ZYXEL NETWORKS

ZyWALL USG FLEX 100/100AX/100W/200/500/700

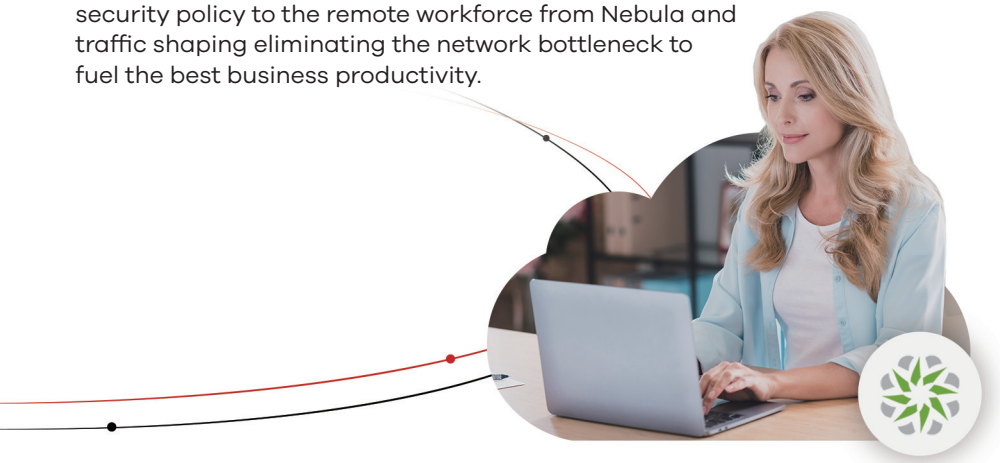
USG FLEX Firewall

The latest USG FLEX series provides one single management platform on the cloud while expanding and strengthening the protection from firewalls to access points with automatic responses. The newly designed USG FLEX Series is capable of minimizing computing power usage and maximizing firewall performance, delivering up to 5x UTM performance with cloud flexibility and collaborative protection to help connect and secure small or mid-sized business users.

Benefits

Nebula together

USG FLEX firewalls, the new addition to the Nebula cloud management family, strongly empowers the full-blown Zyxel security matrix in Nebula, further optimizing Nebula with holistic security and protection for SMB business networks. Zyxel provides a centralized provisioning security policy to the remote workforce from Nebula and traffic shaping eliminating the network bottleneck to fuel the best business productivity.



- Flexibility to adapt to on-premises or Nebula cloud management
- Optional Gold Security Pack unlocks Sandboxing and Reputation Filter
- High assurance multi-layered protection
- DNS and URL content filter ensures the web security
- Device Insight provides better visibility and control
- Automatically contains threats at the network edge
- Secure WiFi guarantees remote work security
- Add two-factor authentication for an extra layer of protection
- AX 802.11 WiFi 6 (802.11ax) dual-radio speeds up to 1800 Mbps

Zero trust security made easy for SMBs

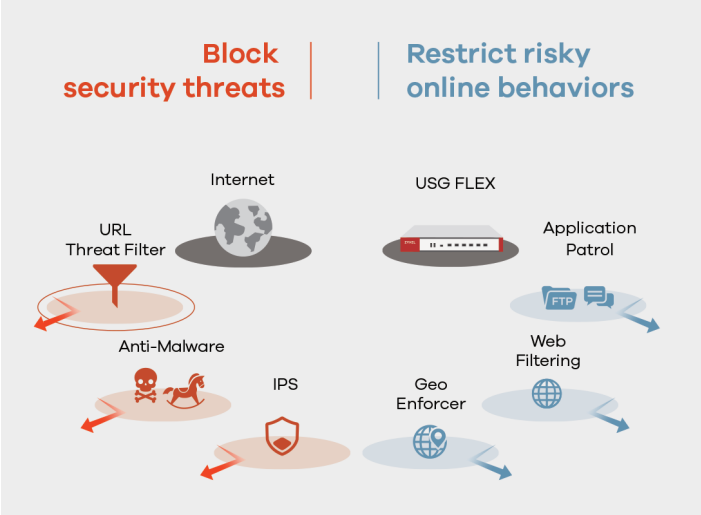
USG FLEX series is your network security ally that leverages AI security cloud to operate multi-layered protection such as anti-malware, DNS/IP/URL filtering, IPS, and application patrol. Our multiple OS supported SecuExtender easily extends the same security outside network premise to remote employees that are on the go. USG FLEX series makes zero trust security easy for small to mid-sized business users.

Best threat intelligence alliance

To ensure your network on getting the best protection, USG FLEX integrates threat intelligence from leading companies and organizations in the cybersecurity field for scaled information about file and real-time threat data. By leveraging a wider malware coverage with multiple-sourced database, this increases the accuracy in threat detection. Web Filtering is also included to safeguard all internet access, especially with CTIRU (Counter-Terrorism Internet Referral Unit) to restrict access to terrorist materials online.

