

ZyXEL



Ultra-fast Performance for Tomorrow's VPN Deployments

- Comprehensive supports to IPv6
- Robust hybrid VPN (IPSec/SSL/L2TP over IPSec)
- High-performance SPI Firewall
- Bandwidth management
- More secure VPN connections with SHA-2 cryptographic
- Auto-provisioned client-to-site IPsec setup with Easy VPN
- Cloud helper provides the friendly firmware upgrade to ensure its authenticity and reliability.
- ZyXEL VPN Firewall conforms to the Payment Card Industry Data Security Standard (PCI DSS)

Networking brings convenience and efficiency to business environments; however it introduces significant security and safety concerns at the same time. Today, businesses or branch offices really need a complete yet affordable solution that not only bridges communications between two or more remote sites, but also connects multiple VPNs and ensures data security to prevent the network from threats.

Benefits

Safer, more reliable VPN connections

Faster processors today have vastly boosted the capabilities of attackers to decrypt VPN tunnels. Legacy VPN cryptographic algorithms like Message Digest 5 (MD5) and Secure Hash Algorithm 1 (SHA-1) are no longer sufficient to guarantee secure outbound communications. With supports to the more advanced Secure Hash Algorithm 2 (SHA-2), the VPN Firewall provides the safest VPN connections in its class to ensure maximum security for business communications.

The complete range of ZyXEL VPN Firewalls deliver reliable, non-stop VPN services with dual-WAN failover and fallback support. With two WAN connections—one primary and one for redundancy—the ZyXEL VPN Firewall automatically switches to the backup connection should the primary link fail, and automatically switches back to the primary connection once it is back online.

To support dynamic, mobile business operations in today's BYOD (bring your own device) business environments, the VPN Firewalls offer unlimited business mobility with Layer-2 Tunneling Protocol (L2TP) VPN for mobile devices. The VPN Firewall supports L2TP/IPSec VPN on a wide variety of mobile Internet devices running the iOS, Android and Windows mobile platforms.

Zero-configuration remote access

Virtual private networks provide businesses a secure and convenient way of sharing company resources with partners, customers, or employees on business trips. Yet typical VPN solutions are hard for non-technical users to configure, which greatly reduces their usability and convenience. The ZyXEL VPN Firewalls feature Easy VPN to provide auto-provisioned client-to-site IPsec VPN setup. A wizard is available with the ZyXEL IPsec VPN client-software that automatically retrieves the VPN configuration file from the remote ZyXEL VPN Firewall and completes the IPsec VPN setup in 3 simple steps. ZyXEL's Easy VPN lowers administration effort and allows partner, customers, or traveling employees to access company servers, email, or data centers easily and securely.



ZyXEL **one**network
Redefining network integration

ZyWALL
1100/310/110
USG20-VPN/
USG20W-VPN

VPN Firewall



Firewall



Ultra-Fast Speed



Multiple WANs



SSL Inspection



Easy Mode



Cloud Helper



PCI DSS Compliance



ICSA Labs
CERTIFIED IPSEC-BASIC



OneSecurity.com



Best TCO for Access Expansion

People expect network access regardless of time or location. As a result, hotspots are in demand in an ever-expanding assortment of locations. The ZyXEL VPN firewalls integrated with ZyXEL AP Controller technology enables users from a centralized user interface. In addition, ZyXEL Hotspot Management delivers a unified solution for business networks with user-friendly tools like Billing System, Walled Garden, Multiple Authentication, 3rd Party Social Login and User Agreement. With ZyWALL 310 and 1100 businesses can now deploy or expand a managed Wi-Fi network with minimal effort.

Swift and Secure Firmware Upgrades

Locating firmware updates — not to mention identifying correct versions for your device and managing their installation — can be a complex and confusing ordeal. The ZyXEL VPN Firewall solves this with its new Cloud Helper service. Cloud Helper provides a simple step to look for up-to-date firmware information. New firmware is immediately made available upon release from our official database to ensure its authenticity and reliability.

