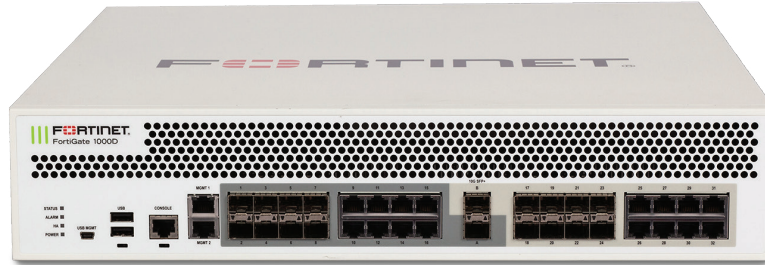# FortiGate® 1000D

Next Generation Firewall
Internal Segmentation Firewall
Data Center Firewall and IPS

The FortiGate 1000D delivers high performance threat protection for mid-sized to large enterprises and service providers, with the flexibility to be deployed at the Internet or cloud edge, in the data center core or internal segments. The multiple high-speed interfaces, high port density, industry-leading security efficacy and high throughput of the 1000D keeps your network connected and secure.

Security
- Protects against known exploits, malware and malicious websites using continuous threat intelligence provided by FortiGuard Labs security services
- Protects against unknown attacks using dynamic analysis and provides automated mitigation to stop targeted attacks

Performance
- Delivers industry's best threat protection performance and ultra-low latency using purpose-built security processor (SPU) technology
- Provides industry-leading performance and protection for SSL encrypted traffic

Certification
- Independently tested and validated best security effectiveness and performance
- Received unparalleled third-party certifications from NSS Labs, ICSA, Virus Bulletin and AV Comparatives

Networking
- Delivers an extensive routing, switching, wireless controller and high performance IPsec VPN capabilities to consolidate networking and security functionality
- Enables flexible deployment modes that fit into organizations' evolving network infrastructure requirements with high port density and high-speed interfaces

Management
- Single Pane of Glass with Network Operations Center (NOC) view provides 360° visibility to identify issues quickly and intuitively
- Predefined compliance checklist analyzes the deployment and highlights best practices to improve overall security posture

Security Fabric
- Enables Fortinet and Fabric-ready partners' products to collaboratively integrate and provide end-to-end security across the entire attack surface

Firewall	IPS	NGFW	Threat Protection	Interfaces
52 Gbps	6 Gbps	5 Gbps	4 Gbps	Multiple GE RJ45, GE SFP and 10 GE SFP+ slots

Refer to specification table for details

DEPLOYMENT

Next Generation Firewall (NGFW)

- Security gateway to the Internet for enterprises
- Enforce security policies with granular control and visibility of users and devices for thousands of discrete applications
- Identify and stop threats with powerful intrusion prevention beyond port and protocol that examines the actual content of your network traffic

Internal Segmentation Firewall (ISFW)

- Segmentation solution for end-to-end protection against threats while meeting compliance requirements
- High port density and accelerated traffic processing capacity, to protect multiple segments without compromising performance
- Deploy transparently and rapidly into existing environments with minimal disruption

Data Center Firewall and IPS (DCFW-IPS)

