

FortiGate 120G Series



Highlights

Gartner® Magic Quadrant™ Leaders for both Network Firewalls and WAN Edge Infrastructure

Secure Networking with FortiOS for converged networking and security

State-of-the-art unparalleled performance with Fortinet's patented SPU and vSPU processors

Enterprise security with consolidated AI/ML-powered FortiGuard services

Deep visibility into applications, users, and devices beyond traditional firewall techniques

Artificial Intelligence, Machine Learning Security with Deep Visibility

The FortiGate 120G series next-generation firewall (NGFW) combines artificial intelligence (AI)-powered security and machine learning (ML) to deliver threat protection at any scale. Get deeper visibility into your network and see applications, users, and devices before they become threats.

Powered by a rich set of AI/ML security capabilities that extend into an integrated security fabric platform, the FortiGate 120G Series delivers secure networking that is broad, deep, and automated. Secure your network end to end with advanced edge protection that includes web, content, and device security, while network segmentation and secure SD-WAN reduce complexity and risk in hybrid IT networks. This security fabric seamlessly extends across your entire environment, including a Hybrid Mesh Firewall architecture, ensuring consistent policy enforcement and threat protection across all network segments.

Universal zero-trust network access (ZTNA) automatically controls, verifies, and facilitates user access to applications, reducing lateral threats by providing access only to validated users. Ultra-fast threat protection and SSL inspection provides security at the edge you can see without impacting performance.

IPS	NGFW	Threat Protection	Interfaces
5.3 Gbps	3.1 Gbps	2.8 Gbps	Multiple GE RJ45, SFP, and 10GE SFP+ Slots Variants with internal storage

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, malware, zero days, and sophisticated AI-powered 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 technology provides industry-leading high-performance protection
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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 hybrid working models, SD-Branch, and cloud-first WAN use cases
 - Achieve operational efficiencies at any scale through automation, deep analytics, and self-healing
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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



FortiGuard AI-Powered Security Services

FortiGuard AI-Powered Security Services is part of Fortinet's layered defense and tightly integrated into our FortiGate NGFWs and other products. Infused with the latest threat intelligence from FortiGuard Labs, these services protect organizations against modern attack vectors and threats, including zero-day and sophisticated AI-powered attacks.

Network and file security

Network and file security services protect against network and file-based threats. With over 18,000 signatures, our industry-leading intrusion prevention system (IPS) uses AI/ML models for deep packet/SSL inspection, detecting and blocking malicious content, and applying virtual patches for newly discovered vulnerabilities. Anti-malware protection defends against both known and unknown file-based threats, combining antivirus and sandboxing for multi-layered security. Application control improves security compliance and provides real-time visibility into applications and usage.

Web/DNS security

Web/DNS security services protect against DNS-based attacks, malicious URLs (including those in emails), and botnet communications. DNS filtering blocks the full spectrum of DNS-based attacks while URL filtering uses a database of over 300 million URLs to identify and block malicious links. Meanwhile, IP reputation and anti-botnet services guard against botnet activity and DDoS attacks. FortiGuard Labs blocks over 500 million malicious/phishing/spam URLs weekly, and blocks 32,000 botnet command-and-control attempts every minute, demonstrating the robust protection offered through Fortinet.

SaaS and data security

SaaS and data security services cover key security needs for application use and data protection. This includes data loss prevention to ensure visibility, management, and protection (blocking exfiltration) of data in motion across networks, clouds, and users. Our inline cloud access security broker service protects data in motion, at rest, and in the cloud, enforcing compliance standards and managing account, user, and cloud app usage. Services also assess infrastructure, validate configurations, and highlight risks and vulnerabilities, including IoT device detection and vulnerability correlation.

Zero-Day threat prevention

Zero-day threat prevention is achieved through AI-powered inline malware prevention to analyze file content to identify and block unknown malware in real time, delivering sub-second protection across all NGFWs. The service also integrates the MITRE ATT&CK matrix to speed up investigations. Integrated into FortiGate NGFWs, the service provides comprehensive defense by blocking unknown threats, streamlining incident response, and reducing security overhead.

