# FortiGate FortiWiFi 80F Series

FG-80F, FG-80F-POE, FG-80F-Bypass, FG-81F, FG-81F-POE, FG-80F-DSL, FWF-81F-2R-POE, FWF-81F-2R-3G4G-POE, FWF-80F/81F-2R, and FWF-80F/81F-2R-3G4G-DSL

## 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 80F 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 FortiWiFi 80F 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 FortiWiFi 80F automatically controls, verifies, and facilitates user access to applications, delivering consistency with a seamless and optimized user experience.

| IPS | NGFW | Threat Protection | Interfaces |
|---|---|---|---|
| 1.4 Gbps | 1 Gbps | 900 Mbps | Multiple GE RJ45 │ Variants with PoE, DSL, 3G4G, WiFi and/or storage |

**FOS**

**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
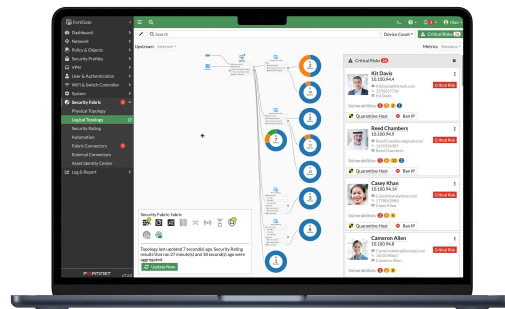


*Intuitive easy to use view into the network and endpoint vulnerabilities*
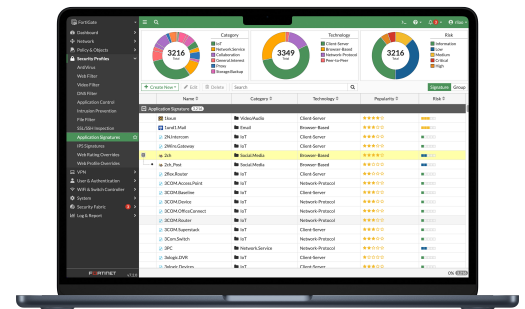
*Visibility with FOS Application Signatures*

### 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.
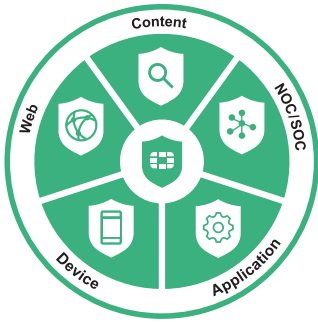
## FortiGuard Services

### FortiGuard AI-Powered Security

FortiGuard's rich suite of security services counter threats in real time using AI-powered, coordinated protection designed by FortiGuard Labs security threat researchers, engineers, and forensic specialists.

### Web Security

Advanced cloud-delivered URL, DNS (Domain Name System), and Video Filtering providing complete protection for phishing and other web born attacks while meeting compliance.

Additionally, its dynamic inline CASB (Cloud Access Security Broker) service is focused on securing business SaaS data, while inline ZTNA traffic inspection and ZTNA posture check provide per-sessions access control to applications. It also integrates with the FortiClient Fabric Agent to extend protection to remote and mobile users.

### Content Security

Advanced content security technologies enable the detection and prevention of known and unknown threats and file-based attack tactics in real-time. With capabilities like CPRL (Compact Pattern Recognition Language), AV, inline Sandbox, and lateral movement protection make it a complete solution to address ransomware, malware, and credential-based attacks.

### Device Security

Advanced security technologies are optimized to monitor and protect IT, IIoT, and OT (Operational Technology) devices against vulnerability and device-based attack tactics. Its validated near-real-time IPS intelligence detects, and blocks known and zero-day threats, provides deep visibility and control into ICS/OT/SCADA protocols, and provides automated discovery, segmentation, and pattern identification-based policies.

### Advanced Tools for SOC/NOC

Advanced NOC and SOC management tools attached to your NGFW provide simplified and faster time-to-activation.

### SOC-as-a-Service

Includes tier-one hunting and automation, log location, 24×7 SOC analyst experts, managed firewall and endpoint functions, and alert triage.

### Fabric Rating Security Best Practices

Includes supply chain virtual patching, up-to-date risk and vulnerability data to deliver quicker business decisions, and remediation for data breach situations.

## 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**

**Secure SD-WAN ASIC SOC4**

- 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
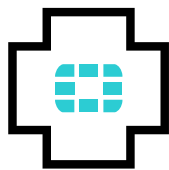
**FortiCare Services**

Fortinet is dedicated to helping our customers succeed, and every year FortiCare Services help thousands of organizations get the most from our Fortinet Security Fabric solution.  Our lifecycle portfolio offers Design, Deploy, Operate, Optimize, and Evolve services.  Operate services offer device-level FortiCare Elite service with enhanced SLAs to meet our customer's operational and availability needs.  In addition, our customized account-level services provide rapid incident resolution and offer proactive care to maximize the security and performance of Fortinet deployments.

