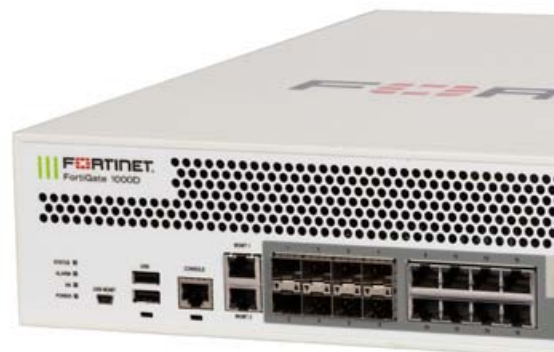# FORTINET®

FortiGate® 1000D

High Performance Data Center and Next Generation Firewall for the Enterprise

Enterprises require a high-speed, high-capacity firewall to stay ahead of ever-increasing network performance requirements as well as continued evolution of the threat landscape, at datacenter and campus locations.

Eliminate Security Bottlenecks

With 52 Gbps of firewall throughput and low latency, the FortiGate 1000D represents an excellent entry model for small data centers and delivers a high performance, high capacity data center firewall. IPv6 parity, 10 GE ports and dramatic increases in VPN performance enable you to keep pace with your evolving network.

Deeper Visibility

At the same time, 8 Gbps of next generation threat prevention performance allows you to run top rated intrusion prevention, application control and antimalware capabilities for deeper inspection of content, applications, user and device activity. Rich console views and reports together with a flexible policy engine provide the visibility and control to empower employees yet secure your enterprise.

Breakthrough Performance

This breakthrough performance — including 10x data center and 5x next generation performance — is made possible by custom hardware, including the latest FortiASIC™ NP6 and CP8 processors, as well as the consolidated security features of the FortiOS™ 5 network security platform.

High Performance, Reliability and Security

- 10x data center and 5x next generation performance

- Top rated security capabilities

- Flexible firewall personalities for core or edge deployment

- Low latency and IPv6 parity

- Option to add Advanced Threat Protection, Strong Authentication and more

Key Features & Benefits

Superior firewall throughput, ultralow latency	10x data center firewall performance eliminates performance bottlenecks
Impressive throughput	5x next generation performance enables multi-function inspection on one appliance
Custom FortiASIC NP6 and CP8 processors	The latest in purpose-built processors enable best-in-class performance and superior cost per gigabit protected
High speed, high density ports	2x 10 GE and 32x GE ports support evolving network requirements and avoid security bottlenecks
Top rated security technologies	Increases protection from advanced threats

ICSAlabs CERTIFIED FIREWALL-CORPORATE

ICSAlabs CERTIFIED SSL VPN

ICSAlabs CERTIFIED IPSEC-BASIC

ICSAlabs CERTIFIED ANTI-VIRUS

ICSAlabs CERTIFIED NETWORK IPS

FortiCare
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FortiGuard
Threat Research & Response
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HARDWARE
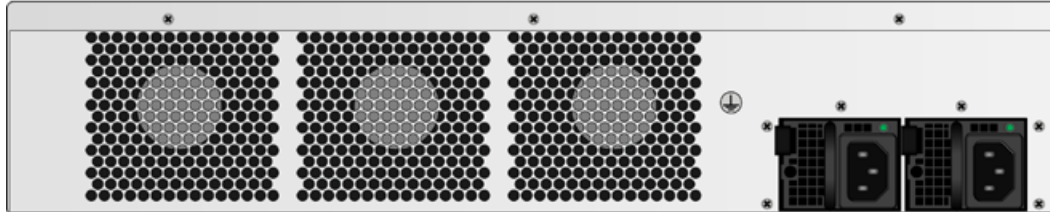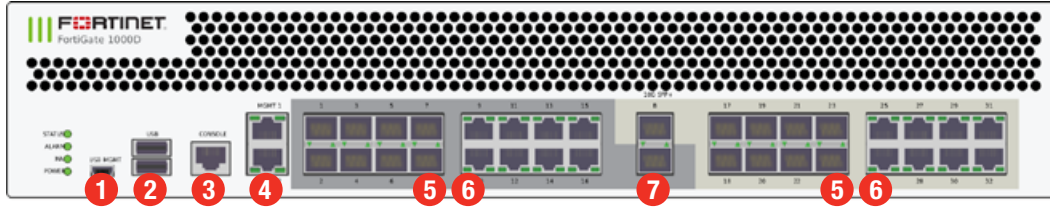
Interfaces

