

Eudemon1000E-G8

Next Generation Firewalls



Overview

The Eudemon1000E-G8 is a new Next-generation Firewall product, developed by Huawei to meet the needs of carriers, enterprises, and next-generation data centers. It combines industry-leading security technologies such as access control, intrusion prevention (IPS), anti-virus (AV), URL filtering, anti-spam, and data loss prevention with rich security, robust processing and carrier-class reliability. Inheriting the Eudemon series' outstanding firewall, VPN, and routing features, it helps you build a fast, efficient, and secure network.

Product Highlights

Comprehensive and Integrated Protection

- Integrates the traditional firewall, VPN, intrusion prevention, antivirus, data leak prevention, bandwidth management, URL filtering, and online behavior management functions all in one device.
- Implements refined bandwidth management based on applications and websites, preferentially forwards key services, and ensures bandwidth for key services.

More Comprehensive Defense

- The built-in traffic probe of a firewall extracts traffic information and reports it to the CIS (Cybersecurity Intelligence System), a security big data analysis platform developed by Huawei. The CIS analyzes threats in the traffic, without decrypting the traffic or compromising the device performance. The threat identification rate is higher than 90%.
- The deception system proactively responds to hacker scanning behavior and quickly detects and records malicious behavior, facilitating forensics and source tracing.

Easy Security Management

- Rapid deployment security policies using scenario template.
- Complies with the minimum permission control principle and automatically generates policy tuning suggestions based on network traffic and application risks.

- Analyzes the policy matching ratio and discovers redundant and invalid policies to remove policies and simplify policy management.
- Interoperate with policy management platform to provide industry-leading security policy management solution.
- Supports Huawei SecoManger to achieve a unified configuration, management and maintenance of all devices.

High Performance

- Uses the network processing chip based on the ARM architecture, improving forwarding performance significantly.
- Enables chip-level pattern matching and accelerates encryption/decryption, improving the performance for processing IPS, antivirus, and IPSec services.

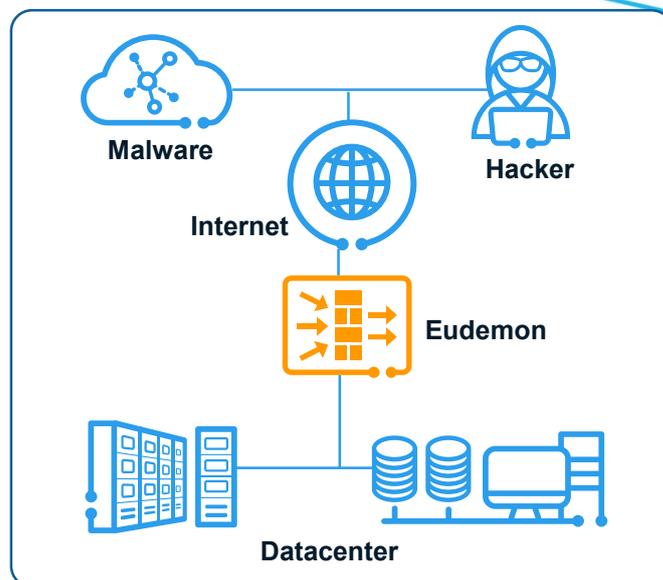
High Port Density

- The device has multiple types of interfaces, such as 40G, 10G, and 1G interfaces. Services can be flexibly expanded without extra interface cards.

