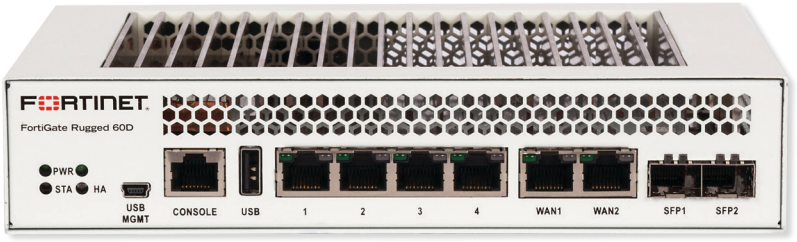
DATA SHEET

FortiGate® Rugged Series



While traditional security solutions are designed and intended for the world of offices and corporations, **the FortiGate Rugged Series offers industrially-hardened, all-in-one security appliance that delivers specialized threat protection for securing critical industrial and control networks against malicious attacks.**

Ruggedized Design

Fanless and use of robust components ensure reliable operation in harsh industrial environments.

Consolidated Security Architecture

FortiGate running FortiOS consolidated security offers better protection and lower cost of ownership than multiple point products. Coupled with FortiGuard Industrial Security Service, it ensures that critical networks receive real-time protection.

Ease of Management

Robust management systems that allow rapid provision and deployment, monitoring of device and threat status while providing actionable reports.

Product Offerings

FGR-30D — Ruggedized compact security appliance with DIN mounting kit

FGR-35D — Security appliance with IP67 rating for outdoor environment

FGR-60D — SPU SoC Powered, high performance security and VPN gateway

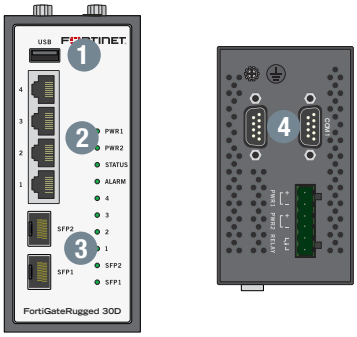
FGR-90D — Robust ruggedized security appliance with wide operating temperature

Third-Party Certifications

ICSA labs CERTIFIED ANTI-VIRUS
ICSA labs CERTIFIED FIREWALL - CORPORATE
ICSA labs CERTIFIED IPSEC - BASIC
ICSA labs CERTIFIED SSL VPN
ICSA labs CERTIFIED NETWORK IPS

Hardware

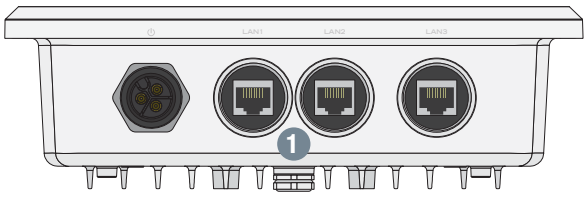
FortiGate Rugged 30D



Interfaces

1. 1x USB Port
2. 4x GE RJ45 Ports
3. 2x GE SFP Slots
4. 2x DB9 Serial Interface/Console

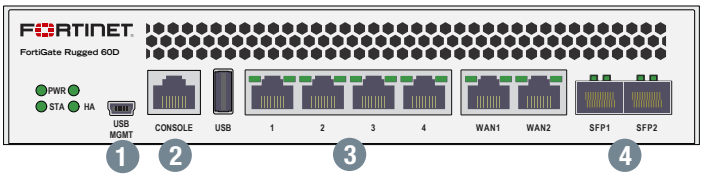
FortiGate Rugged 35D

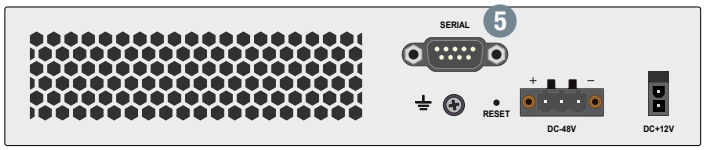


Interfaces

1. 3x GE RJ45 Ports

FortiGate Rugged 60D

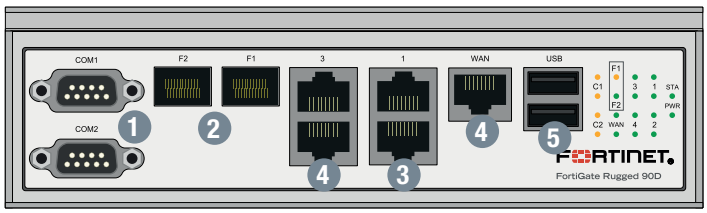




Interfaces

1. USB Management Port for FortiExplorer
2. Console Port (RJ45)
3. 4x GE RJ45 Ports
4. 2x Shared Media (GE RJ45 Ports / GE SFP Slots) Pairs
5. 1x DB9 Serial Interface

