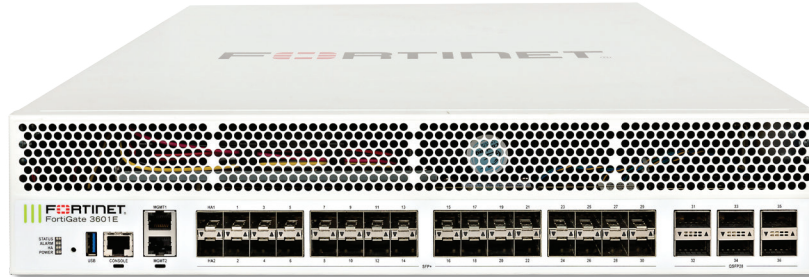


# FortiGate® 3600E Series

FG-3600E and 3601E

Next Generation Firewall  
Internal Segmentation Firewall  
Data Center Firewall and IPS  
Carrier-Class Firewall



The FortiGate 3600E series delivers high performance threat protection for mid-sized to large enterprises and service providers, with the flexibility to be deployed at the Internet or cloud edge, in the data center core or internal segments. The multiple high-speed interfaces, high port density, industry-leading security efficacy and high throughput of the 3600E series keeps your network connected and secure.

### Security

- Protects against known exploits, malware and malicious websites using continuous threat intelligence provided by FortiGuard Labs security services
- Protects against unknown attacks using dynamic analysis and provides automated mitigation to stop targeted attacks

### Performance

- Delivers industry's best threat protection performance and ultra-low latency using purpose-built security processor (SPU) technology
- Provides industry-leading performance and protection for SSL encrypted traffic

### Certification

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

### Networking

- Delivers extensive routing, high-speed interfaces, and high performance VPN capabilities to address performance and connectivity needs of large-scale data center and cloud applications
- Enables flexible deployment modes that fit into organizations' evolving network infrastructure

### Management

- Single Pane of Glass with Network Operations Center (NOC) view provides 360° visibility to identify issues quickly and intuitively
- Predefined compliance checklist analyzes the deployment and highlights best practices to improve overall security posture

### Security Fabric

- Enables Fortinet and Fabric-ready partners' products to collaboratively integrate and provide end-to-end security across the entire attack surface



Firewall	IPS	NGFW	Threat Protection	Interfaces
240 Gbps	55 Gbps	40 Gbps	30 Gbps	Multiple GE RJ45, 10 GE SFP+ / GE SFP and 100 GE QSFP28 / 40 GE QSFP+ slots

Refer to specification table for details

## DEPLOYMENT



### Next Generation Firewall (NGFW)

- Security gateway to the Internet for enterprises
- Enforce security policies with granular control and visibility of users and devices for thousands of discrete applications
- Identify and stop threats with powerful intrusion prevention beyond port and protocol that examines the actual content of your network traffic



### Internal Segmentation Firewall (ISFW)

- Segmentation solution for end-to-end protection against threats while meeting compliance requirements
- High port density and accelerated traffic processing capacity, to protect multiple segments without compromising performance
- Deploy transparently and rapidly into existing environments with minimal disruption



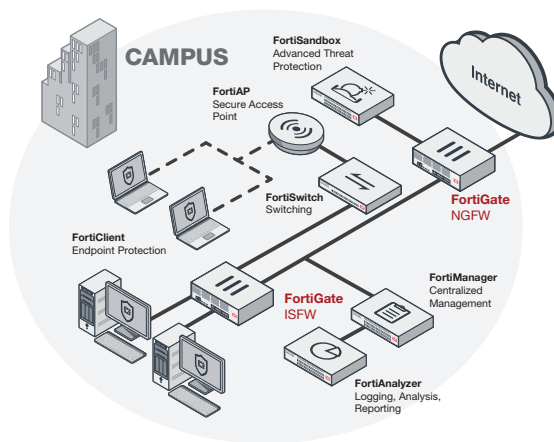
### Data Center Firewall and IPS (DCFW-IPS)

- High availability, high throughput and low latency firewall for data center edge and core
- High session scale for accommodating large network and user traffic for Internet and cloud-facing data centers
- High-speed interfaces for future-proof connectivity while compact size contributes to greener data centers
- Performance optimized IPS engine to detect and deter latest known and zero day threats