Deployment

External Threat Prevention

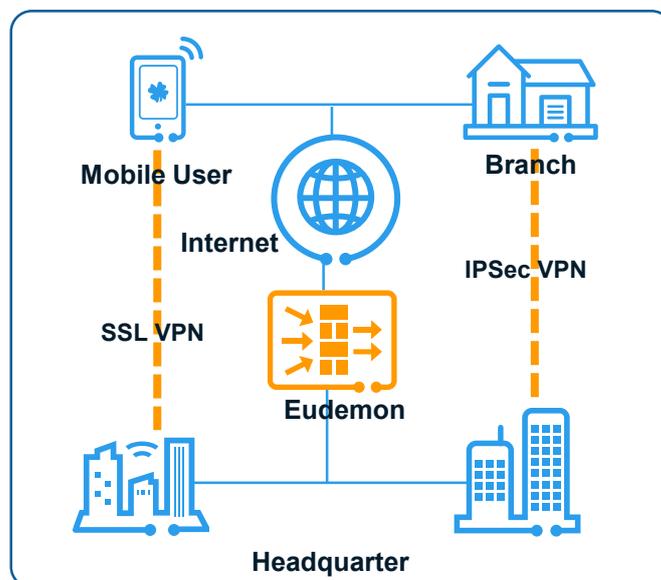
- Coming along with the abundant Internet resources are threats such as DDoS attacks, malicious intrusions, and viruses.
- The capabilities of supporting large numbers of concurrent connections and new connections per second help to combat the numerous DDoS attacks. Empowered by advanced IPS and anti-virus technologies as well as vulnerability-based and real-time updated signature database, the Eudemon 1000E-G series implements near-zero false positives and negatives and a detection ratio of higher than 99%; defends against diversified threats from the Internet, and ensures the security of the intranet .



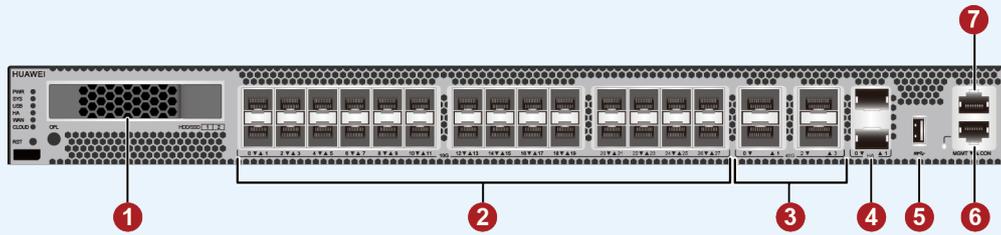
Network Isolation and VPN

Interconnection

- Network areas are not clearly divided, access control is insufficient, and the data transmitted between mobile employees or branches and the headquarters is likely to be intercepted or tampered.
- Delivers high throughput to avoid bottleneck at network borders, supports security zones to clearly divide networks, offers flexible packet filtering policies to accurately control communication, and encapsulates and checks packets of VPN users to ensure the security of data communication.



Hardware



- 1. HDD/SSD Slot
- 2. 28 x 10GE SFP+ Ports¹
- 3. 4 x 40GE QSFP+ Ports²
- 4. 2 x HA SFP+ Ports
- 5. 1 x USB3.0 Port
- 6. 1 x GE Management Port
- 7. Console Port

Note:
 1. The 10GE ports of XGigabitEthernet0/0/20~XGigabitEthernet0/0/27 are not available when 40GE ports of 40GE0/0/2~40GE0/0/3 are used.
 2. 40GE0/0/2 to 40GE0/0/3 ports are disabled by default.

Software Features

Feature	Description
Integrated protection	Integrates firewall, VPN, intrusion prevention, antivirus, data leak prevention, bandwidth management, anti-DDoS, URL filtering, and anti-spam functions. Provides a global configuration view, and manages policies in a unified manner.
Application identification and control	Identifies over 6000 applications and supports the access control granularity down to application functions. The firewall combines application identification with intrusion detection, antivirus, and data filtering, improving detection performance and accuracy.
Intrusion prevention and web protection	Accurately detects and defends against vulnerability-specific attacks based on up-to-date threat information. The firewall can defend against web-specific attacks, including SQL injection and XSS attacks.
Antivirus	Rapidly detects over 5 million types of viruses based on the daily-updated virus signature database.
Anti-APT	Collaborates with the local or cloud sandbox to detect and block malicious files. Encrypted traffic does not need to be decrypted. The firewall can work with the big data analysis platform CIS to detect threats in encrypted traffic. The firewall can proactively respond to malicious scanning behavior and work with the big data analysis platform CIS to analyze behavior, quickly detect and record malicious behavior, and protect enterprises against threats in real time.
Data leak prevention (DLP)	Inspects files to identify the file types, such as WORD, EXCEL, POWERPOINT, and PDF, based on file content, and filters the file content.
Bandwidth management	Manages per-user and per-IP bandwidth in addition to identifying service applications to ensure the network access experience of key services and users. Control methods include limiting the maximum bandwidth, ensuring the minimum bandwidth, and changing application forwarding priorities.

