

# FortiGate 900G Series

FG-900G and FG-901G



## Highlights

**Gartner Magic Quadrant Leader** for both Network Firewalls and WAN Edge Infrastructure.

**Security-Driven Networking** FortiOS delivers converged networking and security.

**State-of-the-Art Unparalleled Performance** with Fortinet's patented / SPU / vSPU processors.

**Enterprise Security** with consolidated AI / ML-powered FortiGuard Services.

**Deep Visibility** into applications, users, and devices beyond traditional firewall techniques.

## AI/ML Security and Deep Visibility

The FortiGate 900G Series NGFW combines AI-powered security and machine learning to deliver Threat Protection at any scale. Get deeper visibility into your network and see applications, users, and devices before they become threats.

Powered by a rich set of AI/ML security capabilities that extend into an integrated security fabric platform, the FortiGate 900G Series delivers secure networking that is broad, deep, and automated. Secure your network end to end with advanced edge protection that includes web, content, and device security, while network segmentation and secure SD-WAN reduce complexity and risk in hybrid IT networks.

Universal ZTNA automatically controls, verifies, and facilitates user access to applications, reducing lateral threats by providing access only to validated users. Ultra-fast Threat Protection and SSL Inspection provides security at the edge you can see without impacting performance.

IPS	NGFW	Threat Protection	Interfaces
26 Gbps	22 Gbps	20 Gbps	Multiple 25 GE SFP28, 10 GE SFP+, GE SFP Slots and GE RJ45





## FortiGuard Services

### Network and File Security

Services provide protection against network-based and file-based threats. This consists of Intrusion Prevention (IPS) which uses AI/M models to perform deep packet/SSL inspection to detect and stop malicious content, and apply virtual patching when a new vulnerability is discovered. It also includes Anti-Malware for defense against known and unknown file-based threats. Anti-malware services span both antivirus and file sandboxing to provide multi-layered protection and are enhanced in real-time with threat intelligence from FortiGuard Labs. Application Control enhances security compliance and offers real-time application visibility.

---

### Web / DNS Security

Services provide protection against web-based threats including DNS-based threats, malicious URLs (including even in emails), and botnet/command and control communications. DNS filtering provides full visibility into DNS traffic while blocking high-risk domains, and protects against DNS tunneling, DNS infiltration, C2 server ID and Domain Generation Algorithms (DGA). URL filtering leverages a database of 300M+ URLs to identify and block links to malicious sites and payloads. IP Reputation and anti-botnet services prevent botnet communications, and block DDoS attacks from known sources.

---

### SaaS and Data Security

Services address numerous security use cases across application usage as well as overall data security. This consists of Data Leak Prevention (DLP) which ensures data visibility, management and protection (including blocking exfiltration) across networks, clouds, and users, while simplifying compliance and privacy implementations. Separately, our Inline Cloud Access Security Broker (CASB) service protects data in motion, at rest, and in the cloud. The service enforces major compliance standards and manages account, user and cloud application usage. Services also include capabilities designed to continually assess your infrastructure, validate that configurations are working effectively and secure, and generate awareness of risks and vulnerabilities that could impact business operations. This includes coverage across IoT devices for both IoT detection and IoT vulnerability correlation.

---

### Zero-Day Threat Prevention

Zero-day threat prevention entails Fortinet's AI-based inline malware prevention, our most advanced sandbox service, to analyze and block unknown files in real-time, offering sub-second protection against zero-day and sophisticated threats across all NGFWs. The service also has a built-in MITRE ATT&CK® matrix to accelerate investigations. The service focuses on comprehensive defense by blocking unknown threats while streamlining incident response efforts and reducing security overhead.

---

### OT Security

The service provides OT detection, OT vulnerability correlation, virtual patching, OT signatures, and industry-specific protocol decoders for overall robust defense of OT environments and devices.



## Secure Any Edge at Any Scale



### Powered by Security Processing Unit (SPU)

Traditional firewalls cannot protect against today's content- and connection-based threats because they rely on off-the-shelf hardware and general-purpose CPUs, causing a dangerous performance gap. Fortinet's custom SPU processors deliver the power you need—up to 520Gbps—to detect emerging threats and block malicious content while ensuring your network security solution does not become a performance bottleneck.