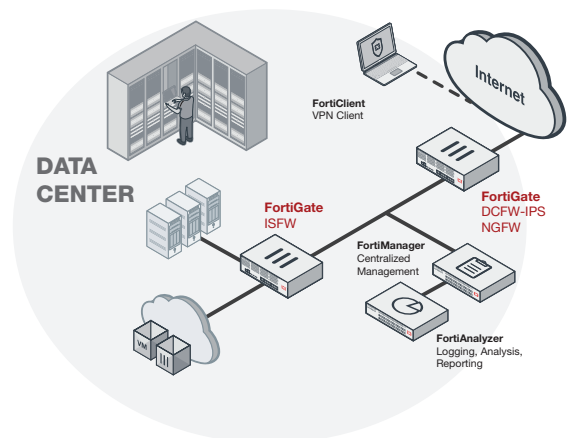


### Carrier-Class Firewall (CCFW)

- Reliable high capacity firewall designed for service providers
- Powered by multiple SPU Network Processors that accelerate processing for both IPv4 and IPv6 traffic
- Supports Carrier License upgrade that unlocks features and protocol support for mobile networks such as GTP and SCTP
- High-speed interfaces for future-proof connectivity



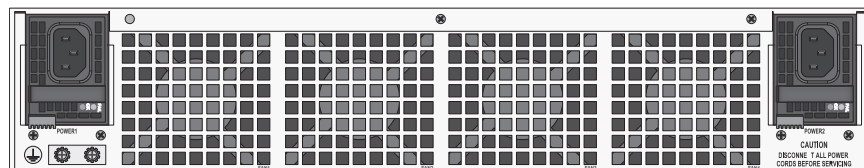
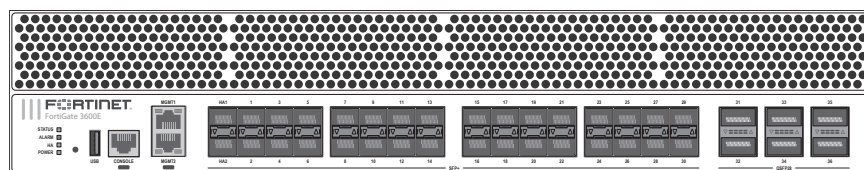
FortiGate 3600E deployment in large campus networks (NGFW, ISFW)



FortiGate 3600E deployment in data center (DCFW-IPS/NGFW, ISFW)

## HARDWARE

### FortiGate 3600E/3601E



### Interfaces

1. USB Management Port
2. Console Port
3. 2x GE RJ45 Management Ports (supports 1 GE only)
4. 2x 10 GE SFP+ / GE SFP HA Slots
5. 30x 10 GE SFP+ / GE SFP Slots
6. 6x 100 GE QSFP28 / 40 GE QSFP+ Slots

### Powered by SPU

- Custom SPU processors deliver the power you need to detect malicious content at multi-Gigabit speeds
- Other security technologies cannot protect against today's wide range of content- and connection-based threats because they rely on general-purpose CPUs, causing a dangerous performance gap
- SPU processors provide the performance needed to block emerging threats, meet rigorous third-party certifications, and ensure that your network security solution does not become a network bottleneck



### Network Processor

Fortinet's new, breakthrough SPU NP6 network processor works inline with FortiOS functions delivering:

- Superior firewall performance for IPv4/IPv6, SCTP and multicast traffic with ultra-low latency down to 2 microseconds
- VPN, CAPWAP and IP tunnel acceleration
- Anomaly-based intrusion prevention, checksum offload and packet defragmentation
- Traffic shaping and priority queuing

### Content Processor

Fortinet's new, breakthrough SPU CP9 content processor works outside of the direct flow of traffic and accelerates the inspection of computationally intensive security features:

- Enhanced IPS performance with unique capability of full signature matching at SPU
- SSL Inspection capabilities based on the latest industry mandated cipher suites
- Encryption and decryption offloading

### 100 GE Connectivity for Network

High speed connectivity is essential for network security segmentation at the core of data networks. The FortiGate 3600E provides multiple 100 GE QSFP28 slots, simplifying network designs without relying on additional devices to bridge desired connectivity.

# FORTINET SECURITY FABRIC

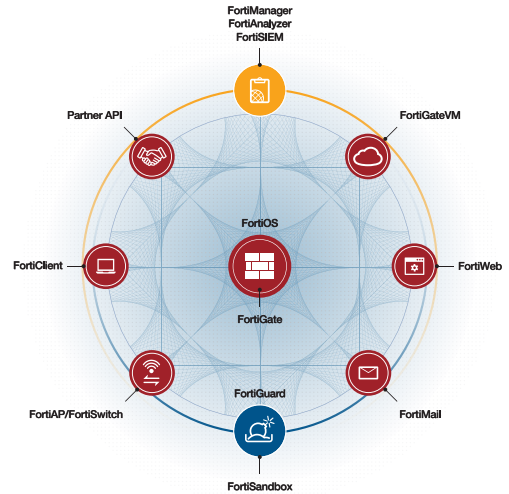
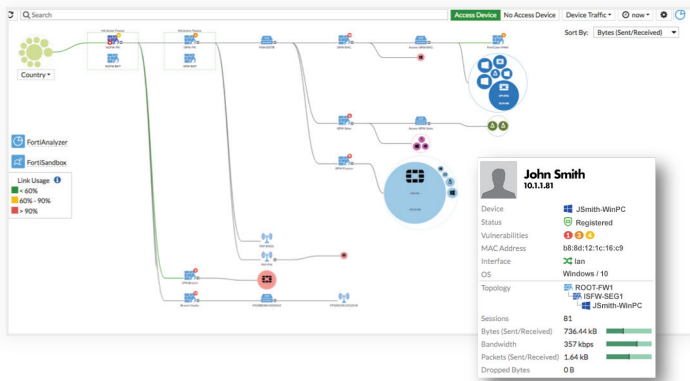
## Security Fabric