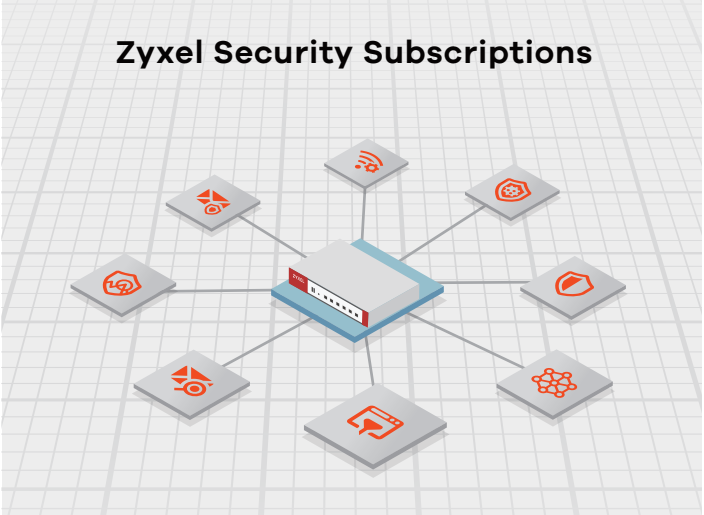
High assurance multi-layered protection

USG FLEX is designed with multi-layer protection against multiple types of threats from in and out. Multiple security services empower you to restrict users' inappropriate application usage or web access. Zyxel offers leading-industry DNS content filter, eliminating blind spots in all encrypted traffic with TLS 1.3 without the need to deploy SSL inspection. All together safeguarding your network without any unattended gaps.



Simplified and unified licensing experience

We know the experience from license purchase and renewals are equally important to our partners. We've optimized the licensing management platform and brought a consistent migration path between on-premise and our cloud platform. We make sure our partners can quickly adapt to a secure environment without the hassle but retaining the flexibility for those who need to practice the same security across networks scenarios.

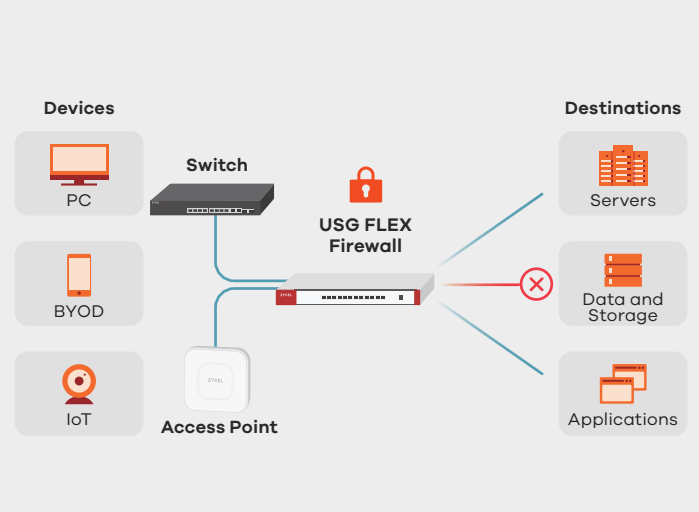


Safeguarding remote connectivity to your corporate network

Businesses striking a balance on productivity and security protection becomes a priority with growing number of devices. Whether it is a wired, wireless, or a IoT device, the Secure WiFi service is used to build a secure L2 tunnel for Work-From-Home user to extend the working experience easily and securely, as if you were in the office with the safety of both two-factor authentication and secure tunnel, which boosts up productivity and eases IT support. The Secure WiFi service also unlocks the number of managed APs to maximum for the USG FLEX firewall.

Deep Insights into all your devices

Device insight gives you more visibility of your networks including wired, wireless, BYOD, and IoT devices. You can create access policy with device contextual such as OS version or device category to enforce network segmentation. This reduces the attack surface and prevents threats from spreading. It also helps SMB(s) reduce time spent on investigation. Continuing with our goal of providing our customers with increased visibility, Zyxel SecuReporter gives your organization comprehensive endpoint inventory dashboard.



Level up security with 2FA network access

Password is not enough to secure your network access. You need a second form of authentication to ensure unauthorized users can't access your company's databases, email accounts and more. Zyxel Two-Factor Authentication allows your organizations to authenticate the identities of users accessing your networks through remote desktops and personal mobile devices.

