FortiGate/FortiWiFi® 50E Series

FortiGate 50E, FortiWiFi 50E/-2R and FortiGate/FortiWiFi 51E

**Secure SD-WAN
Next Generation Firewall**

The FortiGate/FortiWiFi 50E series provides a fast and secure SD-WAN solution in a compact fanless desktop form factor for enterprise branch offices and mid-sized businesses. Protects against cyber threats with system-on-a-chip acceleration and industry-leading secure SD-WAN in a simple, affordable, and easy to deploy solution. Fortinet's Security-Driven Networking approach provides tight integration of the network to the new generation of security.

Security
- Identifies thousands of applications inside network traffic for deep inspection and granular policy enforcement
- Protects against malware, exploits, and malicious websites in both encrypted and non-encrypted traffic
- Prevents and detects against known attacks using continuous threat intelligence from AI-powered FortiGuard Labs security services
- Proactively blocks unknown sophisticated attacks in real-time with the Fortinet Security Fabric integrated AI-powered FortiSandbox

Performance
- Engineered for Innovation using Fortinet's purpose-built security processors (SPU) to deliver the industry's best threat protection performance and ultra-low latency
- Provides industry-leading performance and protection for SSL encrypted traffic including the first firewall vendor to provide TLS 1.3 deep inspection

Certification
- Independently tested and validated best security effectiveness and performance
- Received unparalleled third-party certifications from NSS Labs, ICSA, Virus Bulletin, and AV Comparatives

Networking
- Application aware routing with in-built SD-WAN capabilities to achieve consistent application performance and the best user experience
- Built-in advanced routing capabilities to deliver high performance with encrypted IPSEC tunnels at scale

Management
- Includes a management console that is effective and simple to use, which provides a comprehensive network of automation & visibility
- Provides Zero Touch Provisioning leveraging Single Pane of Glass Management powered by the Fabric Management Center
- Predefined compliance checklists analyze the deployment and highlight best practices to improve the overall security posture

Security Fabric
- Enables Fortinet and Fabric-ready partners' products to provide broader visibility, integrated end-to-end detection, threat intelligence sharing, and automated remediation
- Automatically builds Network Topology visualizations which discover IoT devices and provide complete visibility into Fortinet and Fabric-ready partner products

Firewall	IPS	NGFW	Threat Protection	Interfaces
2.5 Gbps	350 Mbps	220 Mbps	160 Mbps	Multiple GE RJ45	WiFi variants	Variants with dual radios	Variants with internal storage

Refer to the specifications table for details
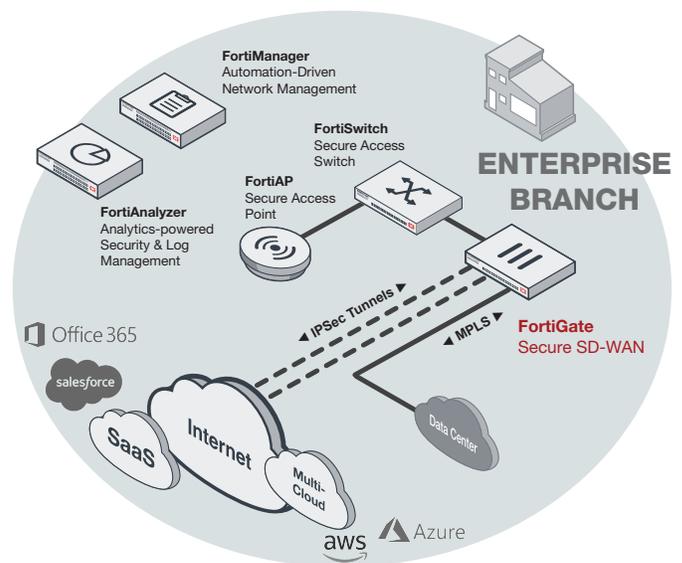
Deployment

Next Generation Firewall (NGFW)

- Reduce the complexity and maximize your ROI by integrating threat protection security capabilities into a single high-performance network security appliance, powered by Fortinet's Security Processing Unit (SPU)
- Full visibility into users, devices, applications across the entire attack surface and consistent security policy enforcement irrespective of asset location
- Protect against network exploitable vulnerabilities with industry-validated IPS that offers low latency and optimized network performance
- Automatically block threats on decrypted traffic using the Industry's highest SSL inspection performance, including the latest TLS 1.3 standard with mandated ciphers
- Proactively block newly discovered sophisticated attacks in real-time with AI-powered FortiGuard Labs and advanced threat protection services included in the Fortinet Security Fabric