# Use Cases
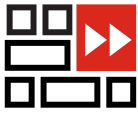
### Next Generation Firewall (NGFW)

- 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
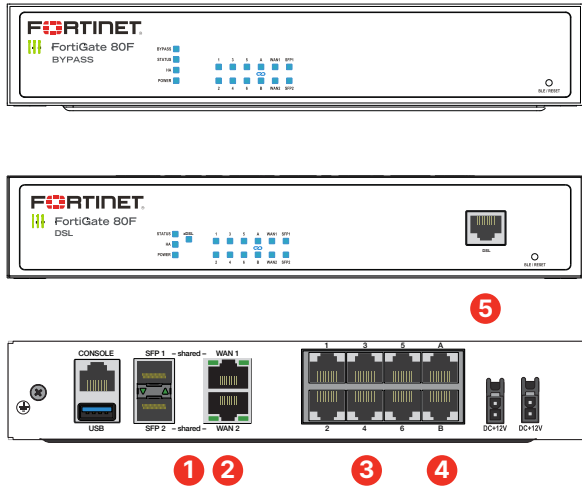
### Universal ZTNA

- 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
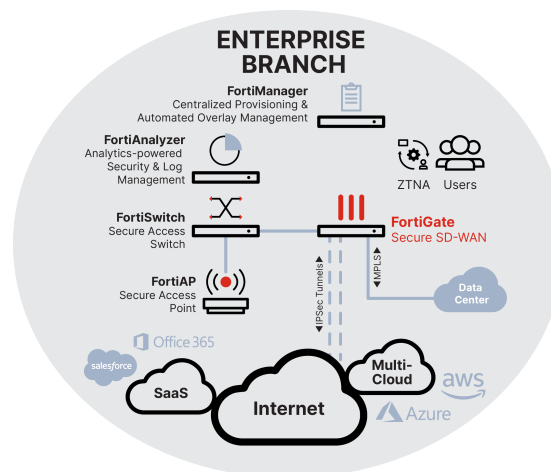
# Hardware

## FortiGate 80F/80F-Bypass/81F
## FortiGate 80F-DSL



### Interfaces

1. 2 x GE RJ45/SFP Shared Media Ports

2. 2 x WAN GE RJ45 Ports, FG-80F-Bypass model only: 1x Bypass GE RJ45 Port Pair (WAN1 and Port1, default configuration)

3. 6 x GE RJ45* Ports

4. 2 x GE RJ45* FortiLink Ports

5. 1 x DSL RJ11 Port (for 80F-DSL only)

* POE/+ ports for POE Variants

## FortiWiFi 80F/81F-2R-3G4G-DSL
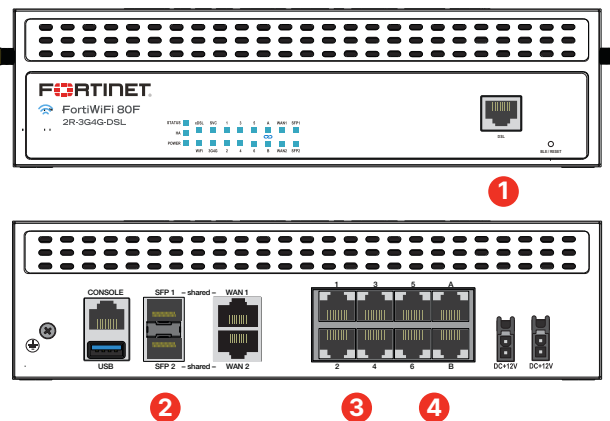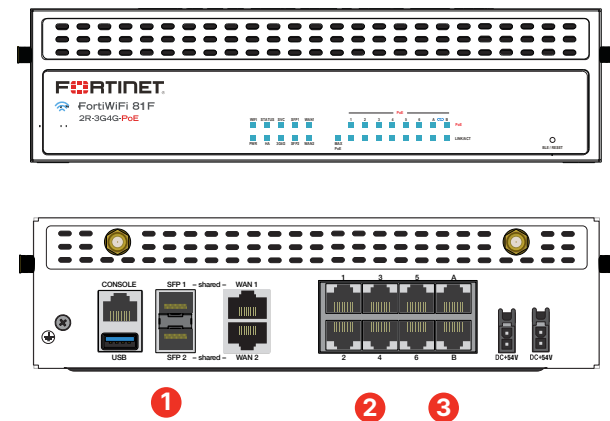


### Interfaces

1. 1 x DSL Port (RJ11)

2. 2 x GE RJ45/SFP Shared Media Ports

3. 6 x GE RJ45 Ports

4. 2 x GE RJ45 FortiLink Ports

## FortiGate 80F/81F-POE
## FortiWiFi 80F/81F-2R
## FortiWiFi 81F-2R-POE



## FortiWiFi 81F-2R-3G4G-POE



### Interfaces

1. 2 x GE RJ45/SFP Shared Media Ports

2. 6 x GE RJ45 POE/+ Ports

3. 2 x GE RJ45 POE/+ FortiLink Ports

# Hardware Features

### Superior Wireless Coverage

A built-in dual-band, dual-stream access point is integrated on the FortiWiFi 80F series which provides the industry's latest high-speed WiFi-6 (802.11ax) wireless access.