Stay ahead of threats with CDR

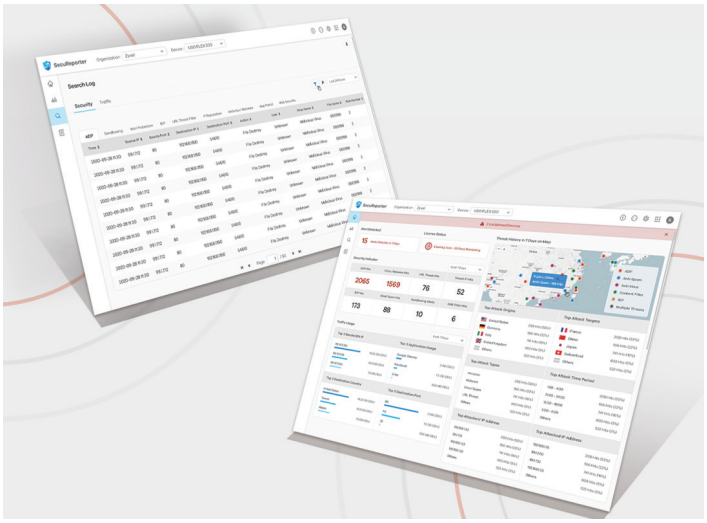
Collaborative Detection & Response (CDR) is used to identify threats and risks posed in the more complex organization workforce, workload, and workplace. USG FLEX firewalls to Nebula provides network admins with a rule-based security policy. The firewalls detect a threat on any of the connected clients and will sync with the Nebula control center, then automatically respond to cyber threats and contain the device(s) at the edge (Wireless Access Point) of your network. It is a perfect fit for IT to address the requirements of a decentralized network infrastructure and provide automatic protection.

Comprehensive web filtering service

USG FLEX Firewall delivers enhanced web filtering functionality and security through its powerful combination of both reputation and category-based filtering. The dynamic content categorization analyzes the content of a previously unknown website and domain and determines if it belongs to an undesirable category including gambling, pornography, games, and many others. A newly added DNS content filter offers a better approach to inspect web access, particularly when the website is deploying ESNI (Encrypted Server Name Indication) where the traditional URL filtering failed to identify the destination domain.

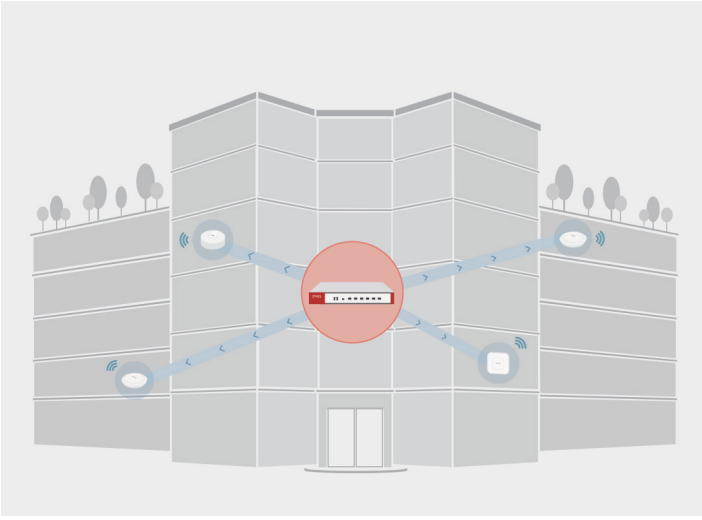
Analytics report and enhanced insights

USG FLEX series dashboard gives user-friendly traffic summary and threat statistic visuals. Utilize SecuReporter for further threat analysis with correlation feature design, making it easy to proactively trackback network status to prevent the next threat event. Centralized visibility of network activities for you to easily manage multiple clients.



Comprehensive connectivity

We also provide Wireless Health Monitor giving you visibility into the connection state of client and access point issues, allowing network administrators to easily troubleshoot issues.



License Service

● Applicable on cloud mode ● Applicable on premises mode

Device Purchase

	Bundled with UTM*	Device Only
Gold Security Pack		No License Included*3
UTM Security Pack*1	● ●	
Hospitality Pack		
Nebula Pro Pack*2	●	
Nebula Plus Pack		
Secure WiFi		

*: Default bundle with UTM Security Pack is only applicable on USG FLEX 100/100AX/100W/200/500/700.
*1: UTM Security Pack gives additional 30-day trial of service on top of its formal 1-year license duration.
*2: 1-year Nebula Pro Pack is given free to USG FLEXs that are default bundled with UTM Security Pack.
*3: Without UTM bundle you can also purchase licenses later. However the bundle option is highly advisable with lower total costs and seamless protection. Pay less and secure more!

License Purchase

	License Pack	Single License
Gold Security Pack*	● ●	● Web Security ● Anti Malware ● SecuReporter
UTM Security Pack*	● ●	
Hospitality Pack*1	●	
Nebula Pro Pack	●	
Nebula Plus Pack	●	
Secure WiFi	● ●	

*: Only applicable on USG FLEX 100/100AX/100W/200/500/700.
*1: Only applicable on USG FLEX 200/500/700.

License Pack

Service	Gold Security Pack	UTM Security Pack	Hospitality Pack
Sandboxing	● ●		
Reputation Filter	● ●		
Web Filtering	● ●	● ●	
Anti-Malware	● ●	● ●	
IPS	● ●	● ●	
Application Patrol	● ●	● ●	
SecuReporter	● ●	● ●	
Collaborative Detection & Response	● ●	● ●	
Network Premium	●	●	
Email Security	●	●	
Security Profile Sync	●	●	
Hotspot Management service*			●
Concurrent Device Upgrade*1			●
Nebula Pro Pack Services	●		
Secure WiFi	● ●		

*: Hotspot Management is only applicable on USG FLEX 200/500/700.
*1: Only applicable on USG FLEX 500/700 to allow additional connected clients.

