



**FortiGate® 5000-Series**  
Scalable Data Center and Carrier-Graded Security Systems



## FortiGate 5000-Series Solution

### Scalable Data Center and Carrier-Graded Security Systems

With so many enterprise initiatives around big data, public cloud and Internet of things, security infrastructure providers must deliver even more performance, reliability and scalability to their customers. Fortinet's 5000-series chassis-based scalable platforms offer groundbreaking throughput and proven resilience to satisfy the most demanding carrier and enterprise datacenter requirements.

#### Consolidated Security Solutions

The FortiGate 5000-series bundles integrate modular carrier class hardware components with advanced FortiASIC™ acceleration and consolidated security from the FortiOS™ operating system to deliver up to 1 Tbps throughput. And with our in-house FortiGuard research team delivers dynamic, automated updates and ensures up-to-date protection against sophisticated threats. In addition, the 5000 series supports a web-based GUI, 'single pane of glass' management console and on-board reporting for deep visibility.

#### Highlights

Bundle	Firewall Throughput*	Concurrent Sessions*	New Session/Second*	IPS Throughput*
FG-5144C (Base)	160 Gbps	46 Million	1.13 Million	36 Gbps
FG-5144C (Base 2)	320 Gbps	92 Million	2.26 Million	72 Gbps
FG-5144C (Base 3)	480 Gbps	138 Million	3.39 Million	108 Gbps
FG-5144C (Base 4)	640 Gbps	184 Million	4.52 Million	144 Gbps
FG-5144C (Full)	960 Gbps	276 Million	6.78 Million	216 Gbps
Security Blade				
FG-5001D	80 Gbps	23 Million	565,000	18 Gbps

\* Based on sum of individual Security Blades, not as a controller-based system.

#### Highly Scalable, Flexible and Unmatched Performance

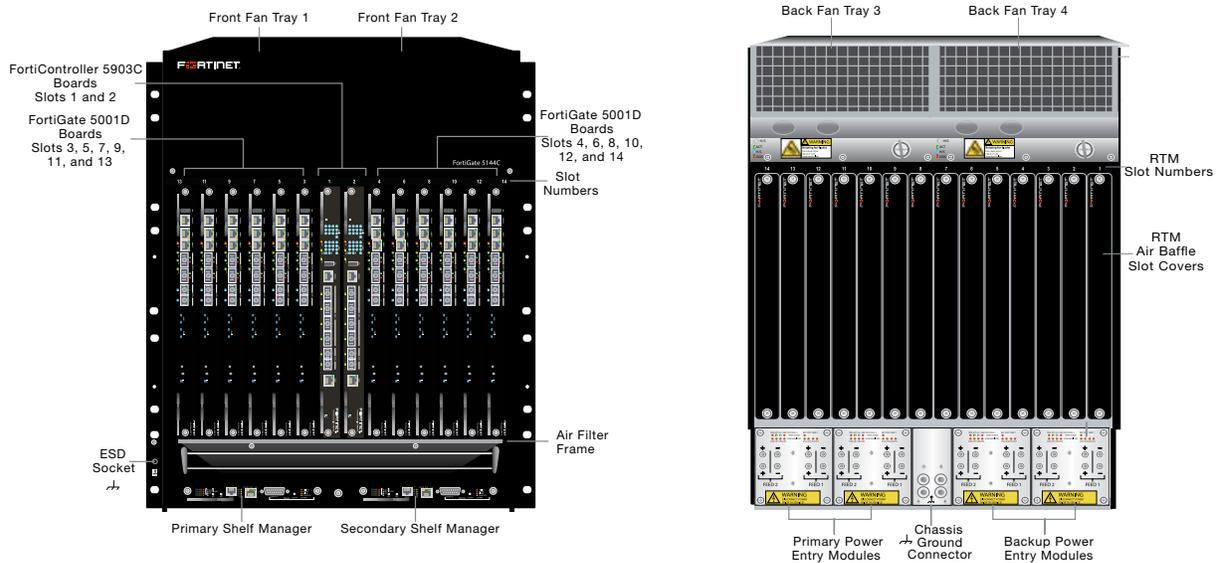
- Ideal for high-speed service provider, large enterprises or telecommunications carrier network.
- Security blades that are powered by FortiASICs that provide superior security functionality and high performance.
- Modular design allows predictable growth.
- Highly available with Virtual Domain (VDOM) support for multi-tenant data center environment.
- Integrated high-speed 40 GE or 100 GE port delivers maximum flexibility and scalability.



# CHASSIS

## FortiGate 5144C

Next Generation 14U 19-inch rack mount ATCA chassis with 40 Gbps Backplane and capable of Dual-Dual-Star topology. It can install up to 14 FortiGate 5000-series blades.