Secure SD-WAN

- Consistent business application performance with accurate detection, dynamic WAN path steering and optimization
- Multi-cloud access for faster SaaS adoption with end-to-end optimization
- Simplification with zero touch deployment and centralized management with auto-provisioning, analytics and reporting
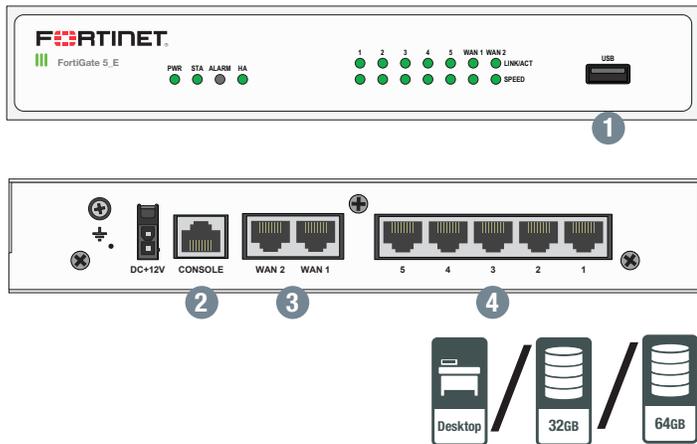- Strong security posture with next generation firewall and real-time threat protection
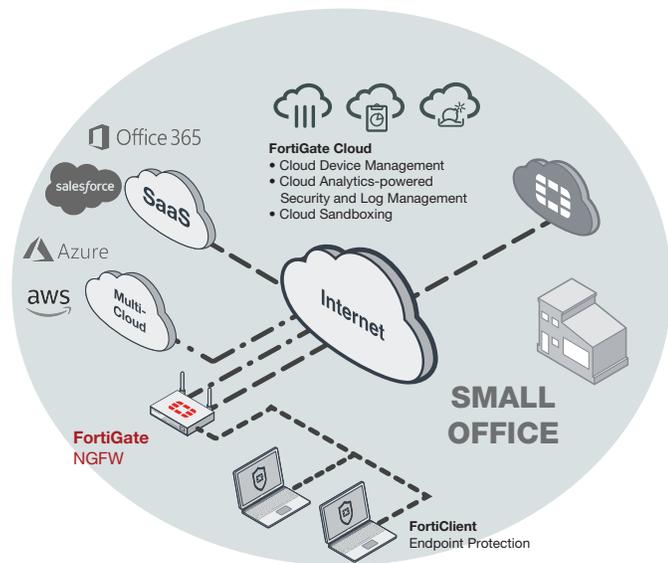
FortiWiFi 50E deployment in Small Office (NGFW)

FortiGate 50E deployment in Enterprise Branch (Secure SD-WAN)

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Hardware

FortiGate 50/51

Interfaces

1. USB Port
2. Console RJ45
3. 2x GE RJ45 WAN Ports
4. 5x GE RJ45 Switch Ports

FortiWiFi 50E/-2R and 51E

Interfaces

1. USB Port
2. Console RJ45
3. 2x GE RJ45 WAN Ports
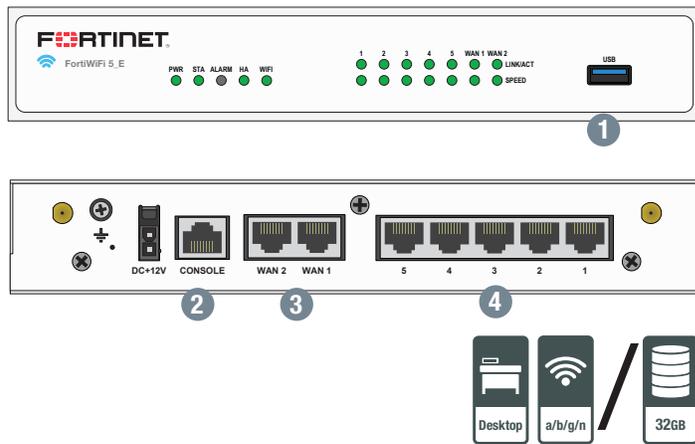4. 5x GE RJ45 Switch Ports

Install in Minutes with FortiExplorer

The FortiExplorer wizard enables easy setup and configuration coupled with easy-to-follow instructions. FortiExplorer runs on popular iOS devices. Using FortiExplorer is as simple as starting the application and connecting to the appropriate USB port on the FortiGate. By using FortiExplorer, you can be up and running and protected in minutes.

