ZYXEL
NETWORKS

USG FLEX 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.

USG FLEX H
Secure. Fast. Protection.
Live Demo

- Firewall/VPN/UTM ultra high performance

- Multi-gig user-definable WAN/LAN Ethernet ports with up to 10 Gbps speed

- Optional 802.3at PoE+ enables eco-friendly deployments without AC adapters

- New powerful uOS accelerates system response time with user friendly design

- SecuExtender VPN utility supports both IKEv2 & SSL VPN

- High assurance multi-layered protection against cyber threats

- Comprehensive Reputation Filter includes IP/URL/DNS inspection

THE CHANNEL CO.
CRN
TECH INNOVATORS
WINNER 2024

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

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.)

AI-powered cloud cybersecurity

Block malicious threats and restrict inappropriate user behaviors. The USG FLEX H series leverages AI-powered cloud intelligence to operate multi-layered protection such as sandboxing, anti-malware, DNS/IP/URL filtering, IPS, and application patrol over your premises.

Our new 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.


Hassle free network management with Nebula

Utilizing Nebula, Zyxel's centralized cloud management platform you can configure and deploy network and security devices centrally (coming soon). You can manage multiple devices and bring the information from them together, combining it to create a more effective defensive ring around the network. (For features available on the Nebula platform, please click here.)

Preemptive Defense by Reputation Filter

Stop 70% of common cyberattacks with Reputation Filter service without sacrificing your network performance thanks to its low computing requirement. Reputation Filter consist of IP Reputation, DNS Filter, and URL threat filter. Analyzes IP, domain, URL addresses with up-to-date cloud reputation databases and determines if addresses are safe or not. Automatically blocks access to compromised sources, providing granular protection.
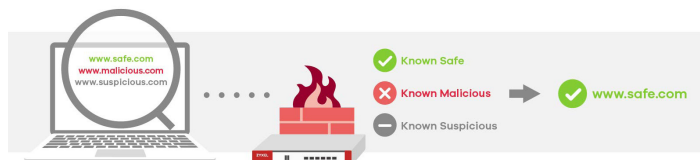
Deep insights of devices

Device insight gives a centralized dashboard of your network activities and information from all connected devices. Tune your access policies based on attributes such as OS version or device categories to achieve network segmentation for limited attack surface and prevent threat from spreading. Easily trace issues and prevent future threat incidents with SecuReporter, provides comprehensive threat analysis and correlations between events.
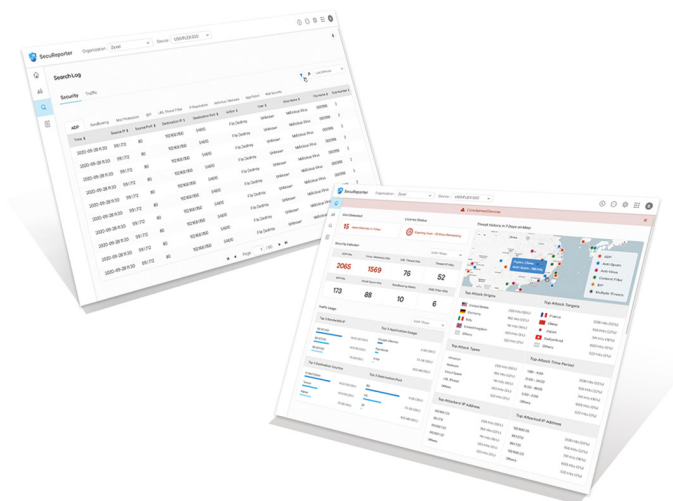

Friendly for OS-native VPN Clients

IKEv2 is a de-facto VPN protocol known for its security, reliability, and efficiency, a safer and more enhanced protocol than L2TP. It's widely adopted so it comes with outstanding interoperability with various types of VPN clients, OS, and VPN gateways. Easy wizard ensures in-a-few-clicks compatibility with free-of-charge OS-native IKEv2 VPN clients such as Windows, macOS, iOS, and Android (via StrongSwan app).