- High availability, high throughput and low latency firewall for data center edge and core
- High session scale for accommodating large network and user traffic for Internet and cloud-facing data centers
- High-speed interfaces for future-proof connectivity while compact size contributes to greener data centers
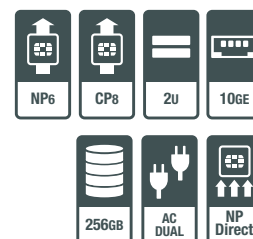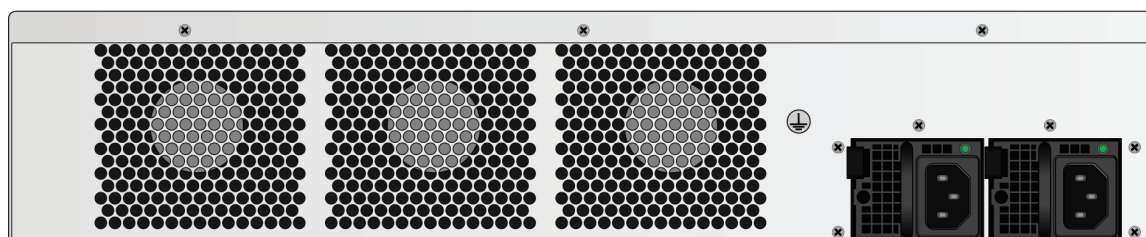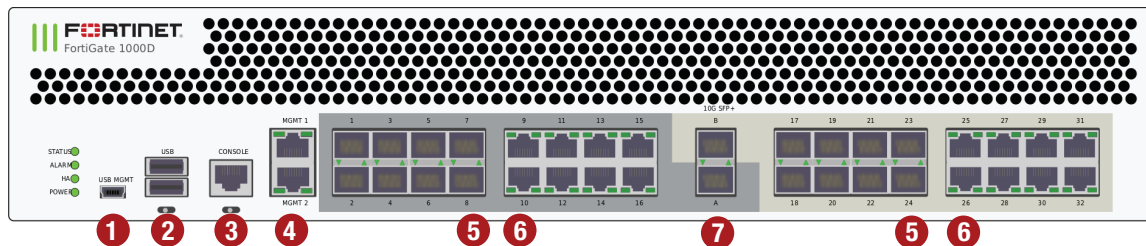- Performance optimized IPS engine to detect and deter latest known and zero day threats
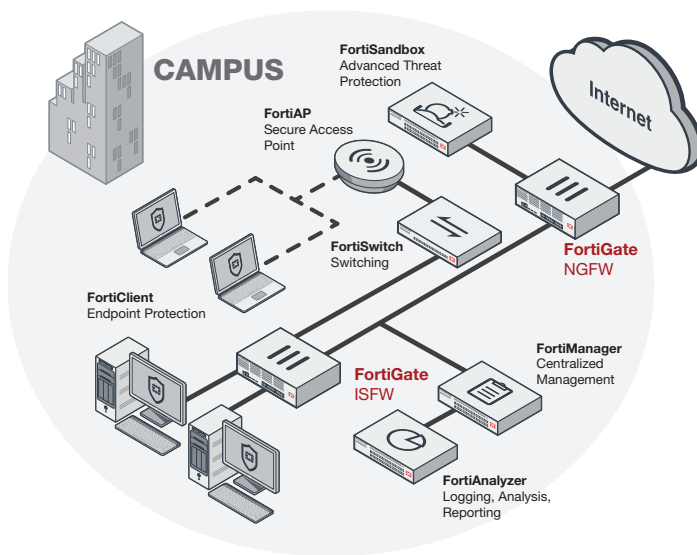
FortiGate 1000D deployment in large campus networks (NGFW, ISFW)
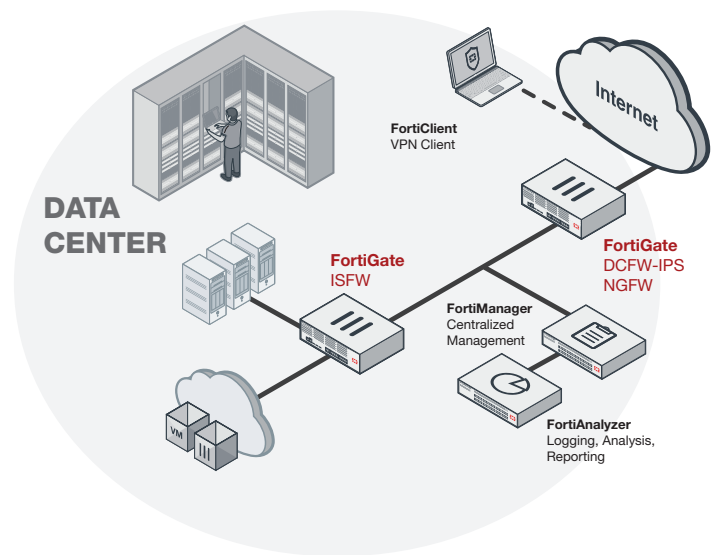
FortiGate 1000D deployment in data center (DCFW-IPS/NGFW, ISFW)