### Trusted Platform Module (TPM)

The FortiGate 80F 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.

### Bypass WAN/LAN Mode

The FortiGate 80F Series offers a pair of bypass ports that help organizations avoid network communication interruption due to device faults and improve network reliability.

### Access Layer Security

FortiLink protocol enables you to converge security and the network access by integrating the FortiSwitch into the FortiGate as a logical extension of the NGFW. These FortiLink enabled ports can be reconfigured as regular ports as needed.

# Specifications

| | FG-80F | FG-81F | FG-80F-BYPASS | FG-80F-POE | FG-81F-POE |
|---|---|---|---|---|---|
| **Interfaces and Modules** | | | | | |
| **GE RJ45/SFP Shared Media Pairs** | 2 | 2 | 2 | 2 | 2 |
| **GE RJ45 Internal Ports** | 6 | 6 | 6 | — | — |
| **GE RJ45 FortiLink Ports (Default)** | 2 | 2 | 2 | — | — |
| **GE RJ45 PoE/+ Ports** | — | — | — | 6 | 6 |
| **GE RJ45 PoE/+ FortiLink Ports (Default)** | — | — | — | 2 | 2 |
| **Bypass GE RJ45 Port Pair** (WAN1 & Port1, default configuration) | — | — | Yes | — | — |
| **Wireless Interface** | — | — | — | — | — |
| **USB Ports 3.0** | 1 | 1 | 1 | 1 | 1 |
| **Console (RJ45)** | 1 | 1 | 1 | 1 | 1 |
| Internal Storage | 1× 128 GB SSD | | | | 1× 128 GB SSD |
| **Trusted Platform Module (TPM)** | Yes | Yes | Yes | Yes | Yes |
| **Bluetooth Low Energy (BLE)** | Yes | Yes | Yes | Yes | Yes |
| **System Performance — Enterprise Traffic Mix** | | | | | |
| **IPS Throughput [2]** | 1.4 Gbps | | | | |
| **NGFW Throughput [2, 4]** | 1 Gbps | | | | |
| **Threat Protection Throughput [2, 5]** | 900 Mbps | | | | |
| **System Performance and Capacity** | | | | | |
| **IPv4 Firewall Throughput** (1518 / 512 / 64 byte, UDP) | 10 / 10 / 7 Gbps | | | | |
| **Firewall Latency (64 byte, UDP)** | 3.23 µs | | | | |
| **Firewall Throughput (Packet per Second)** | 10.5 Mpps | | | | |
| **Concurrent Sessions (TCP)** | 1.5 Million | | | | |
| **New Sessions/Second (TCP)** | 45 000 | | | | |
| **Firewall Policies** | 5000 | | | | |
| **IPsec VPN Throughput (512 byte)[1]** | 6.5 Gbps | | | | |
| **Gateway-to-Gateway IPsec VPN Tunnels** | 200 | | | | |
| **Client-to-Gateway IPsec VPN Tunnels** | 2500 | | | | |
| **SSL-VPN Throughput** | 950 Mbps | | | | |
| **Concurrent SSL-VPN Users** (Recommended Maximum, Tunnel Mode) | 200 | | | | |
| **SSL Inspection Throughput** (IPS, avg HTTPS)[3] | 715 Mbps | | | | |
| **SSL Inspection CPS (IPS, avg. HTTPS)[3]** | 700 | | | | |
| **SSL Inspection Concurrent Session** (IPS, avg HTTPS)[3] | 100 000 | | | | |
| **Application Control Throughput** (HTTP 64K)[2] | 1.8 Gbps | | | | |
| **CAPWAP Throughput (HTTP 64K)** | 9 Gbps | | | | |
| **Virtual Domains (Default / Maximum)** | 10 / 10 | | | | |
| **Maximum Number of FortiSwitches Supported** | 24 | | | | |
| **Maximum Number of FortiAPs** (Total /Tunnel) | 96 / 48 | | | | |
| **Maximum Number of FortiTokens** | 500 | | | | |
| **High Availability Configurations** | Active-Active, Active-Passive, Clustering | | | | |

