FortiGate® 500E Series

FortiGate 500E and 501E
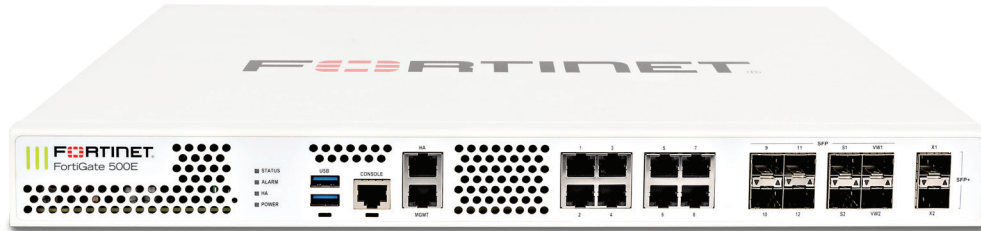
The FortiGate 500E series delivers next generation firewall capabilities for mid-sized to large enterprises, with the flexibility to be deployed at the campus or enterprise branch. Protects against cyber threats with security processor powered high performance, security efficacy and deep visibility.

Security

- Protects against known exploits, malware and malicious websites using continuous threat intelligence provided by FortiGuard Labs security services
- Identify thousands of applications including cloud applications for deep inspection into network traffic
- 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, ICSA, Virus Bulletin and AV Comparatives

Networking

- Delivers extensive routing, switching, wireless controller and high performance IPsec VPN capabilities to consolidate networking and security functionality
- Enables flexible deployment such as Next Generation Firewall and Secure SD-WAN

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
- 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
36 Gbps	5.2 Gbps	5 Gbps	4.7 Gbps	Multiple GE RJ45, GE SFP and 10 GE SFP+ Slots

Refer to specification table for details

DEPLOYMENT

Next Generation Firewall (NGFW)

- Combines threat prevention security capabilities into single high performance network security appliance
- Reduces complexity by creating campus topology view and providing granular visibility of devices, users and threat information
- Identify and stop threats with powerful intrusion prevention beyond port and protocol that examines the actual content of your network traffic
- Delivers industry's highest SSL inspection performance using industry-mandated ciphers
- Proactively detect malicious unknown threats using integrated cloud-based sandbox service

