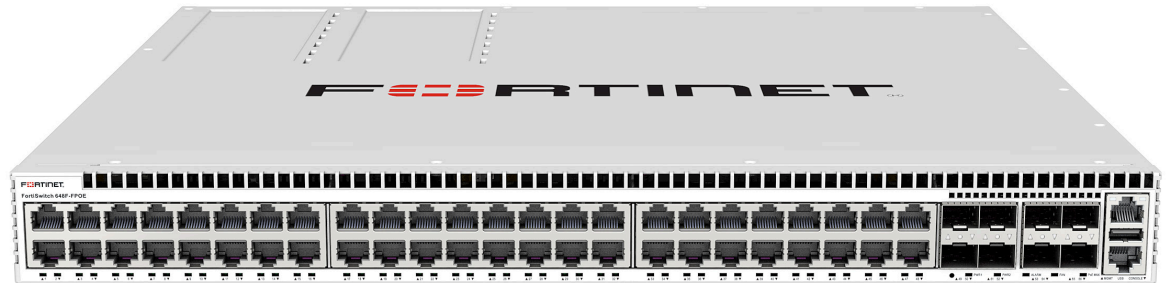# FortiSwitch™ Secure Campus

Highlights

- Standalone or Integrated FortiLink deployment option
- On premise and cloud-based management options
- Zero-touch deployment
- Entry level network access control at no cost
- Role and device-based access control and policy enforcement
- Dynamic segmentation and Micro Segmentation
- Secure access service edge (SASE) support
- Up to 48 access ports in a compact 1 RU form factor
- Stacking up to 300 switches per FortiGate
- Wire-speed switching with up to 40GE uplinks

Security, Performance, and Manageability

The FortiSwitch™ campus family offers an unparalleled combination of security, performance, and manageability, making it the ideal choice for the enterprise campus that prioritize safeguarding against threats.

As campus network design continues to adapt to emerging technologies and evolving business requirements, the FortiSwitch enterprise campus switching architecture empowers network administrators with enhanced visibility, control, and manageability. The platform's scalability, agility, and ease of management contribute to a highly secure environment, providing a robust foundation for any sized campus.

Available in

**Appliance**

Secure Networking through FortiLink

FortiLink is an innovative proprietary management protocol that enables seamless integration and management between a FortiGate Next-Generation Firewall and the FortiSwitch Ethernet switching platform. By using FortiLink, the FortiSwitch becomes a logical extension of the FortiGate, allowing for centralized management of both network security and access layer functions through a single interface.

Native Entry-Level Network Access Control at No Cost

FortiLink integration enables basic Network Access Control (NAC) functionality to profile and securely onboard devices as they connect. FortiLink NAC offers visibility, automated segmentation, and microsegmentation of IoT devices, quarantine if compromised, and virtual patching to help protect against threats.

Dynamic Segmentation and Policy Enforcement

Implementing dynamic port-level security in a large campus Ethernet switching environment traditionally requires hands-on effort and ongoing maintenance. FortiSwitch campus switching architecture automates dynamic segmentation through FortiLink, empowering IT administrators to control traffic within segments, limiting the scope of threats. The automation of segmentation makes making policy enforcement easier and more efficient, while NGFW-level policies ensure granular control and zero-trust access for users and devices.
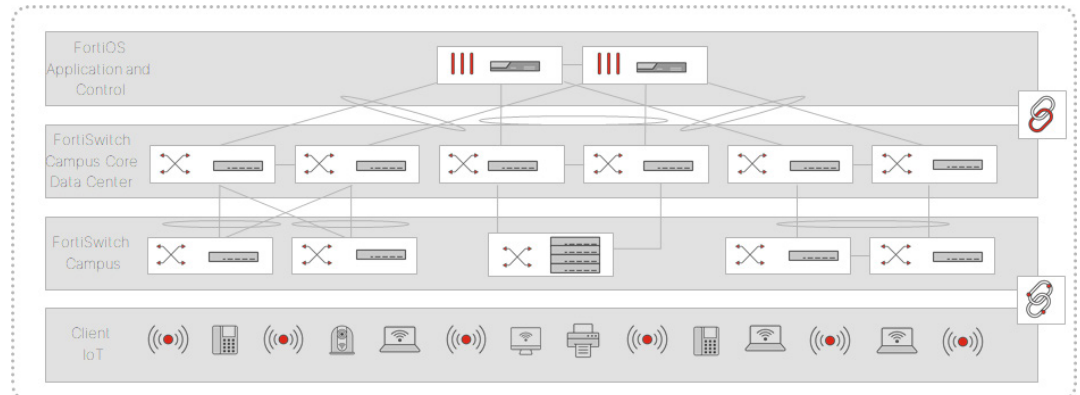
Role and Device-based Access Control and Policy Enforcement

Whether leveraging Fortinet Identity Access Management (IAM) or third-party identity providers, FortiLink automation can leverage identity to make granular role-based policy decisions.

Secure Access Service Edge (SASE)

This FortiSwitch enterprise architecture offers a built-in foundation for zero-trust network access (ZTNA) and secure access service edge (SASE), allowing you the flexibility to easily deploy the type and level of security you need at the edge of your network.

Operational Simplicity

Deploying, managing, and optimizing an Ethernet switching infrastructure has traditionally been challenging and time-consuming.