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-80F | FG-81F | FG-80F-BYPASS | FG-80F-POE | FG-81F-POE |
|---|---|---|---|---|---|
| **Dimensions and Power** | | | | | |
| **Height x Width x Length (inches)** | 1.6 × 8.5 × 7.0 | 1.6 × 8.5 × 7.0 | 1.6 × 8.5 × 7.0 | 2.4 × 8.5 × 7.0 | 2.4 × 8.5 × 7.0 |
| **Height x Width x Length (mm)** | 40 × 216 × 178 | 40 × 216 × 178 | 40 × 216 × 178 | 60 × 216 × 178 | 60 × 216 × 178 |
| **Weight** | 2.4 lbs (1.1 kg) | 2.4 lbs (1.1 kg) | 2.6 lbs (1.2 kg) | 3.1 lbs (1.4 kg) | 3.1 lbs (1.4 kg) |
| **Form Factor (supports EIA/non-EIA standards)** | Desktop/ Wall Mount/ Rack Tray | | | | |
| **Operating Environment and Certifications** | | | | | |
| **Input Rating** | 12V DC, 3A (dual redundancy optional) | 12V DC, 3A (dual redundancy optional) | 12V DC, 3A (dual redundancy optional) | +54V DC, 3A (dual redundancy optional) | +54V 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 | | | | |
| **Maximum Current** | 115VAC/0.4A, 230VAC/0.2A | 115VAC/0.4A, 230VAC/0.2A | 115VAC/0.4A, 230VAC/0.2A | 115VAC/2.2A, 230VAC/1.1A | 115VAC/1.2A, 230VAC/0.6A |
| **Total Available PoE Power Budget*** | — | — | — | 96W | 96W |
| **Power Consumption (Average / Maximum)** | 12.69 W / 15.51 W | 13.5 W / 16.5 W | 12.6 W / 15.4 W | 96 W / 118 W | 98 W / 137 W |
| **Heat Dissipation** | 52.55 BTU/h | 56.30 BTU/h | 52.55 BTU/h | 402.26 BTU/h | 467.5 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 | Fanless 0 dBA | Fanless 0 dBA | 31.56 dBA | 31.56 dBA |
| **Operating Altitude** | Up to 7400 ft (2250 m) | | | | |
| **Compliance** | FCC, ICES, CE, RCM, VCCI, BSMI, UL/cUL, CB | | | | |
| **Certifications** | USGv6/IPv6 | | | | |

* Maximum loading on each PoE/+ port is 30 W (802.3at).

# Specifications

| | FORTIWIFI 80F-2R | FORTIWIFI 81F-2R | FORTIWIFI 81F-2R-POE |
|---|---|---|---|
| **Hardware Specifications** | | | |
| GE RJ45/SFP Shared Media Pairs | 2 | 2 | 2 |
| GE RJ45 Internal Ports | 6 | 6 | — |
| GE RJ45 FortiLink Ports (Default) | 2 | 2 | — |
| GE RJ45 PoE/+ Ports | — | — | 6 |
| GE RJ45 PoE/+ FortiLink Ports (Default) | — | — | 2 |
| Bypass GE RJ45 Port Pair (WAN1 and Port1, default configuration) | — | — | — |
| Wireless Interface | Dual WiFi Radio (5 GHz, 2.4 GHz) 802.11a/b/g/n/ac/ax + 1 Scanning Radio | | |
| Antenna Ports (SMA) | 3 | 3 | 3 |
| USB Ports 3.0 | 1 | 1 | 1 |
| Console (RJ45) | 1 | 1 | 1 |
| Internal Storage | — | 1× 128 GB SSD | 1× 128 GB SSD |
| Trusted Platform Module (TPM) | Yes | Yes | Yes |
| Bluetooth Low Energy (BLE) | Yes | Yes | Yes |
| **Radio Specifications** | | | |
| Multiple User (MU) MIMO | 2×2 | | |
| Maximum Wi-Fi Speeds | 574 Mbps @ 2.4 GHz, 1201 Mbps @ 5 GHz | | |
| Maximum Tx Power | 23 dBm @ 2.4 GHz, 22 dBm @ 5 GHz | | |
| Antenna Gain | 4.5dBi @ 2.4Ghz, 5.5dBi @ 5GHz | | |
| **System Performance — Enterprise Traffic Mix** | | | |
| IPS Throughput [2] | 1.4 Gbps | | |
| NGFW Throughput [2, 4] | 1 Gbps | | |
| Threat Protection Throughput [2, 5] | 900 Mbps | | |
| **System Performance** | | | |
| Firewall Throughput (1518 / 512 / 64 byte UDP packets) | 10/10/7 Gbps | | |
| Firewall Latency (64 byte UDP packets) | 3.23 µs | | |
| Firewall Throughput (Packets Per Second) | 10.5 Mpps | | |
| Concurrent Sessions (TCP) | 1.5 Million | | |
| New Sessions/Second (TCP) | 45 000 | | |
| Firewall Policies | 5000 | | |
| IPsec VPN Throughput (512 byte) [1] | 6.5 Gbps | | |
| Gateway-to-Gateway IPsec VPN Tunnels | 200 | | |
| Client-to-Gateway IPsec VPN Tunnels | 2500 | | |
| SSL-VPN Throughput | 950 Mbps | | |
| Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode) | 200 | | |
| SSL Inspection Throughput (IPS, avg. HTTPS) [3] | 715 Mbps | | |
| SSL Inspection CPS (IPS, avg. HTTPS) [3] | 700 | | |
| SSL Inspection Concurrent Session (IPS, avg. HTTPS) [3] | 100 000 | | |
| Application Control Throughput (HTTP 64K) [2] | 1.8 Gbps | | |
| CAPWAP Throughput (HTTP 64K) | 9 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 | | |