### ASIC Advantage



#### Network Processor 7 NP7

Network Processors operate inline to deliver unmatched performance and scalability for critical network functions. Fortinet's breakthrough SPU NP7 network processor works in line with FortiOS functions to deliver:

- Hyperscale firewall, accelerated session setup, and ultra-low latency
- Industry-leading performance for VPN, VXLAN termination, hardware logging, and elephant flows



#### Content Processor 9 CP9

Content Processors act as co-processors to offload resource-intensive processing of security functions. The ninth generation of the Fortinet Content Processor, the CP9, accelerates resource-intensive SSL (including TLS 1.3) decryption and security functions while delivering:

- Pattern matching acceleration and fast inspection of real-time traffic for application identification
- IPS pre-scan/pre-match, signature correlation offload, and accelerated antivirus processing



*Intuitive view and clear insights into network security posture with FortiManager*

### Centralized Network and Security Management at Scale

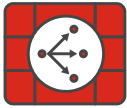
FortiManager, the centralized management solution from Fortinet, enables integrated management of the Fortinet security fabric, including devices like FortiGate, FortiSwitch, and FortiAP. It simplifies and automates the oversight of network and security functions across diverse environments, serving as the fundamental component for deploying Hybrid Mesh Firewalls.

## Use Cases



### Next Generation Firewall (NGFW)

- FortiGuard Labs' suite of AI-powered Security Services—natively integrated with your NGFW—secures web, content, and devices and protects networks from ransomware and sophisticated cyberattacks
- Real-time SSL inspection (including TLS 1.3) provides full visibility into users, devices, and applications across the attack surface
- Fortinet's patented SPU (Security Processing Unit) technology provides industry-leading high-performance protection



### Secure SD-WAN

- FortiGate WAN Edge powered by one OS and unified security and management framework and systems transforms and secures WANs
- Delivers superior quality of experience and effective security posture for work-from-anywhere models, SD-Branch, and cloud-first WAN use cases
- Achieve operational efficiencies at any scale through automation, deep analytics, and self-healing



### Universal ZTNA

- Control access to applications no matter where the user is and no matter where the application is hosted for universal application of access policies
- Provide extensive authentications, checks, and enforce policy prior to granting application access—every time
- Agent-based access with FortiClient or agentless access via proxy portal for guest or BYOD

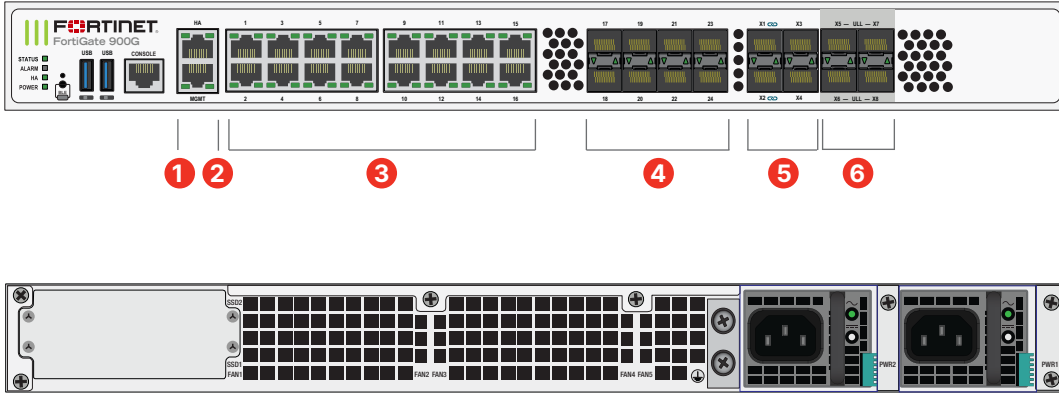


### Segmentation

- Dynamic segmentation adapts to any network topology to deliver true end-to-end security—from the branch to the datacenter and across multi-cloud environments
- Ultra-scalable, low latency, VXLAN segmentation bridges physical and virtual domains with Layer 4 firewall rules
- Prevents lateral movement across the network with advanced, coordinated protection from FortiGuard Security Services detects and prevents known, zero-day, and unknown attacks

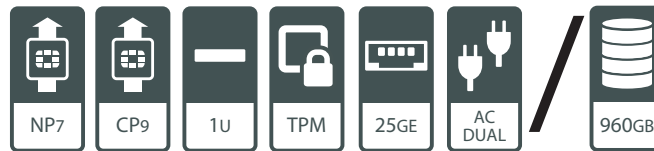
## Hardware

### FortiGate 900G Series



### Interfaces

1. 1 x 2.5/1 GE RJ45 HA Port
2. 1 x GE RJ45 Management Port
3. 16 x GE RJ45 Ports
4. 8 x GE SFP Slots
5. 4 x 10GE/GE SFP+/SFP Slots
6. 4 x 25GE/10GE SFP28/SFP+ ULL (ultra-low latency) Slots



### Trusted Platform Module (TPM)

The FortiGate 900G Series features a dedicated module that hardens physical networking appliances by generating, storing, and authenticating cryptographic keys. Hardware-based security mechanisms protect against malicious software and phishing attacks.