FortiGate Rugged 90D



Interfaces

1. 2x DB9 Serial Interface/Console
2. 2x GE SFP Slots
3. 1x GE RJ45 Bypass Pair
4. 3x GE RJ45 ports
5. 2x USB interfaces

Wireless and 3G/4G WAN Extensions

The FortiGate supports external 3G/4G modems that allow additional or redundant WAN connectivity for maximum reliability. The FortiGate can also operate as a wireless access point controller to further extend wireless capabilities.

Compact, Ruggedized and Reliable Form Factor

Designed for confined spaces and harsh environments, the ruggedized FortiGate can be mounted within an enclosure, on a wall or on a DIN rail. It is small and lightweight yet highly reliable with superior Mean Time Between Failure (MTBF), minimizing the chance of a network disruption. The hardware components meet high standards in both EMI and vibration tolerance with a wide thermal operating range supported.

Fortinet Security Fabric

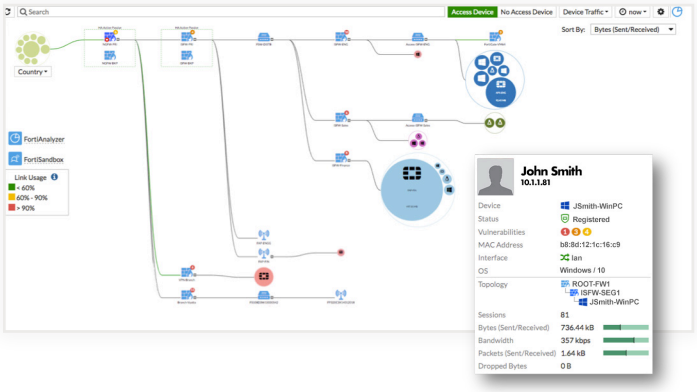
Security Fabric

The Security Fabric delivers broad visibility, integrated AI-driven breach prevention, and automated operations, orchestration, and response across all Fortinet and its ecosystem deployments. It 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. All this is tied together under a single pane of glass management to deliver leading security capabilities across your entire environment while also significantly reducing complexity.

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 security and networking capabilities across the entire FortiGate platform with one intuitive operating system. Reduce complexity, costs, and response time with a truly consolidated next-generation security platform.



- A truly consolidated platform with a single OS and pane-of-glass for all security and networking services across all FortiGate platforms.
- Industry-leading protection: NSS Labs Recommended, VB100, AV Comparatives, and ICSA validated security and performance. Ability to leverage latest technologies such as deception-based security.
- Control thousands of applications, block the latest exploits, and filter web traffic based on millions of real-time URL ratings in addition to true TLS 1.3 support.
- Prevent, detect, and mitigate advanced attacks automatically in minutes with integrated AI-driven breach prevention and advanced threat protection.
- Improved user experience with innovative SD-WAN capabilities and ability to detect, contain and isolate threats with Intent-based Segmentation.
- Utilize SPU hardware acceleration to boost security capability performance.