Simplified Management Procedure

Managing complex configuration settings can be confusing and time-consuming. ZyXEL USG 20-VPN and USG20W-VPN provides an “easy mode” setting in the GUI for entry-level and SOHO users. Easy mode provides an icon-based feature set and attractive dashboard to simplify management and monitoring of the device. Application and function settings also have integrated wizards for user-friendly setup. ZyXEL USG 20-VPN and USG20W-VPN easy mode helps entry-level users and SOHO users effortlessly take advantage of high-speed and secure networking.

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 Wi-Fi AP and to Gateway.

Stay Secure and Up-to-Date with OneSecurity.com

ZyXel provides frequent and timely updates in response to the latest security threats and advisories through OneSecurity.com — our free online service portal. OneSecurity.com offers informative network security resources and the know-how to assist businesses and IT administrators in keeping their network operations safe in the digital age. Information and resources can be found with one click via the GUI of ZyXEL USG Extreme and ZyWALL series products. IT staff can quickly and easily catch up on the latest threats, and then proceed to walkthroughs and troubleshooting protocols with the help of easy-to-follow FAQs — all provided to help users secure their networks and simplify management of our UTM products.

VPN Firewall Quick Finder

Model	USG20(W)-VPN	ZyWALL 110	ZyWALL 310	ZyWALL 1100
Description	SBs		SMBs	
Multi-WAN	Yes	Yes	Yes	Yes
Unified security policy	Yes	Yes	Yes	Yes
SSL inspection	-	Yes	Yes	Yes
Link Aggregation (LAG)	-	-	Yes	Yes
Port grouping	Yes	Yes	-	-
Device HA	-	Yes	Yes	Yes
Device HA Pro	-	Yes	Yes	Yes
Easy Mode	Yes	-	-	-
Cloud Helper	Yes	Yes	Yes	Yes
PCI DSS Compliance	Yes	Yes	Yes	Yes
Content Filtering 2.0*	Yes	Yes	Yes	Yes
Hotspot Management	-	-	Yes	Yes

* SSL Inspection must be enabled for Content Filtering 2.0 Safe Search to function properly.

License Features



Anti-Virus



Anti-Spam



Intrusion
Detection &
Prevention



Application
Intelligence



Content Filtering
2.0



Hotspot
Management



HA Pro

The ZyXEL VPN Firewall Series provides a complete feature set to perfectly fit different business requirements as well as to enable the maximum performance and security with an all-in-one appliance. Comprehensive network modularity also empowers IT professionals to customize the system to meet their individual needs.

Notes:

1. USG20(W)-VPN provides Anti-Spam & Content Filtering 2.0 only

2. Hotspot Management only supports for ZyWALL 310 and ZyWALL 1100

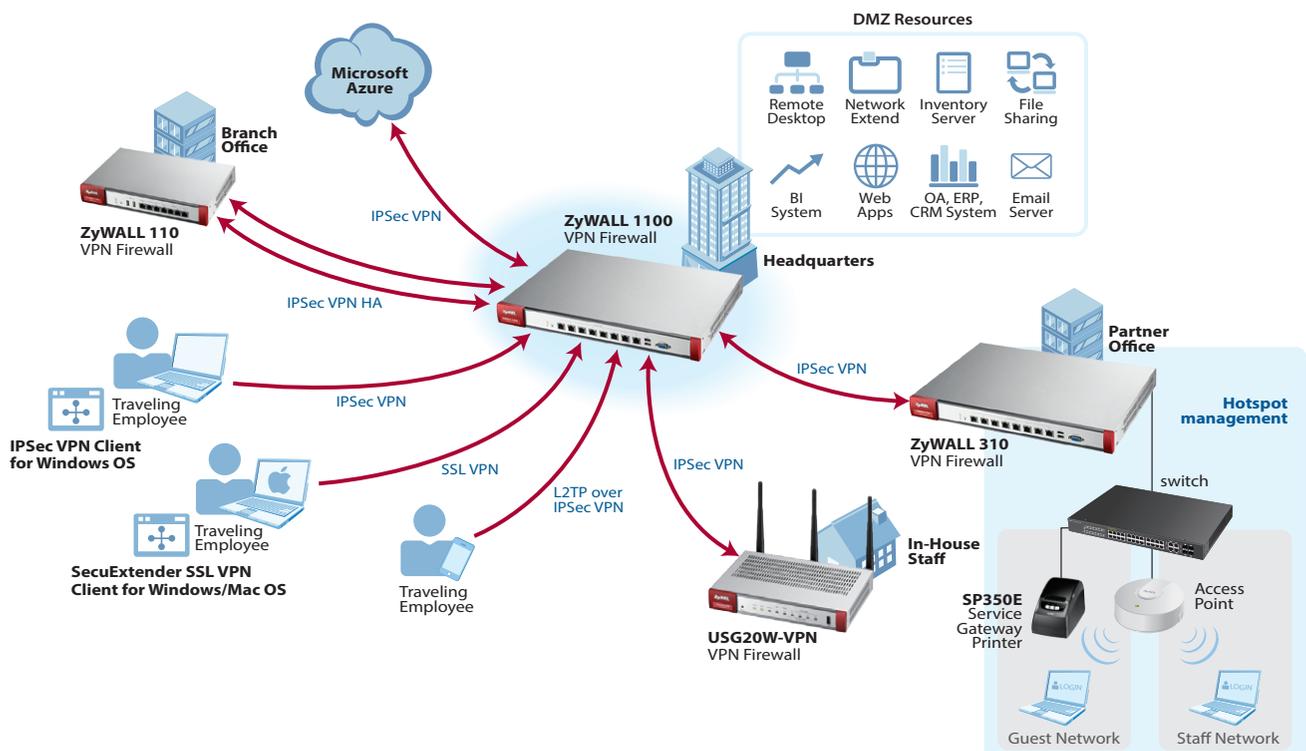
Key Applications

VPN application

- Branch offices, partners and home users can deploy ZyXEL USGs/ZyWALLs for site-to-site IPSec VPN connections
- Branch offices/In-house staff can additionally 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

Hotspot Management (ZyWALL 1100/310 support only)

- High speed internet access
- Tier of service
- Log record for regulatory compliance
- Premium security control
- Various Network access control (free or paid access, social login)