OT security

With over 1000 virtual patches, 1100+ OT applications, and 3300+ protocol rules, integrated OT security capabilities detect threats targeting OT infrastructure, perform vulnerability correlation, apply virtual patching, and utilize industry-specific protocol decoders for robust defense of OT environments and devices.





Available in



Appliance



Virtual



Hosted



Cloud



Container

FortiOS Everywhere

FortiOS, Fortinet's Real-Time Network Security Operating System

FortiOS is the operating system that powers Fortinet Security Fabric platform, enabling enforcement of security policies and holistic visibility across the entire attack surface. FortiOS provides a unified framework for managing and securing networks, cloud-based, hybrid, or a convergence of IT, OT, and IoT. FortiOS enables seamless and efficient interoperation across Fortinet products with consistent and consolidated AI-powered protection across today's hybrid environments.

Unlike traditional point solutions, Fortinet adopts a holistic approach to cybersecurity, aiming to reduce complexities, eliminate security silos, and improve operational efficiencies. By consolidating security functions into a single platform, FortiOS simplifies management, reduces costs, and enhances overall security posture. Together, FortiGate and FortiOS create intelligent, adaptive protection to help organizations reduce complexity, eliminate security silos, and optimize user experience.

By integrating generative AI (GenAI), FortiOS further enhances the ability to analyze network traffic and threat intelligence, detects deviations or anomalies more effectively, and provides more precise remediation recommendations, ensuring minimum performance impact without compromising security.

Learn more about what's new in FortiOS. <https://www.fortinet.com/products/fortigate/fortios>



Intuitive easy to use view into the network and endpoint vulnerabilities



Comprehensive view of network performance, security, and system status



Fortinet ASICs: Unrivaled Security, Unprecedented Performance



Powered by the only purpose-built SPU

Traditional firewalls cannot protect against today's content and connection-based threats because they rely on off-the-shelf general-purpose central processing units (CPUs), leaving a dangerous security gap. Fortinet's custom SPUs deliver the power you need to radically increase speed, scale, and efficiency while greatly improving user experience and reducing footprint and power requirements. Fortinet's SPUs deliver up to 520 Gbps of protected throughput to detect emerging threats and block malicious content while ensuring your network security solution does not become a performance bottleneck.

Fortinet ASICs are designed to be energy-efficient, leading to lower power consumption and improved TCO. They deliver industry-leading throughput, handle more traffic and perform security inspections faster, reduce latency for quicker packet processing and minimize network delays.

Fortinet SPUs are designed with integrated security functions like zero trust, SSL, IPS, and VXLAN to name but a few, dramatically improving the performance of these functions that competitors traditionally implement in software.

Secure SD-WAN ASIC SP5

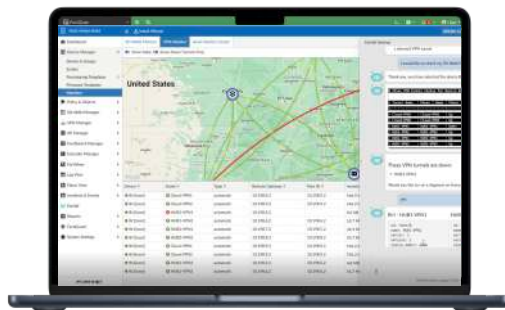
- Combines a RISC-based CPU with Fortinet's proprietary security processing unit (SPU) content and network processors for unmatched performance
- Delivers the industry's fastest application identification and steering for efficient business operations
- Accelerates IPsec VPN performance for the best 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

FortiManager

Centralized management at scale for distributed enterprises



FortiManager, powered by FortiAI, is a centralized management solution for the Fortinet Security Fabric. It streamlines mass provisioning and policy management for FortiGate, FortiGate VM, cloud security, SD-WAN, SD-Branch, FortiSASE, and ZTNA in hybrid environments. Additionally, FortiManager provides real-time monitoring of the entire managed infrastructure and automates network operation workflows. Leveraging GenAI in FortiAI, it further enhances Day 0–1 configurations and provisioning, and Day N troubleshooting and maintenance, unlocking the full potential of the Fortinet Security Fabric and significantly boosting operational efficiency.



