# ZYXEL
NETWORKS

USG FLEX 50
Security Firewall

The latest USG FLEX 50 is equipped with one single cloud management platform while strengthening the robust VPN connections across the branch offices and chain stores with an easy-to-use, integrated security solution designed specifically for your needs. USG FLEX 50 delivers the best-of-breed protection without the cost or complexity.

Benefits

Nebula Together

The USG FLEX 50 is now part of the Nebula cloud management family with the same easy management interface and streamlined configuration & updates. The network functions and management services are pushed to the cloud and are optimized for managing distributed networks.
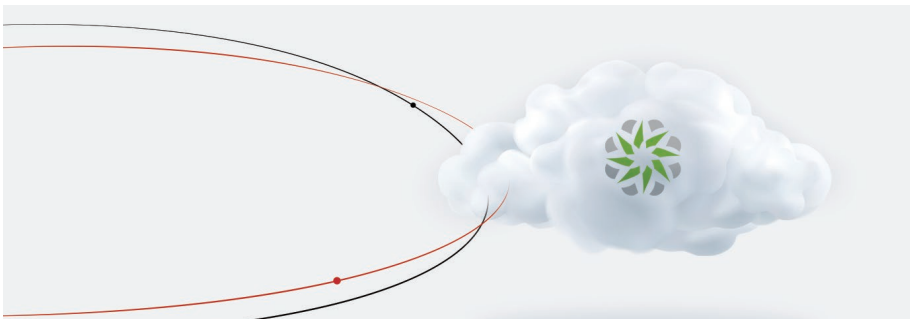
Flexible to adapt to On Premises or Nebula cloud

Manage all distributed networks from one single screen

Web Filtering protects you from undesirable content

Device Insight provides better visibility and control

Analytics report and enhanced insights

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Secure Retail/Branch Network

The USG FLEX 50 provides comprehensive VPN connection types including IKEv2, SSL & IPsec VPN. All offer customers secured remote connections. IPsec VPN hardware engine for high-efficiency VPN tunnel. VPN load balance/failover with IKEv2 ensures strong VPN reliability and security for your business.

The USG FLEX 50 is designed specifically for the needs of small business and branch locations, delivering enterprise-class security. Advanced networking and security features like Web Filtering, Security Profile Sync, and SecuReporter improves security by blocking access to malicious or risky websites, along with controlled access with integrated firewall policy for highly granular blocking and filtering, creating a unified security solution for both wired and wireless networks.
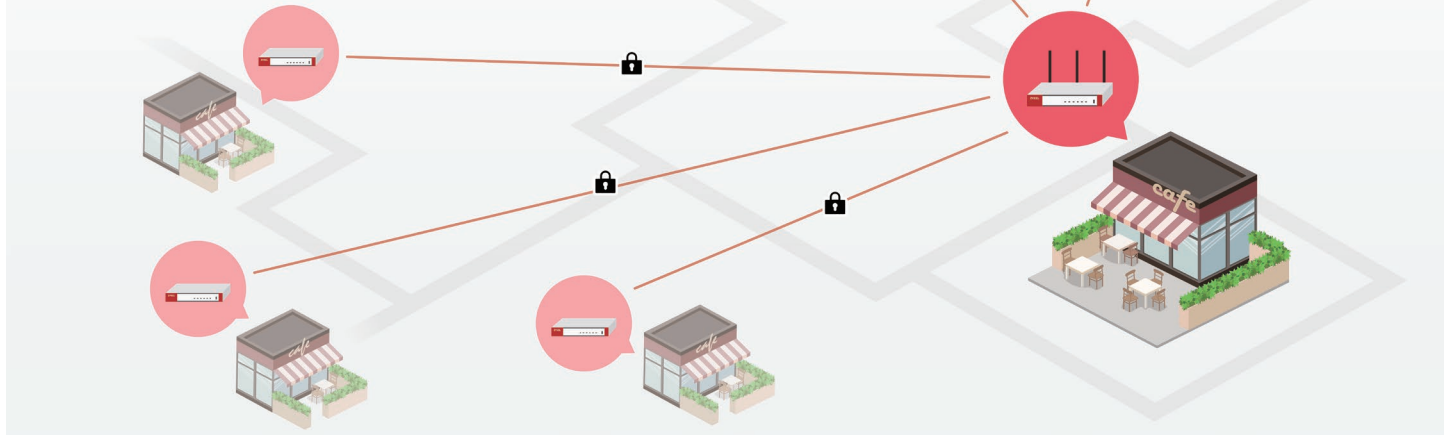
Centralized Provisioning from Nebula

With Zero-Touch deployment and simplified centralized management, installation and operation is no longer a hassle. After being registered to a network, the USG FLEX 50 will automatically be discovered when it's connected, then the preconfigured settings are automatically applied.

