HUAWEI USG6370/6380/6390 Next-Generation Firewalls

---Comprehensive Protection for Medium-Sized Businesses

Huawei USG6370/6380/6390 next-generation firewalls provide high-performance security protection for medium-sized businesses and branch offices with 800 to 1500 users. The firewalls provide VPN, intrusion prevention, and antivirus functions, and can ensure high performance even when multiple security functions are enabled. With comprehensive application control and advanced threat prevention, the firewalls provide cost-effective and all-around security protection for users.

Highlights

Comprehensive and integrated protection

- Multiple security functions, including firewall, VPN, intrusion prevention, and online behavior management, for complete versatility.
- Accurately identify more than 6000 applications to deliver fine-grained access control and improve the quality of key services.
- Detection and prevention of unknown threats, such as zero-day attacks, using sandboxing and the reputation system*.

Simple security management

- Predefined common-scenario defense templates to facilitate security policy deployment.
- Automatically generate policy-tuning suggestions based on risks in network traffic and applications in accordance with the least privilege principle.
- Intelligent detection of redundant and invalid policies.

Third-party proven security capability

- Obtained Firewall, IPS, IPsec, and SSL VPN certifications from the ICSA Labs.
- Obtained the highest-level CC certificate (EAL4+), ranking among the highest security levels in the world.

Intelligent link selection for Internet access

- Select the optimal egress based on services, applications, bandwidth, ISPs, and link priorities to fully utilize link resources, improve Internet access experience, and reduce bandwidth settlement fees.
- Detect link and tunnel quality in real time and intelligently adjust traffic distribution based on detection results to improve service quality and stability.
- Create a predefined ISP address library, from which the optimal Internet access link is selected to ensure a quality Internet access experience.

Deployment

Intranet Control and Security Isolation for medium-sized businesses

- Firewalls are deployed on the Internet egress and between enterprise departments to protect medium-sized businesses. The firewalls use firewall policy control, data filtering, and audit functions to monitor social network applications, prevent data leaks, and protect the enterprise network.
- Intrusion prevention is enabled on the firewall deployed on the Internet egress for real-time application-layer threat prevention.
- The firewall provides refined bandwidth management based on applications and website categories to prioritize bandwidth for mission-critical services.
- The firewall manages online user behavior based on URL categories and applications to block access to infected websites and websites irrelevant to work.
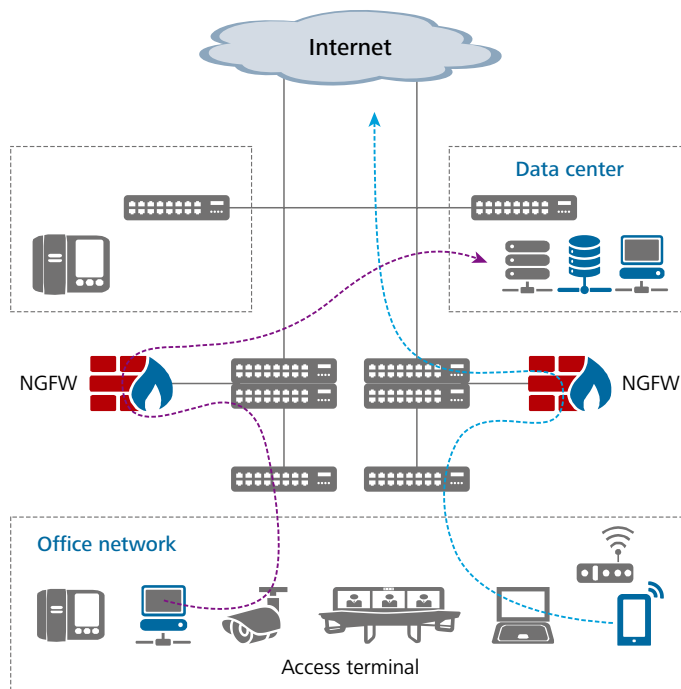
Hardware