Specifications

Model		USG FLEX 100*11	USG FLEX 100AX	USG FLEX 100W
Product photo				
Hardware Specifications				
WiFi standard		N/A	802.11 ax/ac/n/g/b/a	802.11 a/b/g/n/ac
10/100/1000 Mbps RJ-45 ports		4 x LAN/DMZ, 1 x WAN	4 x LAN/DMZ, 1 x WAN	4 x LAN/DMZ, 1 x WAN, 1 x SFP
USB 3.0 ports		1	1	1
Console port		Yes (RJ-45)	Yes (RJ-45)	Yes (RJ-45)
Rack-mountable		N/A	N/A	N/A
Fanless		Yes	Yes	Yes
System Capacity & Performance*1				
SPI firewall throughput (Mbps)*2		900	900	900
VPN throughput (Mbps)*3		270	270	270
VPN IMIX throughput (Mbps)*3		100	100	100
IPS throughput (Mbps)*4		540	540	540
Anti-Malware throughput (Mbps)*4		360	360	360
UTM throughput (Anti-Malware and IPS)(Mbps)*4		360	360	360
Max. TCP concurrent sessions*5		300,000	300,000	300,000
Recommended gateway-to-gateway IPsec VPN tunnels		20	20	20
Max. concurrent IPsec VPN tunnels*6		50	50	50
Concurrent SSL VPN users		30	30	30
VLAN interface		8	8	8
Speedtest Performance				
SPI firewall throughput (Mbps)*10		848	848	848
Key Features				
Security Service	Sandboxing*7	Yes	Yes	Yes
	Web Filtering*7	Yes	Yes	Yes
	Application Patrol*7	Yes	Yes	Yes
	Anti-Malware*7	Yes	Yes	Yes
	IPS*7	Yes	Yes	Yes
	Reputation Filter*7	Yes	Yes	Yes
	Geo Enforcer*7	Yes	Yes	Yes
	SecuReporter*7	Yes	Yes	Yes
	Collaborative Detection & Response*7	Yes	Yes	Yes
	Device Insight	Yes	Yes	Yes
	Security Profile Sync*7	Yes	Yes	Yes
	SSL (HTTPS) inspection	Yes	Yes	Yes
	2-Factor Authentication	Yes	Yes	Yes
	Email Security	Yes	Yes	Yes
VPN Features	VPN	IKEv2, IPSec, SSL, L2TP/IPSec	IKEv2, IPSec, SSL, L2TP/IPSec	IKEv2, IPSec, SSL, L2TP/IPSec
	Microsoft Azure	Yes	Yes	Yes
	Amazon VPC	Yes	Yes	Yes

		USG FLEX 100	USG FLEX 100AX	USG FLEX 100W
Key Features				
WLAN Management	**Default number of managed AP**	8	8	8
	Recommend max. AP in 1 AP Group	10	10	10
	Secure WiFi Service*7	Yes	Yes	Yes
	Maximum Number of Tunnel-Mode AP	6	6	6
	Maximum Number of Managed AP	24	24	24
Management & Connectivity	**Nebula Cloud Mode**	Yes	Yes	Yes
	Nebula Cloud Monitoring Mode	Yes	Yes	Yes
	Device HA Pro	N/A	N/A	N/A
	Link Aggregation (LAG)	N/A	N/A	N/A
	Hotspot Management*7	N/A	N/A	N/A
	Ticket printer support*9/ Support Q'ty (max.)	N/A	N/A	N/A
	Concurrent devices logins (default/max.)*7*8	64	64	64
Power Requirements				
Power input		12 V DC, 2 A max.	12 V DC, 2.5 A max.	12 V DC, 2 A max.
Max. power consumption (Watt Max.)		12.5	24.3	12.5
Heat dissipation (BTU/hr)		42.65	55.37	42.65
Physical Specifications				
Item	**Dimensions (WxDxH)(mm/in.)**	216 x 147.3 x 33/ 8.50 x 5.80 x 1.30	216 x 149.28 x 33/ 8.50 x 5.88 x 1.30	216 x 147.3 x 33/ 8.50 x 5.80 x 1.30
	Weight (Kg/lb.)	0.85/1.87	1.00/2.20	0.85/1.87
Packing	**Dimensions (WxDxH)(mm/in.)**	284 x 190 x 100/ 11.18 x 7.48 x 3.94	284 x 190 x 100/ 11.18 x 7.48 x 3.94	284 x 190 x 100/ 11.18 x 7.48 x 3.94
	Weight (kg/lb.)	1.40/3.09	1.53/3.37	1.40/3.09
Included accessories		• Power adapter • RJ-45 - RS-232 cable for console connection	• Power adapter with plug • RJ-45 - RS-232 cable for console connection • Antenna	• Power adapter • RJ-45 - RS-232 cable for console connection
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)		989,810	766,228	989,810
Certifications				
EMC		FCC Part 15 (Class B), CE EMC (Class B), BSMI	FCC Part 15 (Class B), IC EMC (Class B), CE EMC (Class B), RCM (Class B), BSMI	FCC Part 15 (Class B), CE EMC (Class B), BSMI
Safety		LVD (EN60950-1), BSMI	LVD (EN62368-1), BSMI	LVD (EN60950-1), BSMI