GenAI in FortiManager helps manage networks effortlessly—generates configuration and policy scripts, troubleshoots issues, and executes recommended actions.

FortiConverter Service

Migration to FortiGate NGFW made easy



The FortiConverter Service provides hassle-free migration to help organizations transition quickly and easily from a wide range of legacy firewalls to FortiGate NGFWs. 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.

FortiCare Services

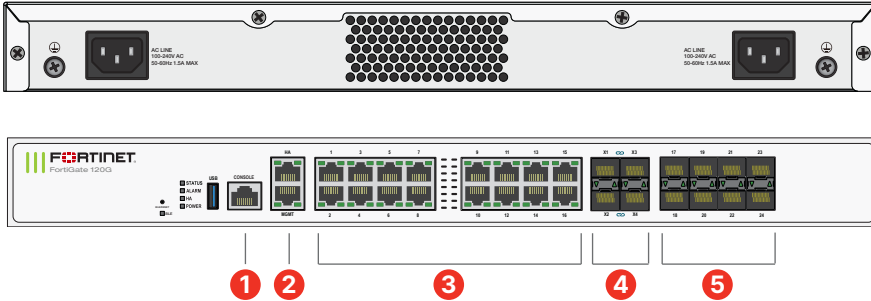
Expertise at your service



Fortinet prioritizes customer success through FortiCare Services, optimizing the Fortinet Security Fabric solution. Our comprehensive life-cycle services include Design, Deploy, Operate, Optimize, and Evolve. The FortiCare Elite, one of the service offerings, provides heightened SLAs and swift issue resolution with a dedicated support team. This advanced support option includes an extended end-of-engineering support of 18 months, providing flexibility and access to the intuitive FortiCare Elite portal for a unified view of device and security health, streamlining operational efficiency and maximizing Fortinet deployment performance.

Hardware

FortiGate 120G/121G Series



Interfaces

1. 1x RJ45 Console Port
2. 2x RJ45 HA and Management Ports
3. 16x GE RJ45 Ports
4. 4x 10GE SFP+ FortiLink Slots
5. 8x SFP Ports

Hardware Features



Trusted Platform Module (TPM)

The FortiGate 120G 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.



Dual power supply

Power supply redundancy is essential in the operation of mission-critical networks. The FortiGate 120G series offers dual built-in non-hot swappable power supplies.



Access layer security

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

Specifications

	FORTIGATE 120G	FORTIGATE 121G
Hardware Specifications		
Hardware Accelerated GE RJ45 Ports		16
GE RJ45 Management / HA		1 / 1
Hardware Accelerated GE SFP Slots		8
Hardware Accelerated 10 GE SFP+ FortiLink Slots (default)		4
USB Ports		1
Console (RJ45) Port		1
Internal Storage	—	1 × 480 GB SSD
Trusted Platform Module (TPM)		☑
Bluetooth Low Energy (BLE)		☑
Signed Firmware Hardware Switch		—
System Performance* — Enterprise Traffic Mix		
IPS Throughput ²		5.3 Gbps
NGFW Throughput ^{2,4}		3.1 Gbps
Threat Protection Throughput ^{2,5}		2.8 Gbps
System Performance and Capacity		
Firewall Throughput (1518 / 512 / 64 byte UDP packets)		39 / 39 / 28 Gbps
Firewall Latency (64 byte UDP packets)		3.17 μs
Firewall Throughput (Packets Per Second)		42 Mpps
Concurrent Sessions (TCP)		3 M
New Sessions/Second (TCP)		140 000
Firewall Policies		10 000
IPsec VPN Throughput (512 byte) ¹		35 Gbps
Gateway-to-Gateway IPsec VPN Tunnels		2000
Client-to-Gateway IPsec VPN Tunnels		16 000
SSL-VPN Throughput		1.5 Gbps
Concurrent SSL-VPN Users (Recommended Maximum, Tunnel Mode)		500
SSL Inspection Throughput (IPS, avg. HTTPS) ³		3 Gbps
SSL Inspection CPS (IPS, avg. HTTPS) ³		2100
SSL Inspection Concurrent Session (IPS, avg. HTTPS) ³		315 000
Application Control Throughput (HTTP 64K) ²		6.7 Gbps
CAPWAP Throughput (HTTP 64K)		35 Gbps
Virtual Domains (Default / Maximum)		10 / 10
Maximum Number of FortiSwitches Supported		48*
Maximum Number of FortiAPs (Total / Tunnel Mode)		128 / 64
Maximum Number of FortiTokens		5000
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.