### Access Layer Security

FortiLink protocol enables you to converge security and the network access by integrating the FortiSwitch into the FortiGate as a logical extension of the NGFW. These FortiLink enabled ports can be reconfigured as regular ports as needed.

## Specifications

	FG-900G	FG-901G
<b>Interfaces and Modules</b>		
Hardware Accelerated 25 GE SFP28 / 10 GE SFP+ Ultra Low Latency Slots		4
Hardware Accelerated 10 GE SFP+ / GE SFP Slots		4
Hardware Accelerated GE SFP Slots		8
Hardware Accelerated GE RJ45 Slots		16
2.5 GE / GE HA Port		1
GE Management Port		1
USB Ports (Client / Server)		2 / 2
Console Port		1
Onboard Storage	No	2x 480 GB
Trusted Platform Module (TPM)		Yes
Included Transceivers		2x SFP SX
<b>System Performance — Enterprise Traffic Mix</b>		
IPS Throughput <sup>2</sup>		26 Gbps
NGFW Throughput <sup>2,4</sup>		22 Gbps
Threat Protection Throughput <sup>2,5</sup>		20 Gbps
<b>System Performance and Capacity</b>		
IPv4 Firewall Throughput (1518 / 512 / 64 byte, UDP)		164 / 163 / 153 Gbps
IPv6 Firewall Throughput (1518 / 512 / 86 byte, UDP)		164 / 163 / 153 Gbps
Firewall Latency (64 byte, UDP)		3.78 / 2.5 μs*
Firewall Throughput (Packet per Second)		229.5 Mpps
Concurrent Sessions (TCP)		16 Million
New Sessions/Second (TCP)		720 000
Firewall Policies		10 000
IPsec VPN Throughput (512 byte) <sup>1</sup>		55 Gbps
Gateway-to-Gateway IPsec VPN Tunnels		2000
Client-to-Gateway IPsec VPN Tunnels		50 000
SSL-VPN Throughput <sup>6</sup>		10 Gbps
Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode)		10 000
SSL Inspection Throughput (IPS, avg HTTPS) <sup>3</sup>		16.7 Gbps
SSL Inspection CPS (IPS, avg. HTTPS) <sup>3</sup>		18 000
SSL Inspection Concurrent Session (IPS, avg HTTPS) <sup>3</sup>		1.6 Million
Application Control Throughput (HTTP 64K) <sup>2</sup>		74.8 Gbps
CAPWAP Throughput (HTTP 64K)		70 Gbps
Virtual Domains (Default / Maximum)		10 / 10
Maximum Number of FortiSwitches Supported		96
Maximum Number of FortiAPs (Total / Tunnel)		1024 / 512
Maximum Number of FortiTokens		5000
High Availability Configurations	Active-Active, Active-Passive, Clustering	

	FG-900G	FG-901G
<b>Dimensions and Power</b>		
Height x Width x Length (inches)	1.5 x 17.0 x 15.0	
Height x Width x Length (mm)	44.45 x 432 x 380	
Weight	15.98 lbs (7.25 kg)	16.53 lbs (7.5 kg)
Form Factor (supports EIA/non-EIA standards)	Rack Mount, 1RU	
AC Power Supply	100–240VAC, 50/60 Hz	
AC Current (Maximum)	6A@100VAC	
Power Consumption (Average / Maximum)	134 W / 252 W	144 W / 264 W
Heat Dissipation	861 BTU/h	902 BTU/h
Power Supply Efficiency Rating	80Plus Compliant	
Redundant Power Supplies (Hot Swappable)	Yes (comes with 2PSU default)	
<b>Operating Environment and Certifications</b>		
Operating Temperature	32°F to 113°F (0°C to 45°C)	
Storage Temperature	-31°F to 158°F (-35°C to 70°C)	
Humidity	10% to 90% non-condensing	
Noise Level	58 dBA	
Forced Airflow	Side and Front to Back	
Operating Altitude	Up to 10 000 ft (3048 m)	
Compliance	FCC Part 15 Class A, RCM, VCCI, CE, UL/cUL, CB	
Certifications	USGv6/IPv6	

\* Latency based on Ultra Low Latency (ULL) ports.