Secure SD-WAN

- Secure direct Internet access for Cloud applications for improved latency and reduce WAN cost spending
- Effective, cost-efficient and high performance threat prevention capabilities
- WAN Path Controller and Link Health Monitoring for better application performance
- Security Processor powered industry's best IPsec VPN and SSL Inspection performance
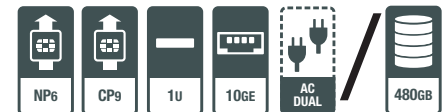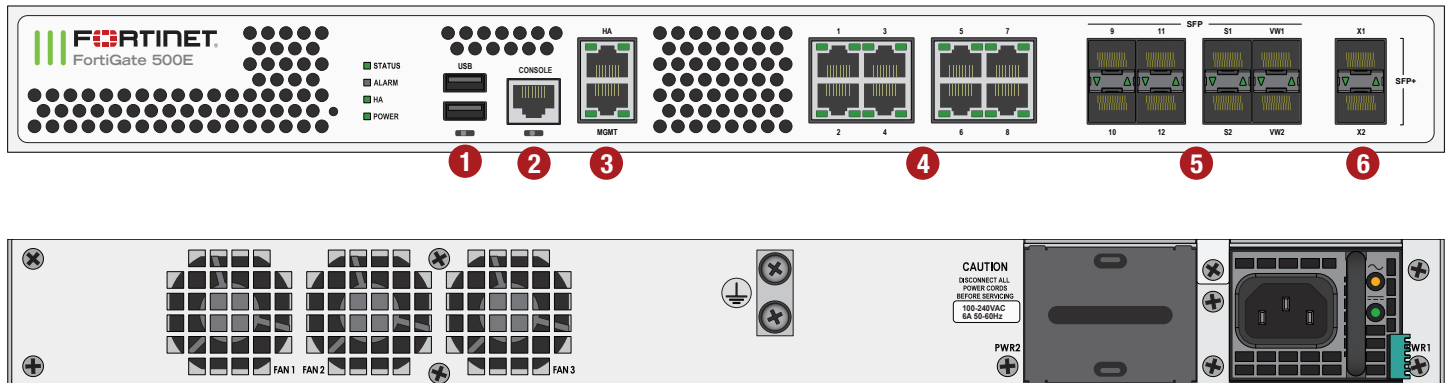- Centralized Management and Zero-Touch deployment
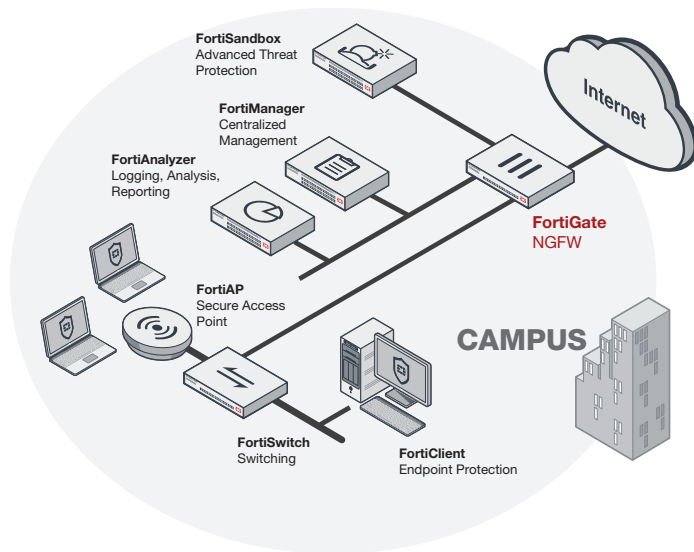
FortiGate 500E deployment in campus
(NGFW)
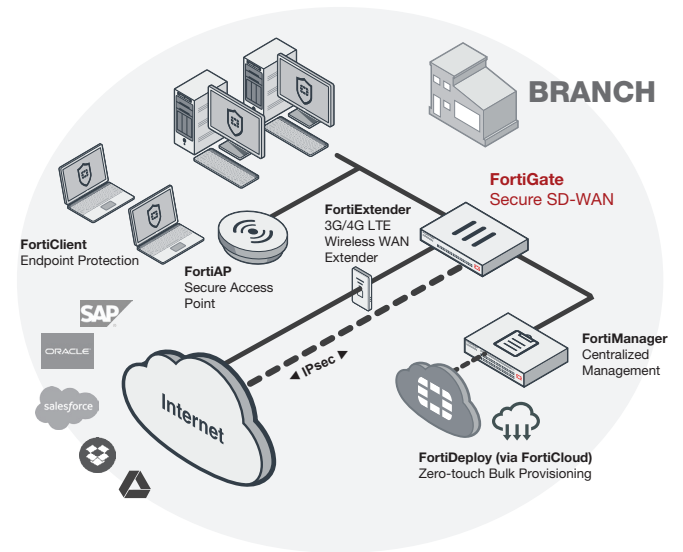
FortiGate 500E deployment in branch office
(Secure SD-WAN)

HARDWARE

FortiGate 500E/501E

Interfaces

1. USB Port
2. Console Port
3. 2x GE RJ45 MGMT/HA Ports
4. 8x GE RJ45 Ports
5. 8x GE SFP Slots
6. 2x 10 GE SFP+ 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 ASIC
- SSL Inspection capabilities based on the latest industry mandated cipher suites
- Encryption and decryption offloading

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.
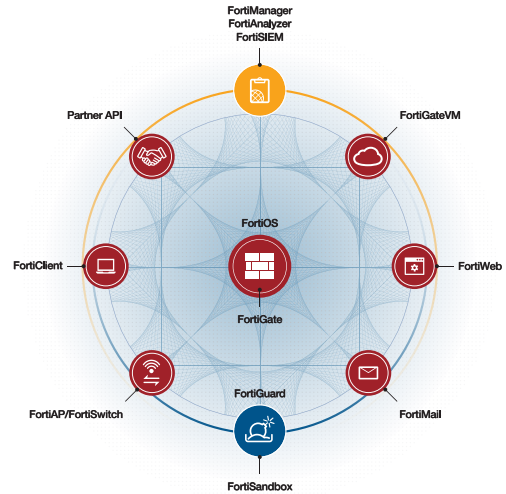
FortiOS

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.
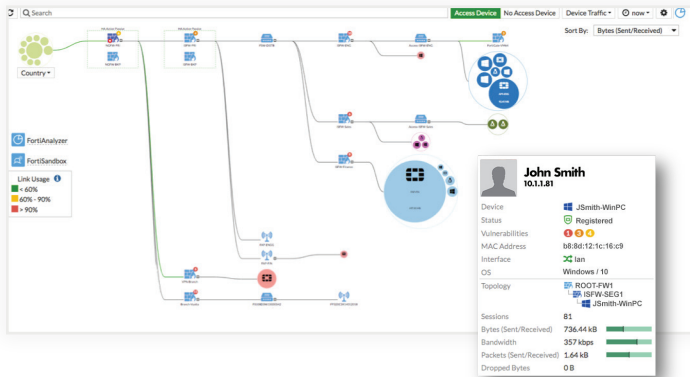
- A truly consolidated platform with one OS for all security and networking services for all FortiGate platforms.
- Industry-leading protection: NSS Labs Recommended, VB100, AV Comparatives, and ICSA validated security and performance.
- Control thousands of applications, block the latest exploits, and 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.
- Ultilize SPU hardware acceleration to boost security capability performance.