HARDWARE

FortiGate 1000D

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

NP Direct

By removing the Internal Switch Fabric, the NP Direct architecture provides direct access to the SPU-NP for the lowest latency forwarding. NGFW deployments require some attention to network design to ensure optimal use of this technology.

Powered by SPU

- Custom SPU 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

- SPU 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 SPU 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 2 microseconds
- VPN, CAPWAP and IP tunnel acceleration
- Anomaly-based intrusion prevention, checksum offload and packet defragmentation
- Traffic shaping and priority queuing

Content Processor

The SPU 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

10 GE 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.

FORTINET SECURITY FABRIC

Security Fabric

The Security Fabric allows security to dynamically expand and adapt as more and more workloads and data are added. Security seamlessly follows and protects data, users, and applications as they move between IoT, devices, and cloud environments throughout the network.

FortiGates are the foundation of Security Fabric, expanding security via visibility and control by tightly integrating with other Fortinet security products and Fabric-Ready Partner solutions.

FortiOS

Control all the security and networking capabilities across the entire FortiGate platform with one intuitive operating system. Reduce operating expenses and save time with a truly consolidated next-generation security platform.
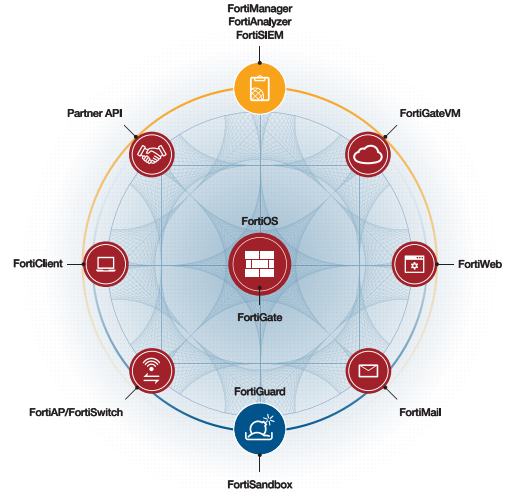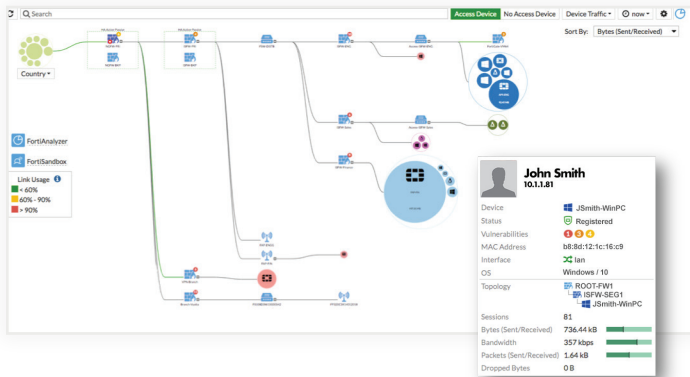
- A truly consolidated platform with one OS for all security and networking services for all FortiGate platforms.
- Industry-leading protection: NSS Labs Recommended, VB100, AV Comparatives, and ICSA validated security and performance.
- Control thousands of applications, block the latest exploits, and filter web traffic based on millions of real-time URL ratings.
- Prevent, detect, and mitigate advanced attacks automatically in minutes with integrated advanced threat protection.
- Fulfill your networking needs with extensive routing, switching, and SD-WAN capabilities.
- Ultilize SPU hardware acceleration to boost security capability performance.