Specifications

Model	ZyWALL 1100	ZyWALL 310	ZyWALL 110	USG20-VPN	USG20W-VPN
Product photo					
Hardware Specifications					
10/100/1000 Mbps RJ-45 ports	8 (configurable)	8 (configurable)	2 x WAN, 1 x OPT, 4 x LAN/DMZ	1 x WAN, 1 x SFP, 4 x LAN/DMZ	1 x WAN, 1 x SFP, 4 x LAN/DMZ
USB ports	2	2	2	1	1
Console port	Yes (DB9)	Yes (DB9)	Yes (DB9)	Yes (RJ-45)	Yes (RJ-45)
Rack-mountable	Yes	Yes	Yes	-	-
Fanless	-	-	-	Yes	Yes
System Capacity & Performance¹					
SPI firewall throughput (Mbps)²	6,000	5,000	1,600	350	350
VPN throughput (Mbps)³	800	650	400	90	90
Concurrent Devices (default/max.)	800/1500	500/ 800	200/ 300	64	64
Max. TCP concurrent sessions⁵	500,000	200,000	60,000	20,000	20,000
Max. concurrent IPsec VPN tunnels⁶	1,000	300	100	10	10
Concurrent SSL VPN user no. (default/max.)	250/500	50/150	25/150	5/15	5/15
Customizable zones	Yes	Yes	Yes	Yes	Yes
IPv6 support	Yes	Yes	Yes	Yes	Yes
WLAN Management					
AP controller (APC) Support	Yes	Yes	Yes	-	-
Managed AP number (default/max.)	2/66	2/34	2/34	-	-
Wireless Specifications					
Standard compliance	-	-	-	-	802.11 a/b/g/n/ac
Wireless frequency	-	-	-	-	2.4 GHz / 5 GHz
Radio	-	-	-	-	1
SSID number	-	-	-	-	8
Maximum transmit power	US (FCC) 2.4 GHz	-	-	-	25dBm, 3 antennas
	US (FCC) 5 GHz	-	-	-	25dBm, 3 antennas
	EU (ETSI) 2.4 GHz	-	-	-	20dBm (EIRP), 3antennas
	EU (ETSI) 5 GHz	-	-	-	20dBm (EIRP), 3antennas
No. of antenna	-	-	-	-	3 Detachable antenna
Antenna gain	-	-	-	-	2dBi @2.4GHz, 3dBi @5GHz
Data rate	-	-	-	-	802.11n Up to 450Mbps 802.11ac Up to 1300Mbps
Receive sensitivity	2.4 GHz	-	-	-	11 Mbps ≤ -87 dBm 54 Mbps ≤ -74 dBm HT20, MCS15 ≤ -71 dBm HT40, MCS15 ≤ -67 dBm
	5 GHz	-	-	-	54 Mbps ≤ -74 dBm HT20, MCS23 ≤ -71 dBm HT40, MCS23 ≤ -68 dBm VHT20, MCS8 ≤ -66 dBm VHT40, MCS9 ≤ -62 dBm VHT80, MCS9 ≤ -59dBm

Model	ZyWALL 1100	ZyWALL 310	ZyWALL 110	USG20-VPN	USG20W-VPN	
Key Software Features						
Firewall	Yes	Yes	Yes	Yes	Yes	
Virtual private network (VPN)	Yes (IPSec, SSL, L2TP over IPSec)	Yes (IPSec, SSL, L2TP over IPSec)	Yes (IPSec, SSL, L2TP over IPSec)	Yes (IPSec, SSL, L2TP over IPSec)	Yes (IPSec, SSL, L2TP over IPSec)	
Bandwidth Management	Yes	Yes	Yes	Yes	Yes	
Logging and Monitoring	Yes	Yes	Yes	Yes	Yes	
SSL (HTTPS) inspection	Yes	Yes	Yes	-	-	
Unified Security Policy	Yes	Yes	Yes	Yes	Yes	
EZ Mode	-	-	-	Yes	Yes	
Cloud Helper	Yes	Yes	Yes	Yes	Yes	
Device HA	Yes	Yes	Yes	-	-	
Licenses Features (E-iCard required)						
Anti-Virus (AV)	Yes	Yes	Yes	-	-	
Intrusion detection and prevention (IDP) & Application Intelligence	Yes	Yes	Yes	-	-	
Anti-Spam	Yes	Yes	Yes	Yes	Yes	
Content Filtering 2.0 (CF2.0)⁷	Yes	Yes	Yes	Yes	Yes	
Device HA Pro	Yes	Yes	Yes	-	-	
Hostpot Management	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.	12 V DC, 3.33 A max.	12 V DC, 2.0 A max.	12 V DC, 2.0 A max.	
Max. power consumption (watt)	58.5	58.5	37.0	12.00	18.0	
Heat dissipation (BTU/hr)	199.61	199.61	126.25	40.92	61.38	
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	300 x 178 x 44/ 11.81 x 7 x 1.73	216 x 143 x 33 / 8.50 x 5.63 x 1.30	216 x 143 x 33 / 8.50 x 5.63 x 1.30
	Weight (kg/lb.)	3.3/7.28	3.3/7.28	2/4.41	1.04kg/2.29lb.	1.14kg/2.51lb. (antenna included)
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	245 x 152 x 351/ 9.65 x 5.98 x 13.82	276 x 185 x 98/ 10.87 x 7.28 x 3.86	276 x 185 x 98/ 10.87 x 7.28 x 3.86
	Weight (kg/lb.)	4.74/10.45	4.74/10.45	2.83/6.24	1.41/3.11	1.50/3.31
Included accessories	<ul style="list-style-type: none"> Power cord Rack mounting kit 	<ul style="list-style-type: none"> Power cord Rack mounting kit 	<ul style="list-style-type: none"> Power adaptor Power cord Rack mounting kit 	<ul style="list-style-type: none"> Power adaptor RJ45 -RS232 cable for console connection 	<ul style="list-style-type: none"> Power adaptor RJ45 -RS232 cable for console connection Antenna 	
Environmental Specifications						
Operating	Temperature	0°C to 40°C/32°F to 104°F				
	Humidify	10% to 90% (non-condensing)				
Storage	Temperature	-30°C to 70°C/-22°F to 158°F				
	Humidify	10% to 90% (non-condensing)				
MTBF (hr)	560,811.5	560,811.5	787,109.3	44,000.00	44,000.00	
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	FCC Part 15 (Class A), CE EMC (Class A), C-Tick (Class A), BSMI	FCC Part 15 (Class B), IC, CE EMC (Class B), RCM, BSMI	FCC Part 15 (Class B), IC, CE EMC (Class B), RCM, BSMI	
Safety	LVD (EN60950-1), BSMI	LVD (EN60950-1), BSMI	LVD (EN60950-1), BSMI	BSMI, UL	BSMI, UL	