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

| | FORTIWIFI 80F-2R | FORTIWIFI 81F-2R | FORTIWIFI 81F-2R-POE |
|---|---|---|---|
| **Dimensions** | | | |
| **Height x Width x Length (inches)** | 2.4 × 8.5 × 7.0 | 2.4 × 8.5 × 7.0 | 2.4 × 8.5 × 7.0 |
| **Height x Width x Length (mm)** | 60 × 216 × 178 | 60 × 216 × 178 | 60 × 216 × 178 |
| **Weight** | 3.3 lbs (1.5 kg) | 3.3 lbs (1.5 kg) | 3.3 lbs (1.5 kg) |
| **Form Factor** | Desktop/ Wall Mount/ Rack Tray | | |
| **Operating Environment and Certifications** | | | |
| **Input Rating** | 12V DC, 5A (dual redundancy optional) | 12V DC, 5A (dual redundancy optional) | +54V DC, 5A (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 | | |
| **Maximum Current** | 115VAC/0.42A, 230VAC/0.21A | 115VAC/0.42A, 230VAC/0.28A | 115VAC/0.9A, 230VAC/0.6A |
| **Total Available PoE Power Budget\*** | — | — | 96W |
| **Power Consumption (Average / Maximum)** | 22.9 W / 27.9 W | 24.79 W / 30.29 W | 107.4 W / 131.3 W |
| **Heat Dissipation** | 95.26 BTU/h | 103.29 BTU/h | 441.4 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** | 24.14 dBA | 24.14 dBA | 31.56 dBA |
| **Operating Altitude** | Up to 7400 ft  (2250 m) | | |
| **Compliance** | FCC, ICES, CE, RCM, VCCI, BSMI, UL/cUL, CB | | |
| **Certifications** | USGv6/IPv6 | | |

\* Maximum loading on each PoE/+ port is 30 W (802.3at).

# Specifications

| | FG-80F-DSL | FWF-80F-2R-3G4G-DSL | FWF-81F-2R-3G4G-DSL | FWF-81F-2R-3G4G-POE |
|---|---|---|---|---|
| **Interfaces and Modules** | | | | |
| GE RJ45/SFP Shared Media Pairs | 2 | 2 | 2 | 2 |
| GE RJ45 Internal Ports | 6 | 6 | 6 | – |
| GE RJ45 FortiLink Ports (Default) | 2 | 2 | 2 | – |
| GE RJ45 POE/+ Ports | – | – | – | 6 |
| GE RJ45 POE/+ FortiLink Ports (Default) | – | – | – | 2 |
| DSL RJ11 Port | 1 | 1 | 1 | – |
| Cellular Modem | – | 3G4G / LTE | 3G4G / LTE | 3G4G / LTE |
| Wireless Interface | – | Single Radio (2.4GHz/5GHz), 802.11a/b/g/n/ac-W2 Dual WiFi Radio (5 GHz, 2.4 GHz) 802.11a/b/g/n/ac/ax + 1 Scanning Radio | Dual WiFi Radio (5 GHz, 2.4 GHz) 802.11a/b/g/n/ac/ax + 1 Scanning Radio | Dual WiFi Radio (5 GHz, 2.4 GHz) 802.11a/b/g/n/ac/ax + 1 Scanning Radio |
| Antenna Ports (SMA) | – | 6 | 6 | 6 |
| USB Ports | 1 | 1 | 1 | 1 |
| Console Port (RJ45) | 1 | 1 | 1 | 1 |
| SIM Slots (Nano SIM) | – | 2 | 2 | 2 |
| Internal Storage | – | | 128 GB | 128 GB |
| Trusted Platform Module (TPM) | – | Yes | Yes | Yes |
| Bluetooth Low Energy (BLE) | – | Yes | Yes | Yes |
| **System Performance — Enterprise Traffic Mix** | | | | |
| IPS Throughput [2] | | 1 Gbps | | |
| NGFW Throughput [2, 4] | | 800 Mbps | | |
| Threat Protection Throughput [2, 5] | | 600 Mbps | | |
| **System Performance and Capacity** | | | | |
| IPv4 Firewall Throughput (1518 / 512 / 64 byte, UDP) | | 5 / 5 / 5 Gbps | | |
| Firewall Latency (64 byte, UDP) | | 2.97 µs | | |
| Firewall Throughput (Packet per Second) | | 7.5 Mpps | | |
| Concurrent Sessions (TCP) | | 700 000 | | |
| New Sessions/Second (TCP) | | 35 000 | | |
| Firewall Policies | | 5 000 | | |
| IPsec VPN Throughput (512 byte) [1] | | 4.4 Gbps | | |
| Gateway-to-Gateway IPsec VPN Tunnels | | 200 | | |
| Client-to-Gateway IPsec VPN Tunnels | | 250 | | |
| SSL-VPN Throughput | | 490 Mbps | | |
| Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode) | | 200 | | |
| SSL Inspection Throughput (IPS, avg. HTTPS) [3] | | 310 Mbps | | |
| SSL Inspection CPS (IPS, avg. HTTPS) [3] | | 320 | | |
| SSL Inspection Concurrent Session (IPS, avg. HTTPS) [3] | | 55 000 | | |
| Application Control Throughput (HTTP 64K) [2] | | 990 Mbps | | |
| CAPWAP Throughput (HTTP 64K) | | 3.5 Gbps | | |
| Virtual Domains (Default / Maximum) | | 10 / 10 | | |
| Maximum Number of FortiSwitches Supported | | 8 | | |
| Maximum Number of FortiAPs (Total / Tunnel) | | 16 / 8 | | |
| Maximum Number of FortiTokens | | 500 | | |
| High Availability Configurations | | Active-Active, Active-Passive, Clustering | | |