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

Specifications

	FGR-30D	FGR-35D	FGR-60D	FGR-90D
Interfaces and Modules				
GE RJ45 Interfaces	4	3	4	3
GE RJ45 Bypass Pair	–	–	–	1
GE SFP Slots	2	–	–	2
Shared Media Pairs (GE RJ45 / GE SFP)	–	–	2	–
DB9 Serial Interface	2	–	1	2
USB (Client / Server)	1	–	1/1	1
RJ45 Console Port	–	–	1	–
Included Transceivers	None	None	None	None
System Performance and Capacity				
IPv4 Firewall Throughput (1518 UDP)	900 Mbps	550 Mbps	1.5 Gbps	2 Gbps
Firewall Latency (64 byte, UDP)	70 µs	90 µs	4 µs	51 µs
Firewall Throughput (Packets Per Second)	87 Kpps	52.5 Kpps	2.2 Mpps	84 Kpps
Concurrent Sessions (TCP)	750,000	750,000	500,000	2.5 Million
New Sessions/Second (TCP)	5,000	5,000	4,000	20,000
Firewall Policies	5,000	5,000	5,000	5,000
IPsec VPN Throughput (512 byte) [1]	45 Mbps	45 Mbps	1 Gbps	84 Mbps
Gateway-to-Gateway IPsec VPN Tunnels	200	200	200	200
Client-to-Gateway IPsec VPN Tunnels	250	250	500	1,000
SSL-VPN Throughput	25 Mbps	25 Mbps	30 Mbps	115 Mbps
Concurrent SSL-VPN Users (Recommended Maximum)	80	80	100	200
SSL Inspection Throughput (IPS, avg. HTTPS) [3]	50 Mbps	55 Mbps	15 Mbps	85 Mbps
SSL Inspection CPS (IPS, avg. HTTPS) [3]	75	75	20	70
SSL Inspection Concurrent Session (IPS, avg. HTTPS) [3]	45,000	45,000	15,000	72,000
Application Control Throughput (HTTP 64K)	210 Mbps	230 Mbps	95 Mbps	440 Mbps
Virtual Domains (Default / Maximum)	5 / 5	5 / 5	10 / 10	10 / 10
Maximum Number of FortiAPs (Total / Tunnel)	2 / 2	2 / 2	10 / 5	32 / 16
Maximum Number of FortiTokens	20	20	100	100
Maximum Number of Registered FortiClients	200	200	200	200
High Availability Configurations	Active-Active, Active-Passive, Clustering	Active-Active, Active-Passive, Clustering	Active-Active, Active-Passive, Clustering	Active-Active, Active-Passive, Clustering
System Performance — Optimal Traffic Mix				
IPS Throughput [2]	230 Mbps	230 Mbps	200 Mbps	1.1 Gbps
System Performance — Enterprise Traffic Mix				
IPS Throughput [2]	180 Mbps	210 Mbps	95 Mbps	350 Mbps
NGFW Throughput [2, 4]	45 Mbps	65 Mbps	40 Mbps	370 Mbps
Threat Protection Throughput [2, 5]	16 Mbps	16 Mbps	23 Mbps	280 Mbps
Dimensions and Power				
Height x Width x Length (inches)	5.49 x 4.13 x 2.36	3.07 x 10.04 x 10.04	1.73 x 8.50 x 6.10	2.11 x 7.32 x 6.30
Height x Width x Length (mm)	139.5 x 105 x 60	78 x 255.09 x 255.09	44 x 216 x 155	53.5 x 186 x 160
Weight	1.46 lbs (0.668 kg)	3.986 lbs (1.808 kg)	3.5 lbs (1.6 kg)	2.4 lbs (1.08 kg)
Form Factor	Desktop	Outdoor mountable	Desktop	Desktop
IP Rating	IP20	IP67	IP20	IP40
Power Supply	Dual input, total 6 pin terminal block (12–48V DC) DC cables are not included. [6]	Terminal block (12–48V DC) DC cables are not included. [7]	-48V DC power supply and external 12V DC power adapter connection. AC adapter not included. DC Power connector supplied only. [8]	Dual input, total 6 pin terminal block (12–48V DC) AC adapter included. [9]
Power Consumption (Average / Maximum)	15.55 W / 15.92W	10.2 W / 10.5 W	11.6 W / 14 W	40 W / 49 W
Maximum Current	1.19A	0.83A	-48V DC / 0.5A	12–48V DC/ 4.08–1.02A
Heat Dissipation	54.29 BTU/h	35.81 BTU/h	40 BTU/h	167 BTU/h
Operating Environment and Certifications				
Operating Temperature	-40–158°F (-40–70°C)	-40–140°F (-40–60°C)	-4–140°F (-20–60°C)	-40–158°F (-40–70°C) [10]
Storage Temperature	-58–185°F (-50–85°C)	-58–185°F (-50–85°C)	-40–185°F (-40–85°C)	-40–185°F (-40–85°C)
Humidity	5–95% non-condensing	5–95% non-condensing	20–90% non-condensing	0–95% non-condensing
Operating Altitude	Up to 7,400 ft (2,250 m)	Up to 7,400 ft (2,250 m)	Up to 7,400 ft (2,250 m)	Up to 7,400 ft (2,250 m)
Compliance	FCC Part 15 Class A, C-Tick, VCCI Class B, CE, UL/cUL, CB	FCC Part 15 Class A, C-Tick, VCCI Class A, CE, UL/cUL, CB	FCC Part 15 Class A, C-Tick, CE, UL/cUL, CB	FCC Part 15 Class A, C-Tick, VCCI Class A, CE, UL/cUL, CB

Specifications

	FGR-30D	FGR-35D	FGR-60D	FGR-90D
Certifications	IEEE 1613 and IEC 61850-3 Certified ICSA Labs: Firewall, IPsec, IPS, Antivirus, SSL-VPN	IEEE 1613 and IEC 61850-3 Certified ICSA Labs: Firewall, IPsec, IPS, Antivirus, SSL-VPN	—	IEC 61850-3 and IEEE 1613 Emission Compliant ICSA Labs: Firewall, IPsec, IPS, Antivirus, SSL-VPN

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. AC adapter not supported.
7. AC adapter not supported. Requires fabricated DC cables (refer to QuickStart Guide).
8. Requires third-party AC adapter or DC cables. If wide temperature range is not required, SP-FG60C-PDC (0–40°C) may be acquired separately.
9. Additional AC adapter for dual redundant input is currently not available for order.
10. Excludes supplied power adapter which operates at smaller temperature range.