Note:

* This matrix with firmware ZLD 4.20 or later.

*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.

*6: Including Gateway-to-Gateway and Client-to-Gateway.

*7: SafeSearch function in CF2.0 need to enable SSL Inspection firstly.

Features Set

Software Features

Firewall

- ICSA-certified firewall (certification pending)
- 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

- 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
- Content Filtering 2.0
- Anti-Spam

IPSec VPN

- ICSA-certified IPSec VPN
- Encryption: AES (256-bit), 3DES and DES
- Authentication: SHA-2 (512-bit), SHA-1 and MD5
- Support route-based VPN Tunnel Interface (VTI)
- Key management: manual key, IKEv1 and IKEv2 with EAP
- Perfect forward secrecy (DH groups) support 1, 2, 5, 14
- 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
- HTTP, FTP, SMTP, POP3 and IMAP4 protocol support
- Automatic signature updates

- No file size limitation
- Customizable user portal

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
- Bandwidth limit per user
- Bandwidth limit per IP
- GRE

WLAN Management (ZyWALL Series support only)

- Support AP controller version 1.97
- Wireless L2 isolation
- Supports auto AP FW update
- Scheduled Wi-Fi service
- Dynamic Channel Selection (DCS)
- Client steering for 5GHz priority and sticky client prevention
- Auto healing provides a stable and reliable coverage
- IEEE 802.1x authentication
- Captive portal Web authentication
- Customizable captive portal page
- RADIUS authentication
- Wi-Fi Multimedia (WMM) wireless QoS
- CAPWAP discovery protocol
- Multiple SSID with VLAN

Authentication

- Local user database
- Built-in 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

Logging/Monitoring

- Comprehensive local logging
- Syslog (send to up to 4 servers)
- E-mail alert (send to up to 2 servers)
- Real-Time traffic monitoring
- System status monitoring
- Built-in daily report
- Advanced reporting (Vantage Report)

System Management

- Role-based administration
- Multiple administrator logins
- Supports generating SHA2 Certificate
- Supports Cloud Helper (Firmware ZLD4.20)
- Multi-lingual Web GUI (HTTPS and HTTP)
- Command line interface (console, Web console, SSH and telnet)
- SNMP v1, v2c, v3
- System configuration rollback
- Firmware upgrade via FTP, FTP-TLS and Web GUI
- Dual firmware images
- Cloud CNM SecuManager*

* Available in Sept, 2016

Optional Security Services

- Kaspersky Anti-Virus
- Application Intelligence & IDP
- Content Filtering 2.0
- Anti-Spam

