ZyXEL

Powerful, Robust Anti-malware Protection for Medium-sized Businesses

- **High-performance, high-value Next Generation Firewall (NGFW) for medium-sized businesses and campuses**

- **Anti-malware protection with firewall, anti-virus, anti-spam, content filtering, IDP, next-generation application intelligence and SSL inspection**

- **Robust SSL, IPSec and L2TP over IPSec VPN connectivity and VPN high availability (HA)**

- **Unified security policy streamlines the configuration and management efforts**

- **Built-in WLAN controller for centralized AP management and effortless WLAN scalability of up to 18 APs**

As business grows and network expands, more and more users and devices as well as new applications like cloud-based services would join the network. It means that high network availability for sustainable business, more workplace Wi-Fi and up-to-date regulations for application usages are eagerly needed. Without an effective solution to control, optimize or block social and some other Web applications, businesses would risk not only losing productivity but also exposing company network to new threats.

The new ZyXEL USG Extreme Series are Next Generation Firewalls (NGFW) designed to deliver high availability, anti-malware protection and consolidated policy enforcement for medium sized businesses and campuses. The ZyXEL USGs provides WAN and VPN load balancing and failover ensures nonstop business communications, while incorporating best-in-breed anti-virus, anti-spam, content filtering and application intelligence technology for effective application optimization and comprehensive network protection.

'NEXT-GEN' ZyXEL USG

ANTI-VIRUS · FIREWALL · ANTI-SPAM · WLAN CONTROLLER · VPN · CONTENT FILTERING · IDP · APPLICATION INTELLIGENCE

Benefits

Powerful and Robust

ZyXEL's USG Extreme Series is built on a powerful multi-core platform to deliver high performance that helps growing businesses to overcome challenges during the expansion. In order to satisfy the needs for always-online communications, the Series features multi-WAN load balancing/failover and a comprehensive mobile broadband USB modem support list for WAN backup operations. In addition, the Series supports IPSec load balancing and failover to provide additional resiliency for the most mission-critical VPN deployments.

Protection and optimization

The ZyXEL USG Extreme Series provides extensive anti-malware protection and effective control of Web applications—like Facebook, Google Apps and Netflix—with industry-leading firewall, anti-virus, anti-spam, content filtering, IDP and application intelligence. These security measures are enhanced with SSL inspection, which helps block threats that are hidden in SSL encrypted connections and facilitates deeper policy enforcement.

ZyXEL green

USG1900/1100
Unified Security Gateway— Extreme Series

ICSAlabs CERTIFIED IPSEC - BASIC | ICSAlabs CERTIFIED FIREWALL - SMB | POWERED BY KASPERSKY ANTI-VIRUS | IR6 READY

Streamlined management

Unified security policy streamlines the configuration of firewall and every security feature to offer faster, easier and more consistent policy management. From a single interface, users can apply all policy criteria to every UTM feature with reduced complexity. The integrated WLAN controller also enables users to management up to 18 APs from a centralized user interface.

Best TCO for Wi-Fi Expansion

Addressing the connectivity needs in the BYOD trend, the ZyXEL USG Extreme Series helps businesses deploying or expanding a managed Wi-Fi network with minimized efforts. Integrated with ZyXEL AP Controller technology, the Series enables businesses to easily scale up the WLAN and to provide seamless Wi-Fi coverage in places like meeting rooms and guest reception areas.

Model List

USG1900
Unified Security Gateway

• 8 x GbE RJ-45, 2 x USB (multi-WAN & mobile broadband)
• 7,000 Mbps firewall throughput
• 900 Mbps VPN throughput
• 650 Mbps IDP throughput
• 600 Mbps AV throughput
• 600 Mbps AV and IDP throughput

USG1100
Unified Security Gateway

• 8 x GbE RJ-45, 2 x USB (multi-WAN & mobile broadband)
• 6,000 Mbps firewall throughput
• 800 Mbps VPN throughput
• 550 Mbps IDP throughput
• 500 Mbps AV throughput
• 500 Mbps AV and IDP throughput

Feature Introduction

Multiple WANs

Multi-WAN & Mobile Broadband

The ZyXEL USG Extreme Series provides non-stop Internet uptime with multi-WAN and mobile broadband support. Multi-WAN works with two or more Ethernet WAN connections for active-active WAN load balancing or active-passive failover. Comprehensive mobile broadband USB modems are also supported for WAN backup.

VPN High Availability (HA)

VPN High Availability (HA)

ZyXEL USGs feature VPN HA to satisfy the demands of the most mission-critical VPN deployments. Supporting advanced GRE over IPSec technology, users can deploy two IPSec VPN tunnels for active-active VPN load balancing or active-passive failover.