> For more information, please refer to the FortiOS data sheet available at 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 and forti.net/forticare

SPECIFICATIONS

	FORTIGATE 500E	FORTIGATE 501E
Interfaces and Modules		
10 GE SFP+ Slots	2	
GE RJ45 Interfaces	8	
GE SFP Slots	8	
GE RJ45 Management Ports	2	
USB Ports	2	
RJ45 Console Port	1	
Local Storage	NIL	2x 240 GB SSD
Included Transceivers	2x SFP (SX 1 GE)	
System Performance — Enterprise Traffic Mix		
IPS Throughput [2]	5.2 Gbps	
NGFW Throughput [2, 4]	5 Gbps	
Threat Protection Throughput [2, 5]	4.7 Gbps	
System Performance and Capacity		
IPv4 Firewall Throughput (1518 / 512 / 64 byte, UDP)	36 / 36 / 22 Gbps	
IPv6 Firewall Throughput (1518 / 512 / 64 byte, UDP)	36 / 36 / 22 Gbps	
Firewall Latency (64 byte, UDP)	2 µs	
Firewall Throughput (Packet per Second)	33 Mpps	
Concurrent Sessions (TCP)	8 Million	
New Sessions/Second (TCP)	300,000	
Firewall Policies	10,000	
IPsec VPN Throughput (512 byte) [1]	20 Gbps	
Gateway-to-Gateway IPsec VPN Tunnels	2,000	
Client-to-Gateway IPsec VPN Tunnels	50,000	
SSL-VPN Throughput	5 Gbps	
Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode)	500	
SSL Inspection Throughput (IPS, avg. HTTPS) [3]	5.7 Gbps	
SSL Inspection CPS (IPS, avg. HTTPS) [3]	3,500	
SSL Inspection Concurrent Session (IPS, avg. HTTPS) [3]	800,000	
Application Control Throughput (HTTP 64K) [2]	14 Gbps	
CAPWAP Throughput (1444 byte, UDP)	18 Gbps	
Virtual Domains (Default / Maximum)	10 / 10	
Maximum Number of Switches Supported	48	
Maximum Number of FortiAPs (Total / Tunnel)	512 / 256	
Maximum Number of FortiTokens	1,000	
Maximum Number of Registered Endpoints	2,000	
High Availability Configurations	Active-Active, Active-Passive, Clustering	

	FORTIGATE 500E	FORTIGATE 501E
Dimensions and Power		
Height x Width x Length (inches)	1.75 x 17.0 x 15.0	
Height x Width x Length (mm)	44.45 x 432 x 380	
Weight	16.1 lbs (7.3 kg)	16.6 lbs (7.5 kg)
Form Factor	1 RU	
Power Consumption (Average / Maximum)	95 W / 193 W	105 W / 200 W
Power Source	100–240V 60–50Hz	
Current (Maximum)	6A	
Heat Dissipation	613 BTU/h	
Redundant Power Supplies (Hot Swappable)	optional	
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	
Noise Level	43 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 500E	FG-500E	2x 10 GE SFP+ slots, 10x GE RJ45 ports (including 1x MGMT port, 1x HA port, 8x switch ports), 8x GE SFP slots, SPU NP6 and CP9 hardware accelerated.
FortiGate 501E	FG-501E	2x 10 GE SFP+ slots, 10x GE RJ45 ports (including 1x MGMT port, 1x HA port, 8x switch ports), 8x GE SFP slots, SPU NP6 and CP9 hardware accelerated, 2x 240 GB onboard SSD storage.
Optional Accessories		
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+ 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
10 GE Copper SFP+ Transceiver Module, up to 30m	FS-TRAN-SFP+GC	10 GE copper SFP+ RJ45 transceiver. For FortiSwitch only, up to 30m.
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
Optional Power Supply	SP-FG300E-PS	AC power supply for FG-300/301E and FG-500/501E.

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