High assurance multi-layered protection

Designed with multi-layer protection that blocks both outside malicious threats as well as internal inappropriate user behaviors. Restrict high-risk applications or web access from inside your network. Industry-leading DNS filter with TLS 1.3 eliminates all blind spots in all encrypted traffic without the need to deploy SSL inspection.
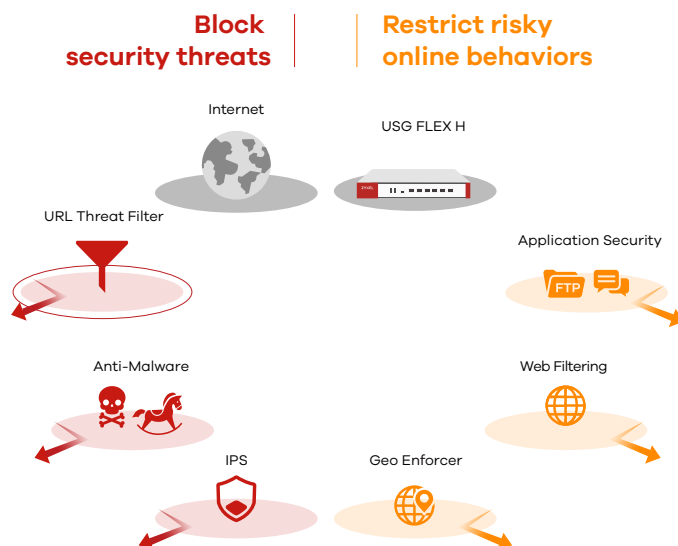
License

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	Available in April, 2025	-
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.

Specifications

Model	USG FLEX 100H/HP	USG FLEX 200H/HP
Product photo		
Hardware Specifications		
WiFi Standard	-	-
Interface ports	100H: 8 x 1GbE 100HP: 7 x 1GbE 1 x 1GbE/PoE+ (802.3at, 30W max.)	200H: 2 x 2.5mGig, 6 x 1GbE 200HP: 1 x 2.5mGig 1 x 2.5mGig/PoE+ (802.3at, 30W max.) 6 x 1GbE
USB 3.0 ports	1	1
Console port	Yes (RJ-45)	Yes (RJ-45)
Rack-mountable	-	Yes
Fanless	Yes	Yes
System Capacity & Performance[1]		
SPI firewall throughput (Mbps)[2]	4,000	6,500
VPN throughput (Mbps)[3]	900	1,200
IPS throughput (Mbps)[4]	1,500	2,500
Anti-Malware throughput (Mbps)[4]	1,000	1,800
UTM throughput (Anti-Malware and IPS)[4]	1,000	1,800
Max. TCP concurrent sessions[5]	300,000	600,000
Max. concurrent IPSec VPN tunnels[6]	50	100
Recommended gateway-to-gateway IPSec VPN tunnels	20	50
Concurrent SSL VPN users	25	50
VLAN interface	16	32
Speedtest Performance		
SPI firewall throughput (Mbps)[7]	931.61	929.97
Security Service[8]		
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
Secure WiFi[9]	Yes	Yes
Key Features		
VPN	IKEv2, IPSec, SSL	IKEv2, IPSec, SSL
SSL (HTTPS) Inspection	Yes	Yes
Two-Factor Authentication	Yes	Yes
Nebula Centralized Management	Yes	Yes

Model	USG FLEX 100H/HP	USG FLEX 200H/HP
Power Requirements		
Power input	100H: 12 V DC, 2 A max. 100HP: 19 V DC, 3.42 A	200H: 12 V DC, 2 A max. 200HP: 19 V DC, 3.42 A
Max. power consumption (Watt max.)	100H: 17 100HP: 51.2	200H: 22 200HP: 62
Heat dissipation (BTU/hr)	100H: 40.365 (BTU/hr) 100HP: 194.5 (BTU/Hr)	200H: 58.75 (BTU/hr) 200HP: 191.9 (BTU/hr)
PoE power budget (watt max.)	100HP: 30	200HP: 30
Physical Specifications		

Item	**Dimensions (WxDxH) (mm/in.)**	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.)	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	427 x 247 x 73/ 16.81 x 9.72 x 2.87
	Weight (kg/lb.)	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 (100HP) • RJ-45 to RS-232 cable for console connection	• Power adapter • Power cord (200HP) • RJ-45 to RS-232 cable for console connection • Rack mounting kit (optional, by regions)

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)		100H: 40°C/289845.2327 hr 25°C/518347.4294 hr 100HP: 40°C/291183.7887 hr 25°C/550382.5753 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
Safety		LVD (EN62368-1), BSMI	LVD (EN62368-1), BSMI

*: This matrix with firmware uOS1.30 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) and IPS throughput is measured using the industry standard HTTP performance test (1,460-byte HTTP packets). Testing done with multiple flows.
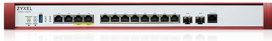
*5: Maximum sessions are measured using the industry standard IXIA IxLoad testing tool.