USG6370/6380/6390
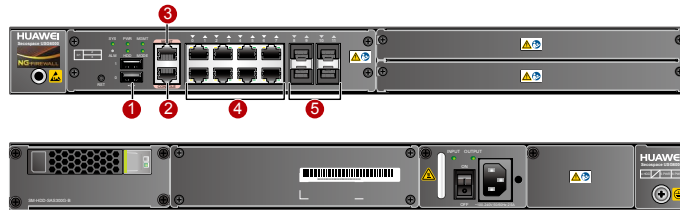
Interfaces
1. 2 x USB Ports
2. Console Port
3. 1 x GE (RJ45) Management Port
4. 8 x GE (RJ45) Ports
5. 4 x GE (SFP) Ports

Table 1. Wide Service Interface Cards (WSICs) for USG6300 Series

Feature	2XG8GE	8GE
Technical Specification		
Integrated Ports	2 x 10GE (SFP+), 8 x GE (RJ45)	8 x GE (RJ45)

Feature	8GEF	4GE-BYPASS
Technical Specification		
Integrated Ports	8 x GE (SFP)	4 x GE (RJ45) BYPASS

Software Features

Function	Description
Integrated Protection	Provides firewall, VPN, intrusion prevention, antivirus, data leak prevention, bandwidth management, Anti-DDoS, URL filtering, and anti-spam functions.
Application Identification and Control	Identifies common applications, supports application-specific access control, and combines application identification with intrusion prevention, antivirus, and data filtering to improve detection performance and accuracy.
Intrusion Prevention and Web Protection	Obtains the latest threat information in a timely manner for accurate detection and prevention of vulnerability exploits and web attacks, such as cross-site scripting and SQL injection attacks.
Antivirus	Rapidly detects over five million types of viruses through the daily-updated signature database.
Anti-APT*	Interworks with the sandbox to detect and block malicious files.
Data Leak Prevention	Inspects files to identify the file type, such as WORD, EXCEL, POWERPOINT, and PDF, based on file contents, and filters sensitive content.
Bandwidth Management	Manages per-user and per-IP bandwidth in addition to identifying service applications to prioritize mission-critical services and users through methods such as peak bandwidth and committed bandwidth, policy-based routing (PBR), and application forwarding priority adjustment.
URL Filtering	Can access a URL category database of over 120 million URLs to manage access by URL category, such as blocking malicious URLs and accelerating access to specified categories.
Behavior and Content Audit	Audits and traces the sources of URL access based on the user IP address and requested content.
Load Balancing	Supports server load balancing and link load balancing, fully utilizing existing network resources.
Intelligent Uplink Selection	Supports service-specific PBR and intelligent uplink selection based on multiple load balancing algorithms (for example, based on bandwidth ratio and link health status) in multi-homing scenarios.

Function	Description
VPN Encryption	Supports multiple highly reliable VPN features, such as IPsec VPN, SSL VPN, L2TP VPN, and GRE. Provides a VPN client (SecoClient,* developed in-house) for remote user access through SSL VPN, L2TP VPN, and L2TP over IPsec VPN. Supports IPsec intelligent link selection and dynamic IPsec tunnel switchover to improve link availability.
SSL Encrypted Traffic Detection	Serves as a proxy to detect and defend against threats in SSL-encrypted traffic using application-layer protection methods such as intrusion prevention, antivirus, data filtering, and URL filtering.
Anti-DDoS	Defends against more than 10 types of common DDoS attacks, including SYN flood and UDP flood attacks.
User Authentication	Supports multiple user authentication methods, including local, RADIUS, HWTACACS, SecurID, AD, CA, LDAP, and Endpoint Security.
Security Virtualization	Allows users to create and manage virtual security services, including firewall, intrusion prevention, and antivirus services, on the same physical device.
Policy Management	Provides predefined common-scenario defense templates to facilitate security policy deployment. Automatically evaluates risks in security policies and provides tuning suggestions. Detects redundant and conflicting policies to remove unnecessary and incorrect policies.
	Provides the firewall policy management solution in partnership with FireMon to reduce O&M costs and potential faults.*
Diversified Reports	Provides visualized and multi-dimensional reports by user, application, content, time, traffic, threat, and URL.[1]
	Generates network security analysis reports on the Huawei security center platform to evaluate the current network security status and provide optimization suggestions.*
Routing	Supports IPv4 static routes, policy-based routing, routing policies, multicast, RIP, OSPF, BGP, and IS-IS. Supports IPv6 static routes, policy-based routing, routing policies, RIPng, OSPFv3, BGP4+, and IPv6 IS-IS.
Working Mode and High Availability	Supports multiple working modes (transparent, routing, and hybrid), high availability modes (active/active and active/standby), and link high-availability technologies (IP-Link, BFD, and Link-group).
Device Management Capability	Built-in Web UI: Provides abundant device management and maintenance functions, including log report, configuration, and troubleshooting.
	eSight network management: Manages the performance, alarms, resources, configurations, and topology of the entire network.
	Agile Controller: Implements application- and user-specific security policy control in the Huawei SDN Agile Network Solution.*
	LogCenter security event management system: Provides functions such as security posture awareness, report management, log audit, and centralized alarm management.
	API: Supports both NETCONF* and RESTCONF northbound APIs to enable users to centrally configure and maintain firewalls via an upper-level controller to simply the O&M.