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-80F-DSL | FWF-80F-2R-3G4G-DSL | FWF-81F-2R-3G4G-DSL | FWF-81F-2R-3G4G-POE |
|---|---|---|---|---|
| **Dimensions and Power** | | | | |
| Height x Width x Length (inches) | 2.4 × 8.5 × 7.0 | 2.4 × 8.5 × 7.0 | 2.4 × 8.5 × 7.0 | 2.4 × 8.5 × 7.0 |
| Height x Width x Length (mm) | 60 × 216 × 178 | 60 × 216 × 178 | 60 × 216 × 178 | 60 × 216 × 178 |
| Weight | 3.07 lbs (1.39 kg) | 3.5 lbs (1.6 kg) | 3.5 lbs (1.6 kg) | 3.5 lbs (1.6 kg) |
| Form Factor (supports EIA/non-EIA standards) | Desktop / Wallmount (optional) | | | |
| Input Rating | 12V DC, 5A | 12V DC, 5A | 12V DC, 5A | 54V DC, 2.78A |
| Power Required (Redundancy Optional) | Powered by up to two external DC power adapters (one adapter included),  100-240V AC, 50/60 Hz | | | |
| Current (Maximum) | 115Vac/0.9A, 230Vac/0.6A | | | |
| Total Available PoE Power Budget* | – | — | — | 96W |
| Power Consumption (Average / Maximum) | 28.0 W / 31.6 W | 28.07 W / 34.31 W | 29.2 W / 35.6 W | 109.3 W / 133.6 W |
| Heat Dissipation | 108 BTU/h | 117.0 BTU/h | 121.5 BTU/h | 455.6 BTU/h |
| **Operating Environment and Certifications** | | | | |
| Operating Temperature | 32°–104°F  (0°–40°C) | | | |
| Storage Temperature | -31°–158°F  (-35°–70°C) | | | |
| Humidity | 10%–90% non-condensing | 20%–90% non-condensing | 20%–90% non-condensing | 20%–90% non-condensing |
| Noise Level | 24.14 dBA | 24.14 dBA | 24.14 dBA | 31.56 dBA |
| Operating Altitude | Up to 7400 ft  (2250 m) | | | |
| Compliance | FCC, ICES, CE, RCM, VCCI, BSMI, UL/cUL, CB | | | |
| Certifications | USGv6/IPv6 | | | |
| **Radio Specifications** | | | | |
| Multiple (MU) MIMO | N/A | 3×3 | | |
| Maximum Wi-Fi Speeds | N/A | 1300 Mbps @ 5 GHz, 450 Mbps @ 2.4 GHz | | |
| Maximum Tx Power | N/A | 20 dBm | | |
| Antenna Gain | N/A | 3.5 dBi @ 5 GHz, 5 dBi @ 2.4 GHz | | |
| **3G4G Modem** | | | | |
| Regions Supported | N/A | All Regions | | |
| Modem Model | N/A | Sierra Wireless EM7565 (2 SIM Slots, Active/Passive) | | |
| LTE Category | N/A | CAT-12 | | |
| LTE Bands | N/A | 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+ | N/A | B1, B2, B4, B5, B6, B8, B9, B19 | | |
| WCDMA | N/A | — | | |
| CDMA 1xRTT/EV-DO Rev A | N/A | — | | |
| GSM/GPRS/EDGE | N/A | — | | |
| Module Certifications | N/A | FCC, ICES, CE, RCM, VCCI, BSMI, UL/cUL, CB | | |
| Diversity | N/A | Yes | | |
| MIMO | N/A | Yes | | |
| GNSS Bias | N/A | Yes | | |
| **xDSL Modem - Supported Mode** | | | | |
| VDSL2 | ⊙ | ⊙ | ⊙ | N/A |
| ADSL2 | ⊙ | ⊙ | ⊙ | N/A |
| ADSL2+ | ⊙ | ⊙ | ⊙ | N/A |
| G.DMT | ⊙ | ⊙ | ⊙ | N/A |
| T1.413 | ⊙ | ⊙ | ⊙ | N/A |
| G.Lite | ⊙ | ⊙ | ⊙ | N/A |
| **xDSL Modem - Supported Type** | | | | |
| Annex A, B, I,J, M & L | ⊙ | ⊙ | ⊙ | N/A |

* Maximum loading on each PoE/+ port is 30 W (802.3at).