Note: All performance values are “up to” and vary depending on system configuration.

<sup>1</sup> IPsec VPN performance test uses AES256-SHA256.

<sup>2</sup> IPS (Enterprise Mix), Application Control, NGFW and Threat Protection are measured with Logging enabled.

<sup>3</sup> SSL Inspection performance values use an average of HTTPS sessions of different cipher suites.

<sup>4</sup> NGFW performance is measured with Firewall, IPS and Application Control enabled.

<sup>5</sup> Threat Protection performance is measured with Firewall, IPS, Application Control and Malware Protection enabled.

<sup>6</sup> Uses RSA-2048 certificate.



## Subscriptions

Service Category	Service Offering	A-la-carte	Bundles		
			Enterprise Protection	Unified Threat Protection	Advanced Threat Protection
FortiGuard Security Services	IPS Service	•	•	•	•
	Anti-Malware Protection (AMP) — Antivirus, Mobile Malware, Botnet, CDR, Virus Outbreak Protection and FortiSandbox Cloud Service	•	•	•	•
	URL, DNS & Video Filtering Service	•	•	•	
	Anti-Spam		•	•	
	AI-based Inline Malware Prevention Service	•	•		
	Data Loss Prevention Service <sup>1</sup>	•	•		
	OT Security Service (OT Detection, OT Vulnerability correlation, Virtual Patching, OT Signature / Protocol Decoders) <sup>1</sup>	•			
	Application Control			included with FortiCare Subscription	
	CASB SaaS Control			included with FortiCare Subscription	
SD-WAN and SASE Services	SD-WAN Underlay Bandwidth and Quality Monitoring Service	•			
	SD-WAN Overlay-as-a-Service for SaaS-based overlay network provisioning	•			
	SD-WAN Connector for FortiSASE Secure Private Access	•			
	FortiSASE subscription including cloud management and 10Mbps bandwidth license <sup>2</sup>	•			
NOC and SOC Services	FortiGuard Attack Surface Security Service (IoT Detection, IoT Vulnerability Correlation, and Security Rating Updates) <sup>1</sup>	•	•		
	FortiConverter Service	•	•		
	Managed FortiGate Service	•			
	FortiGate Cloud (SMB Logging + Cloud Management)	•			
	FortiManager Cloud	•			
	FortiAnalyzer Cloud	•			
	FortiAnalyzer Cloud with SOCaaS	•			
Hardware and Software Support	FortiCare Essentials <sup>2</sup>	•			
	FortiCare Premium	•	•	•	•
	FortiCare Elite	•			
Base Services	Internet Service (SaaS) DB Updates				
	GeoIP DB Updates				included with FortiCare Subscription
	Device/OS Detection Signatures				
	Trusted Certificate DB Updates				
	DDNS (v4/v6) Service				

1. Full features available when running FortiOS 7.4.1

2. Desktop Models only



### FortiGuard Bundles

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.



### FortiCare Services

Fortinet prioritizes customer success through FortiCare Services, optimizing the Fortinet Security Fabric solution. Our comprehensive lifecycle services include Design, Deploy, Operate, Optimize, and Evolve. The FortiCare Elite, one of the service variants, offers heightened SLAs and swift issue resolution with a dedicated support team. This advanced support option includes an Extended End-of-Engineering-Support of 18 months, providing flexibility. Access the intuitive FortiCare Elite Portal for a unified view of device and security health, streamlining operational efficiency and maximizing Fortinet deployment performance.