1. USB Management Port
2. USB Ports
3. Console Port
4. 2x GE RJ45 Management Ports

5. 16x GE SFP Slots
6. 16x GE RJ45 Ports
7. 2x 10 GE SFP+ Slots
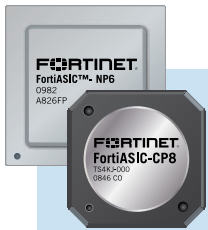
Powered by FortiASICs

- Custom FortiASIC™ processors deliver the power you need to detect malicious content at multi-Gigabit speeds

- Other security technologies cannot protect against today's wide range of content and connection-based threats because they rely on general-purpose CPUs, causing a dangerous performance gap

- FortiASIC processors provide the performance needed to block emerging threats, meet rigorous third-party certifications, and ensure that your network security solution does not become a network bottleneck

Network Processor

Fortinet's new, breakthrough FortiASIC NP6 network processor works inline with FortiOS functions delivering:

- Superior firewall performance for IPv4/IPv6, SCTP and multicast traffic with ultra-low latency down to 3 microseconds

- VPN, CAPWAP and IP tunnel acceleration

- Anomaly-based intrusion prevention, checksum offload and packet defragmentation

- Traffic shaping and priority queuing

Content Processor

The FortiASIC CP8 content processor works outside of the direct flow of traffic, providing high-speed cryptography and content inspection services including:

- Signature-based content inspection acceleration

- Encryption and decryption offloading

10GE Connectivity

High speed connectivity is essential for network security segmentation. The FortiGate 1000D provides 10 GE slots that simplify network designs without relying on additional devices to bridge desired connectivity.

DEPLOYMENT
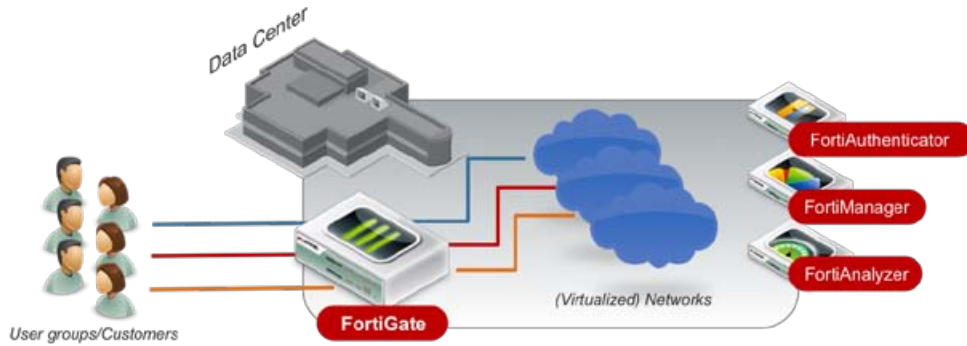
FortiGate deployed as data center core firewall

Data Center Core Firewall

Organizations deploying the NP (Network Processor) 6 powered FortiGate 1000 Series firewalls at their data center will enjoy superior protection and performance with industry-leading, high capacity firewall technologies that deliver exceptional throughput and ultra-low latency, enabling the security, flexibility, scalability and manageability expected on a core platform. These firewalls come with numerous high-speed 40 GE and 10 GE interfaces which are ideal for segmenting network physically. Running on the latest FortiOS, these platform are virtualization and cloud-ready. They support next-generation data center architectures, multi-tenant requirements, provide APIs for rapid orchestration and easy integration with third-party ecosystems.

