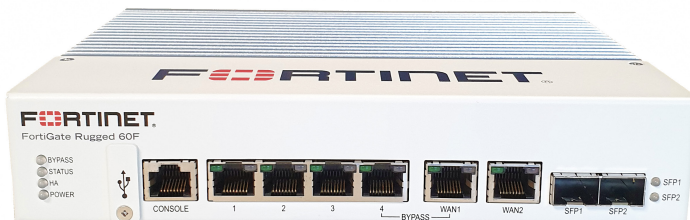**FORTINET**

FortiGate® Rugged Series

Available in:

Appliance

Mission Critical Security Solutions for Harsh Environments

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.
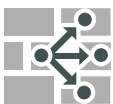
SD-WAN Capable

Supports reliable connectivity with lower costs via SD-WAN technologies.

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

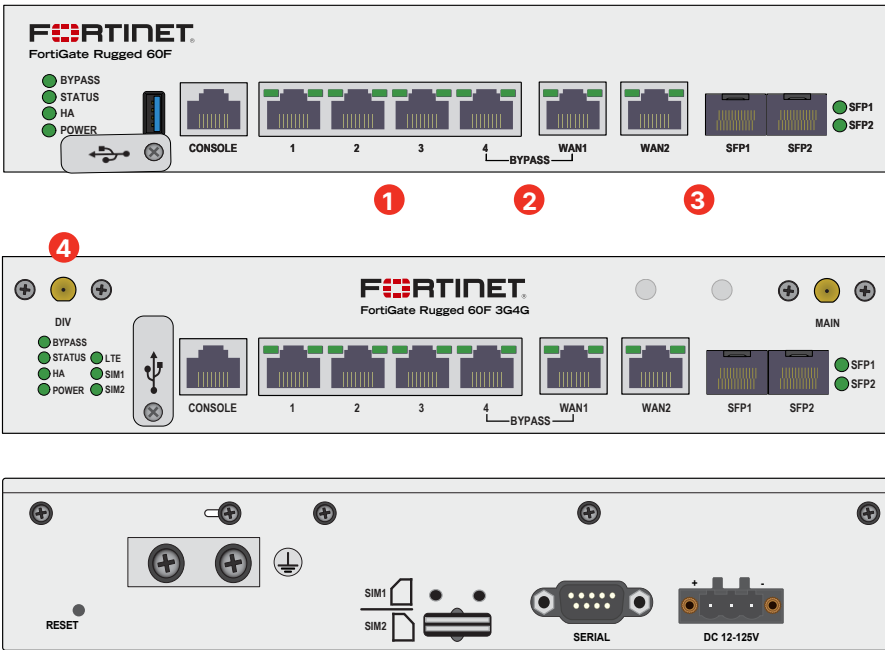Security appliance with IP67 rating for outdoor environment

FGR-60F

New SPU SoC4-powered for rugged and harsh environments

FGR-60F-3G4G

Integrated 3G4G modem for ruggedized and mission-critical applications
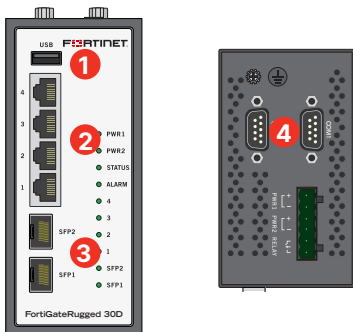
1

HARDWARE

FortiGate Rugged 60F/-3G4G

Interfaces

1. 4x GE RJ45 Ports
2. 1x Bypass GE RJ45 Port Pair (WAN1 & Port4, default setting)*
3. 2x GE RJ45/SFP Shared Media Pairs
4. Integrated 3G4G Modem
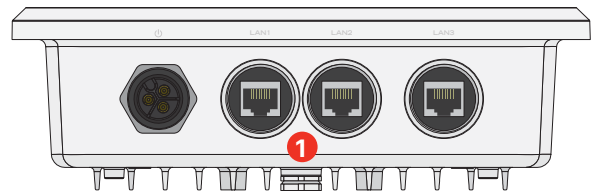
*NOTE: WAN1/WAN2 and SFP1/SFP2 are shared interfaces

FortiGate Rugged 30D

Interfaces

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

FortiGate Rugged 35D


Interfaces

1. 3x GE RJ45 Ports

FORTINET SECURITY FABRIC

Security Fabric

The industry's highest-performing cybersecurity platform, powered by FortiOS, with a rich ecosystem designed to span the extended digital attack surface, delivering fully automated, self-healing network security.