Supported Protocols

IPS and Application Control Support for Operational Technology/Industrial Control System

- ADDP
- BACnet
- CC-Link
- CIP
- CN/IP - EIA/CEA-852
- IEC 62056 - DLMS/COSEM
- DNP3
- ECHONET Lite
- LonTalk/EIA-709.1
- ELCOM 90
- EtherCAT Automation Protocol (EAP)
- Ethernet Global Data (EGD)
- EtherNet/IP
- Ether-S-Bus
- FL-net
- HART-IP
- IEC 60870-6 (TASE.2/ICCP)
- IEC 60870-5-104
- IEC 61850 (MMS)
- IEEE 1278.2 Distributed Interactive Simulation
- KNXnet/IP (EIBnet/IP)
- Modbus TCP
- MOXA
- MTConnect
- OPC UA (DA, HDA, AE)
- OpenADR
- PROFINET
- RTPS
- SafetyNet p
- Siemens S7, S7Plus, LOGO
- STANAG 4 406
- STANAG 5066
- IEEE C37.118 Synchrophasor
- Vedeer-Root

FortiGate Rugged 30D

FortiGate Rugged 35D

FortiGate Rugged 60D

FortiGate Rugged 90D

Order Information

Product	SKU	Description
FortiGate Rugged 30D	FGR-30D	Ruggedized, 4x GE RJ45 ports, 2x GE SFP slots, 2x DB9 Serial. Maximum managed FortiAPs (Total / Tunnel) 2 / 2.
FortiGate Rugged 35D	FGR-35D	Ruggedized, IP67 rating for outdoor environment, 3x GE RJ45 Switch ports. Maximum managed FortiAPs (Total / Tunnel) 2 / 2.
FortiGate Rugged 60D	FGR-60D	Ruggedized, 4x GE RJ45 Switch ports, 2x Shared Media pairs (Including 2x GE RJ45 ports, 2x SFP slots). DB9 Serial. Maximum managed FortiAPs (Total / Tunnel) 10 / 5.
FortiGate Rugged 90D	FGR-90D	Ruggedized, 3x GE RJ45 ports, 1x GE RJ45 bybass pair, 2x SFP slots. 2x DB9 Serial/console. Dual power input. Maximum managed FortiAPs (Total / Tunnel) 32 / 16.
Optional Accessories		
1 GE SFP LX transceivers, SMF, -40–85°C operation	FR-TRAN-LX	1 GE SFP LX transceiver module, -40–85°C, over SMF, for all systems with SFP and SFP/SFP+ slots.
1 GE SFP SX transceivers, MMF, -40–85°C operation	FR-TRAN-SX	1 GE SFP SX transceiver module, -40–85°C, over MMF, for all systems with SFP and SFP/SFP+ slots.
1 GE SFP transceivers, 90km range, -40–85°C operation	FR-TRAN-ZX	1 GE SFP transceivers, -40–85°C operation, 90km range for all systems with SFP slots.

Bundles

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	360 Protection	Enterprise Protection	UTM	Threat Protection
FortiCare	ASE [1]	24x7	24x7	24x7
FortiGuard App Control Service	•	•	•	•
FortiGuard IPS Service	•	•	•	•
FortiGuard Advanced Malware Protection (AMP) — Antivirus, Mobile Malware, Botnet, CDR, Virus Outbreak Protection and FortiSandbox Cloud Service	•	•	•	•
FortiGuard Web Filtering Service	•	•	•	
FortiGuard Antispam Service	•	•	•	
FortiGuard Security Rating Service	•	•		
FortiGuard Industrial Service	•	•		
FortiCASB SaaS-only Service	•	•		
FortiConverter Service	•			
SD-WAN Cloud Assisted Monitoring [2]	•			
SD-WAN Overlay Controller VPN Service [2]	•			
FortiAnalyzer Cloud [2]	•			
FortiManager Cloud [2]	•			

1. 24x7 plus Advanced Services Ticket Handling 2. Available when running FortiOS 6.2

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