1: If no hard disk is inserted, you can view and export system and service logs. By inserting a hard disk, you can also view, export, customize, and subscribe to reports.

Functions marked with * are supported only in USG V500R001 and later versions.

Specifications

System Performance and Capacity

Model	USG6370	USG6380	USG6390
IPv4 Firewall Throughput[1] (1518/512/64-byte, UDP)	4/4/1.2 Gbit/s	6/6/1.2 Gbit/s	8/8/1.2 Gbit/s
IPv6 Firewall Throughput[1] (1518/512/84-byte, UDP)	4/4/1.6 Gbit/s	6/6/1.6 Gbit/s	8/8/1.6 Gbit/s
Firewall Throughput (Packets Per Second)	1.8 Mpps	1.8 Mpps	1.8 Mpps
Firewall Latency (64-byte, UDP)	25 μs	25 μs	25 μs
FW + SA* Throughput[2]	4 Gbit/s	5 Gbit/s	6 Gbit/s
FW + SA* Throughput (Realworld)[3]	2.5 Gbit/s	3 Gbit/s	3.5 Gbit/s
FW + SA + IPS Throughput[2]	2 Gbit/s	2 Gbit/s	2 Gbit/s
FW + SA + Antivirus Throughput[2]	2 Gbit/s	2 Gbit/s	2 Gbit/s
FW + SA + IPS + Antivirus + URL Throughput[2]	1.4 Gbit/s	1.6 Gbit/s	1.8 Gbit/s
FW + SA + IPS + Antivirus Throughput (Realworld)[3]	1 Gbit/s	1.2 Gbit/s	1.4 Gbit/s
Concurrent Sessions (HTTP1.1)[1]	4,000,000	4,000,000	4,000,000
New Sessions/Second (HTTP1.1)[1]	60,000	70,000	80,000
IPsec VPN Throughput[1] (AES-128 + SHA1, 1420-byte)	3 Gbit/s	3 Gbit/s	3 Gbit/s
Maximum IPsec VPN Tunnels (GW to GW)	4,000	4,000	4,000
Maximum IPsec VPN Tunnels (Client to GW)	4,000	4,000	4,000
SSL Inspection Throughput[4]	90 Mbit/s	90 Mbit/s	90 Mbit/s
SSL VPN Throughput[5]	200 Mbit/s	200 Mbit/s	200 Mbit/s
Concurrent SSL VPN Users (Default/Maximum)	100/1,000	100/1,000	100/1,000
Security Policies (Maximum)	15,000	15,000	15,000
Virtual Firewalls (Default/Maximum)	10/100	10/100	10/100
URL Filtering: Categories	More than 130		
URL Filtering: URLs	Can access a database of over 120 million URLs in the cloud		
Automated Threat Feed and IPS Signature Updates	Yes, an industry-leading security center from Huawei (http://sec.huawei.com/sec/web/index.do)		
Third-Party and Open-Source Ecosystem[6]	Open APIs for integration with third-party products through RESTCONF and NETCONF interfaces Other third-party management software based on SNMP, SSH, and syslog Collaboration with third-party tools, such as FireMon Collaboration with Anti-APT solution		
Centralized Management	Centralized configuration, logging, monitoring, and reporting is performed by Huawei eSight and LogCenter		

Model	USG6370	USG6380	USG6390
VLANs (maximum)	4,094		
Virtual Interfaces (maximum)	1,024		
High Availability Configurations	Active/Active, Active/Standby		

1. Performance is tested under ideal conditions based on RFC 2544 and RFC 3511. The actual result may vary with deployment environments.
2. Antivirus, IPS, and SA performances are measured using 100 KB of HTTP files.
3. Throughput is measured with the Enterprise Traffic Model.
4. SSL inspection throughput is measured with IPS-enabled and HTTPS traffic using TLS v1.2 with AES256-SHA.
5. SSL VPN throughput is measured using TLS v1.2 with AES128-SHA.
6. USG6000 V100R001 supports only the RESTCONF interface and cannot interwork with sandbox or third-party tools.
*SA indicates Service Awareness.

