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Data Sheet

FortiGate 90G Series

FG-90G and FG-91G

Highlights

Gartner Magic Quadrant Leader for both Network Firewalls and SD-WAN.

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

Unparalleled Performance with Fortinet's patented SoC processors.

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

Simplified Operations with centralized management for networking and security, automation, deep analytics, and self-healing.

Converged Next-Generation Firewall (NGFW) and SD-WAN

The FortiGate Next-Generation Firewall 90G series is ideal for building security-driven networks at distributed enterprise sites and transforming WAN architecture at any scale.

With a rich set of AI/ML-based FortiGuard security services and our integrated Security Fabric platform, the FortiGate 90G series delivers coordinated, automated, end-to-end threat protection across all use cases.

FortiGate has the industry's first integrated SD-WAN and zero-trust network access (ZTNA) enforcement within an NGFW solution and is powered by one OS. FortiGate 90G automatically controls, verifies, and facilitates user access to applications, delivering consistency with a seamless and optimized user experience.

IPS	NGFW	Threat Protection	Interfaces
4.5 Gbps	2.5 Gbps	2.2 Gbps	Multiple GE RJ45, 10 GE RJ45, and SFP+ Share Media Slots | Variants with internal storage

Available in

Appliance

Virtual

Hosted

Cloud

Container

FortiOS Everywhere

FortiOS, Fortinet’s Advanced Operating System

FortiOS enables the convergence of high performing networking and security across the Fortinet Security Fabric. Because it can be deployed anywhere, it delivers consistent and context-aware security posture across network, endpoint, and multi-cloud environments.

FortiOS powers all FortiGate deployments whether a physical or virtual device, as a container, or as a cloud service. This universal deployment model enables the consolidation of many technologies and use cases into organically built best-of-breed capabilities, unified operating system, and ultra-scalability. The solution allows organizations to protect all edges, simplify operations, and run their business without compromising performance or protection.

FortiOS dramatically expands the Fortinet Security Fabric’s ability to deliver advanced AI/ML-powered services, inline advanced sandbox detection, integrated ZTNA enforcement, and more. It provides protection across hybrid deployment models for hardware, software, and Software-as-a-Service with SASE.

FortiOS expands visibility and control, ensures the consistent deployment and enforcement of a simplified, single policy and management framework. Its security policies enable centralized management across large-scale networks with the following key attributes:

- Interactive drill-down and topology viewers that display real-time status
- On-click remediation that provides accurate and quick protection against threats and abuses
- Unique threat score system correlates weighted threats with users to prioritize investigations

Intuitive easy to use view into the network and endpoint vulnerabilities

Visibility with FOS Application Signatures

FortiConverter Service

FortiConverter Service provides hassle-free migration to help organizations transition from a wide range of legacy firewalls to FortiGate Next-Generation Firewalls quickly and easily. The service eliminates errors and redundancy by employing best practices with advanced methodologies and automated processes. Organizations can accelerate their network protection with the latest FortiOS technology.

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)

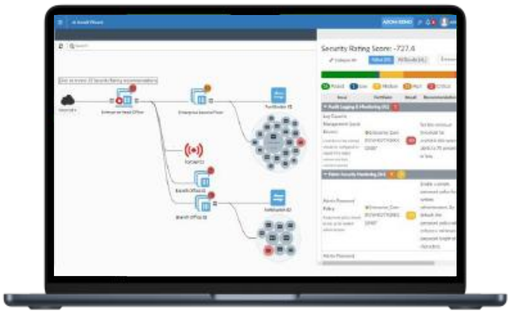
Traditional firewalls cannot protect against today's content- and connection-based threats because they rely on off-the-shelf hardware and general-purpose CPUs, causing a dangerous performance gap. Fortinet's custom SPU processors deliver the power you need—up to 520Gbps—to detect emerging threats and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