	FORTIGATE 120G	FORTIGATE 121G
Dimensions		
Height x Width x Length (inches)	1.73 × 17 × 10	
Height x Width x Length (mm)	44 × 432 × 254	
Weight	12.17 lbs (5.52 kg)	
Form Factor (supports EIA/non-EIA standards)	Rack Mount, 1RU	
Operating Environment and Certifications		
Input Rating	100-240VAC, 60-50Hz	
Power Supply Efficiency Rating	N/A	
Redundant Power Supplies	Yes (Default dual non-swappable AC PSU for 1+1 Redundancy)	
Maximum Current	1.0A @100V, 0.5A @240V	
Power Consumption (Average / Maximum)	38 W / 40 W	43 W / 47 W
Heat Dissipation	138 BTU/hr	159 BTU/h
Operating Temperature	32°F to 104°F (0°C to 40°C)	
Storage Temperature	-31°F to 158°F (-35°C to 70°C)	
Humidity	20% to 90% non-condensing	10% to 90% non-condensing
Noise Level	49 dBA	
Air Flow	Side to back	
Operating Altitude	Up to 10 000 ft (3048 m)	
Compliance	FCC Part 15B, Class A, CE, RCM, VCCI, UL/cUL, CB, BSMI	
Certifications	USGv6/IPv6	

* FortiOS 7.6.1+ is required for supporting up to 48 FSW. All prior releases support up to 32.

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.

Subscriptions

Service Category	Service Offering	A-la-carte	Bundles			
			Enterprise Protection	Unified Threat Protection	Advanced Threat Protection	
FortiGuard Security Services	IPS — IPS, Malicious/Botnet URLs	•	•	•	•	
	Anti-Malware Protection (AMP)—AV, Botnet Domains, Mobile Malware, Virus Outbreak Protection, Content Disarm and Reconstruct ³ , AI-based Heuristic AV, FortiGate Cloud Sandbox	•	•	•	•	
	URL, DNS and Video Filtering — URL, DNS and Video ³ Filtering, Malicious Certificate	•	•	•		
	Anti-Spam		•	•		
	AI-based Inline Malware Prevention ³	•	•			
	Data Loss Prevention (DLP) ¹	•	•			
	Attack Surface Security — IoT Device Detection, IoT Vulnerability Correlation and Virtual Patching, Security Rating, Outbreak Check	•	•			
	OT Security—OT Device Detection, OT vulnerability correlation and Virtual Patching, OT Application Control and IPS ¹	•				
	Application Control			-----included with FortiCare Subscription-----		
Inline CASB ³			-----included with FortiCare Subscription-----			
SD-WAN and SASE Services	SD-WAN Underlay Bandwidth and Quality Monitoring	Models up to FG/FWF-60F series				
	SD-WAN Underlay and Application Monitoring Service	FG-70F series and above				
	SD-WAN Overlay-as-a-Service	•				
	SD-WAN Connector for FortiSASE Secure Private Access	•				
	SASE expansion for SD-WAN (SD-WAN SPA Connector license plus FortiSASE starter kit for n* users) ²	Selected models only ²				
	SASE connector for FortiSASE Secure Edge Management (with 10Mbps Bandwidth)	Desktop models only				
NOC and SOC Services	FortiConverter Service for one time configuration conversion	•	•			
	Managed FortiGate Service—available 24×7, with Fortinet NOC experts performing device setup, network, and policy change management	•				
	FortiGate Cloud—Management, Analysis, and One Year Log Retention	•				
	FortiManager Cloud	•				
	FortiAnalyzer Cloud	•				
FortiGuard SOCaaS—24×7 cloud-based managed log monitoring, incident triage, and SOC escalation service	•					
Hardware and Software Support	FortiCare Essentials	Desktop models only				
	FortiCare Premium	•	•	•	•	
	FortiCare Elite	•				
Base Services	Device/OS Detection, GeolIPs, Trusted CA Certificates, Internet Services and Botnet IPs, DDNS (v4/v6), Local Protection, PSIRT Check, Anti-Phishing			-----included with FortiCare Subscription-----		