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 and Reliable Form Factor

Designed for small environments, you can simply place the FortiGate/FortiWiFi 50E series on a desktop. It is small, lightweight yet highly reliable with superior MTBF (Mean Time Between Failure), minimizing the chance of a network disruption.

Superior Wireless Coverage

A built-in dual-band, dual-stream access point on the FortiWiFi 50E-2R provides speedy 802.11ac coverage on 2.4 GHz or 5 GHz bands. The dual-band chipset addresses the PCI-DSS compliance requirement for rogue AP wireless scanning.

Fortinet Security Fabric

Security Fabric

The Security Fabric is the cybersecurity platform that enables digital innovations. It delivers broad visibility of the entire attack surface to better manage risk. Its unified and integrated solution reduces the complexity of supporting multiple-point products, while automated workflows increase operational speeds and reduce response times across the Fortinet deployment ecosystem. The Fortinet Security Fabric overs the following key areas under a single management center:

- **Security-Driven Networking** that secures, accelerates, and unifies the network and user experience
- **Zero Trust Network Access** that identifies and secures users and devices in real-time, on and off of the network
- **Dynamic Cloud Security** that protects and controls cloud infrastructures and applications
- **AI-Driven Security Operations** that automatically prevents, detects, isolates, and responds to cyber threats
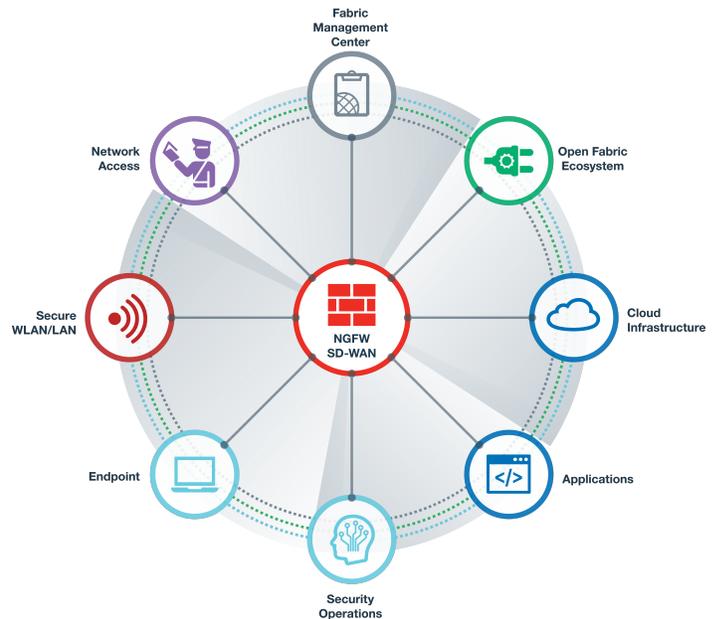
FortiOS

FortiGates are the foundation of the Fortinet Security Fabric—the core is FortiOS. All security and networking capabilities across the entire FortiGate platform are controlled with one intuitive operating system. FortiOS reduces complexity, costs, and response times by truly consolidating next-generation security products and services into one platform.

- A truly consolidated platform with a single OS and pane-of-glass for across the entire digital attack surface.
- Industry-leading protection: NSS Labs Recommended, VB100, AV Comparatives, and ICSA validated security and performance.
- Leverage the 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.
- Automatically prevent, detect, and mitigate advanced attacks within minutes with an integrated AI-driven security and advanced threat protection.
- Improve and unify the user experience with innovative SD-WAN capabilities with the ability to detect, contain, and isolate threats with automated segmentation.
- Utilize SPU hardware acceleration to boost network security performance.