ASIC Advantage

FORTINET
FortiSP5
1403LP699

Secure SD-WAN ASIC SP5

- Combines a RISC-based CPU with Fortinet's proprietary Security Processing Unit (SPU) content and network processors for unmatched performance
- Delivers industry's fastest application identification and steering for efficient business operations
- Accelerates IPsec VPN performance for best user experience on direct internet access
- Enables best of breed NGFW Security and Deep SSL Inspection with high performance
- Extends security to access layer to enable SD-Branch transformation with accelerated and integrated switch and access point connectivity



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)

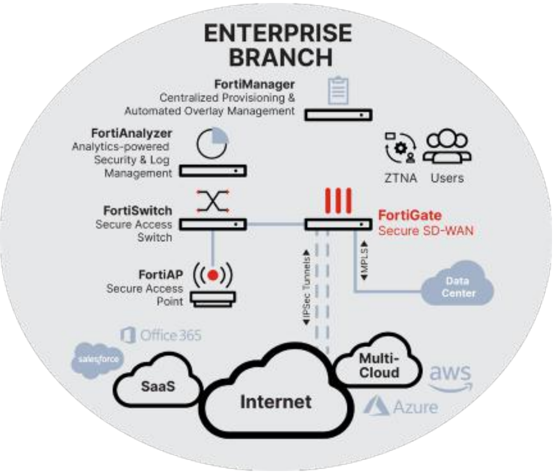
- FortiGuard Labs' suite of AI-powered Security Services—natively integrated with your NGFW—secures web, content, and devices and protects networks from ransomware and sophisticated cyberattacks
- Real-time SSL inspection (including TLS 1.3) provides full visibility into users, devices, and applications 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-any where models, SD-Branch, and cloud-first WAN use cases
- Achieve operational efficiencies at any scale through automation, deep analytics, and self-healing

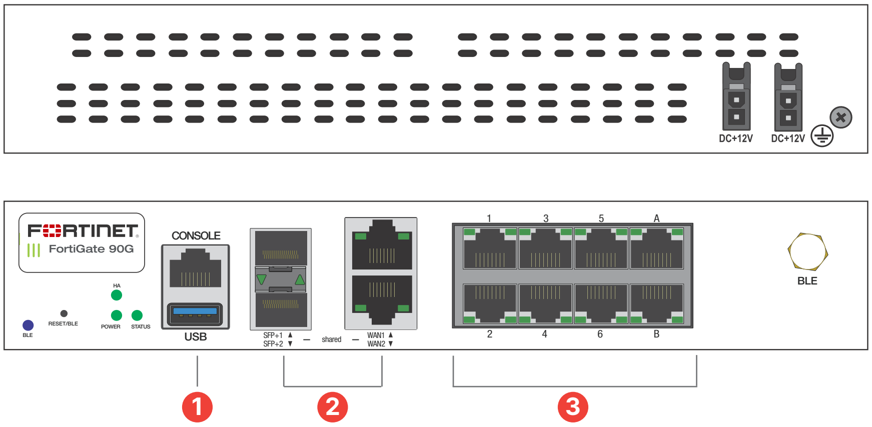
Universal ZTNA

- 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



Hardware

FortiGate 90G/91G



Interfaces

1. 1x RJ45 Console and
   1x USB Management Port
2. 2× 10/5/2.5/ GE RJ45 or
   10GE/GE SFP+/SFP Shared Media Ports
3. 8x GE RJ45 Ports

Hardware Features

■ SP5 ◣ DESKTOP ■ 120GB

Compact and Reliable Form Factor

Designed for small environments, you can place it on a desktop or wall-mount it. It is small, lightweight, yet highly reliable with a superior MTBF (Mean Time Between Failure), minimizing the chance of a network disruption.

Trusted Platform Module (TPM)

The FortiGate 90G 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.