Mid-Enterprise Edge Firewall

Fortinet's FortiGate 1000 Series firewalls are perfect for growing large enterprises with their agile and high performance network security capabilities. These FortiGates not only deliver protection exceeding expectations, they are suitable for consolidating other security components. This allows organizations to significantly reduce TCOs and simplifies the network. Unlike other NGFWs (Next Generation Firewalls), the FortiGates are powered by FortiASICs which provide security without compromises performance. They run on the World's most advanced security operating systems that meet each organizations unique requirements. Advanced features such as integrated endpoint control and token server helps organizations to rapidly deploy enhanced security to their mobile workforce while device-based policies aid to implement BYOD securely.
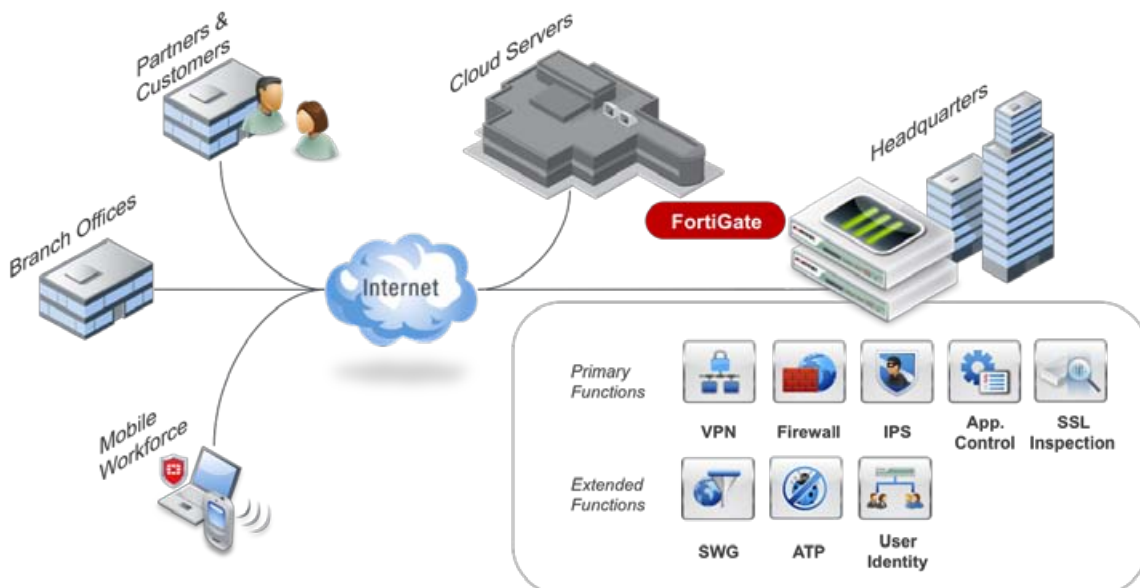
FortiGate deployed as mid-enterprise edge firewall