- **Broad**: Coordinated detection and enforcement across the entire digital attack surface and lifecycle with converged networking and security across edges, clouds, endpoints and users

- **Integrated**: Integrated and unified security, operation, and performance across different technologies, location, deployment options, and the richest Ecosystem

- **Automated**: Context aware, self-healing network & security posture leveraging cloud-scale and advanced AI to automatically deliver near-real-time, user-to-application coordinated protection across the Fabric

The Fabric empowers organizations of any size to secure and simplify their hybrid infrastructure on the journey to digital innovation.
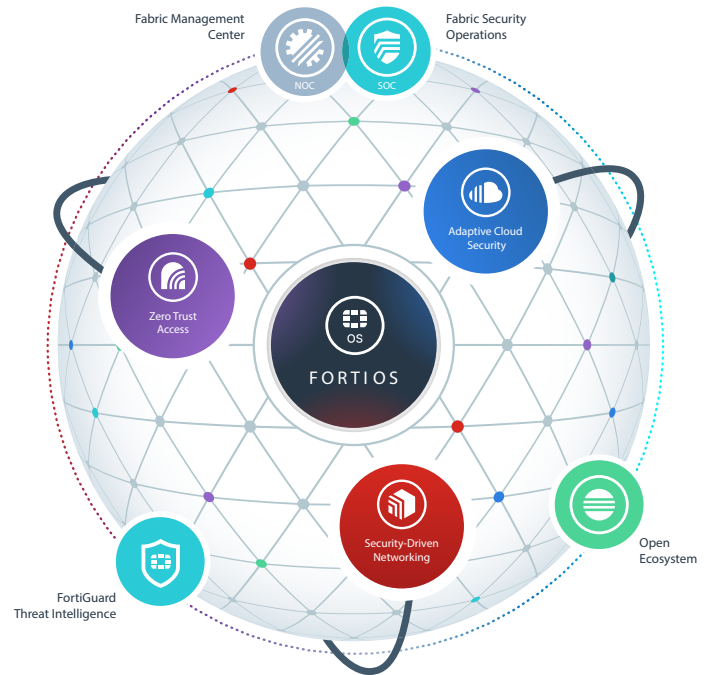
FortiOS™ Operating System

FortiOS, Fortinet's leading operating system enable the convergence of high performing networking and security across the Fortinet Security Fabric delivering consistent and context-aware security posture across network endpoint, and clouds. The organically built best of breed capabilities and unified approach allows organizations to run their businesses without compromising performance or protection, supports seamless scalability, and simplifies innovation consumption.

The release of FortiOS 7 dramatically expands the Fortinet Security Fabric's ability to deliver consistent security across hybrid deployment models consisting on appliances, software and As-a-Service with SASE, ZTNA and other emerging cybersecurity solutions.

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™ Services

Fortinet is dedicated to helping our customers succeed, and every year FortiCare services help thousands of organizations get the most from their Fortinet Security Fabric solution. We have more than 1,000 experts to help accelerate technology implementation, provide reliable assistance through advanced support, and offer proactive care to maximize security and performance of Fortinet deployments.