The Security Fabric 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.

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 the security and networking capabilities across the entire FortiGate platform with one intuitive operating system. Reduce operating expenses and save time with a truly consolidated next-generation security platform.



- A truly consolidated platform with one OS for all security and networking services for all FortiGate platforms.
- Industry-leading protection: NSS Labs Recommended, VB100, AV Comparatives, and ICSA validated security and performance.
- Control thousands of applications, block the latest exploits, and filter web traffic based on millions of real-time URL ratings.
- Prevent, detect, and mitigate advanced attacks automatically in minutes with integrated advanced threat protection.
- Fulfill your networking needs with extensive routing, switching, and SD-WAN capabilities.
- Utilize SPU hardware acceleration to boost security capability performance.

For more information, please refer to the FortiOS data sheet available at [www.fortinet.com](http://www.fortinet.com)

## 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](http://forti.net/fortiguard) and [forti.net/forticare](http://forti.net/forticare)

## SPECIFICATIONS

FORTIGATE 3600E/3601E	
<b>Interfaces and Modules</b>	
100 GE QSFP28 / 40 GE QSFP+ Slots	6
10 GE SFP+ / GE SFP Slots	30
GE RJ45 Management Ports	2 (support 1GE only)
USB Ports (Client / Server)	1 / 1
Console Port	1
Internal Storage	2x 2 TB SSD (For FG-3601E only)
Included Transceivers	2x SFP+ (SR 10GE)
<b>System Performance — Enterprise Traffic Mix</b>	
IPS Throughput <sup>2</sup>	55 Gbps
NGFW Throughput <sup>2,4</sup>	40 Gbps
Threat Protection Throughput <sup>2,5</sup>	30 Gbps
<b>System Performance and Capacity</b>	
Firewall Throughput (1518 / 512 / 64 byte, UDP)	240 / 240 / 150 Gbps
IPv6 Firewall Throughput (1518 / 512 / 86 byte, UDP)	240 / 240 / 150 Gbps
Firewall Latency (64 byte, UDP)	4 µs
Firewall Throughput (Packet per Second)	225 Mpps
Concurrent Sessions (TCP)	50 Million
New Sessions/Second (TCP)	460,000
Firewall Policies	200,000
IPsec VPN Throughput (512 byte) <sup>1</sup>	145 Gbps
Gateway-to-Gateway IPsec VPN Tunnels	40,000
Client-to-Gateway IPsec VPN Tunnels	200,000
SSL-VPN Throughput	12 Gbps
Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode)	30,000
SSL Inspection Throughput (IPS, avg. HTTPS) <sup>3</sup>	34 Gbps
SSL Inspection CPS (IPS, avg. HTTPS) <sup>3</sup>	19,000
SSL Inspection Concurrent Session (IPS, avg. HTTPS) <sup>3</sup>	5.2 Million
Application Control Throughput (HTTP 64K) <sup>2</sup>	95 Gbps
CAPWAP Throughput (HTTP 64K)	15 Gbps
Virtual Domains (Default / Maximum)	10 / 500
Maximum Number of Switches Supported	256
Maximum Number of FortiAPs (Total / Tunnel Mode)	4,096 / 1,024
Maximum Number of FortiTokens	5,000
Maximum Number of Registered FortiClients	50,000
High Availability Configurations	Active / Active, Active / Passive, Clustering

FORTIGATE 3600E/3601E	
<b>Dimensions and Power</b>	
Height x Width x Length (inches)	3.5 x 17.4 x 21.9
Height x Width x Length (mm)	89 x 443 x 556
Weight	3600E: 43.1 lbs (19.6 kg) 3601E: 44.5 lbs (20.2 kg)
Form Factor	2 RU
AC Power Supply	100–240V AC, 50–60 Hz
Power Consumption (Average / Maximum)	672 W / 977 W
Heat Dissipation	3334 BTU/h
Redundant Power Supplies	Yes, Hot Swappable
<b>Operating Environment and Certifications</b>	
Operating Temperature	32–104°F (0–40°C)
Storage Temperature	-31–158°F (-35–70°C)
Humidity	10–90% non-condensing
Noise Level	60 dBA
Operating Altitude	Up to 7,400 ft (2,250 m)
Compliance	FCC Part 15 Class A, C-Tick, VCCI, CE, UL/cUL, CB
Certifications	ICSA Labs: Firewall, IPsec, IPS, Antivirus, SSL-VPN; USGv6/IPv6

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.