# SUBSCRIPTIONS

| Service Category | Service Offering | A-la-carte | Bundles | | |
|---|---|---|---|---|---|
| | | | Enterprise Protection | Unified Threat Protection | Advanced Threat Protection |
| Security Services | FortiGuard IPS Service | • | • | • | • |
| | FortiGuard Anti-Malware Protection (AMP) — Antivirus, Mobile Malware, Botnet, CDR, Virus Outbreak Protection and FortiSandbox Cloud Service | • | • | • | • |
| | FortiGuard Web Security — URL and web content, Video and Secure DNS Filtering | • | • | • | |
| | FortiGuard Anti-Spam | | • | • | |
| | FortiGuard IoT Detection Service | • | • | | |
| | FortiGuard Industrial Security Service | • | • | | |
| | FortiCloud AI-based Inline Sandbox Service [1] | • | | | |
| NOC Services | FortiGate Cloud (SMB Logging + Cloud Management) | • | | | |
| | FortiGuard Security Fabric Rating and Compliance Monitoring Service | • | • | | |
| | FortiConverter Service | • | • | | |
| | FortiGuard SD-WAN Underlay Bandwidth and Quality Monitoring Service | • | | | |
| SOC Services | FortiAnalyzer Cloud | • | | | |
| | FortiAnalyzer Cloud with SOCaaS | • | | | |
| Hardware and Software Support | FortiCare Essentials | • | | | |
| | FortiCare Premium | • | • | • | • |
| | FortiCare Elite | • | | | |
| Base Services | FortiGuard Application Control | | | | |
| | FortiCloud ZTNA Inline CASB Service [1] | | | | |
| | Internet Service (SaaS) DB Updates | | included with FortiCare Subscription | | |
| | GeoIP DB Updates | | | | |
| | Device/OS Detection Signatures | | | | |
| | Trusted Certificate DB Updates | | | | |
| | DDNS (v4/v6) Service | | | | |

[1] Available when running FortiOS 7.2

**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 Elite**

FortiCare Elite services offers enhanced service-level agreements (SLAs) and accelerated issue resolution. This advanced support offering provides access to a dedicated support team. Single-touch ticket handling by the expert technical team streamlines resolution. This option also provides Extended End-of-Engineering-Support (EoE's) of 18 months for added flexibility and access to the new FortiCare Elite Portal. This intuitive portal provides a single unified view of device and security health.

**Fortinet CSR Policy**

Fortinet is committed to driving progress and sustainability for all through cybersecurity, with respect for human rights and ethical business practices, making possible a digital world you can always trust. You represent and warrant to Fortinet that you will not use Fortinet's products and services to engage in, or support in any way, violations or abuses of human rights, including those involving illegal censorship, surveillance, detention, or excessive use of force. Users of Fortinet products are required to comply with the Fortinet EULA and report any suspected violations of the EULA via the procedures outlined in the Fortinet Whistleblower Policy.
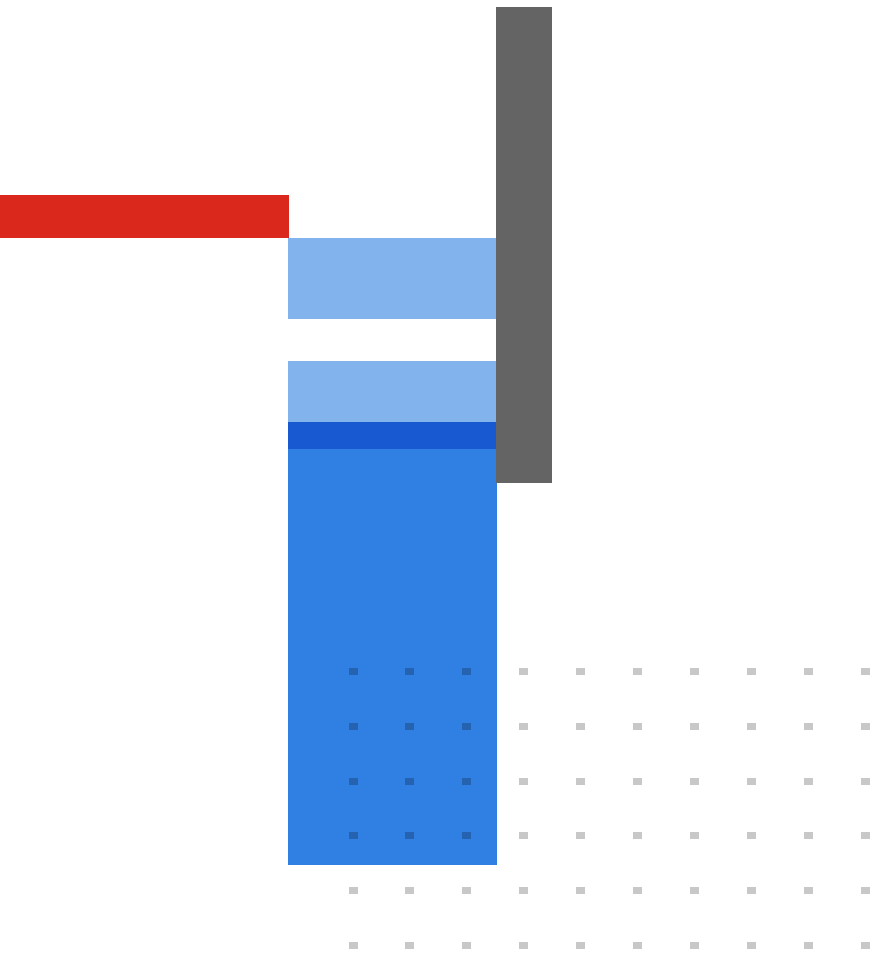
# Ordering Information