SPECIFICATIONS

	FGR-30D	FGR-35D	FGR-60F / -3G4G
Interfaces and Modules			
GE RJ45 Interfaces	4	3	4
Bypass GE RJ45 Port Pair*	–	–	1*
GE SFP Slots	2	–	–
GE RJ45/SFP Shared Media Pairs	–	–	2
DB9 Serial Interface	2	–	1
USB (Client / Server)	1	–	1
RJ45 Console Port	–	–	1
Trusted Platform Module (TPM)	–	–	Yes
Cellular Modem	–	–	3G4G / LTE
Transceivers Included	–	–	–
System Performance and Capacity			
IPv4 Firewall Throughput (1518** / 512 / 64 byte UDP packets)	900 Mbps**	550 Mbps**	6/6/5.95 Gbps
Firewall Latency (64 byte, UDP)	70.00 µs	90.00 µs	3.10 µs
Firewall Throughput (Packets Per Second)	87 Kpps	52.5 Kpps	8.9 Mpps
Concurrent Sessions (TCP)	750,000	750,000	600,000
New Sessions/Second (TCP)	5,000	5,000	19,000
Firewall Policies	5,000	5,000	5,000
IPsec VPN Throughput (512 byte)[1]	45 Mbps	45 Mbps	3.5 Gbps
Gateway-to-Gateway IPsec VPN Tunnels	200	200	200
Client-to-Gateway IPsec VPN Tunnels	250	250	500
SSL-VPN Throughput	25 Mbps	25 Mbps	400 Mbps
Concurrent SSL-VPN Users (Recommended Maximum)	80	80	100
SSL Inspection Throughput (IPS, avg. HTTPS)[3]	50 Mbps	55 Mbps	460 Mbps
SSL Inspection CPS (IPS, avg. HTTPS)[3]	75	75	300
SSL Inspection Concurrent Session (IPS, avg. HTTPS)[3]	45,000	45,000	70,000
Application Control Throughput (HTTP 64K)	210 Mbps	230 Mbps	1.3 Gbps
Virtual Domains (Default / Maximum)	5 / 5	5 / 5	10 / 10
Maximum Number of FortiAPs (Total / Tunnel)	2 / 2	2 / 2	30 / 10
Maximum Number of FortiTokens	20	20	500
Maximum Number of FortiSwitches	8	8	16
High Availability Configurations	Active-Active, Active-Passive, Clustering		
System Performance — Enterprise Traffic Mix			
IPS Throughput[2]	180 Mbps	210 Mbps	950 Mbps
NGFW Throughput[2,4]	45 Mbps	65 Mbps	550 Mbps
Threat Protection Throughput[2,5]	16 Mbps	16 Mbps	500 Mbps

*Default bypass pair configuration is WAN1 and Port4
**Measured using 1518 byte UDP packets

SPECIFICATIONS

	FGR-30D	FGR-35D	FGR-60F / -3G4G	
Dimensions and Power				
Height x Width x Length (inches)	5.49 × 4.13 × 2.36	3.07 × 10.04 × 10.04	1.68 × 8.50 × 6.50	
Height x Width x Length (mm)	139.5 × 105 × 60	78 × 255.09 × 255.09	42.7 × 216 × 165	
Weight	1.46 lbs (0.668 kg)	3.986 lbs (1.808 kg)	3.85 lbs (1.75 kg)	
Form Factor	Desktop/DIN/Wall Mount	Outdoor mountable	Desktop/DIN/Wall Mount	
IP Rating	IP20	IP67	IP20	
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]	Terminal block, supports negative (+12V to +125V DC) and positive ground (-12V to -125V DC) sources, cables are not included.[7]	
Power Consumption (Average / Maximum)	15.55 W / 15.92W	10.2 W / 10.5 W	15 W / 21 W	17 W / 24W
Maximum Current	1.19A	0.83A	12V DC / 2A	
Heat Dissipation	54.29 BTU/h	35.81 BTU/h	72 BTU/h	82 BTU/h
Operating Environment and Certifications				
Operating Temperature	-40–158°F (-40–70°C)	-40–140°F (-40–60°C)	-40–167°F (-40–75°C)	
Storage Temperature	-58–185°F (-50–85°C)	-58–185°F (-50–85°C)	-40–167°F (-40–75°C)	
Humidity	5–95% non-condensing	5–95% non-condensing	5–95% 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)	
Compliance	FCC Part 15 Class A, RCM VCCI Class B, CE, UL/cUL, CB	FCC Part 15 Class A, RCM, VCCI Class A, CE, UL/cUL, CB	FCC Part 15 Class A, RCM, VCCI Class A, CE, UL/cUL, CB	
Industry Certifications				
	61850-3 and IEEE 1613 Emission Compliant	IEC 61850-3 and IEEE 1613 Emission Compliant	IEC 61850-3 and IEEE 1613 Certified	
Regional Compatibility			**FGR-60F-3G4G**	
Maximum Tx Power			20 dBm	
Regions			All Regions	
Modem Model			Sierra Wireless EM7565 (2 SIM Slots, Active/Passive)	
LTE			B1, B2, B3, B4, B5, B7, B8, B9, B12, B13, B18, B19, B20, B26, B28, B29, B30, B32, B41, B42, B43, B46, B48, B66	
UMTS/HSPA+			B1, B2, B3, B4, B5, B6, B8, B9, B29	
WCDMA			—	
CDMA 1xRTT/EV-DO Rev A			—	
GSM/GPRS/EDGE			—	
Module Certifications			FCC, ICES, CE, RCM, VCCI, BSMI, UL/cUL, CB	
Diversity			Yes	
MIMO			Yes	
GNSS Bias			Yes	