Services

FortiGuard™ Security Services

FortiGuard Labs offer 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

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Specifications

	FG-50E	FWF-50E	FWF-50E-2R	FG-51E	FWF-51E
Hardware Specifications					
GE RJ45 Switch Ports			5		
GE RJ45 WAN Ports			2		
USB Ports			1		
Console (RJ45)			1		
Wireless Interface	—	802.11 a/b/g/n	dual radio, 802.11a/b/g/n/ac	—	802.11 a/b/g/n
Internal Storage	—	—	—	1x 32 GB SSD	1x 32 GB SSD
System Performance — Enterprise Traffic Mix					
IPS Throughput [2]			350 Mbps		
NGFW Throughput [2, 4]			220 Mbps		
Threat Protection Throughput [2, 5]			160 Mbps		
System Performance					
Firewall Throughput			2.5 Gbps		
Firewall Latency (64 byte UDP packets)			180 µs		
Firewall Throughput (Packets Per Second)			375 Kpps		
Concurrent Sessions (TCP)			1.8 Million		
New Sessions/Second (TCP)			21,000		
Firewall Policies			5,000		
IPsec VPN Throughput (512 byte) [1]			90 Mbps		
Gateway-to-Gateway IPsec VPN Tunnels			200		
Client-to-Gateway IPsec VPN Tunnels			250		
SSL-VPN Throughput			100 Mbps		
Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode)			200		
SSL Inspection Throughput (IPS, avg. HTTPS) [3]			150 Mbps		
SSL Inspection CPS (IPS, avg. HTTPS) [3]			140		
SSL Inspection Concurrent Session (IPS, avg. HTTPS) [3]			75,000		
Application Control Throughput (HTTP 64K) [2]			450 Mbps		
CAPWAP Throughput (HTTP 64K)			1.2 Gbps		
Virtual Domains (Default / Maximum)			5 / 5		
Maximum Number of FortiSwitches Supported			8		
Maximum Number of FortiAPs (Total / Tunnel Mode)			10 / 5		
Maximum Number of FortiTokens			500		
High Availability Configurations			Active/Active, Active/Passive, Clustering		
Dimensions					
Height x Width x Length (inches)			1.44 x 8.52 x 5.5		
Height x Width x Length (mm)			36.5 x 216 x 140		
Weight	2.015 lbs (0.914 kg)	2.041 lbs (0.926 kg)	2.38 lbs (1.08 kg)	2.04 lbs (0.925 kg)	2.04 lbs (0.925 kg)
Form Factor			Desktop		
Radio Specifications					
MIMO	—	2x2	2x2	—	2x2
Maximum Wi-Fi Speeds	—	300 Mbps	876 Mbps	—	300 Mbps
Maximum Tx Power	—	21 dBm	21 dBm	—	21 dBm
Antenna Gain	—	2 dBi @ 5 GHz, 2.4dBi @ 2.4 GHz	3 dBi @ 5 GHz, 2 dBi @ 2.4 GHz	—	2 dBi @ 5 GHz, 2.4dBi @ 2.4 GHz

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.

Specifications

	FG-50E	FWF-50E	FWF-50E-2R	FG-51E	FWF-51E
Operating Environment and Certifications					
Input Rating			12Vdc, 2A		
Power Required		Powered by External DC Power Adapter, 100–240V AC, 50–60 Hz			
Maximum Current			100 V / 0.6 A, 240 V / 0.4 A		
Power Consumption (Average / Maximum)	15 / 18 W	18 / 22 W	22.1 / 26.5 W	16 / 20 W	19 / 23 W
Heat Dissipation	62 BTU/h	75 BTU/h	90 BTU/h	67 BTU/h	79 BTU/h
Operating Temperature			32–104°F (0–40°C)		
Storage Temperature			-31–158°F (-35–70°C)		
Humidity			10–90% non-condensing		
Noise Level			Fanless 0 dBA		
Operating Altitude			Up to 7,400 ft (2,250 m)		
Regulatory Compliance			FCC, ICES, CE, RCM, VCCI, BSMI, UL/cUL, CB		
Certifications		ICSA Labs: Firewall, IPsec, IPS, Antivirus, SSL-VPN			

Order Information

Product	SKU	Description
FortiGate 50E	FG-50E	7x GE RJ45 ports (including 2x WAN ports, 5x Switch ports)
FortiWiFi 50E	FWF-50E	7x GE RJ45 ports (including 2x WAN ports, 5x Switch ports), Wireless (802.11a/b/g/n)
FortiWiFi 50E-2R	FWF-50E-2R	7x GE RJ45 ports (including 2x WAN ports, 5x Switch ports), dual radio wireless (802.11a/b/g/n/ac)
FortiGate 51E	FG-51E	7x GE RJ45 ports (including 2x WAN ports, 5x Switch ports), 32 GB SSD onboard storage
FortiWiFi 51E	FWF-51E	7x GE RJ45 ports (including 2x WAN ports, 5x Switch ports), Wireless (802.11a/b/g/n), 32 GB SSD onboard storage
Optional Accessory		
Rack Mount Tray	SP-RACKTRAY-02	Rack mount tray for FG-30D, FG-40C, FG-50/51E, FG-60C, FG-60D/-POE, FG-70D, FG-80D, FG-90D/-POE, FAD-100E, FRC-100D, FWB-100D, FML-60D, FVE-100E.

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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