1. Full features available when running FortiOS 7.4.1.

2. See the FortiSASE Ordering Guide for supported models and their associated number of user licenses.

3. Not available for FortiGate/FortiWiFi 40F, 60E, 60F, 80E, and 90E series from 7.4.4 onwards. Not available for FortiGate/FortiWiFi 30G and 50G series in any OS build.



FortiGuard Bundles

FortiGuard AI-Powered Security Bundles provide a comprehensive and meticulously curated selection of security services to combat known, unknown, zero-day, and emerging AI-based threats. These services are designed to prevent malicious content from breaching your defenses, protect against web-based threats, secure devices throughout IT/OT/IoT environments, and ensure the safety of applications, users, and data. All bundles include FortiCare Premium Services featuring 24×7×365 availability, one-hour response for critical issues, and next-business-day response for noncritical matters.



Ordering Information

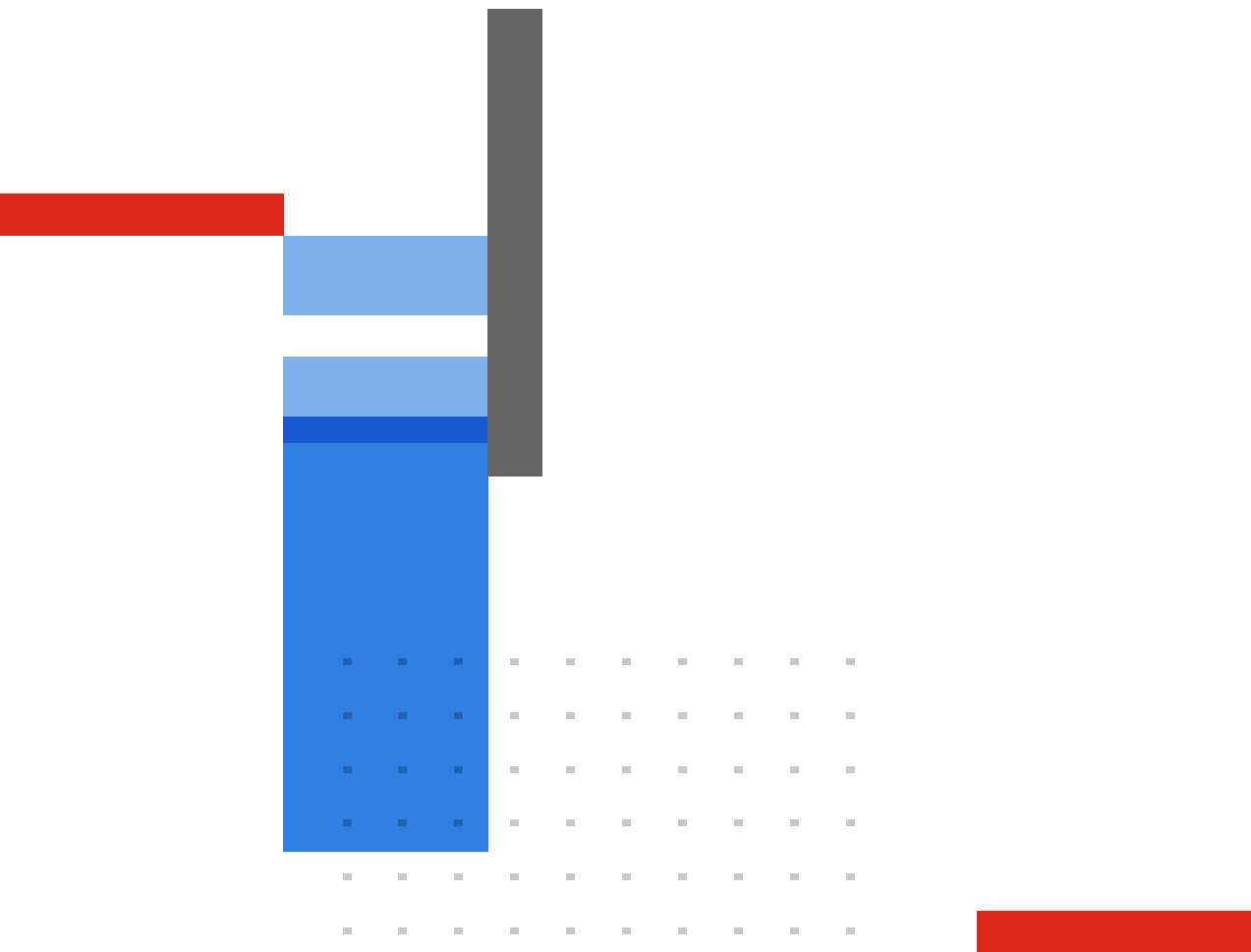
Product	SKU	Description
FortiGate 120G	FG-120G	18x GE RJ45 ports (including 1x MGMT port, 1x HA port, 16x switch ports), 8x GE SFP slots, 4x 10GE SFP+ slots, SP5 hardware accelerated, dual AC power supplies.
FortiGate 121G	FG-121G	18x GE RJ45 ports (including 1x MGMT port, 1x HA port, 16x switch ports), 8x GE SFP slots, 4x 10GE SFP+ slots, SP5 hardware accelerated, 480GB onboard SSD storage, dual AC power supplies.
Transceivers		
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.
1 GE SFP RJ45 Transceiver Module	FN-TRAN-GC	1 GE SFP RJ45 transceiver module for all systems with SFP and SFP/SFP+ slots.