Model		USG FLEX 200	USG FLEX 500	USG FLEX 700
Product photo				
Hardware Specifications				
10/100/1000 Mbps RJ-45 ports		4 x LAN/DMZ, 2 x WAN, 1 x SFP	7 (configurable), 1 x SFP (configurable)	12 (configuratble), 2 x SFP (configurable)
USB 3.0 ports		2	2	2
Console port		Yes (DB9)	Yes (DB9)	Yes (DB9)
Rack-mountable		Yes	Yes	Yes
Fanless		Yes	N/A	N/A
System Capacity & Performance*1				
SPI firewall throughput (Mbps)*2		1,800	2,300	5,400
VPN throughput (Mbps)*3		450	810	1,100
VPN IMIX throughput (Mbps)*3		160	240	550
IPS throughput (Mbps)*4		1,100	1,500	2,000
Anti-Malware throughput (Mbps)*4		570	800	1,450
UTM throughput (Anti-Malware and IPS)(Mbps)*4		550	800	1,350
Max. TCP concurrent sessions*5		600,000	1,000,000	1,600,000
Recommended gateway-to-gateway IPsec VPN tunnels		50	150	250
Max. concurrent IPsec VPN tunnels*6		100	300	500
Concurrent SSL VPN users		60	150	150
VLAN interface		16	64	128
Speedtest Performance				
SPI firewall throughput (Mbps)*10		931	935	934
Key Features				
Security Service	Sandboxing*7	Yes	Yes	Yes
	Web Filtering*7	Yes	Yes	Yes
	Application Patrol*7	Yes	Yes	Yes
	Anti-Malware*7	Yes	Yes	Yes
	IPS*7	Yes	Yes	Yes
	Reputation Filter*7	Yes	Yes	Yes
	Geo Enforcer	Yes	Yes	Yes
	SecuReporter*7	Yes	Yes	Yes
	Collaborative Detection & Response*7	Yes	Yes	Yes
	Device Insight	Yes	Yes	Yes
	Security Profile Sync*7	Yes	Yes	Yes
	SSL (HTTPS) Inspection	Yes	Yes	Yes
	2-Factor Authentication	Yes	Yes	Yes
	Email Security	Yes	Yes	Yes
VPN Features	VPN	IKEv2, IPSec, SSL, L2TP/IPSec	IKEv2, IPSec, SSL, L2TP/IPSec	IKEv2, IPSec, SSL, L2TP/IPSec
	Microsoft Azure	Yes	N/A	N/A
	Amazon VPC	Yes	Yes	Yes
WLAN Management	Default number of managed AP	8	8	8
	Recommend max. AP in 1 AP Group	20	60	200
	Secure WiFi Service*7	Yes	Yes	Yes
	Maximum Number of Tunnel-Mode AP	10	18	130
	Maximum Number of Managed AP	40	72	520

Model		USG FLEX 200	USG FLEX 500	USG FLEX 700
Key Features				
Management & Connectivity	**Nebula Cloud Mode**	Yes	Yes	Yes
	Nebula Cloud Monitoring Mode	Yes	Yes	Yes
	Device HA Pro	N/A	Yes	Yes
	Link Aggregation (LAG)	N/A	Yes	Yes
	Hotspot Management*7	Yes	Yes	Yes
	Ticket printer support*9/ Support Q'ty (max.)	Yes (SP350E)/10	Yes (SP350E)/10	Yes (SP350E)/10
	Concurrent devices logins (default/max.)*7*8	200	200/300	500/2000
Power Requirements				
Power input		12 V DC, 2.5 A max.	12 V DC, 4.17 A	100-240 V AC, 50/60 Hz, 2.5 A max.
Max. power consumption (Watt Max.)		13.3	24.1	46
Heat dissipation (BTU/hr)		45.38	82.23	120.1
Physical Specifications				
Item	**Dimensions (WxDxH)(mm/in.)**	272 x 187 x 36/ 10.7 x 7.36 x 1.42	300 x 188 x 44/ 16.93 x 7.4 x 1.73	430 x 250 x 44/ 16.93 x 9.84 x 1.73
	Weight (Kg/lb.)	1.4/3.09	1.65/3.64	3.3/7.28
Packing	**Dimensions (WxDxH)(mm/in.)**	427 x 247 x 73/ 16.81 x 9.72 x 2.87	351 x 152 x 245/ 13.82 x 5.98 x 9.65	519 x 392 x 163/ 20.43 x 15.43 x 6.42
	Weight (kg/lb.)	2.23 (W/O bracket) 2.42 (W/ bracket)	2.83/6.24	4.8/10.58
Included accessories		• Power adapter • Rack mounting kit	• Power adapter • Power cord • Rack mounting kit	• Power cord • Rack mounting kit
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)		529,688	529,688	947,736
Acoustic Noise		N/A	24.5 dBA on < 25°C Operating temperature, 41.5 dBA on full FAN speed	24.5 dBA on < 25°C Operating temperature, 41.5 dBA on full FAN speed
Certifications				
EMC		FCC Part 15 (Class B), CE EMC (Class B), C-Tick (Class B), BSMI	FCC Part 15 (Class A), CE EMC (Class A), C-Tick (Class A), BSMI	FCC Part 15 (Class A), CE EMC (Class A), C-Tick (Class A), BSMI
Safety		LVD (EN60950-1), BSMI	LVD (EN60950-1), BSMI	LVD (EN60950-1), BSMI