6. AC adapter not supported.
7. AC adapter not supported. Requires fabricated DC cables (refer to QuickStart Guide).

SUPPORTED PROTOCOLS

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

- ADDP
- Allen-Bradley PCCC
- BACnet
- CC-Link
- CIP
- CN/IP (EIA/CEA-852)
- CoAP
- DICOM
- DNP3 / RealPort DNP3
- ECHONET Lite
- ELCOM 90
- Emerson DeltaV
- Ether-S-Bus
- EtherCAT Automation Protocol (EAP)
- Ethernet Global Data (EGD)
- Ethernet Powerlink
- EtherNet/IP
- FL-net
- GE SRTP (GE Fanuc)
- HART-IP
- HL7
- IEC 60870-5-104 (IEC 104)*
- IEC 60870-6 (TASE.2/ICCP)
- IEC 61850 MMS
- IEC 61850 R-GOOSE
- IEC 61850 R-SV

- IEEE 1278.2 Distributed Interactive Simulation
- IEEE C37.118 Synchrophasor
- KNXnet/IP (EIBnet/IP)
- LonTalk/EIA-709.1
- Mitsubishi MELSEC
- Modbus TCP / MOXA Modbus RTU*
- MOXA
- MQTT
- MTConnect
- Net C/X (Digi RealPort)
- Niagara Fox
- OPC Classic (DA, HDA, AE)
- OPC UA
- IEC 62056 (DLMS/COSEM)
- OpenADR
- OSIsoft PI System
- PROFINET
- RTPS
- SafetyNet p
- Siemens S7, S7Plus, LOGO
- STANAG 4406
- STANAG 5066
- TriStation
- Vedeer-Root

* Additional parameters supported for the signatures in the GUI (requires FortiOS v6.4 and above).

FortiGate Rugged 30D

FortiGate Rugged 35D

FortiGate Rugged 60F

Trusted Platform Module (FG-60F Series)

The FortiGate Rugged 60F Series features an integrated hardware security module, also known as Trusted Platform Module (TPM), that hardens physical networking appliances by generating, storing, and authenticating cryptographic keys. Hardware-based security mechanisms protect against malicious software and phishing attacks.
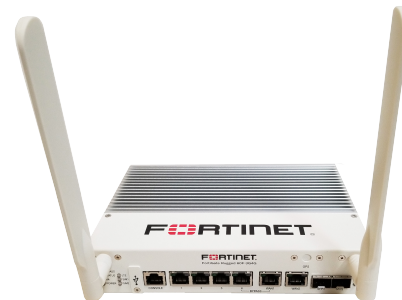

FortiGate Rugged 60F-3G4G

ORDERING 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 60F	FGR-60F	Ruggedized, 4 x GE RJ45 Switch ports, 2 x Shared Media pairs (Including 2 x GE RJ45 ports, 2 x SFP slots). 1x RJ45 by-pass can be set up between WAN1 and PORT4. DB9 Serial.
FortiGate Rugged 60F-3G4G	FGR-60F-3G4G	Ruggedized, 4 x GE RJ45 Switch ports, 2 x Shared Media pairs (Including 2 x GE RJ45 ports, 2 x SFP slots). 1x RJ45 by-pass can be set up between WAN1 and PORT4. DB9 Serial, embedded 3G/4G/LTE wireless wan module.
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	Enterprise Protection	SMB Protection	Unified Threat Protection	Advanced Threat Protection
FortiCare	24×7	24×7	24×7	24×7
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 and Video[1] Filtering Service	•	•	•	
FortiGuard Antispam Service	•	•	•	
FortiGuard Security Rating Service	•			
FortiGuard IoT Detection Service	•			
FortiGuard Industrial Service	•			
FortiConverter Service	•			
FortiGate Cloud Subscription		•		

1. Available when running FortiOS 7.0

www.fortinet.com