For more information, please refer to the FortiOS data sheet available at www.fortinet.com

SERVICES

FortiGuard™ Security Services

FortiGuard Labs offers real-time intelligence on the threat landscape, delivering comprehensive security updates across the full range of Fortinet's solutions. Comprised of security threat researchers, engineers, and forensic specialists, the team collaborates with the world's leading threat monitoring organizations and other network and security vendors, as well as law enforcement agencies.

FortiCare™ Support Services

Our FortiCare customer support team provides global technical support for all Fortinet products. With support staff in the Americas, Europe, Middle East, and Asia, FortiCare offers services to meet the needs of enterprises of all sizes.

For more information, please refer to forti.net/fortiguard and forti.net/forticare

(760)736-8100　　　**MSSP@BorderLAN.com**　　　DATA SHEET

SPECIFICATIONS

	FORTIGATE 1000D
Interfaces and Modules	
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	1x 256 GB SSD
Included Transceivers	0
System Performance — Enterprise Traffic Mix	
IPS Throughput [2]	6 Gbps
NGFW Throughput [2, 4]	5 Gbps
Threat Protection Throughput [2, 5]	4 Gbps
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 Million
New Sessions/Second (TCP)	280,000
Firewall Policies	100,000
IPsec VPN Throughput (512 byte) [1]	25 Gbps
Gateway-to-Gateway IPsec VPN Tunnels	20,000
Client-to-Gateway IPsec VPN Tunnels	100,000
SSL-VPN Throughput	3.6 Gbps
Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode)	10,000
SSL Inspection Throughput (IPS, avg. HTTPS) [3]	5.0 Gbps
SSL Inspection CPS (IPS, avg. HTTPS) [3]	2,700
SSL Inspection Concurrent Session (IPS, avg. HTTPS) [3]	800,000
Application Control Throughput (HTTP 64K) [2]	14 Gbps
CAPWAP Throughput (1444 byte, UDP)	11 Gbps
Virtual Domains (Default / Maximum)	10 / 250
Maximum Number of Switches Supported	128
Maximum Number of FortiAPs (Total / Tunnel)	4,096 / 1,024
Maximum Number of FortiTokens	5,000
Maximum Number of Registered Endpoints	20,000
High Availability Configurations	Active-Active, Active-Passive, Clustering

	FORTIGATE 1000D
Dimensions and Power	
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	100–240V AC, 50–60 Hz
Power Consumption (Average / Maximum)	153 W / 220.8 W
Current (Maximum)	100V / 5A, 240V / 3A
Heat Dissipation	753.40 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	10–90% non-condensing
Noise Level	53.3 dBA
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; USGv6/IPv6

Note: All performance values are "up to" and vary depending on system configuration.
1. IPsec VPN performance test uses AES256-SHA256.
2. IPS (Enterprise Mix), Application Control, NGFW and Threat Protection are measured with Logging enabled.
3. SSL Inspection performance values use an average of HTTPS sessions of different cipher suites.
4. NGFW performance is measured with Firewall, IPS and Application Control enabled.
5. Threat Protection performance is measured with Firewall, IPS, Application Control and Malware Protection enabled.

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, SPU NP6 and CP8 hardware accelerated, 1x 256 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, short 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.

FortiGuard Bundle

FortiGuard Labs delivers a number of security intelligence services to augment the FortiGate firewall platform. You can easily optimize the protection capabilities of your FortiGate with one of these FortiGuard Bundles.

Bundles	Threat Protection	UTM	Enterprise Protection
FortiCASB SaaS-only Service ^			•
FortiGuard Industrial Service ^			•
FortiGuard Security Rating Service* ^			•
FortiGuard Antispam		•	•
FortiGuard Web Filtering		•	•
FortiGuard Advanced Malware Protection (AMP) — Antivirus, Mobile Malware, Botnet, CDR*, Virus Outbreak Protection* and FortiSandbox Cloud Service*	•	•	•
FortiGuard IPS Service	•	•	•
FortiCare + FortiGuard App Control Service	•	•	•

* Available when running FortiOS 6.0.1 and above   ^ With new Q3-2018 SKUs

FORTINET

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