*: This matrix with firmware ZLD5.37 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 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: AV (with Express Mode) and IDP 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: This is the recommend maximum number of concurrent logged-in devices.
*9: With Hotspot Management license support.
*10: The Speedtest result is conducted with 1 Gbps WAN link in real world and it is subject to fluctuate due to quality of the ISP link.
*11: USG FLEX 100 rev1 is adopting a new hardware design equipped with 4 x LAN/DMZ, 1 x WAN.

Wireless Specifications

Model		USG FLEX 100AX	USG FLEX 100W
Standard compliance		802.11 ax/ac/n/g/b/a	802.11 a/b/g/n/ac
Wireless frequency		2.4/5 GHz	2.4/5 GHz
Radio		2	2
SSID number		4	4
Maximum transmit power (Max. total channel)	**US (FCC) 2.4 GHz**	29.8 dBm, 2 antennas	25 dBm, 3 antennas
	US (FCC) 5 GHz	32.6 dBm, 2 antennas	25 dBm, 3 antennas
	EU (ETSI) 2.4 GHz	19.93 dBm (EIRP), 2 antennas	20 dBm (EIRP), 3 antennas
	EU (ETSI) 5 GHz	22.99 dBm (EIRP), 2 antennas	20 dBm (EIRP), 3 antennas
No. of antenna		2 detachable antennas	3 detachable antennas
Antenna gain		3 dbi @ 2.4 GHz/5 GHz	2 dBi @ 2.4 GHz 3 dBi @ 5 GHz
Data rate		• 2.4 GHz: up to 600 Mbps • 5 GHz: up to 1200 Mbps	• 2.4 GHz: up to 300 Mbps • 5 GHz: up to 866 Mbps
Frequency band	**2.4 GHz (IEEE 802.11 b/g/n)**	• USA (FCC): 2.412 to 2.462 GHz • Europe (ETSI): 2.412 to 2.472 GHz • TWN (NCC): 2.412 to 2.462 GHz	• USA (FCC): 2.412 to 2.462 GHz • Europe (ETSI): 2.412 to 2.472 GHz • TWN (NCC): 2.412 to 2.462 GHz
	5 GHz (IEEE 802.11 a/n/ac)	• USA (FCC): 5.150 to 5.250 GHz; 5.725 to 5.850 GHz • Europe (ETSI): 5.15 to 5.35 GHz; 5.470 to 5.725 GHz • TWN (NCC): 5.15 to 5.25 GHz; 5.725 to 5.850 GHz	• USA (FCC): 5.150 to 5.250 GHz; 5.250 to 5.350 GHz; 5.470to 5.725 GHz; 5.725 to 5.850 GHz • Europe (ETSI): 5.15 to 5.35 GHz; 5.470 to 5.725 GHz • TWN (NCC): 5.15 to 5.25 GHz; 5.25 to 5.35 GHz; 5.470 to 5.725 GHz; 5.725 to 5.850 GHz
Receive sensitivity	**2.4 GHz**	• 11 Mbps ≤ -99 dBm • 54 Mbps ≤ -95 dBm • HT20, MCS7 ≤ -90 dBm • HT40, MCS7 ≤ -86 dBm	• 11 Mbps ≤ -87 dBm • 54 Mbps ≤ -74 dBm • HT20 ≤ -71 dBm • HT40 ≤ -68 dBm
	5 GHz	• 54 Mbps ≤ -90 dBm • HT20, MCS7 ≤ -85 dBm • HT40, MCS7 ≤ -81 dBm • VHT20, MCS8 ≤ -90 dBm +/-2 dBm • VHT40, MCS9 ≤ -85 dBm +/-2 dBm • VHT80, MCS9 ≤ -68 dBm +/-2 dBm • HE20, MCS11 ≤ -61 dBm +/-2 dBm • HE40, MCS11 ≤ -58 dBm +/-2 dBm • HE80, MCS11 ≤ -55 dBm +/-2 dBm	• 54 Mbps ≤ -74 dBm • HT20, MCS23 ≤ -71 dBm • HT40, MCS23 ≤ -68 dBm • VHT20, MCS8 ≤ -66 dBm • VHT40, MCS9 ≤ -62 dBm • VHT80, MCS9 ≤ -59 dBm

