

FortiGate® Rugged 60D

Integrated Security for Industrial Control Systems



Industrial control systems face an increasing number of targeted attacks and are especially vulnerable to attacks with the potential to cause wide scale outages. While unlikely traditional security solutions are intended for an office environment, the FortiGate Rugged 60D is an industrially-hardened, all-in-one security appliance that delivers specialized threat protection for securing critical control industrial networks against malicious attacks.

Ruggedized Protection for Harsh Environments

FortiGateRugged 60D meets required performance and reliability standards for operating in the demanding substation setting. It is designed to operate reliably in harsh electrical and environmental conditions, including high levels of electrical and radio-frequency interference and wide ambient temperature ranges.

Industrial Network Security

FortiOS running on the ruggedized platform provides industrial network specific protections using security technologies such as Antivirus & IPS while FortiGuard update services and its team of threat experts delivers real-time protections to identify latest malicious activities with no administrator intervention.

Unified Central Management

Managing and monitoring distributed security gateways is essential in ensuring all sites are properly protected. FortiManager can be used to manage configurations, monitor devices and tackle threat events centrally. The unified management console means lower TCO and simplified network.

Ruggedized integrated security platform for Industrial Environment

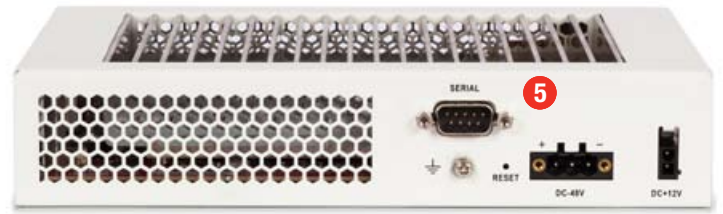
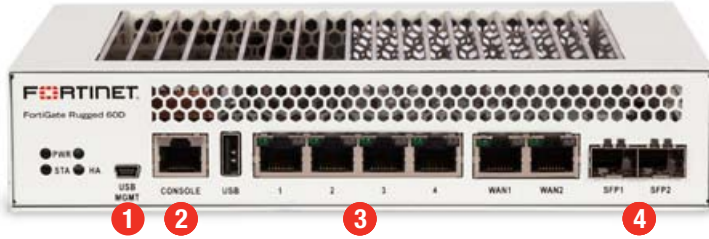
- Supports Gigabit Ethernet Copper and Fiber connectivity
- Runs on FortiOS 5 — the most powerful security operating system in the world delivers more security to fight advanced threats, more control to secure mobile devices, and more intelligence to build secure policies
- FortiASIC SOC2 delivers outstanding firewall and VPN performance
- Backed by Fortinet's global FortiCare technical support and FortiGuard threat research teams for around-the-clock protection and support

Key Features & Benefits

Ruggedized Design	Fanless and use of robust components ensure reliable operation in harsh industrial environments.
Consolidated Security Architecture	FortiGate consolidated security offers better protection and lower cost of ownership than multiple point products.
Ease of Management	Robust management systems that allow rapid provision and deployment, monitoring of device and threat status while providing actionable reports.



HARDWARE



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



Powered by
FortiASIC SOC2

- Combines a RISC-based CPU with Fortinet's proprietary FortiASIC™ content and network processors for unmatched performance
- Simplifies appliance design and enables breakthrough performance for smaller networks
- Supports firewall acceleration across all packet sizes for maximum throughput
- Delivers accelerated UTM content processing for superior performance and protection
- Accelerates VPN performance for high speed, secure remote access

Install in Minutes with FortiExplorer

The FortiExplorer™ wizard enables the ease of set up and configurations with easy-to-follow instructions. The application runs on Windows, Mac OS X desktops and laptops as well as popular mobile devices. Simply connect to the appropriate USB port on the appliance, and be fully protected in minutes.

Wireless and 3G/4G WAN Extensions

The FortiGate supports external 3G/4G USB modems that allows additional WAN connectivity or a redundant link for maximum reliability. It can also operate as a wireless controller extending wireless capabilities.

Serial Interface for Legacy Connectivity

The appliance comes equipped with a serial DB9 interface that is commonly used with DNP3 protocol in legacy industrial systems.

Compact, Ruggedized and Reliable Form Factor

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

HIGHLIGHTS

FortiOS — The World's Most Advanced Security Operating System

• Feature Select

Instantly fine-tunes the FortiGate based on desired deployment needs using feature presets. Simplifies user administration and configurations while providing flexibility for different deployment modes.

• Contextual Visibility

Presents critical deep insights into real-time network activities with data on threat details, IPs, users, devices, applications and more. Allows administrators to quickly understand threats and stop them.

• Advanced Security

Multiple advanced technologies can be coordinated to look for and stop today's blended, targeted or unknown attacks. Efficient packet handling improves performance while lowering latencies and reducing network complexities.