The USG FLEX 50 helps customers to comply with regulations by offering log archiving service without the need for additional hardware and software installation.

All from One Place with Ease

From access points, switches, security gateways and firewalls, all Nebula devices are managed through the cloud using an intuitive interface that allows you to configure, manage, and troubleshoot all distributed networks from one single screen without the complexity of remote site access.

Comprehensive Content Filtering Service

USG FLEX 50 delivers enhanced content 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, then 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 is not applicable to the destination domain.

Deep Insight Into All Your Devices

Device Insight gives you more visibility of your networks including wired, wireless, BYOD, and IoT devices. Enable it to identify devices with distinct security segments down to individual level. Device insights also detect vulnerabilities that are associated with those devices. It helps SMB(s) to reduce the number of human hours spent on investigation. Continuing with our goal of providing our customers with increased visibility, Zyxel SecuReporter gives your organization comprehensive endpoint inventory dashboard.

Analytics Report and Enhanced Insights

USG FLEX 50 dashboard gives user-friendly traffic summary and threat visual statistics. 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.
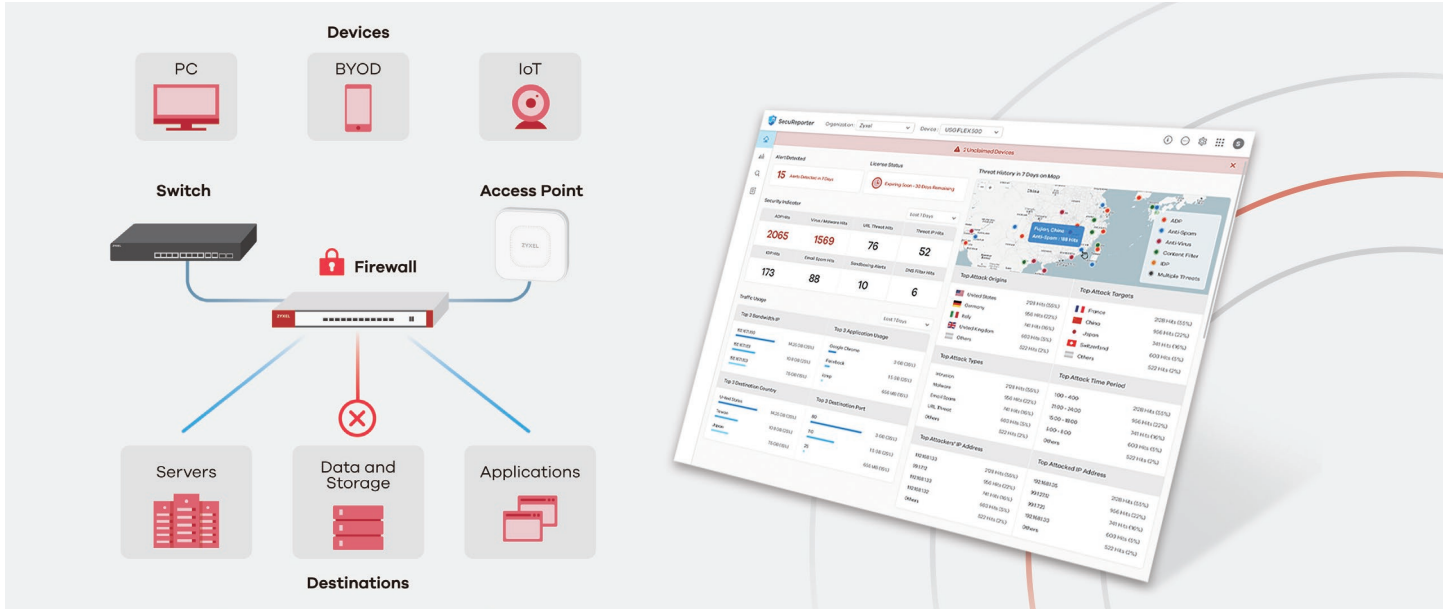
Zyxel One Network Experience