Specifications

	FORTIGATE 90G	FORTIGATE 91G
Hardware Specifications		
10/5/2.5/GE RJ45 or 10GE/GE SFP+/ SFP Shared Media pairs	2	2
GE RJ45 Internal Ports	8	8
Wireless Interface	–	–
USB Ports	1	1
Console (RJ45)	1	1
Internal Storage	–	1 × 120 GB SSD
Trusted Platform Module (TPM)	✓	✓
Bluetooth Low Energy (BLE)	✓	✓
System Performance* — Enterprise Traffic Mix		
IPS Throughput [2]	4.5 Gbps	
NGFW Throughput [2, 4]	2.5 Gbps	
Threat Protection Throughput [2, 5]	2.2 Gbps	
System Performance and Capacity		
Firewall Throughput (1518 / 512 / 64 byte UDP packets)	28 / 28 / 27.9 Gbps	
Firewall Latency (64 byte UDP packets)	3.23 μs	
Firewall Throughput (Packets Per Second)	41.85 Mpps	
Concurrent Sessions (TCP)	3 M	
New Sessions/Second (TCP)	124 000	
Firewall Policies	5000	
IPsec VPN Throughput (512 byte) [1]	25 Gbps	
Gateway-to-Gateway IPsec VPN Tunnels	200	
Client-to-Gateway IPsec VPN Tunnels	2500	
SSL-VPN Throughput [6, 7]	1.4 Gbps	
Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode)	200	
SSL Inspection Throughput (IPS, avg. HTTPS) [3]	2.6 Gbps	
SSL Inspection CPS (IPS, avg. HTTPS) [3]	1400	
SSL Inspection Concurrent Session (IPS, avg. HTTPS) [3]	300 000	
Application Control Throughput (HTTP 64K) [2]	6.7 Gbps	
CAPWAP Throughput (HTTP 64K)	23.6 Gbps	
Virtual Domains (Default / Maximum)	10 / 10	
Maximum Number of FortiSwitches Supported	24	
Maximum Number of FortiAPs (Total / Tunnel Mode)	96 / 48	
Maximum Number of FortiTokens	500	
High Availability Configurations	Active-Active, Active-Passive, Clustering	

	FORTIGATE 90G	FORTIGATE 91G
Dimensions		
Height x Width x Length (inches)	1.65 × 8.5 × 7.0	
Height x Width x Length (mm)	42 × 216 × 178	
Weight	2.47 lbs (1.12 kg)	
Form Factor	Desktop	
Operating Environment and Certifications		
Input Rating	12V DC, 3A (dual redundancy optional)	
Power Required (Redundancy Optional)	Powered by up to 2 External DC Power Adapters (1 adapter included), 100–240V AC, 50/60 Hz	
Power Supply Efficiency Rating	80Plus Compliant	
Power Required (Redundancy Optional)	Powered by up to 2 External DC Power Adapters (1 adapter included), 100–240V AC, 50/60 Hz	
Maximum Current	115Vac/0.4A, 230Vac/0.2A	
Power Consumption (Average / Maximum)	19.9 W / 20.53 W	22.4 W / 23.5 W
Heat Dissipation	70.0 BTU/hr	80.1 BTU/hr
Operating Temperature	32°F to 104°F (0°C to 40°C)	
Storage Temperature	-31°F to 158°F (-35°C to 70°C)	
Humidity	10% to 90% non-condensing	
Noise Level	21.73 dBA	
Operating Altitude	Up to 10 000 ft (3048 m)	
Compliance	FCC, ICES, CE, RCM, VCCI, BSMI, UL/cUL, CB	
Certifications	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.

[6] Uses RSA-2048 certificate.