FEATURES
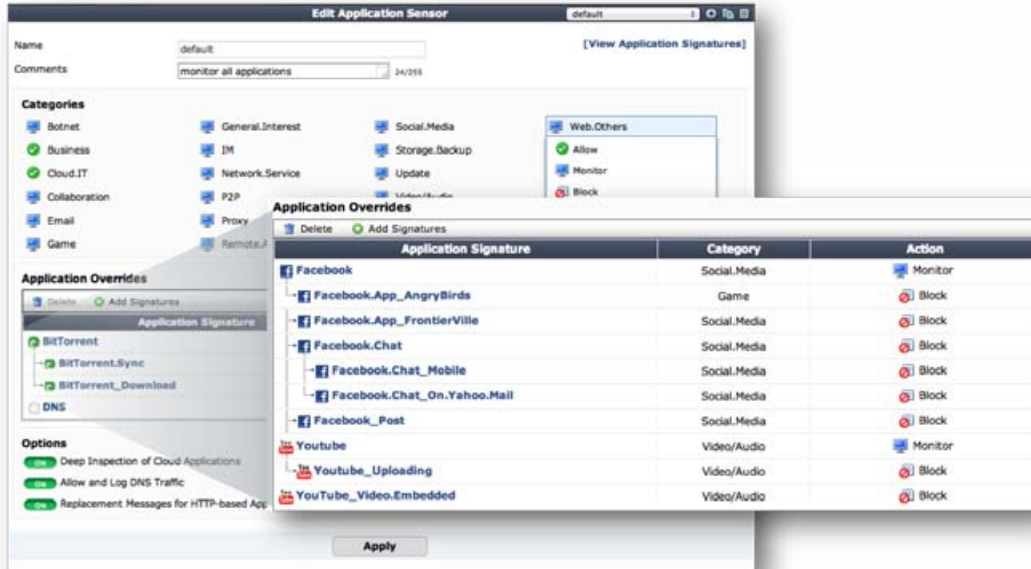
Powerful application control with granular settings

Proven with Industry Validation

3rd party industry certifications, as well as real-world effectiveness and performance tests assure quality and providing you best-of-breed protection.

Ease of Use

FortiOS lowers operational costs and reduces IT staff workload. Single pane of glass management and centralized analysis ensure consistent policy creation and enforcement while minimizing deployment and configuration challenges.

In-depth Visibility & Reporting

Through FortiView, a collection of flexible widget-based views with drill-down capabilities, FortiOS allows administrators to quickly visualize and understand recent network activities and threat situations.

Detailed logs offer deep insights to sessions that passed through the FortiGate while comprehensive reports help organizations to trend network usage accurately.

Powerful Policy Management

Two types of policy management views — global and section view — are available to suit your preferences. Policy objects can easily be edited, duplicated or moved from the policy table. Robust management features include policy object search, tagging, sorting and filtering.

With FortiManager integration, you have the ability to set up sophisticated policy implementation and provisioning

workflows to meet compliance or operational requirements. The FortiManager also offers logging and reporting module that simplified and reduced TCO.

Identity Centric Enforcement

FortiOS supports both local and remote authentication services such as LDAP, Radius and TACACS+ to identify users and apply appropriate access policies and security profiles accordingly. It can simplify identity-based implementations and provide a seamless user authorization experience with single sign-on capabilities. FortiOS has strong PKI and certificate-based authentication services while also integrating an internal two-factor authentication server for additional security.

To tackle security for today's prevalent use of personal devices, FortiOS offers state-of-the-art device identification capabilities that empower organizations to set up more intelligent security policies.

Granular Application Control

Advanced application control with ability to control discrete functions lets you define and enforce policies for thousands of applications running across networks regardless of port or the protocol used for communication.

Highly Effective IPS

Over 8,000 IPS signatures enable you to stop attacks that have evaded most conventional firewalls. Additionally, FortiOS also offers behavior-based heuristics settings that recognize zero-day threats for which no signature has been created.

FEATURES

Beyond Next Generation Firewall Capabilities

Our Secure Web Gateway capabilities allow you to prevent end users from unknowingly visiting malicious sites, shield them from inappropriate material out on the Internet, and maintain a safe and productive work environment. Real-time dashboards provide administrators visibility into end user activity while rich reporting keeps executives up to date. An advanced policy engine gives you the tools you need — such as time-based quotas, user overrides and more — to implement balanced policies.