Unified Security Policy

Unified Security Policy

Unified security policy offers object-based management and a unified configuration interface for firewall and all security-related policies. Users can easily apply all policy criteria to every UTM feature, reduce configuration time, and get more streamlined policy management.

Anti-Virus

Anti-Virus

Powered by Kaspersky SafeStream II gateway anti-virus, ZyXEL USGs provide comprehensive and real-time protection against malware threats before they enter the network. ZyXEL USGs can identify and block over 650,000 viruses right at the gate and provide high-speed scanning with stream-based virus scanning technology.

Anti-Spam

Anti-Spam

With a cloud-based IP reputation system, ZyXEL anti-spam can deliver accurate, zero-hour spam outbreak protection by analyzing up-to-the-minute sender reputation data from highly diverse traffic sources. It can detect spam outbreaks in the first few minutes of emergence regardless of spam language or format.

VPN

Robust VPN

ZyXEL USGs support high-throughput IPSec, L2TP over IPSec and SSL VPN for a wide range of site-to-client and site-to-site VPN deployments. Reinforced with the advanced SHA-2 encryption, the ZyXEL USGs provide the most secure VPN for business communications.

Integrated WLAN Controller

Integrated WLAN Controller

The integrated WLAN controller supports CAPWAP, and enables centralized authentication and access management of multiple APs in the network. The ZyXEL USG Extreme Series can manage 2 APs by default, and up to 18 APs with license upgrade.

Application Intelligence

Application Intelligence

ZyXEL's USG Extreme Series can identify, categorize and control over 3,000 social, gaming, productivity, and other Web applications and behaviors. Users can prioritize productive applications, throttle acceptable ones, and block unproductive applications to boost productivity and prevent bandwidth abuse.

SSL Inspection

SSL Inspection

SSL inspection enables the ZyXEL Extreme Series to provide not only comprehensive security, but also deeper policy enforcement. It enables the USG's application intelligence, IDP, content filtering and anti-virus to inspect traffic in SSL encrypted connections and block threats that usually go unseen.

Content Filtering

Content Filtering

ZyXEL content filtering helps screen access to websites that are not business related or malicious. With a massive, cloud-based database of over 140 billion URLs that are continuously analyzed and tracked, ZyXEL provides highly accurate, broad and instant protection against malicious Web content.
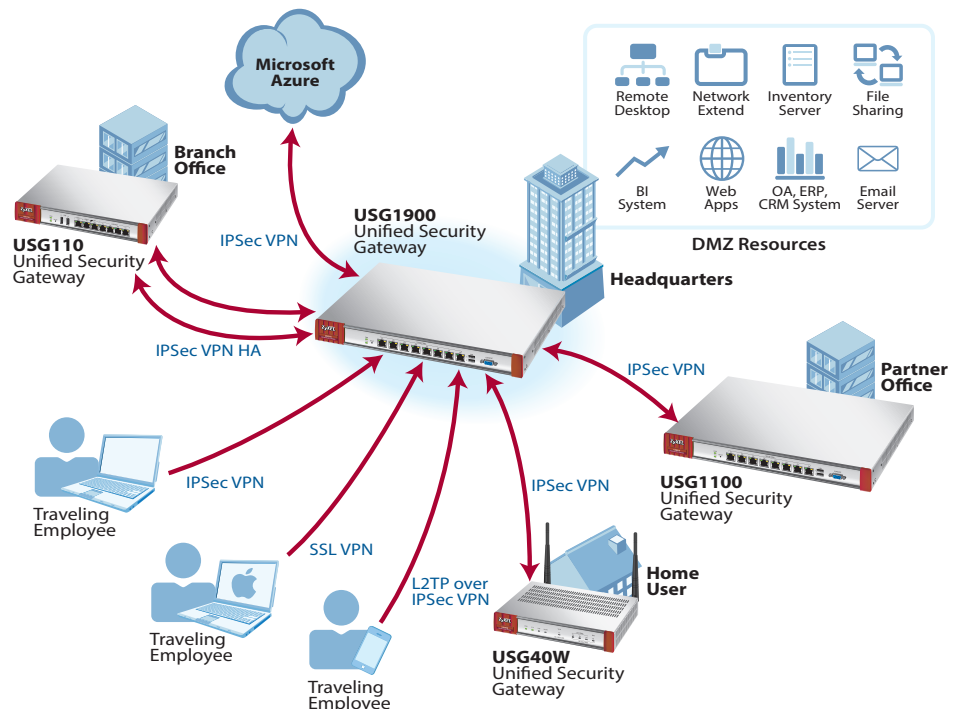
Application Diagram