Hardware Specifications

Model	USG6370	USG6380	USG6390
Dimensions (H x W x D) mm	44.4 x 442 x 421		
Form Factor/ Height	1U		
Fixed Interfaces	8 x GE (RJ45) + 4 x GE (SFP)		
USB2.0 Port	Supported		
Expansion Slot	2 WSIC*		
Expansion I/O	WSIC: 2 x 10 GE (SFP+) + 8 x GE (RJ45), 8 x GE (RJ45), 8 x GE (SFP), 4 x GE (RJ45) BYPASS		
Maximum Number of Interfaces	24 x GE (RJ45) + 4 x GE (SFP) + 4 x 10GE (SFP+) or 20 x GE (SFP) + 8 × GE (RJ45)		
MTBF	11.96 years		
Weight (Full Configuration)	8.6 kg		
Local Storage	Optional. Supports a 300 GB hard disk (The hard disk is hot-swappable, but the hard disk card is not.)		
AC Power Supply	100V to 240V, 50/60Hz		
Power Consumption (Average/Maximum)	56.13W/133.74W		
Heat Dissipation	456 BTU/h		
Power Supplies	Single 170W AC power supply; optional dual AC power supplies		
Operating Environment (Temperature/Humidity)	Temperature: 0°C to 45°C (without optional HDD); 5°C to 40°C (with optional HDD) Humidity: 5% to 95% (without optional HDD), non-condensing; 5% to 90% (with optional HDD), non-condensing		
Non-operating Environment	Temperature: -40°C to +70°C Humidity: 5% to 95% (without optional HDD), non-condensing; 5% to 90% (with optional HDD), non-condensing		
Operating Altitude (maximum)	5,000 meters (without optional HDD); 3,000 meters (with optional HDD)		
Non-operating Altitude (maximum)	5,000 meters (without optional HDD); 3,000 meters (with optional HDD)		
Noise	63 dBA		

*WISC is not hot-swappable.

Certifications

Certifications	
Software	ICSA Labs: Firewall, IPS, IPsec, SSL VPN CC: EAL4+
Hardware	CB, CE-SDOC, ROHS, REACH&WEEE(EU), RCM, ETL, FCC&IC, VCCI, BSMI

Regulatory, Safety, and EMC Compliance

Certifications	
Regulatory Compliance	Products comply with CE markings per directives 2014/30/EU and 2014/35/EU.
Safety	• UL 60950-1 • CSA-C22.2 No. 60950-1 • EN 60950-1 • IEC 60950-1
EMC: Emissions	• EN 55022 Class A • ETSI EN 300 386 • IEC 61000-3-2/EN 61000-3-2 • IEC 61000-3-3/EN 61000-3-3 • FCC CFR47 Part 15 Subpart B Class A • ICES-003 Class A • VCCI V-3 Class A • CNS 13438 Class A
EMC: Immunity	• EN 55024 • ETSI EN 300 386 • CNS 13438 Class A

Ordering Guide

Product	Model	Description
USG6370	USG6370-AC	USG6370 AC Host(8GE(RJ45)+4GE(SFP), 4GB Memory, 1 AC Power)
USG6370	USG6370-BDL-AC	USG6370 AC Host(8GE(RJ45)+4GE(SFP), 4GB Memory, 1 AC Power, with IPS-AV-URL Function Group Update Service Subscribe 12 Months)
USG6380	USG6380-AC	USG6380 AC Host(8GE(RJ45)+4GE(SFP), 4GB Memory, 1 AC Power)
USG6380	USG6380-BDL-AC	USG6380 AC Host(8GE(RJ45)+4GE(SFP), 4GB Memory, 1 AC Power, with IPS-AV-URL Function Group Update Service Subscribe 12 Months)
USG6390	USG6390-AC	USG6390 AC Host(8GE(RJ45)+4GE(SFP), 4GB Memory, 1 AC Power)