Recognizing that despite all of the latest security controls, targeted threats may still slip through, organizations have the opportunity to add an additional layer of inspection, focused on advanced threat detection in complement to established threat prevention. Often referred to as "sandboxing" or breach detection, Fortinet offers on-premise and cloud-based options to extend your next generation firewall.
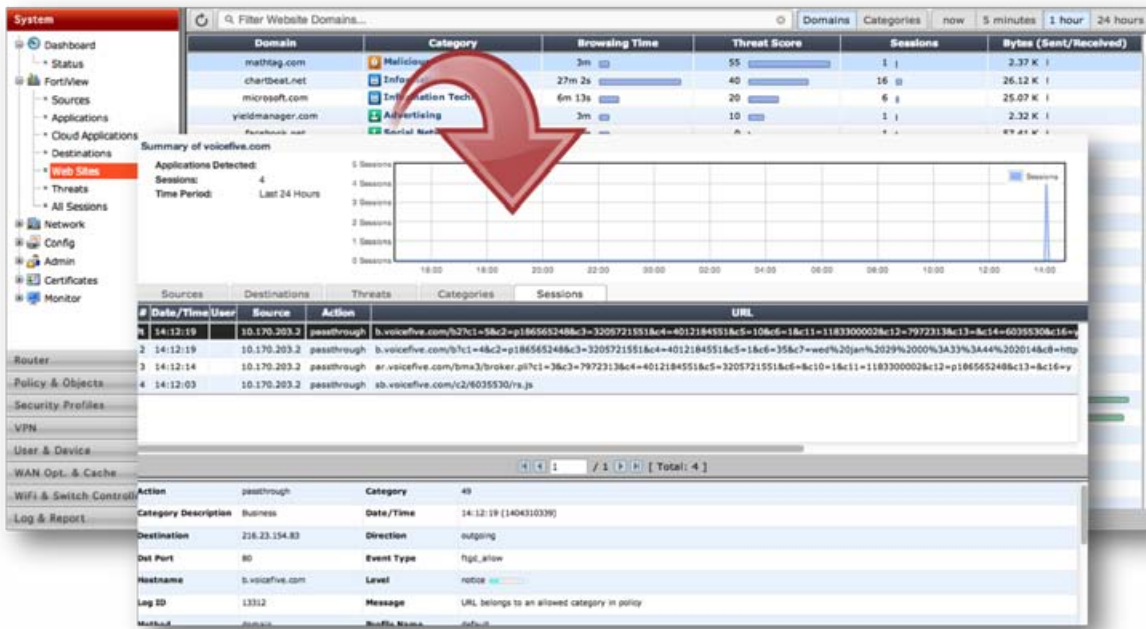
FortiView — real-time query widget with drill-down panels

FortiGuard Security Services and FortiCare Support

- **Cutting-Edge Security Expertise**
  Our team of over 200 security researchers, vast data collection and state-of-the-art analysis systems across the globe examine the latest cyber-criminal activities and techniques to deliver real-time protection for your organization. With high marks attained by third-party evaluations, customers are assured of quality and credible security updates against the evolving sophisticated or targeted threats.

- **World-Class Support**
  It is critical to keep your network running properly and be able to resolve issues quickly. Our large team of knowledgable and responsive technical support engineers, together with comprehensive self-help resources, are always ready to assist you in time of critical need. In addition, Fortinet also offers a variety of support offerings that cater to your organizations and project requirement.

SPECIFICATIONS

Interfaces and Modules	FORTIGATE 1000D
Hardware Accelerated 10 GE SFP+ Slots	2
Hardware Accelerated GE SFP Slots	16
Hardware Accelerated GE RJ45 Ports	16
GE RJ45 Management / HA Ports	2
USB Ports (Client / Server)	1 / 2
Console Port	1
Onboard Storage	120 GB
Included Transceivers	0

