C/-22°F to 158°F
	Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)
MTBF (hr)		40°C/346653.298 hr 25°C/491775.8384 hr	40°C/431877.9743 hr 25°C/669031.2966 hr
Acoustic noise		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
Certifications			
EMC		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
Safety		LVD (EN62368-1), BSMI	LVD (EN62368-1), BSMI

All specifications are subject to change without notice.
*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 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)
*8: 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.

Compatibility & Accessories

Managed AP Service

Model	Managed APs (Default/Max)	Supported Managed APs		
USG FLEX 50H/HP	8/12	• WAX640S-6E • WAX630S • WAX620D-6E • WAX610D • WAX510D	• WAX300H • WAC500H • WBE660S • WBE630S • WBE530	• WBE510D • WAX655E • WAX650S • WBE665S • IAP500BE
USG FLEX 100H/HP	8/24			
USG FLEX 200H/HP	8/40			
USG FLEX 500H	8/72			
USG FLEX 700H	8/520			

Secure Tunnel for Remote AP

Model	Number of Tunnel Mode APs	Supported Remote APs		
USG FLEX 50H/HP	3	• WAC500H • WAX510D • WAX610D • WAX620D-6E • WAX630S	• WAX640S-6E • WAX650S • WAX655E • WBE510D • WBE530	• WBE630S • WBE660S • WBE665S • IAP500BE
USG FLEX 100H/HP	6			
USG FLEX 200H/HP	10			
USG FLEX 500H	18			
USG FLEX 700H	130			

IPSec and SSL VPN Client

Item	Description	Supported OS
SecuExtender Zero Trust IPSec and SSL VPN Client*	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.	• Windows 11 • macOS Tahoe

*: 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
SFP10G-T*1	10-Gigabit SFP+	RJ-45	-	0.03/32.8	-	-
SFP10G-SR*2	10-Gigabit SFP+	Duplex LC	850	0.3/328	Yes	Multi mode
SFP10G-SR-E*2	10-Gigabit SFP+	Duplex LC	850	0.3/328	Yes	Multi mode
SFP10G-LR*2	10-Gigabit SFP+	Duplex LC	1310	10/10936	Yes	Single mode
SFP10G-LR-E*2	10-Gigabit SFP+	Duplex LC	1310	10/10936	Yes	Single mode
SFP-1000T	Gigabit	RJ-45	-	0.1/109	-	-
SFP-SX-D*2	Gigabit	Duplex LC	850	0.55/601	Yes	Multi mode
SFP-SX-E*2	Gigabit	Duplex LC	850	0.55/601	Yes	Multi mode
SFP-LX-10-D*2	Gigabit	Duplex LC	1310	10/10936	Yes	Single mode
SFP-LX-10-E*2	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

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All specifications are subject to change without notice.

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