## ORDER INFORMATION

Product	SKU	Description
FortiGate 3600E	FG-3600E	6x 100 GE QSFP28 slots and 32x 10 GE SFP+ slots (including 30x ports, 2x HA ports), 2x GE RJ45 Management Ports, SPU NP6 and CP9 hardware accelerated, and 2 AC power supplies.
FortiGate 3601E	FG-3601E	6x 100 GE QSFP28 slots and 32x 10 GE SFP+ slots (including 30x ports, 2x HA ports), 2x GE RJ45 Management Ports, SPU NP6 and CP9 hardware accelerated, 4 TB SSD onboard storage, and 2 AC power supplies.
Optional Accessories		
Rack Mount Sliding Rails	SP-FG3040B-RAIL	Rack mount sliding rails for FG-1000C/-DC, FG-1200D, FG-1500D/DC, FG-3040B/-DC, FG-3140B/-DC, FG-3240C/-DC, FG-3000D/-DC, FG-3100D/-DC, FG-3200D/-DC, FG-3400/3401E, FG-3600/3601E, FG-3700D/-DC, FG-3700DX, FG-3810D/-DC and FG-3950B/-DC.
AC power supply	SP-FG3800D-PS	AC power supply for FG-3400/3401E, FG-3600/3601E, FG-3700D, FG-3700D-NEBS, FG-3700DX, FG-3810D and FG-3815D
100 GE QSFP28 Transceiver Module, 4 Channel Parallel Fiber, Short Range	FG-TRAN-QSFP28-SR4	100 GE QSFP28 transceivers, 4 channel parallel fiber, short range for all systems with QSFP28 slots.
100 GE QSFP28 Transceiver Module, 4 Channel Parallel Fiber, Long Range	FG-TRAN-QSFP28-LR4	100 GE QSFP28 transceivers, 4 channel parallel fiber, long range for all systems with QSFP28 slots.
40 GE QSFP+ Transceiver Module, Short Range	FG-TRAN-QSFP+SR	40 GE QSFP+ transceiver module, short range for all systems with QSFP+ slots.
40 GE QSFP+ Transceiver Module, Short Range BiDi	FG-TRAN-QSFP+SR-BIDI	40 GE QSFP+ transceiver module, short range BiDi for all systems with QSFP+ slots.
40 GE QSFP+ Transceiver Module, Long Range	FG-TRAN-QSFP+LR	40 GE QSFP+ transceiver module, long range for all systems with QSFP+ slots.
10 GE SFP+ Transceiver Module, Short Range	FG-TRAN-SFP+SR	10 GE SFP+ transceiver module, short range for all systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Long Range	FG-TRAN-SFP+LR	10 GE SFP+ transceiver module, long range for all systems with SFP+ and SFP/SFP+ slots.
1 GE SFP LX Transceiver Module	FG-TRAN-LX	1 GE SFP LX transceiver module for all systems with SFP and SFP/SFP+ slots.
1 GE SFP RJ45 Transceiver Module	FG-TRAN-GC	1 GE SFP RJ45 transceiver module for all systems with SFP and SFP/SFP+ slots.
1 GE SFP SX Transceiver Module	FG-TRAN-SX	1 GE SFP SX transceiver module for all systems with SFP and SFP/SFP+ slots.
10 GE SFP+ Active Direct Attach Cable, 10m / 32.8 ft	SP-CABLE-ADASFP+	10 GE SFP+ active direct attach cable, 10m / 32.8 ft for all systems with SFP+ and SFP/SFP+ slots.



### 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	Threat Protection	UTM	Enterprise Protection
FortiCASB SaaS-only Service ^			•
FortiGuard Industrial Service ^			•
FortiGuard Security Rating Service* ^			•
FortiGuard Antispam		•	•
FortiGuard Web Filtering		•	•
FortiGuard Advanced Malware Protection (AMP) — Antivirus, Mobile Malware, Botnet, CDR*, Virus Outbreak Protection* and FortiSandbox Cloud Service*	•	•	•
FortiGuard IPS Service	•	•	•
FortiCare + FortiGuard App Control Service	•	•	•

\* Available when running FortiOS 6.0.1 and above ^ With new Q3-2018 SKUs



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