Feature	Description
URL filtering	<p>Provides a URL category database with over 120 million URLs and accelerates access to specific categories of websites, improving access experience of high-priority websites.</p> <p>Supports DNS filtering, in which accessed web pages are filtered based on domain names.</p> <p>Supports the SafeSearch function to filter resources of search engines, such as Google, to guarantee access to only healthy network resources.</p>
Behavior and content audit	Audits and traces the sources of the accessed content based on users.
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-egress scenarios.
VPN encryption	Supports multiple highly available VPN features, such as IPSec VPN, SSL VPN, L2TP VPN, MPLS VPN, and GRE, and provides the Huawei-developed VPN client SecoClient for SSL VPN, L2TP VPN, and L2TP over IPSec VPN remote access.
DSVPN	Dynamic smart VPN (DSVPN) establishes VPN tunnels between branches whose public addresses are dynamically changed, reducing the networking and O&M costs of the branches.
SSL-encrypted traffic detection	Detects and defends 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, AD, and LDAP. The firewall supports built-in Portal and Portal redirection functions. It can work with the Agile Controller to implement multiple authentication modes.
Security virtualization	Supports virtualization of multiple types of security services, including firewall, intrusion prevention, antivirus, and VPN. Users can separately conduct personal management on the same physical device.
Security policy management	<p>Manages and controls traffic based on VLAN IDs, quintuples, security zones, regions, applications, URL categories, and time ranges, and implements integrated content security detection.</p> <p>Provides predefined common-scenario defense templates to facilitate security policy deployment.</p>
Routing	Supports multiple types of routing protocols and features, such as RIP, OSPF, BGP, IS-IS, RIPng, OSPFv3, BGP4+, and IPv6 IS-IS.
Deployment and reliability	Supports transparent, routing, and hybrid working modes and high availability (HA), including the Active/Active and Active/Standby modes.

Specification

Performance and Capability

Performance and Capability	Eudemon1000E-G8
IPv4 Firewall Throughput ¹ (1518/512/64-byte, UDP)	80/80/80Gbit/s
IPv6 Firewall Throughput ¹ (1518/512/84-byte, UDP)	80/80/16Gbit/s
Firewall Throughput (Packet per Second)	120Mpps
Firewall Latency (64-byte, UDP)	15 μs
FW+SA Throughput	36Gbit/s
FW + SA + IPS Throughput ²	24Gbit/s
FW + SA + IPS + Antivirus Throughput ²	23Gbit/s
Full protection Throughput ³	22 Gbit/s
Full protection Throughput (Realworld) ⁴	12 Gbit/s
Concurrent Sessions (HTTP1.1) ¹	25,000,000
New Sessions/Second (HTTP1.1) ¹	800,000
IPsec VPN Throughput ¹ (AES-256 + SHA256, 1420-byte)	70Gbit/s
Maximum IPsec VPN Tunnels (GW to GW)	60,000
Maximum IPsec VPN Tunnels (Client to GW)	60,000
SSL Inspection Throughput ⁵	12 Gbit/s
SSL VPN Throughput ⁶	6 Gbit/s
Concurrent SSL VPN Users (Default/Maximum)	100/15000
Security Policies (Maximum)	60,000
Virtual Firewalls(In DCN Scenario)	1000(500)
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	Open API for integration with third-party products, providing RESTful and NetConf interface Other third-part management software based on SNMP, SSH, Syslog Collaboration with Anti-APT solution
Centralized Management	Centralized configuration, logging, monitoring, and reporting is performed by Huawei eSight and eLog
VLANs (Max)	4094
VLANIF Interfaces (Max)	1024
High Availability Configurations	Active/Active, Active/Standby

Note:

1. Performance is tested under ideal conditions based on RFC2544, 3511. The actual result may vary with deployment environments.
 2. Antivirus, IPS, and SA performances are measured using 100 KB HTTP files
 3. Full protection throughput is measured with Firewall, SA, IPS, Antivirus and URL enabled, Antivirus, IPS, and SA performances are measured using 100 KB HTTP files.
 4. Full protection throughput is measured with Firewall, SA, IPS and Antivirus enabled, Enterprise Mix Traffic Model.
 5. SSL inspection throughput is measured with IPS-enabled and HTTPS traffic using TLS v1.2 with AES128-GCM-SHA256.
 6. SSL VPN throughput is measured using TLS v1.2 with AES128-SHA.
- *SA: Service Awareness.