Product	Model	Description
USG6390	USG6390-BDL-AC	USG6390 AC Host(8GE(RJ45)+4GE(SFP), 4GB Memory, 1 AC Power, with IPS-AV-URL Function Group Update Service Subscribe 12 Months)

Business Module Group

WSIC	WSIC-8GE	8GE Electric Ports Interface Card
WSIC	WSIC-4GEBYPASS	4GE Electric Ports Bypass Card
WSIC	WSIC-8GEF	8GE Optical Ports Interface Card
WSIC	WSIC-2XG8GE	2*10GE Optical Ports+8GE Electric Ports Interface Card

Hard Disk Group

HDD	SM-HDD-SAS300G-B	300GB 10K RPM SAS Hard Disk for 1U rack Gateway

Power Module

Power	Power-AC-B	170W AC power module

Function License

Virtual Firewall	LIC-VSYS-10-USG6000	Quantity of Virtual Firewall (10 Vsys)
Virtual Firewall	LIC-VSYS-20-USG6000	Quantity of Virtual Firewall (20 Vsys)
Virtual Firewall	LIC-VSYS-50-USG6000	Quantity of Virtual Firewall (50 Vsys)
Virtual Firewall	LIC-VSYS-100-USG6000	Quantity of Virtual Firewall (100 Vsys)
SSL VPN Concurrent Users	LIC-SSL-100-USG6000	Quantity of SSL VPN Concurrent Users(100 Users)
	LIC-SSL-200-USG6000	Quantity of SSL VPN Concurrent Users(200 Users)
	LIC-SSL-500-USG6000	Quantity of SSL VPN Concurrent Users(500 Users)
	LIC-SSL-1000-USG6000	Quantity of SSL VPN Concurrent Users(1000 Users)

NGFW License

IPS Update Service	LIC-IPS-12-USG6300-03	IPS Update Service Subscribe 12 Months(Applies to USG6370/80)
	LIC-IPS-36-USG6300-03	IPS Update Service Subscribe 36 Months(Applies to USG6370/80)
	LIC-IPS-12-USG6300-04	IPS Update Service Subscribe 12 Months(Applies to USG6390)
	LIC-IPS-36-USG6300-04	IPS Update Service Subscribe 36 Months(Applies to USG6390)
URL Filtering Update Service	LIC-URL-12-USG6300-03	URL Filtering Update Service Subscribe 12 Months(Applies to USG6370/80)
	LIC-URL-36-USG6300-03	URL Filtering Update Service Subscribe 36 Months(Applies to USG6370/80)
	LIC-URL-12-USG6300-04	URL Filtering Update Service Subscribe 12 Months(Applies to USG6390)
	LIC-URL-36-USG6300-04	URL Filtering Update Service Subscribe 36 Months(Applies to USG6390)

Product	Model	Description
Anti-Virus Update Service	LIC-AV-12-USG6300-03	Anti-Virus Update Service Subscribe 12 Months(Applies to USG6370/80)
	LIC-AV-36-USG6300-03	Anti-Virus Update Service Subscribe 36 Months(Applies to USG6370/80)
	LIC-AV-12-USG6300-04	Anti-Virus Update Service Subscribe 12 Months(Applies to USG6390)
	LIC-AV-36-USG6300-04	Anti-Virus Update Service Subscribe 36 Months(Applies to USG6390)
IPS-AV-URL Function Group	LIC-IPSAVURL-12-USG6300-03	IPS-AV-URL Function Group Subscribe 12 Months(Applies to USG6370/80)
	LIC-IPSAVURL-36-USG6300-03	IPS-AV-URL Function Group Subscribe 36 Months(Applies to USG6370/80)
	LIC-IPSAVURL-12-USG6300-04	IPS-AV-URL Function Group Subscribe 12 Months(Applies to USG6390)
	LIC-IPSAVURL-36-USG6300-04	IPS-AV-URL Function Group Subscribe 36 Months(Applies to USG6390)

Basic License

Content Filtering	LIC-CONTENT	Content Filtering Function

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