## Ordering Information

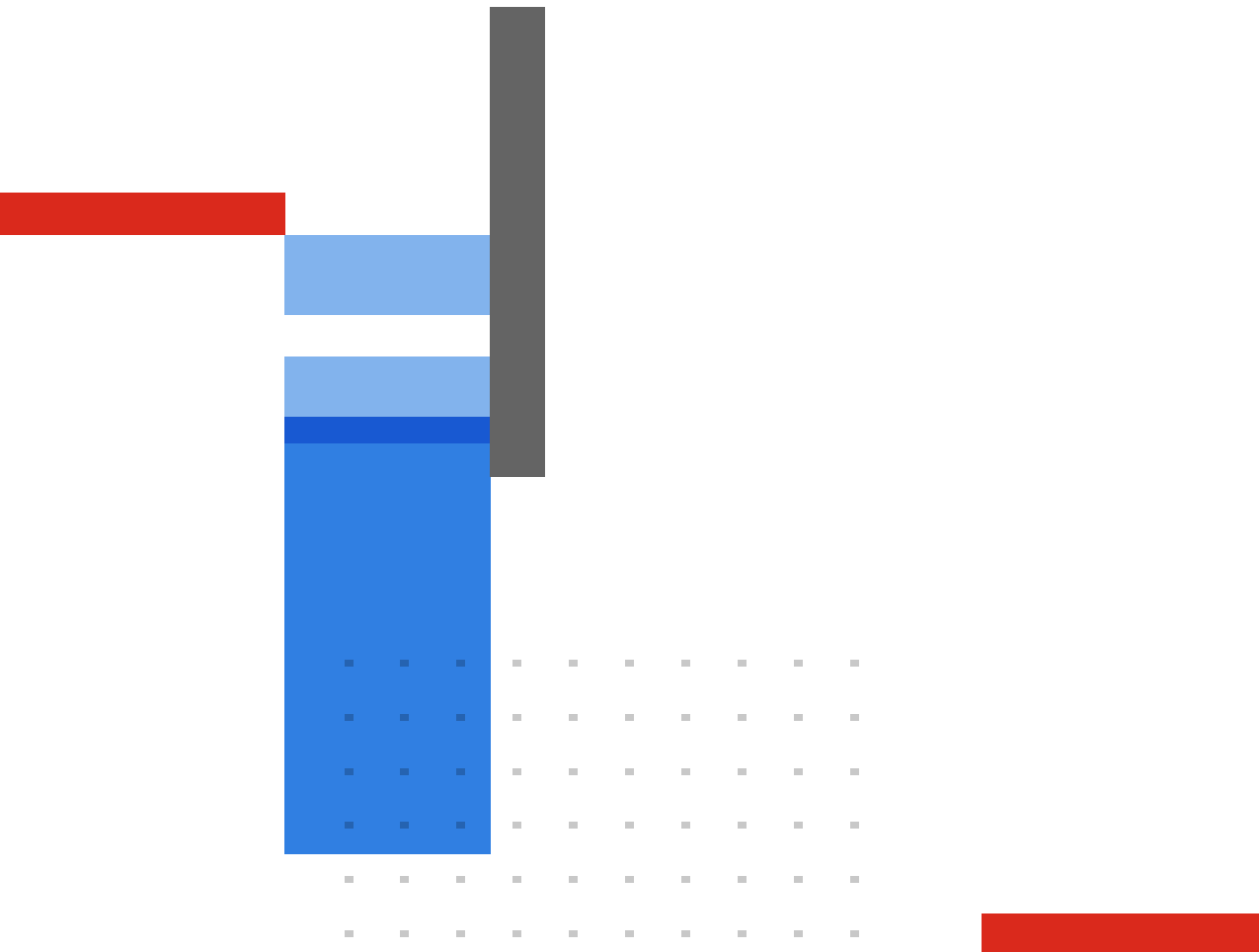
Product	SKU	Description
FortiGate 900G	FG-900G	4× 25G SFP28 slots, 4× 10GE SFP+ slots, 17x GE RJ45 ports (including 1x MGMT port, 16x switch ports), 1× 2.5G HA port, 8x GE SFP slots, SPU NP7 and CP9 hardware accelerated, dual AC PSU.
FortiGate 901G	FG-901G	4× 25G SFP28 slots, 4× 10GE SFP+ slots, 17x GE RJ45 ports (including 1x MGMT port, 16x switch ports), 1× 2.5G HA port, 8x GE SFP slots, SPU NP7 and CP9 hardware accelerated, 2× 480 GB onboard SSD storage, dual AC PSU.
<b>Optional Accessories</b>		
<b>AC Power Supply</b>	SP-FG400F-PS	AC power supply for FG-400/401F, FG-600/601F, and FG-900/901G power cable SP-FGPCOR-XX sold separately.
<b>Transceivers</b>		
1 GE SFP LX Transceiver Module	FN-TRAN-LX	1 GE SFP LX transceiver module for all systems with SFP and SFP/SFP+ slots.
1 GE SFP RJ45 Transceiver Module	FN-TRAN-GC	1 GE SFP RJ45 transceiver module for all systems with SFP and SFP/SFP+ slots.
1 GE SFP SX Transceiver Module	FN-TRAN-SX	1 GE SFP SX transceiver module for all systems with SFP and SFP/SFP+ slots.
10 GE SFP+ RJ45 Transceiver Module	FN-TRAN-SFP+GC	10 GE SFP+ RJ45 transceiver module for systems with SFP+ slots.
10 GE SFP+ Transceiver Module, Short Range	FN-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	FN-TRAN-SFP+LR	10 GE SFP+ transceiver module, long range for all systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Extended Range	FN-TRAN-SFP+ER	10 GE SFP+ transceiver module, extended range for all systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, 30km Long Range	FN-TRAN-SFP+BD27	10 GE SFP+ transceiver module, 30km long range single BiDi for systems with SFP+ and SFP/SFP+ slots (connects to FN-TRAN-SFP+BD33, ordered separately).
10 GE SFP+ Transceiver Module, (connects to FN-TRAN-SFP+BD27, ordered separately)	FN-TRAN-SFP+BD33	10 GE SFP+ transceiver module, 30km long range single BiDi for systems with SFP+ and SFP/SFP+ slots (connects to FN-TRAN-SFP+BD27, ordered separately).
10 GE SFP+ Transceiver Module, 80km Extreme Long Range	FN-TRAN-SFP+ZR	10 GE SFP+ transceiver module, 80km extreme long range, for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Extended Range	FS-TRAN-SFP+ER	10 GE SFP+ transceivers, extended range for all systems with SFP+ slots.
25 GE SFP28 Transceiver Module, Short Range	FN-TRAN-SFP28-SR	25 GE SFP28 transceiver module, short range for all systems with SFP28 slots.
25 GE SFP28 Transceiver Module, Long Range	FN-TRAN-SFP28-LR	25 GE SFP28 transceiver module, long range for all systems with SFP28 slots.
<b>Cables</b>		
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.
25 GE SFP28 Passive Direct Attach Cable	FN-CABLE-SFP28-1	25 GE SFP28 passive direct attach cable 1m for systems with SFP28 slots.
25 GE SFP28 Passive Direct Attach Cable	FN-CABLE-SFP28-3	25 GE SFP28 passive direct attach cable 3m for systems with SFP28 slots.
25 GE SFP28 Passive Direct Attach Cable	FN-CABLE-SFP28-5	25 GE SFP28 passive direct attach cable 5m for systems with SFP28 slots.