Software Features

Security Service

Firewall
- Routing and transparent (bridge) modes
- Stateful packet inspection
- SIP NAT traversal
- H.323 NAT traversal*2
- ALG support for customized ports
- Protocol anomaly detection and protection
- Traffic anomaly detection and protection
- Flooding detection and protection
- DoS/DDoS protection

Unified Security Policy
- Unified policy management interface
- Support Content Filtering, Application Patrol, firewall (ACL)
- Firewall: SSL inspection*2
- Policy criteria: source and destination IP address, user group, time
- Policy criteria: zone, user*2

Intrusion Prevention System (IPS)
- Support both intrusion detection and prevention
- Support allowlist (whitelist) to deal with false positives involving known benign activity*2
- Support rate-based IPS signatures to protect networks against application-based DoS and brute force attacks*2
- Signature-based and behavior-based scanning
- Support exploit-based and vulnerability-based protection
- Support Web attacks like XSS and SQL injection
- Streamed-based engine
- Support SSL inspection*2
- Inspection on various protocols: HTTP, FTP, SMTP, POP3, and IMAP
- Inspection on various protocols: HTTPs, FTPs, SMTPs, POP3s, and IMAPs*2
- Customizable signature & protection profile*2
- 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
- Prioritize and throttle application
- 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
- Multiple file types supported
- Stream-based scan engine (Stream Mode)
- No file size limitation
- HTTP, FTP, SMTP, and POP3 protocol supported
- SSL inspection support*2
- Automatic signature update

Email Security*2
- Transparent mail interception via SMTP and POP3 protocols
- Spam and Phishing mail detection
- Block and Allow List support
- Supports DNSBL checking

URL Threat Filter
- Botnet C&C websites blocking
- Malicious URL blocking
- Supports External URL blacklist

Web Filtering
- HTTPs domain filtering
- SafeSearch support: Google, YouTube, and Microsoft Bing*2
- Allow List websites enforcement
- URL Block and Allow List with keyword blocking
- Customizable warning messages and redirect URL
- Customizable Content Filtering block page
- URL categories increased to 111
- CTIRU (Counter-Terrorism Internet Referral Unit) support
- Support DNS base filtering (domain filtering)

Geo Enforcer
- Geo IP blocking
- Geographical visibility on traffics statistics and logs
- IPv6 address support*2

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

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

Collaborative Detection & Response (CDR)
- Support Alert/Block/Quarantine containment actions
- Prevent malicious wireless clients network access with blocking feature
- Customizable warning messages and redirect URL
- Bypass by IP or MAC address with exempt list

VPN

IPSec VPN
- Key management: IKEv1 (x-auth, mode-config), IKEv2 (EAP, configuration payload)
- Encryption: DES, 3DES, AES (256-bit)
- Authentication: MD5, SHA1, SHA2 (512-bit)
- Perfect forward secrecy (DH groups) support 1, 2, 5, 14, 15-18, 20-21
- PSK and PKI (X.509) certificate support
- IPSec NAT traversal (NAT-T)
- Dead Peer Detection (DPD) and relay detection
- VPN concentrator
- Route-based VPN Tunnel Interface (VTI)
- VPN high availability (Failover, LB)
- GRE over IPSec*2
- NAT over IPSec
- L2TP over IPSec
- SecuExtender Zero Trust VPN Client
- Support native Windows, iOS/macOS and Android (StrongSwan) client provision*2
- Support 2FA Email/SMS*2
- Support 2FA Google Authenticator

SSL VPN*2
- Supports Windows and Mac OS X
- Supports full tunnel mode
- Supports 2-Factor authentication

Networking

Secure WiFi

- Secure Tunnel for Remote AP
- L2 access between home office and HQ (Secured Tunnel)
- GRE Tunnel for Campus AP
- Enforcing 2FA with Google Authenticator
- WPA2 Enterprise (802.1x) supported
- Wireless Storm Control
- Applicable regardless of the On premise/Nebula-managed mode of the USG FLEX

WLAN Management*2

- Supports AP Controller (APC) version 4.00
- 802.11ax WiFi 6 AP and WPA3 support
- 802.11k/v/r support
- Supports auto AP FW update
- Scheduled WiFi service
- Dynamic Channel Selection (DCS)
- Client steering for 5 GHz priority and sticky client prevention
- Auto healing
- Customizable captive portal page
- WiFi Multimedia (WMM) wireless QoS
- CAPWAP discovery protocol
- Multiple SSID with VLAN
- Supports ZyMesh
- Support AP forward compatibility
- Rogue AP Detection

Mobile Broadband*2

- WAN connection failover via 3G and 4G* USB modems
- Auto fallback when primary WAN recovers

IPv6 Support*2

- Dual stack
- IPv4 tunneling (6rd and 6to4 transition tunnel)
- SLAAC, static IP address
- DNS, DHCPv6 server/client
- Static/Policy route
- IPSec (IKEv2 6in6, 4in6, 6in4)