10 GE SFP+ RJ45 Transceiver Module	FN-TRAN-SFP+GC	10 GE SFP+ RJ45 transceiver module for systems with SFP+ slots.
10 GE SFP+ Transceiver Module, Long Range	FN-TRAN-SFP+LR	10 GE SFP+ transceiver module, long range for all systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Extended Range	FN-TRAN-SFP+ER	10 GE SFP+ transceiver module, extended range for all systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Short Range	FN-TRAN-SFP+SR	10GE SFP+ transceiver module, short range for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, 30km Long Range	FN-TRAN-SFP+BD27	10GE SFP+ transceiver module, 30km long range single BiDi for systems with SFP+ and SFP/SFP+ slots (connects to FN-TRAN-SFP+BD33, ordered separately).
10 GE SFP+ Transceiver Module, (connects to FN-TRAN-SFP+BD27, ordered separately)	FN-TRAN-SFP+BD33	10GE SFP+ transceiver module, 30km long range single BiDi for systems with SFP+ and SFP/SFP+ slots (connects to FN-TRAN-SFP+BD27, ordered separately).
Cables		
10 GE SFP+ Passive Direct Attach Cable 1m	FN-CABLE-SFP+1	10 GE SFP+ passive direct attach cable, 1m for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Passive Direct Attach Cable 3m	FN-CABLE-SFP+3	10 GE SFP+ passive direct attach cable, 3m for systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Passive Direct Attach Cable 5m	FN-CABLE-SFP+5	10 GE SFP+ passive direct attach cable, 5m for systems with SFP+ and SFP/SFP+ slots.

Visit <https://www.fortinet.com/resources/ordering-guides> for related ordering guides.



Fortinet Corporate Social Responsibility Policy

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