| Product | SKU | Description |
| --- | --- | --- |
| FortiGate 80F | FG-80F | 8 x GE RJ45 ports, 2 x RJ45/SFP shared media WAN ports. |
| FortiGate 81F | FG-81F | 8 x GE RJ45 ports, 2 x RJ45/SFP shared media WAN ports, 128GB onboard storage. |
| FortiGate 80F-Bypass | FG-80F-Bypass | 8 x GE RJ45 ports, 2 x RJ45/SFP shared media WAN ports, may be configured with 1 pair of LAN bypass. |
| FortiGate 80F-POE | FG-80F-POE | 8 x GE PoE ports, 2 x RJ45/SFP shared media WAN ports |
| FortiGate 81F-POE | FG-81F-POE | 8 x GE RJ45 PoE ports, 2 x RJ45/SFP shared media WAN ports, 128GB SSD. |
| FortiGate 80F-DSL | FG-80F-DSL | 8 x GE RJ45 Ports, 2 x RJ45/SFP shared media WAN ports, with embedded DSL module. |
| FortiWiFi 80F-2R | FWF-80F-2R-[RC] | 8 x GE RJ45 ports, 2 x RJ45/SFP shared media WAN ports, dual WiFi radio. |
| FortiWiFi 81F-2R | FWF-81F-2R-[RC] | 8 x GE RJ45 ports, 2 x RJ45/SFP shared media WAN ports, dual WiFi radio, 128GB SSD. |
| FortiWiFi 81F-2R-POE | FWF-81F-2R-POE-[RC] | 8 x GE RJ45 RJ45 PoE ports, 2 x RJ45/SFP shared media WAN ports, dual WiFi radio, 128GB SSD. |
| FortiWiFi-80F-2R-3G4G-DSL | FWF-80F-2R-3G4G-DSL-[RC] | 8 x GE RJ45 Ports, 2 x GE RJ45 WAN Ports, dual WiFi radio, with embedded DSL and 3G/4G/LTE modules |
| FortiWiFi-81F-2R-3G4G-DSL | FWF-81F-2R-3G4G-DSL-[RC] | 8 x GE RJ45 Ports, 2 x GE RJ45 WAN Ports, dual WiFi radio, with embedded DSL and 3G/4G/LTE modules, 128GB SSD onboard storage. |
| FortiWiFi-81F-2R-3G4G-PoE | FWF-81F-2R-3G4G-PoE-[RC] | 8 x GE RJ45 PoE/+ Ports, 2 x RJ45/SFP shared media WAN ports, dual WiFi radio, with embedded 3G/4G/LTE modules, 128GB SSD onboard storage. |
| Accessories | SKU | Description |
| AC Power Adaptor | SP-FG60E-PDC-5 | Pack of 5 AC power adaptors for FG/FWF 60E/61E, 60F/61F, 80E/81E and 80F/81F. |
| AC Power Adaptor | SP-FWF80F-PDC-5 | Pack of 5 AC power adaptors for FWF-80/81F-2R, power cable SP-FG60CPCOR-XX sold separately. |
| AC Power Adaptor | SP-FG80E-POE-PDC | AC power adaptor for FG-60E-POE, FG-80E-POE, FG-81E-POE, FG-80/81F-POE, FWF-81F-2R-POE power cable SP-FG60CPCOR-XX sold separately. |
| Rack Mount Tray | SP-RACKTRAY-02 | Rack mount tray for all FortiGate E series and F series desktop models. |
| Wall Mount Kit | SP-FG60F-MOUNT-20 | Pack of 20 wall mount kits for FG/FWF-40F series, FG/FWF-60F series, FG-80F, FG-81F and FG-80F-Bypass. |
| Transceivers | SKU | Description |
| 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. |
| 1GE SFP Transceiver, 90km Range, -40°/85°C Operation | FR-TRAN-ZX | 1G SFP transceivers, -40°/85°C operation, 90km range for all systems with SFP Slots. |

RC (regional code): A, B, D, E, F, I, J, N, P , S, V, and Y

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