Connection

- Routing mode
- Bridge mode and hybrid mode*2
- Ethernet and PPPoE
- NAT and PAT
- NAT Virtual Server Load Balancing
- VLAN tagging (802.1Q)
- Virtual interface (alias interface)
- Policy-based routing (user-aware)*2
- Policy-based NAT (SNAT)
- GRE*2
- Dynamic routing (RIPv1/v2 and OSPF, BGP)*2
- DHCP client/server/relay
- Dynamic DNS support
- WAN trunk for more than 2 ports
- Per host session limit
- Guaranteed bandwidth
- Maximum bandwidth
- Priority-bandwidth utilization
- Bandwidth limit per user*2
- Bandwidth limit per IP
- Bandwidth management by application
- Link Aggregation support*1 *2

Management

Nebula Cloud Mode

- 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
- Central Device and Client Monitoring (Log and Statistics Information) and Reporting
- Security Profile Sync

Nebula Cloud Monitoring Mode

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

Authentication

- Local user database
- External user database: Microsoft Windows Active Directory, RADIUS, LDAP
- Cloud user database*3
- IEEE 802.1x authentication
- Captive portal Web authentication
- XAUTH, IKEv2 with EAP VPN authentication
- IP-MAC address binding
- SSO (Single Sign-On) support*2
- Supports 2-factor authentication (Google Authenticator, SMS*2/Email*2)

System Management

- Role-based administration
- Multi-lingual Web GUI (HTTPS and HTTP)
- Command line interface (console, web console, SSH and telnet)*2
- SNMP v1, v2c, v3
- System configuration rollback*2
- Configuration auto backup*2
- Firmware upgrade via FTP, FTP-TLS*2
- Firmware upgrade via Web GUI*2
- New firmware notify and auto upgrade
- Dual firmware images

Logging and Monitoring

- Comprehensive local logging
- Syslog (to up to 4 servers)
- Email alerts (to up to 2 servers)
- Real-time traffic monitoring
- Built-in daily report
- Cloud CNM SecuReporter

*: For specific models supporting the 3G and 4G dongles on the list, please refer to the Zyxel product page at 3G dongle document
*1: Supported models USG FLEX 500/700
*2: Only supported in On Premises Mode
*3: Only supported in Nebula Cloud Mode

Access Point Compatibility List

Secure Tunnel for Remote AP

Functions	Remote AP	Number of Tunnel Mode AP	Supported Remote AP
ATP	ATP100(W)	6	• WAX655E • WAX650S • WAX640S-6E • WAX630S • WAX620D-6E • WAX610D • WAX510D • WAC500 • WAC500H
	ATP200	10	
	ATP500	18	
	ATP700	66	
	ATP800	130	
USG FLEX	USG FLEX 100(AX/W)	6	
	USG FLEX 200	10	
	USG FLEX 500	18	
	USG FLEX 700	130	
VPN	VPN50	10	
	VPN100	18	
	VPN300	130	
	VPN1000	258	

Managed AP Service

Product	Unified AP		Unified Pro AP	
Models	• NWA5301-NJ • NWA5121-NI • NWA5123-NI • NWA5123-AC • NWA5123-AC HD*	• WAC5302D-S • WAC5302D-Sv2 • WAC500* • WAC500H* • WAX510D*	• WAC6103D-I • WAC6303D-S • WAC6502D-S • WAC6503D-S • WAC6552D-S • WAC6502D-E • WAC6553D-E	• WAX610D • WAX630S • WAX640S-6E • WAX620D-6E • WAX650S • WAX655E
Functions				
Central management	Yes		Yes	
Auto provisioning	Yes		Yes	
Data forwarding	Local bridge		Local bridge/Data tunnel	
ZyMesh	Yes		Yes	

*: Support both local bridge and data tunnel for data forwarding

Service Gateway Printer

Model	Feature	Supported Model			
SP350E 	• Buttons: 3 • Paper roll width: 58 (+0/-1) mm • Interface: 10/100 Mbps RJ-45 port • Power input: 12 V DC, 5 A max. • Item dimensions (WxDxH): 176 x 111 x 114 mm (6.93" x 4.37" x 4.49") • Item weight: 0.8 kg (1.76 lb.)	• USG FLEX 200 • USG FLEX 500 • USG FLEX 700	• VPN50 • VPN100 • VPN300 • VPN1000	• USG60(W) • USG110 • USG210 • USG310 • USG1100 • USG1900 • USG2200 Series	• ZyWALL 110 • ZyWALL 310 • ZyWALL 1100

*: Hotspot management licenses required

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	Single LC	1310 nm	10 km/10936 yd	Single Mode	Yes
SFP-SX-D	Gigabit	Single LC	850 nm	550 m/601 yd	Multi Mode	Yes
SFP-BX1310-10-D*1	Gigabit	Single LC	1310 nm (TX) 1490 nm (RX)	10 km/10936 yd	Single Mode	Yes
SFP-BX1490-10-D*1	Gigabit	Single LC	1490 nm (TX) 1310 nm (RX)	10 km/10936 yd	Single Mode	Yes

*: only USG2200-VPN supports 10-Gigabit SFP+
*1: SFP-BX1310-10-D and SFP-BX1490-10-D are must used in pairs.

For more product information, visit us on the web at www.zyxel.com

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