FortiGate 5144C	
<b>Hardware Specifications</b>	
Available Slots	14
High Availability Backplane Fabric	Built-in
40 Gbps Backplane Support	Yes
Shelf Manager (Default / Maximum)	1 / 2
Dual Networking Blade Support	Yes
<b>Dimensions</b>	
Height x Width x Length (inches)	24.44 x 19.06 x 21.63
Height x Width x Length (cm)	62.1 x 48.4 x 55.0
Weight	108 lbs (50 kg)
<b>Power and Environment</b>	
Power Required	DC/AC <sup>1</sup>
Chassis Only Power Consumption (Maximum) **	960 W
Heat Dissipation (Maximum) **	3,276 BTU/h
Operating Temperature	32–104°F (0–40°C)
Storage Temperature	-13–158°F (-35–70°C)
Humidity	5–90% non-condensing
<b>Compliance</b>	
Certifications	FCC Part 15 Class A, C-Tick, VCCI, CE, BSMI, UL/cUL

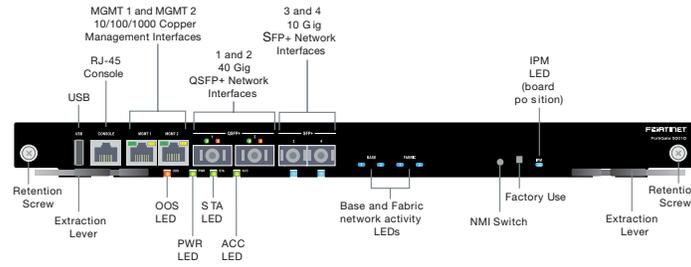
<sup>1</sup> Optional FortiGate-5053B Power Supply Shelf used to provide AC power to the FortiGate

\*\* Please refer to respective Chassis Guide for computation of total power requirement.

# SECURITY BLADE

## FortiGate 5001D

Latest purpose-built FortiGate security blade with carrier-class capacity and protection. Runs on FortiOS 5 — the most powerful security operating system in the world.



FortiGate 5001D	
<b>Interfaces and Storage</b>	
40 GE QSFP+ Ports	2
10 GE SFP+ Ports	2
GE RJ45 Ports	2
RJ45 Console Port	1
Included Transceivers	2x 10 GE SFP+ SR
Local Storage	200 GB
<b>System Performance</b>	
Firewall Throughput (1518 / 512 / 64 byte UDP packets)	80 / 80 / 45 Gbps
Firewall Latency (64 byte UDP packets)	3 µs
Firewall Throughput (Packets Per Second)	67.5 Mpps
Concurrent Sessions (TCP)	23 Million
New Sessions/Second (TCP)	565,000
Maximum Firewall Policies	200,000
IPsec VPN Throughput (512 byte packets)	25 Gbps
Gateway-to-Gateway IPsec VPN Tunnels	40,000
Client-to-Gateway IPsec VPN Tunnels	64,000
SSL-VPN Throughput	6.5 Gbps
Concurrent SSL-VPN Users (Recommended Maximum)	25,000
IPS Throughput (HTTP / Enterprise Mix) <sup>1</sup>	18 / 13 Gbps
SSL Inspection Throughput <sup>2</sup>	9 Gbps

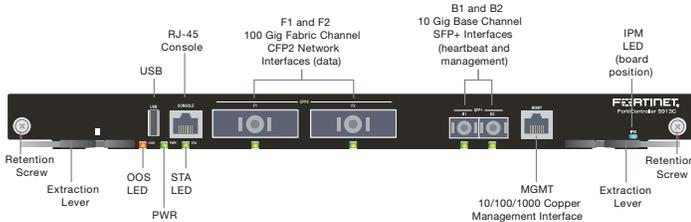
FortiGate 5001D	
Application Control Throughput <sup>3</sup>	18 Gbps
NGFW Throughput <sup>4</sup>	10 Gbps
Threat Protection Throughput <sup>5</sup>	7.7 Gbps
CAPWAP Throughput <sup>6</sup>	15 Gbps
Virtual Domains (Default / Maximum)	10 / 500
Maximum Number of FortiTokens	5,000
Maximum Number of Registered FortiClients	20,000
Maximum Number of FortiAPs (Total / Tunnel)	4,096 / 1,024
<b>Power and Environment</b>	
Power Consumption (Average / Maximum)	189 / 226 W
Heat Dissipation (Average)	774 BTU/h
Operating Temperature	32–104°F (0–40°C)
Storage Temperature	-13–158°F (-25–70°C)
Humidity	20–90% non-condensing
<b>Compliance</b>	
Certifications	FCC Part 15 Class A, C-Tick, VCCI, CE, UL/cUL, CB, ICSA Labs: Firewall, IPsec, IPS, Antivirus, SSL-VPN; USGv6/Pv6
NEBS Certified	—