Anti-malware protection and application optimization

- Enabling anti-virus, anti-spam and intrusion prevention, business networks gain deep, extensive protection against all types of malware threats
- Content filtering enables businesses to deny access to Websites that are malicious or not business-related
- Application intelligence technology not only enable businesses to block or throttle non-productive Web applications, but also optimize Web applications that increase productivity
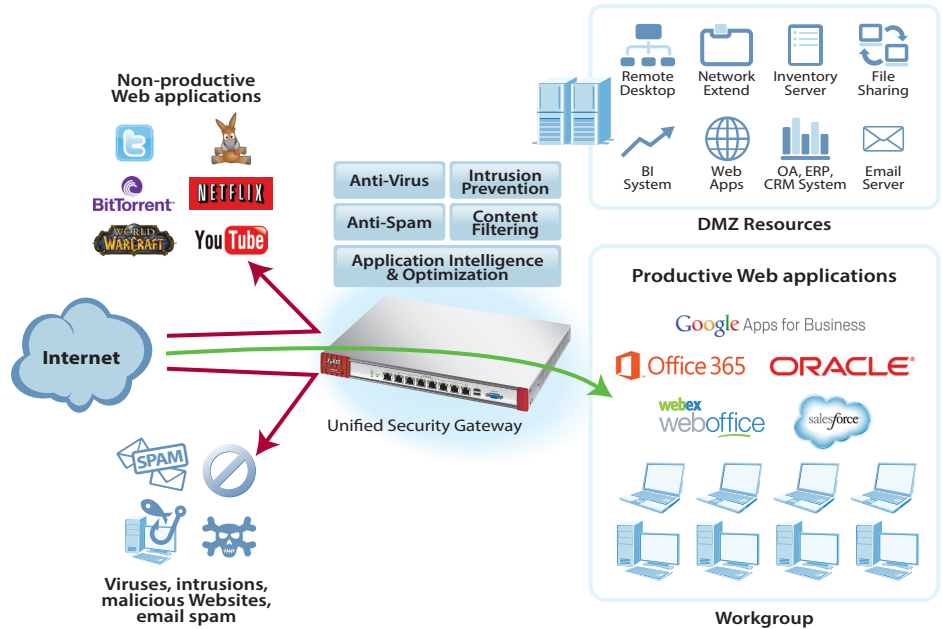
VPN application

- Branch offices, partners and home users can deploy ZyXEL USGs/ZyWALLs for site-to-site IPSec VPN connections
- Branch offices can additional deploy IPSec VPN HA (load balancing and failover) for always online VPN connectivity
- Remote users can securely access company resources with their computers or smartphones via SSL, IPSec and L2TP over IPSec VPN
- The headquarter USG/ZyWALL can also establish an IPSec VPN connection with Microsoft Azure for secured access to a variety of cloud-based applications

Specifications

Model	Extreme Series	
	USG1900	**USG1100**
Hardware Specifications		
10/100/1000 Mbps RJ-45 ports	8 (configurable)	8 (configurable)
USB ports	2	2
Console port	Yes (DB9)	Yes (DB9)
Rack-mountable	Yes	Yes
System Capacity & Performance[*1]		
SPI firewall throughput (Mbps)[*2]	7,000	6,000
VPN throughput (Mbps)[*3]	900	800
IDP throughput (Mbps)[*4]	650	550
AV throughput (Mbps)[*4]	600	500
UTM throughput (AV and IDP)[*4]	600	500
Unlimited user licenses	Yes	Yes
Max. TCP concurrent sessions[*5]	500,000	300,000
New TCP session rate	12,000	12,000
Max. concurrent IPsec VPN tunnels	2,000	1,000
Max. concurrent SSL VPN users	755	255
Included SSL VPN user no.	55	55
Customizable zones	Yes	Yes
IPv6 support	Yes	Yes
VLAN interface	128	128
WLAN Management		
AP Controller (APC) ver.	1.0	1.0
Managed AP number (default/max.)	2/18	2/18
Key Software Features		
Virtual Private Network (VPN)	Yes (IPSec, SSL, L2TP over IPSec)	Yes (IPSec, SSL, L2TP over IPSec)
Firewall	Yes	Yes
Anti-Virus (AV)	Yes	Yes
Anti-spam	Yes	Yes
Content Filtering (CF)	Yes	Yes
Application intelligence and optimization	Yes	Yes
Intrusion Detection and Prevention (IDP)	Yes	Yes
SSL inspection	Yes	Yes
Single Sign-On (SSO)	Yes	Yes
Power Requirements		
Power input	100 - 240 V AC, 50/60 Hz, 1.3 A max.	100 - 240 V AC, 50/60 Hz, 1.3 A max.
Max. power consumption (watt)	58.5	58.5
Physical Specifications		
Item — Dimensions (WxDxH)(mm/in.)	430 x 250 x 44/16.93 x 9.84 x 1.73	430 x 250 x 44/16.93 x 9.84 x 1.73
Item — Weight (kg/lb.)	3.3/7.28	3.3/7.28
Packing — Dimensions (WxDxH)(mm/in.)	519 x 392 x 163/20.43 x 15.43 x 6.42	519 x 392 x 163/20.43 x 15.43 x 6.42
Packing — Weight (kg/lb.)	4.8/10.58	4.8/10.58
Included accessories	· 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)
Operating — 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)
Storage — Humidity	10% to 90% (non-condensing)	10% to 90% (non-condensing)
MTBF (hr)	560,811.5	560,811.5
Certifications		
EMC	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