For complete, up-to-date and detailed feature set, please refer to the Administration Handbook and FortiOS Datasheet



FortiOS Dashboard — Single Pane of Glass Management

IPS and Application Control Signatures Support List

Vendors/Applications:

7T Technologies/Schneider Electric, ABB, Advantech, Avahi, Broadwin, CoDeSys, Cogent, Control Automation, Datac, GE, Iconics, InduSoft, Intellicom, Measuresoft, Microsys, MOXA, PcVue, Progea, Promotic, RealFlex, Rockwell Automation, RSLogix, Siemens, Sunway, TeeChart, TwinCAT, WellinTech, xArrow

Protocols: BACnet, DNP3, ELCOM7, EtherCAT, EtherIP, ICCP, IEC.60870.5.104, IEC.61850, Modbus, OPC, PROFINET

Industry Validated Best-in-class Security

The FortiGate appliances have earned more certifications than any other vendor by consistently meeting rigorous third-party standards. Our various industry-leading security technologies such as firewall, IPS and AV provide organizations with air-tight security that can safely count on.

Scalable Centralized Management Support

Centrally manage with ease any number of FortiGate devices across multiple locations with FortiManager, allowing administrators to efficiently applying policies and distributing content security/firmware updates. The FortiManager provides a diversity of deployment types, growth flexibility, advanced customization through APIs and simple licensing. In addition, it can serve as a central logging and reporting facility, proving much needed visibility and monitoring capabilities.

Complete and Real-time Protection

Fortinet FortiGuard Subscription Services provide automated, real-time, up-to-date protection against the latest security threats. Our threat research labs are located worldwide, providing 24x7 updates when you most need it.

World-Class Technical Support and Documentation

Fortinet FortiCare support offerings provide comprehensive global support for all Fortinet products and services. You can rest assured your Fortinet security products are performing optimally and protecting your users, applications, and data around the clock.

SPECIFICATIONS

	FGR-60D
Interfaces & Modules	
GE RJ45 Interfaces	4
Shared Media Pairs (GE RJ45 / GE SFP)	2
DB9 Serial Interface	1
USB (Client / Server)	1/1
RJ-45 Console Port	1
System Performance & Capacity	
IPv4 Firewall Throughput (1518 / 512 / 64 byte, UDP)	1.5 / 1.5 / 1.5 Gbps
Firewall Latency (64 byte, UDP)	4 μs
Firewall Throughput (Packet per Second)	2.2 Mpps
Concurrent Sessions (TCP)	500,000
New Sessions/Sec (TCP)	4,000
Firewall Policies	5,000
IPSEC VPN Throughput (512 byte)	1 Gbps
Gateway-to-Gateway IPsec VPN Tunnels	200
Client-to-Gateway IPsec VPN Tunnels	500
SSL VPN Throughput	30 Mbps
Concurrent SSL-VPN Users (recommended Max)	100
IPS Throughput	200 Mbps
Antivirus Throughput (Proxy Based / Flow Based)	35 / 50 Mbps
Virtual Domains (Default / Max)	10 / 10
Max Number of FortiAPs (Total / Tunnel)	10 / 5
Max Number of FortiTokens	100
Max Number of Registered Endpoints	200
High Availability Configurations	Active-Active, Active-Passive, Clustering

	FGR-60D
Dimensions & Power	
Height x Width x Length	1.73 x 8.50 x 6.10 inches (44 x 216 x 155 mm)
Weight	3.5 lbs (1.6 kg)
Form Factor	Desktop
Power Supply	-48V DC power supply & external 12V DC power adapter connection. AC adapter not included.*
Power Consumption (Max)	-48V DC / 0.5A
Heat Dissipation	TBA
Operating Environment & Certifications	
Operating Temperature	-4–158°F (-20–70°C)
Storage Temperature	-40–185°F (-40–85°C)
Humidity	20–90% non-condensing
Operating Altitude	Up to 7,400 ft (2,250 m)
Compliance	FCC Part 15 Class A, C-Tick, VCCI, CE, UL/cUL, CB
Certifications	IEC 61850-3 (EMC) and IEEE 1613 Emission Compliant CSA Labs: Firewall, IPsec, IPS, Antivirus, SSL VPN

* Power supplies do not operate in redundant mode. Third-party AC adapter is required and may affect systems compliance with Industrial standards.

Note: All performance values are "up to" and vary depending on system configuration. Antivirus performance is measured using 44 Kbyte HTTP files. IPS performance is measured using 1 Mbyte HTTP files. IPsec VPN performance is based on 512 byte UDP packets using AES-256+SHA1.

For complete, up-to-date and detailed feature set, please refer to the Administration Handbook and FortiOS Datasheet

ORDER INFORMATION

Product	SKU	Description
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.
Optional Accessories		
Optional Accessories	SKU	Description
SFP SX Transceiver Module	FG-TRAN-SX	Transceiver SX module for all models with SFP interfaces.
SFP LX Transceiver Module	FG-TRAN-LX	Transceiver LX module for all models with SFP interfaces with LC connector.



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