Note: All performance values are "up to" and vary depending on system configuration. IPsec VPN performance is based on 512 byte UDP packets using AES-256+SHA1. 1. IPS performance is measured using 1 Mbyte HTTP and Enterprise Traffic Mix. 2. SSL Inspection is measured with IPS enabled and HTTP traffic, using TLS v1.2 with AES256-SHA. 3. Application Control performance is measured with 64 Kbytes HTTP traffic. 4. NGFW performance is measured with IPS and Application Control enabled, based on Enterprise Traffic Mix. 5. Threat Protection performance is measured with IPS and Application Control and Malware protection enabled, based on Enterprise Traffic Mix. 6. CAPWAP performance is based on 1444 byte UDP packets.

# NETWORKING BLADE

## FortiController 5913C

High performance, FortiASIC DP2 accelerated networking blade with 100 GE interfaces and 10/40-gigabit fabric and 1-gigabit base backplane channel.



FortiController 5913C	
<b>Interfaces</b>	
Fabric Channel Interfaces	2x 100 GE CFP2
Base Channel Interfaces	2x 10 GE SFP+
Management Interfaces	1x GE RJ45
Included Transceivers	2x 10 GE SFP+ SR
40 GE Backplane Fabric Support	Yes
10 GE Backplane Fabric Support	Yes
GE Backplane Fabric Support	—
<b>System Performance</b>	
Maximum Traffic Throughput	200 Gbps
Maximum Concurrent Sessions	135 Million
New Sessions/Second (TCP)	3.6 Million
<b>Power and Environment</b>	
Power Consumption (Average / Maximum)	280 / 400 W
Heat Dissipation	955 BTU/h
Operating Temperature	32–104°F (0–40°C)
Storage Temperature	-13–158°F (-35–70°C)
Humidity	5–90% non-condensing
<b>Compliance</b>	
Certifications	FCC Part 15 Class A, C-Tick, VCCI, CE, UL/cUL, CB

## ORDER INFORMATION

SKU		Components			
Hardware-only Bundle	Hardware + Services Bundle	Chassis	Security Blade	Networking Blade	Services*
FG-5144C-HW-BASE	FG-5144-BASE-BDL-950-DD	FG-5144C-DC	2x FG-5001D	1x FCTRL-5913C	
FG-5144C-HW-BASE-2	FG-5144C-BASE-2-BDL-950-DD	FG-5144C-DC	4x FG-5001D	1x FCTRL-5913C	
FG-5144C-HW-BASE-3	FG-5144C-BASE-3-BDL-950-DD	FG-5144C-DC	6x FG-5001D	2x FCTRL-5913C	UTM Bundle (24x7 FortiCare plus NGFW, AV, Web Filtering and Antispam Services) for each security blade.
FG-5144C-HW-BASE-4	FG-5144C-BASE-4-BDL-950-DD	FG-5144C-DC	8x FG-5001D	2x FCTRL-5913C	
FG-5144C-HW-FULL	FG-5144-FULL-BDL-950-DD	FG-5144C-DC	12x FG-5001D	2x FCTRL-5913C	