Note:
*1: Actual performance may vary depending on 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).
*4: AV 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.

Features Set

Software Features

Firewall
• ICSA-certified firewall (certification in progress)
• Routing and transparent (bridge) modes
• Stateful packet inspection
• User-aware policy enforcement
• SIP/H.323 NAT traversal
• ALG support for customized ports
• Protocol anomaly detection and protection
• Traffic anomaly detection and protection
• Flooding detection and protection
• DoS/DDoS protection

IPv6 Support
• IPv6 Ready gold logo (certification in progress)
• Dual stack
• IPv4 tunneling (6rd and 6to4 transition tunnel)
• IPv6 addressing
• DNS
• DHCPv6
• Bridge
• VLAN
• PPPoE
• Static routing
• Policy routing
• Session control
• Firewall and ADP
• IPSec VPN
• Intrusion Detection and Prevention (IDP)
• Application intelligence and optimization
• Content filtering
• Anti-virus, anti-malware
• Anti-spam

IPSec VPN
• ICSA-certified IPSec VPN (certification in progress)
• Encryption: AES (256-bit), 3DES and DES
• Authentication: SHA-2 (512-bit), SHA-1 and MD5
• Key management: manual key, IKEv1 and IKEv2 with EAP
• Perfect forward secrecy (DH groups) support 1, 2, 5
• IPSec NAT traversal
• Dead peer detection and relay detection
• PKI (X.509) certificate support
• VPN concentrator
• Simple wizard support
• VPN auto-reconnection
• VPN High Availability (HA): load-balancing and failover

• L2TP over IPSec
• GRE and GRE over IPSec
• NAT over IPSec
• ZyXEL VPN client provisioning

SSL VPN
• Supports Windows and Mac OS X
• Supports full tunnel mode
• Supports 2-step authentication
• Customizable user portal

Intrusion Detection and Prevention (IDP)
• Routing and transparent (bridge) mode
• Signature-based and behavior-based scanning
• Automatic signature updates
• Customizable protection profile
• Customized signatures supported
• SSL (HTTPS) inspection support

Application Intelligence and Optimization
• Granular control over the most important applications
• Identifies and controls over 3,000 applications and behaviors
• Supports over 15 application categories
• Application bandwidth management
• Supports user authentication
• Real-time statistics and reports
• SSL (HTTPS) inspection support

Anti-Virus
• Supports Kaspersky anti-virus signatures
• Identifies and blocks over 650,000 viruses
• Stream-based anti-virus engine
• HTTP, FTP, SMTP, POP3 and IMAP4 protocol support
• Automatic signature updates
• No file size limitation
• SSL (HTTPS) inspection support

Anti-Spam
• Transparent mail interception via SMTP and POP3 protocols
• Configurable POP3 and SMTP ports
• Sender-based IP reputation filter
• Recurrent Pattern Detection (RPD) technology
• Zero-hour virus outbreak protection
• X-Header support
• Blacklist and whitelist support
• Supports DNSBL checking
• Spam tag support
• Statistics report

Content Filtering
• Social media filtering
• Malicious Website filtering
• URL blocking and keyword blocking

• Blacklist and whitelist support
• Blocks java applets, cookies and ActiveX
• Dynamic, cloud-based URL filtering database
• Unlimited user license support
• Customizable warning messages and redirection URL
• SSL (HTTPS) inspection support