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

*9: Available in Q2, 2025

Model	USG FLEX 500H	USG FLEX 700H
Product photo		

Hardware Specifications		
Interface ports	2 x 2.5mGig 2 x 2.5mGig/PoE+ (802.3at, total 30W) 8 x 1GbE	2 x 2.5mGig 2 x 10mGig/PoE+ (802.3at, total 30W) 8 x 1GbE 2 x 10G SFP+
USB 3.0 ports	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
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

Speedtest Performance		
SPI firewall throughput (Mbps)[7]	938.1	921.64

Security Service[8]		
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
Secure WiFi[9]	Yes	Yes

Key Features		
VPN	IKEv2, IPSec, SSL	IKEv2, IPSec, SSL
SSL (HTTPS) Inspection	Yes	Yes
Two-Factor Authentication	Yes	Yes
Nebula Centralized Management	Yes	Yes

Model		USG FLEX 500H	USG FLEX 700H
Power Requirements			
Power input		19 V DC, 4.736 A	100 - 240 V AC, 50/60 Hz, 2 A max.
Max. power consumption (Watt max.)		68	86.7
Heat dissipation (BTU/hr)		211.3 (BTU/hr)	235 (BTU/hr)
PoE power budget (Watt max.)		30	30
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 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
PoE power budget (watt max.)		30	30
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		16.86 dBA on < 25°C operating temperature, 43.76 dBA on full FAN speed	16.85 dBA on < 25°C operating temperature, 47.84 dBA 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

*: This matrix with firmware uOS1.30 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) and IPS 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: With Zyxel service license to enable or extend the feature capacity.
*9: Available in Q2, 2025

Software Features

Security Service

Firewall
- Routing and transparent (bridge) modes
- Stateful packet inspection
- FTP NAT traversal
- ALG support for customized ports
- Dos Prevention (Preventing Flood and Sweep Attacks)
- Per host session limit
- Support External IP Block List

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 up to 25 application categories
- 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
- 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

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

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

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)
- Authentication: MD5, SHA1, SHA2 (512-bit)
- Perfect forward secrecy (DH groups) support 2, 5, 14-16, 19-21, 28-30
- PSK and PKI (X.509) certificate authentication
- IPSec NAT traversal (NAT-T)
- Dead Peer Detection (DPD) and relay detection
- SecuExternder 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

Networking

Connection
- Routing mode
- Ethernet and PPPoE
- NAT and PAT
- Static route
- Policy-based routing (user-aware)
- Policy-based NAT (SNAT)
- DHCP client/server/relay
- Dynamic DNS support
- WAN load balancing/failover (Round Robin, LLF, Split over)
- Bandwidth Management

Management

Nebula Centralized Management
- Monitor device on/off status
- Event log
- Firmware upgrade operation
- Access remote GUI (requires Nebula Pro Pack)
- Backup and restore firewall configurations (requires Nebula Pro Pack)

Authentication
- Local user database
- External user database

- IKEv2 with EAP-MSCHAPv2 VPN authentication
- Supports 2FA authentication (Google Authenticator, Microsoft Authenticator)

System Management
- Multi-lingual Web GUI (HTTPS and HTTP)
- Command line interface (console, SSH and telnet)
- SNMP v1, v2c, v3
- System configuration rollback
- Configuration auto backup

- 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)
- Real-time traffic monitoring
- Built-in daily report
- SecuReporter supported

*: Compatible with OpenVPN Connect

Accessories

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 10 64-bit • macOS 10.15 or above

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

Transceivers (Optional)

Model	Speed	Connector	Wavelength	Max. Distance	Optical Fiber Type	DDMI
SFP10G-SR*	10-Gigabit SFP+	Duplex LC	850 nm	300 m/328 yd	Multi mode	Yes
SFP10G-LR*	10-Gigabit SFP+	Duplex LC	1310 nm	10 km/10936 yd	Single mode	Yes
SFP-1000T	Gigabit	RJ-45	-	100 m/109 yd	Multi mode	-
SFP-LX-10-D	Gigabit	LC	1310 nm	10 km/10936 yd	Single mode	Yes
SFP-SX-D	Gigabit	LC	850nm	550 m/601 yd	Multi mode	Yes

*: 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.