---

## Fortinet CSR Policy

Fortinet is committed to driving progress and sustainability for all through cybersecurity, with respect for human rights and ethical business practices, making possible a digital world you can always trust. You represent and warrant to Fortinet that you will not use Fortinet's products and services to engage in, or support in any way, violations or abuses of human rights, including those involving illegal censorship, surveillance, detention, or excessive use of force. Users of Fortinet products are required to comply with the [Fortinet EULA](#) and report any suspected violations of the EULA via the procedures outlined in the [Fortinet Whistleblower Policy](#).



[www.fortinet.com](http://www.fortinet.com)

Copyright © 2024 Fortinet, Inc. All rights reserved. Fortinet®, FortiGate®, FortiCare® and FortiGuard®, and certain other marks are registered trademarks of Fortinet, Inc., and other Fortinet names herein may also be registered and/or common law trademarks of Fortinet. All other product or company names may be trademarks of their respective owners. Performance and other metrics contained herein were attained in internal lab tests under ideal conditions, and actual performance and other results may vary. Network variables, different network environments and other conditions may affect performance results. Nothing herein represents any binding commitment by Fortinet, and Fortinet disclaims all warranties, whether express or implied, except to the extent Fortinet enters a binding written contract, signed by Fortinet's General Counsel, with a purchaser that expressly warrants that the identified product will perform according to certain expressly-identified performance metrics and, in such event, only the specific performance metrics expressly identified in such binding written contract shall be binding on Fortinet. For absolute clarity, any such warranty will be limited to performance in the same ideal conditions as in Fortinet's internal lab tests. Fortinet disclaims in full any covenants, representations, and guarantees pursuant hereto, whether express or implied. Fortinet reserves the right to change, modify, transfer, or otherwise revise this publication without notice, and the most current version of the publication shall be applicable.