Aiming for relieving our customers from repetitive operations of deploying and managing a network, Zyxel One Network is designed to simplify the configuration, management, and troubleshooting, allowing our customers to focus on the business priorities. Zyxel One Network presents an easy-to-use tool, Zyxel One Network Utility(ZON Utility), to realize speed network setup. Zyxel Smart Connect allows Zyxel networking equipment to be aware and recognize each other and further facilitating the network maintenance via one-click remote functions such as factory reset or power cycling. Zyxel One Network redefines the network integration across multiple networking products from switch to WiFi AP and to Gateway.

Licenses

Licensed Pack

The USG FLEX 50 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 gives you some peace of mind at more control over your network updates and visibility, or even the most advanced management of cloud networking.

● On Premises Feature Included   ● Nebula Feature Included

	Service / Component	On Premises	On Cloud
Content Filter Pack	Web Filtering	●	●
	SecuReporter Premium	●	●
	Security Profile Sync		●
Nebula Professional Pack	Nebula Professional Pack Service		●
Nebula Plus Pack	Nebula Plus Pack Service		●

*: Please contact your local customer service if you can't use your content filter license with Nebula.

Specifications

Model	USG FLEX 50
Product photo	

Hardware Specifications	
10/100/1000 Mbps RJ-45 ports	4 x LAN/DMZ, 1 x WAN
USB ports	1
Console port	Yes (RJ-45)
Rack-mountable	N/A
Fanless	Yes
System Capacity & Performance*[1]	
SPI firewall throughput*[2] (Mbps)	350
VPN throughput (Mbps)	90
VPN IMIX Throughput (Mbps)*[3]	40
Max. TCP concurrent sessions*[4]	20,000
Max. concurrent IPsec VPN tunnels*[5]	10
Recommended gateway-to-gateway IPsec VPN tunnels	5
Concurrent SSL VPN users	5 / 15
VLAN interface	8
Speed Test Performance	
SPI firewall throughput*[6] (Mbps)	320
Key Features	
Security Service	**Web Filtering*[7]**	Yes
	SecuReporter Premium*[7]	Yes
	2-Factor Authentication	Yes
	Device Insight	Yes
	Security Profile Synchronize (SPS)*[7]	Yes

Model		USG FLEX 50
Key Features		
VPN Features	VPN	IKEv2, IPSec, SSL, L2TP/IPSec
	Microsoft Azure	Yes
	Amazon VPC	Yes
Connectivity Management	Nebula Cloud Managed Mode	Yes
	Easy Mode*8	Yes
	Concurrent devices logins*9	64
	Facebook Wi-Fi	Yes
Power Requirements		
Power input		12V DC, 2.0 A max.
Max. power consumption (Watt Max.)		12
Heat dissipation (BTU/hr)		40.92
Physical Specifications		
Item	Dimensions (WxDxH) (mm/in.)	216 x 143 x 33 / 8.50 x 5.63 x 1.30
	Weight (kg/lb.)	0.88 / 1.94
Packing	Dimensions (WxDxH) (mm/in.)	276 x 185 x 98 / 10.87 x 7.28 x 3.86
	Weight (kg/lb.)	1.41 / 3.11
Included accessories		• Power adapter • RJ-45 - RS-232 cable for console connection
Environmental Specifications		
Operating environment	Temperature	0°C to 40°C / 32°F to 104°F
	Humidity	10% to 90% (non-condensing)
Storage environment	Temperature	- 30°C to 70°C / - 22°F to 158°F
	Humidity	10% to 90% (non-condensing)
MTBF (hr)		655130
Certifications		
EMC		FCC Part 15 (Class B), IC, CE EMC (Class B), RCM, BSMI
Safety		BSMI, UL

*: This matrix with firmware ZLD5.3 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 measured based on RFC 2544 (1,424-byte UDP packets); IMIX: UDP throughput based on a combination of 64 byte, 512 byte and 1424 byte packet sizes.
*4: Maximum sessions measured using the industry standard IXIA IxLoad testing tool.
*5: Including Gateway-to-Gateway and Client-to-Gateway.
*6: 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.
*7: With Zyxel service license to enable or extend the feature capacity.
*8: Only supported in On-Premise mode.
*9: This is the recommend maximum number of concurrent logged-in devices.