Unified Security Policy
• Unified policy management interface
• Supported UTM features: anti-virus, anti-spam, IDP, content filtering, application intelligence, firewall (ACL)
• 3-tier configuration: object-based, profile-based, policy-based
• Policy criteria: zone, source and destination IP address, user, time

WLAN Management
• ZyXEL AP Controller (APC) 1.0 compliant
• Client RSSI threshold to prevent sticky clients
• IEEE 802.1x authentication
• Wireless Layer 2 isolation
• Captive portal Web authentication
• Customizable captive portal page
• Dynamic guest accounts
• RADIUS authentication
• Wi-Fi Multimedia (WMM) wireless QoS
• CAPWAP discovery protocol
• ZyXEL Wireless Optimizer (ZWO) AP planning

Mobile Broadband
• WAN connection failover via 3G and 4G* USB modems
• Auto fallback when primary WAN recovers
4G USB modem support available in future firmware upgrades

Networking
• Routing mode, bridge mode and hybrid mode
• Ethernet and PPPoE
• NAT and PAT
• VLAN tagging (802.1Q)
• Virtual interface (alias interface)
• Policy-based routing (user-aware)
• Policy-based NAT (SNAT)
• Dynamic routing (RIPv1/v2 and OSPF)
• 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

Authentication
- Local user database
- Microsoft Windows Active Directory integration
- External LDAP/RADIUS user database
- XAUTH, IKEv2 with EAP VPN authentication
- Web-based authentication
- Forced user authentication (transparent authentication)
- IP-MAC address binding
- SSO (Single Sign-On) support

Device High Availability (HA)
- Active-passive failover mode
- Device failure detection and notification
- Supports ICMP and TCP ping check
- Link monitoring
- Configuration auto-sync

System Management
- Role-based administration
- Multiple administrator logins
- Multi-lingual Web GUI (HTTPS and HTTP)
- Command line interface (console, Web console, SSH and TELNET)

- SNMP v2c (MIB-II)
- System configuration rollback
- Firmware upgrade via FTP, FTP-TLS and Web GUI
- 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
- Advanced reporting with Vantage Report

Licenses

Security

Product	Kaspersky Anti-Virus	Application Intelligence & IDP	Content Filtering	Anti-Spam
USG1900	1 year 2 years	1 year 2 years	1 year 2 years	1 year 2 years
USG1100	1 year 2 years	1 year 2 years	1 year 2 years	1 year 2 years

Notes:
1. ZyXEL USGs can be purchased with bundled 12-month standard license (anti-virus, anti-span, content filtering and IDP) with extra 1-month trial.
2. Licenses can be easily activated, renewed and managed at myZyXEL.com2.0
3. License bundles may vary according to region. Please contact your local sales representative for more information.

VPN, Management and Reporting

Product	Managed APs	SecuExtender— SSL VPN Client	IPSec VPN Client	Vantage Report
USG1900	Add 8 APs	Add 50 clients	For 1 client For 5 clients For 10 clients For 50 clients	For 1 client For 5 clients For 10 clients For 50 clients
USG1100	Add 8 APs	Add 50 clients		

Access Point Compatibility List

Series	NWA3000-N Series	NWA5000 Series	NWA5120 Series
	Unified Pro Access Point	Managed Access Point	Unified Access Point
Models	NWA3160-N NWA3560-N NWA3550-N	NWA5160N NWA5560-N NWA5550-N	NWA5121-NI NWA5121-N NWA5123-NI
Functions			
Central management	Yes	Yes	Yes
Auto provisioning	Yes	Yes	Yes
Data forwarding	Local bridge	Local bridge	Local bridge

Accessories

Item	Description	Supported OS
IPSec VPN Client	IPSec VPN client software for the ZyWALL and USG Series with Easy VPN for zero-configuration remote access	• Windows XP (32-bit) • Windows Server 2003 (32-bit) • Windows Server 2008 (32/64-bit) • Windows Vista (32/64-bit) • Windows 7 (32/64-bit) • Windows 8 (32/64-bit)
SecuExtender— SSL VPN Client	SSL VPN client software for the ZyWALL and USG Series with auto-installation in Windows, and lite set up for MAC user	• Windows OS • MAC OS 10.7 or later

Notes:
1. A 30-day trial version of IPSec VPN client and SSL VPN client for MAC OS can be downloaded from official ZyXEL website. To continue using the application, please contact your regional sales representatives and purchase a commercial license for the application.
2. SSL VPN client for Windows OS is pushed from USG/ZyWALL device and launches automatically. It does not require a license key to activate the application.