[7] SSL VPN only supported between 7.0.12 and 7.0.15

Subscriptions

			Bundles		
Service Category	Service Offering	A-la-carte	Enterprise Protection	Unified Threat Protection	Advanced Threat Protection
FortiGuard Security Services	IPS — IPS, Malicious/Botnet URLs	•	•	•	•
	Anti-Malware Protection (AMP)—AV, Botnet Domains, Mobile Malware, Virus Outbreak Protection, Content Disarm and Reconstruct [3], AI-based Heurestic AV, FortiGate Cloud Sandbox	•	•	•	•
	URL, DNS and Video Filtering — URL, DNS and Video [3] Filtering, Malicious Certificate	•	•	•	
	Anti-Spam		•	•	
	AI-based Inline Malware Prevention [3]	•	•		
	Data Loss Prevention (DLP) [1]	•	•		
	Attack Surface Security — IoT Device Detection, IoT Vulnerability Correlation and Virtual Patching, Security Rating, Outbreak Check	•	•		
	OT Security—OT Device Detection, OT vulnerability correlation and Virtual Patching, OT Application Control and IPS [1]	•			
	Application Control		included with FortiCare Subscription		
	Inline CASB [3]		included with FortiCare Subscription		
SD-WAN and SASE Services	SD-WAN Underlay Bandwidth and Quality Monitoring	•			
	SD-WAN Overlay-as-a-Service	•			
	SD-WAN Connector for FortiSASE Secure Private Access	•			
	SASE connector for FortiSASE Secure Edge Management (with 10Mbps Bandwidth) [2]	•			
NOC and SOC Services	FortiConverter Service for one time configuration conversion	•	•		
	Managed FortiGate Service—available 24×7, with Fortinet NOC experts performing device setup, network, and policy change management	•			
	FortiGate Cloud—Management, Analysis, and One Year Log Retention	•			
	FortiManager Cloud	•			
	FortiAnalyzer Cloud	•			
	FortiGuard SOCaaS—24×7 cloud-based managed log monitoring, incident triage, and SOC escalation service	•			
Hardware and Software Support	FortiCare Essentials [2]	•			
	FortiCare Premium	•	•	•	•
	FortiCare Elite	•			
Base Services	Device/OS Detection, GeoIPs, Trusted CA Certificates, Internet Services and Botnet IPs, DDNS (v4/v6), Local Protection, PSIRT Check, Anti-Phishing		included with FortiCare Subscription		

1. Full features available when running FortiOS 7.4.1.

2. Desktop Models only.

3. Not available for FortiGate/FortiWiFi 40F, 60E, 60F, 80E, and 90E series from 7.4.4 onwards.

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 90G	FG-90G	8x GE RJ45 ports, 2× 10GE RJ45/SFP+ shared media WAN ports.
FortiGate 91G	FG-91G	8x GE RJ45 ports, 2× 10GE RJ45/SFP+ shared media WAN ports with 120GB SSD.
Optional Accessories		
AC Power Adaptor	SP-FG60E-PDC-5	Pack of 5 AC power adaptors for FG/FWF 60E/61E, FG/FWF 60F/61F, FG-80E/81E, FG-80F/81F, and FG-90G/91G.
Wall Mount Kit	SP-FG60F-MOUNT-20	Pack of 20 wall mount kits for FG/FWF-60F, FG-90G/91G and FG/FWF-80F series.
Rack Mount Tray	SP-RACKTRAY-02	Rack mount tray for all FortiGate E, F, and G series desktop models.
Mounting Ear Bracket	SP-EAR-FG90G-10	Mounting Ear brackets for FG-90/91G 10 pairs pack.
Transceivers		
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.
1 GE SFP LX Transceiver Module	FN-TRAN-LX	1 GE SFP LX 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).
Cables		
10 GE SFP+ Passive Direct Attach Cable, 1m	FN-CABLE-SFP+1	10 GE SFP+ passive direct attach cable, 1m for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Passive Direct Attach Cable, 3m	FN-CABLE-SFP+3	10 GE SFP+ passive direct attach cable, 3m for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Passive Direct Attach Cable, 5m	FN-CABLE-SFP+5	10 GE SFP+ passive direct attach cable, 5m for systems with SFP+ and SFP/SFP+ slots.

Visit https://www.fortinet.com/resources/ordering-guides for related ordering guides.

Fortinet Corporate Social Responsibility Policy

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