Software Features

Security Service

Firewall
- ICSA-certified corporate firewall
- Routing and transparent (bridge) modes
- Stateful packet inspection
- SIP NAT traversal
- H.323 NAT traversal*1
- ALG support for customized ports
- Protocol anomaly detection and protection
- Traffic anomaly detection and protection
- Flooding detection and protection
- DoS/DDoS protection

Web Filtering
- HTTPs domain filtering
- SafeSearch support
- 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

Device Insight*1
- Agentless Scanning for discovery and classification of devicess
- Provide the dashboard to view all devices on the network, including wired, wireless, BYOD, IoT, and SecuExtender (remote endpoint)
- Extended view of the inventory on SecuReporter
- Visibility of network devices (switches, wireless access points, firewalls) from Zyxel or 3rd party vendors

VPN

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

SSL VPN
- Supports Windows and macOS
- Supports full tunnel mode
- Supports 2-Factor authentication

Networking

Mobile Broadband*1
- WAN connection failover via 3G and 4G* USB modems
- Auto fallback when primary WAN recovers

IPv6 Support*1
- Dual stack
- IPv4 tunneling (6rd and 6to4 transition tunnel)
- IPv6 addressing
- DNS, DHCPv6 server/client
- Bridge
- VLAN
- PPPoE
- Static/Policy route
- Session control
- Firewall and ADP
- IPSec (IKEv2 6in6, 4in6, 6in4)
- Content Filtering

Connection
- Routing mode
- Bridge mode and hybrid mode*1
- Ethernet and PPPoE
- NAT and PAT
- NAT Virtual Server Load Balancing
- VLAN tagging (802.1Q)
- Virtual interface (alias interface)
- Policy-based routing (user-aware)*1
- Policy-based NAT (SNAT)
- Dynamic routing (RIPv1/v2 and OSPF, BGP)*1
- 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
- Bandwidth limit per IP

Management

Nebula Cloud Management*2
- 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

Authentication
- Local user database
- Cloud user database*2
- Built-in user database
- External user database: Microsoft Windows Active Directory, RADIUS, LDAP
- IEEE 802.1x authentication
- Captive portal Web authentication
- XAUTH, IKEv2 with EAP VPN authentication
- Web-based authentication
- Forced user authentication (transparent authentication)
- IP-MAC address binding
- Supports 2-factor authentication
  ▪ Google Authenticator
  ▪ SMS/Email

System Management
- Role-based administration
- Multiple administrator logins

- Supports Cloud Helper
- Multi-lingual Web GUI (HTTPS and HTTP)
- Command line interface (console, Web console, SSH and telnet)*¹
- SNMP v1, v2c, v3
- System configuration rollback*¹
- Configuration auto backup*¹
- Firmware upgrade via FTP, FTP-TLS, and web GUI*¹
- Dual firmware images
- Cloud CNM SecuManager*¹

Logging/Monitoring
- Comprehensive local logging
- Syslog (send to up to 4 servers)

- Email alerts (send to up to 2 servers)
- Real-time traffic monitoring
- System status monitoring
- Built-in daily report
- Cloud CNM SecuReporter

Zyxel One Network
- ZON Utility
  - IP configuration
  - Web GUI access
  - Firmware upgrade
  - Password configuration
- Smart Connect
  - Location and System Name update
  - Discover neighboring devices

- One-click remote management access to the neighboring Zyxel devices

Subscription Services
- Content Filter Pack
  - Web Filtering
  - SecuReporter Premium
  - Security Profile Sync
- Nebula Professional Pack
- Nebula Plus Pack

*: For specific models supporting the 3G and 4G dongles on the list, please refer to the Zyxel product page at 3G dongle document.
*1: Only supported in On-Premise mode.
*2: Only supported in Cloud mode.

12/05/22

Datasheet USG FLEX 50