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

Hotspot Management (Firmware ZLD4.20)

- ZyWALL310 and ZyWALL1100 support only
- Integrated account generator, Web-based authentication portal and billing system
- Supports external RADIUS servers
- Per account bandwidth management
- User agreement login
- SP350E Service Gateway Printer enables oneclick account and billing generation
- Built-in billing system
 - Time-to-finish accounting mode
 - Accumulation accounting mode
- Supports PayPal online payment
- Marketing tool
 - Advertisement link
 - Walled garden
 - Portal page

Device High Availability Pro (HA Pro) (Firmware ZLD4.20)

- ZyWALL Series support only
- Device failure detection and notification
- Supports ICMP and TCP ping check
- Link monitoring
- Configuration auto-sync
- Dedicated Heartbeat Link
- Instant handover
- NAT/Firewall/VPN Sessions synchronization



ZyWALL 1100/310/110/USG20(W)-VPN VPN Firewall

Licenses

VPN

Product	SSL VPN Tunnels	SecuExtender SSL VPN Client ^{*1}	IPSec VPN Client
ZyWALL 1100 ZyWALL 310 ZyWALL 110	Add 5 Tunnels Add 10 Tunnels Add 50 Tunnels	For 1 client For 5 clients For 10 clients	For 1 client For 5 clients For 10 clients For 50 clients
USG20-VPN USG20W-VPN	Add 5 tunnels Add 10 tunnels		

*1: Support OS: MAC OS 10.7 or later

Security

Product	Kaspersky Anti-Virus	Application Intelligence & IDP	Content Filtering 2.0	Anti-Spam
ZyWALL 1100 ZyWALL 310 ZyWALL 110	1 year 2 years	1 year 2 years	1 year 2 years	1 year 2 years
USG20-VPN USG20W-VPN	-	-		

- Notes:
- Licenses can be easily activated, renewed and managed at myZyXEL.com 2.0
 - License bundles may vary according to region. Please contact your local sales representative for more information.
 - ZyWALL Series provides all security services with 30-day trial.
 - USG20(W)-VPN provide Content Filtering 2.0 and Anti-Spam services with 30-day trial.

Connectivity & Industrial

Product	Concurrent Device Upgrade ^{*1}	Hotspot Management ^{*1}	Managed APs	HA Pro ^{*1}	Vantage Report
ZyWALL 1100	100 nodes 300 nodes	1 year / One-Time	Add 4 APs Add 8 APs	One-Time	For 1 device For 5 devices For 25 devices For 100 devices
ZyWALL 310	100 nodes				
ZyWALL 110					
USG20-VPN USG20W-VPN	-	-	-		

*1: With firmware ZLD 4.20 or later

Access Point Compatibility List

Series	NWA5120 Series	NWA5000 Series	NWA3000-N Series	WAC6500 Series
	Unified Access Point	Managed Access Point	Unified Pro Access Point	Unified Pro Access Point
Models	NWA5121-NI NWA5121-N NWA5123-NI NWA5301-NJ NWA5123-AC	NWA5160N NWA5560-N NWA5550-N	NWA3160-N NWA3560-N NWA3550-N	WAC6503D-S WAC6502D-S WAC6502D-E WAC6553D-E WAC6103D-I
Functions				
Central management	Yes	Yes	Yes	Yes
Auto provisioning	Yes	Yes	Yes	Yes
Data forwarding	Local bridge	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	<ul style="list-style-type: none"> • 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) • Windows 10 (32/64-bit)
SecuExtender— SSL VPN Client 	SSL VPN client software could be installed in Windows and for MAC OS, the secured VPN connection will set-up between device and USG/ZyWALL Series	<ul style="list-style-type: none"> • Windows XP • Windows 7 (32/64-bit) • Windows 8/8.1 (32/64-bit) • Windows 10 (32/64-bit) • 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 can be downloaded from official ZyXEL website. It does not require a license key to activate the application.

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



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