\* Applicable to Hardware + Services Bundle only

Bundle Items	SKU	Description
FortiGate 5144C BASE HW Bundle	FG-5144C-HW-BASE	14U 14-slot 5144C chassis, 2x FG-5001D security blades, 1x FCTRL-5913C networking blade, 4 PEMs, 4 fan Units, 2 shelf FRU data modules, 1 shelf manager, front and RTM air baffles, and 4 pairs DC cables for connecting to FG-5053B power shelves.
FortiGate 5144C BASE HW Bundle with Services	FG-5144C-BASE-BDL-950-DD	FG-5144C-HW-BASE plus 2x 24x7 FortiCare and FortiGuard UTM bundles for FG-5001D security blades and 1x 24x7 FortiCare for FCTRL-5913C networking blade.
FortiGate 5144C BASE 2 HW Bundle	FG-5144C-HW-BASE-2	14U 14-slot 5144C chassis, 4x FG-5001D security blades, 1x FCTRL-5913C networking blade, 4 PEMs, 4 fan units, 2 shelf FRU data modules, 1 shelf manager, front and RTM air baffles, and 4 pairs DC cables for connecting to FG-5053B power shelves.
FortiGate 5144C BASE 2 HW Bundle with Services	FG-5144C-BASE-2-BDL-950-DD	FG-5144C-HW-BASE-2 plus 4x 24x7 FortiCare and FortiGuard UTM bundles for FG-5001D security blades and 1x 24x7 FortiCare for FCTRL-5913C networking blade.
FortiGate 5144C BASE 3 HW Bundle	FG-5144C-HW-BASE-3	14U 14-slot 5144C chassis, 6x FG-5001D security blades, 2x FCTRL-5913C networking blade, 4 PEMs, 4 fan units, 2 shelf FRU data modules, 1 shelf manager, front and RTM air baffles, and 4 pairs DC cables for connecting to FG-5053B power shelves.
FortiGate 5144C BASE 3 HW Bundle with Services	FG-5144C-BASE-3-BDL-950-DD	FG-5144C-HW-BASE-3 plus 6x 24x7 FortiCare and FortiGuard UTM bundles for FG-5001D security blades and 2x 24x7 FortiCare for FCTRL-5913C networking blade.
FortiGate 5144C BASE 4 HW Bundle	FG-5144C-HW-BASE-4	14U 14-slot 5144C chassis, 8x FG-5001D security blades, 2x FCTRL-5913C networking blade, 4 PEMs, 4 fan units, 2 shelf FRU data modules, 1 shelf manager, front and RTM air baffles, and 4 pairs DC cables for connecting to FG-5053B power shelves.
FortiGate 5144C BASE 4 HW Bundle with Services	FG-5144C-BASE-4-BDL-950-DD	FG-5144C-HW-BASE-4 plus 8x 24x7 FortiCare and FortiGuard UTM bundles for FG-5001D security blades and 2x 24x7 FortiCare for FCTRL-5913C networking blade.
FortiGate 5144C FULL HW Bundle	FG-5144C-HW-FULL	14U 14-slot 5144C chassis, 12x FG-5001D security blades, 2x FCTRL-5913C networking blade, 4 PEMs, 4 fan units, 2 shelf FRU data modules, 1 shelf manager, front and RTM air baffles, and 4 pairs DC cables for connecting to FG-5053B power shelves.
FortiGate 5144C FULL HW Bundle with Services	FG-5144C-FULL-BDL-950-DD	FG-5144C-HW-FULL plus 12x 24x7 FortiCare and FortiGuard UTM bundles for FG-5001D security blades and 2x 24x7 FortiCare for FCTRL-5913C networking blade.

Optional Items	SKU	Description
<b>Chassis</b>		
FortiGate 5144C Shelf Manager	FG-5144C-SM	5144C shelf manager with ShMM-700R mezzanine card and radial IPMB bus
FortiGate 5144C Fan Tray	FG-5144C-FAN-F	FG-5144C fan tray front
FortiGate 5144C Fan Tray	FG-5144C-FAN-R	FG-5144C fan tray rear
FortiGate 5144C Shelf FRU Data Module	FG-5144C-SFRU	FG-5144C shelf FRU data module
FortiGate 5144C Power Entry Module	FG-5144C-PEM	FG-5144C PEM, power entry module
FortiGate 5144C Air Filter	FG-5144C-AF	FG-5144C air filter
FortiGate 5144C Blank Panel	FG-5144C-ABF	5000 front slot blank panel with air baffle (aluminum/plastic)
FortiGate 5144C Blank Panel	FG-5144C-ABR	5000 RTM slot blank panel with air baffle (aluminum/plastic)
FortiGate 5053B Power Converter Tray	FG-5053B	AC power converter shelf for high capacity 5000 chassis, supports up to 4 PSU-5000B power supply units, unpopulated
FortiGate 5000 Series Power Supply Unit	PSU-5000B	Power supply unit for FG-5000 series, AC power supply unit, 1,200 Watts maximum, requires FortiGate 5053B shelf
<b>Security Blades</b>		
FortiGate 5001D	FG-5001D	Security blade with 2x 40 GE QSFP+, 2x 10 GE SFP+/GE SFP slots, 2x GE RJ45 management ports, 200 GB SSD onboard storage
<b>Networking Blades</b>		
FortiController 5913C	FCTRL-5913C	Networking blade with 2x 100 GE CFP2 fabric ports and 2x 10 GE SFP+ base ports, includes 2 SR SFP+



GLOBAL HEADQUARTERS  
Fortinet Inc.  
899 Kifer Road  
Sunnyvale, CA 94086  
United States  
Tel: +1.408.235.7700  
www.fortinet.com/sales

EMEA SALES OFFICE  
905 rue Albert Einstein  
Valbonne 06560  
Alpes-Maritimes, France  
Tel: +33.4.8987.0500

APAC SALES OFFICE  
300 Beach Road 20-01  
The Concourse  
Singapore 199555  
Tel: +65.6395.2788

LATIN AMERICA SALES OFFICE  
Sawgrass Lakes Center  
13450 W. Sunrise Blvd., Suite 430  
Sunrise, FL 33323  
United States  
Tel: +1.954.368.9990