Hardware Specification

Hardware Specification	Eudemon1000E-G8
Dimensions (H x W x D) mm	44 x 442 x 600
Form Factor/Height	1U
Fixed Interface	4*40GE(QSFP+)+28*10GE(SFP+) 2*10GE(SFP+) HA
USB Port	1 x USB 3.0 Ports
MTBF	25years
Weight (Full Configuration)	12 kg
Local Storage	Optional, SSD(2*M.2) supported, 240G/SSD(1*2.5inch) supported, 240G/HDD(1*2.5inch) supported, 1TB
AC Power Supply	AC:100V to 240V, 50/60Hz DC: -48V ~ 60V
Power Consumption (Average/Maximum)	AC: 346W/488.3W DC: 338.4W/448.6W
Heat Dissipation	>1670.6 BTU/h
Power Supplies	Dual AC or dual DC 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 95% (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 95% (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	Maximum value < 72 Dba

Order Information

Product

Eudemon1000 E-G8-AC	Eudemon1000E-G8-AC Host(28*(SFP+)+2*(QSFP+)+2*HA,2AC power supply)
Eudemon1000 E-G8-DC	Eudemon1000E-G8-DC Host(28*(SFP+)+2*(QSFP+)+2*HA,2DC power supply)

SSL VPN License

LIC-EDMLM-SSLVPN-100	Quantity of SSL VPN Concurrent Users(100 Users)
LIC-EDMLM-SSLVPN-200	Quantity of SSL VPN Concurrent Users(200 Users)
LIC-EDMLM-SSLVPN-500	Quantity of SSL VPN Concurrent Users(500 Users)
LIC-EDMLM-SSLVPN-1000	Quantity of SSL VPN Concurrent Users(1000 Users)
LIC-EDMLM-SSLVPN-2000	Quantity of SSL VPN Concurrent Users(2000 Users)
LIC-EDMLM-SSLVPN-5000	Quantity of SSL VPN Concurrent Users(5000 Users)

VSYS License

LIC-EDMLM-VSYS-10	Quantity of Virtual Firewall (10 Vsys)
LIC-EDMLM-VSYS-20	Quantity of Virtual Firewall (20 Vsys)
LIC-EDMLM-VSYS-50	Quantity of Virtual Firewall (50 Vsys)
LIC-EDMLM-VSYS-100	Quantity of Virtual Firewall (100 Vsys)
LIC-EDMLM-VSYS-200	Quantity of Virtual Firewall (200 Vsys)
LIC-EDMLM-VSYS-500	Quantity of Virtual Firewall (500 Vsys)
LIC-EDMLM-VSYS-1000	Quantity of Virtual Firewall (1000 Vsys)

Threat Protection License

LIC-E1KE-02-IPS-1Y	IPS Update Service Subscribe 12 Months (Applies to E1000E-G8)
LIC-E1KE-02-IPS-3Y	IPS Update Service Subscribe 36 Months (Applies to E1000E-G8)
LIC-E1KE-02-AV-1Y	AV Update Service Subscribe 12 Months (Applies to E1000E-G8)
LIC-E1KE-02-AV-3Y	AV Update Service Subscribe 36 Months (Applies to E1000E-G8)
LIC-E1KE-02-URL-1Y	URL Remote Query Service Subscribe 12 Months (Applies to E1000E-G8)
LIC-E1KE-02-URL-3Y	URL Remote Query Service Subscribe 36 Months (Applies to E1000E-G8)
LIC-E1KE-02-TP-1Y-OVS	Threat Protection Subscription 12 Months (Applies to E1000E-G8)
LIC-E1KE-02-TP-3Y-OVS	Threat Protection Subscription 36 Months (Applies to E1000E-G8)
LIC-E1KE-05-FP-E	Flow Probe Function (Applies to E1000E-G8)
LIC-EDM-CNTSEC	Content Security Features

Carrier Network Security License

LIC-E1KE-02-CN-E	Carrier Network Enhanced Security Supported License(Applies to E1000E-G8~G16)
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