System Performance and Capacity	
IPv4 Firewall Throughput (1518 / 512 / 64 byte, UDP)	52 / 52 / 33 Gbps
IPv6 Firewall Throughput (1518 / 512 / 86 byte, UDP)	52 / 52 / 33 Gbps
Firewall Latency (64 byte, UDP)	3 µs
Firewall Throughput (Packet per Second)	49.5 Mpps
Concurrent Sessions (TCP)	11 Mil
New Sessions/Second (TCP)	240,000
Firewall Policies	100,000
IPSEC VPN Throughput (512 byte)	30 Gbps
Gateway-to-Gateway IPsec VPN Tunnels	20,000
Client-to-Gateway IPsec VPN Tunnels	50,000
SSL-VPN Throughput	3.6 Gbps
Concurrent SSL-VPN Users (Recommended Maximum)	10,000
IPS Throughput	8 Gbps
Antivirus Throughput (Proxy Based / Flow Based)	3.5 / 5.5 Gbps
CAPWAP Clear-text Throughput (HTTP)	10.5 Gbps
Virtual Domains (Default / Maximum)	10 / 250
Maximum Number of FortiAPs (Total / Tunnel)	4,096 / 1,024
Maximum Number of FortiTokens	5,000
Maximum Number of Registered Endpoints	8,000
High Availability Configurations	Active-Active, Active-Passive, Clustering

Dimensions and Power	FORTIGATE 1000D
Height x Width x Length (inches)	3.48 x 17.20 x 17.95
Height x Width x Length (mm)	88.5 x 437 x 456
Weight	24.70 lbs (11.20 kg)
Form Factor	Rack Mount, 2 RU
AC Power Supply	100–240 VAC, 50–60 Hz
Power Consumption (Average / Maximum)	101 W / 122 W
Current (Maximum)	100V / 5A, 220V / 3A
Heat Dissipation	415.19 BTU/h
Redundant Power Supplies	Yes, Hot swappable

Operating Environment and Certifications	
Operating Temperature	32–104°F (0–40°C)
Storage Temperature	-31–158°F (-35–70°C)
Humidity	20–90% non-condensing
Operating Altitude	Up to 7,400 ft (2,250 m)
Compliance	FCC Part 15 Class A, C-Tick, VCCI, CE, UL/cUL, CB
Certifications	ICSA Labs: Firewall, IPsec, IPS, Antivirus, SSL-VPN

Note: All performance values are "up to" and vary depending on system configuration. Antivirus performance is measured using 44 Kbyte HTTP files. IPS performance is measured using 1 Mbyte HTTP files. IPsec VPN performance is based on 512 byte UDP packets using AES-256+SHA1.

For complete, up-to-date and detailed feature set, please refer to the Administration Handbook and FortiOS Datasheet.

ORDER INFORMATION

Product	SKU	Description
FortiGate 1000D	FG-1000D	2x 10 GE SFP+ slots, 16x GE SFP Slots, 16x GE RJ45 ports, 2x GE RJ45 Management ports, 120 GB SSD onboard storage, dual AC power supplies

Optional Accessories/Spares	SKU	Description
1 GE SFP LX transceiver module	FG-TRAN-LX	1 GE SFP LX transceiver module for all systems with SFP and SFP/SFP+ slots
1 GE SFP RJ45 transceiver module	FG-TRAN-GC	1 GE SFP RJ45 transceiver module for all systems with SFP and SFP/SFP+slots
1 GE SFP SX transceiver module	FG-TRAN-SX	1 GE SFP SX transceiver module for all systems with SFP and SFP/SFP+ slots
10 GE SFP+ transceiver module, short range	FG-TRAN-SFP+SR	10 GE SFP+ transceiver module, long range for all systems with SFP+ and SFP/SFP+ slots
10 GE SFP+ transceiver module, long range	FG-TRAN-SFP+LR	10 GE SFP+ transceiver module, long range for all systems with SFP+ and SFP/SFP+ slots
10 GE SFP+ active direct attach cable, 10m / 32.8 ft	SP-CABLE-ADASFP+	10 GE SFP+ active direct attach cable, 10m / 32.8 ft for all systems with SFP+ and SFP/SFP+ slots
Ear bracket for rack mounting, 2 RU	SP-EAR-FG1000D	Ear bracket for rack mounting, 2 RU for FG-1000D
AC power supply	SP-FXX1000D	AC power supply for FG-1000D and FXX-1000D

FÔRTINET®

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