FortiSwitch switching architecture can be securely deployed and managed in minutes through zero-touch deployment. Whether FortiSwitch is deployed in standalone mode or FortiLink mode, automation and orchestration offer intuitive workflows and unified views to provision, manage, and optimize your campus. This is available through both FortiCloud and on-premises management.

Centralized management delivers a unified, single view of both the LAN and security. This provides a consistent user experience for optimal operational efficiency, simplifying management, optimization, and troubleshooting. The result is a shorter mean time to repair both network and security issues.

FortiLink   **Standalone**

FortiOS   **FortiLAN Cloud**
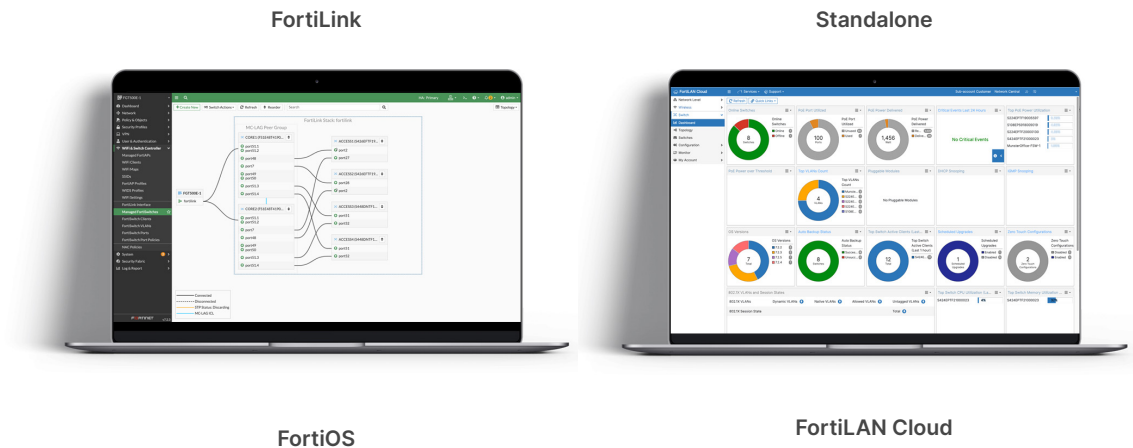
Scalable Flexible Campus

FortiSwitch campus architecture scales to meet the need of today's next-generation campus without sacrificing security. Supporting up to 48 ports in a compact 1 RU form factor, FortiSwitch can deliver the performance and scale you require.

Eliminate Bottlenecks

Dedicated uplinks capable of speeds up to 25GE through SFP+ and SFP28 slots can support your choice of media utilizing through a wide variety of transceivers.

Next Generation Power over Ethernet Support

With PoE+ support in all models and next-generation 90W 802.3bt PoE support in specific models, FortiSwitch delivers and manages power where needed for devices such as cameras, sensors, and wireless access points

Product Offerings

Model Numbers

400 Series: FS-424E-FIBER, FS-M426E-FPOE, FS-424E, FS-424E-POE, FS-424E-FPOE, FS-448E, FS-448E-POE, FS-448E-FPOE

500 Series: FS-524-D, FS-524D-FPOE, FS-548D, FS-548D-FPOE

600 Series: FS-624F, FS-624F-FPOE, FS-648F, FS-648F-FPOE

Features

Refer to the FortiSwitch Feature Matrix for details about the features supported by each FortiSwitch model.

FORTISWITCH FORTILINK MODE (WITH FORTIGATE)
Management and Configuration
Auto Discovery of Multiple Switches
8 to 300 Managed Switches depending on FortiGate model
FortiLink Stacking (Auto Inter-Switch Links)
FortiLink Secure Fabric
Software Upgrade of Switches
Centralized VLAN Configuration
Switch POE Control
Link Aggregation Configuration
Spanning Tree
LLDP/MED
IGMP Snooping
L3 Routing and Services (FortiGate)
Policy-Based Routing (FortiGate)
Virtual Domain (FortiGate)
Automated detection and recommendations
Dynamic Port Profiles for FortiSwitch ports
Provision firmware upon authorization
Health Monitoring
High Availability
Support FortiLink FortiGate in HA Cluster
LAG support for FortiLink Connection
Active-Active Split LAG from FortiGate to FortiSwitches for Advanced Redundancy

FORTISWITCH FORTILINK MODE (WITH FORTIGATE)
Security and Visibility
802.1X Authentication (Port-based, MAC-based, MAB)
Syslog Collection
DHCP Snooping
Device Detection
MAC Black/While Listing (FortiGate)
Policy Control of Users and Devices (FortiGate)
Block Intra-VLAN Traffic
Network Device Detection
Host Quarantine on Switch Port
Integrated FortiGate Network Access Control (NAC) function
FortiGuard IoT identification
FortiSwitch recommendations in Security Rating
Switch Controller traffic collector
Port Statistics
Clients Monitoring
UTM Features
Firewall (FortiGate)
IPC, AV, Application Control, Botnet (FortiGate)

Features

Refer to the FortiSwitch Feature Matrix for details about the features supported by each FortiSwitch model.

FORTISWITCH
Layer 2
Jumbo Frames
Auto-negotiation for Port Speed and Duplex
MDI/MDIX Auto-crossover
IEEE 802.1D MAC Bridging/STP
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
STP Root Guard
STP BPDU Guard
Edge Port / Port Fast
IEEE 802.1Q VLAN Tagging
Private VLAN
IEEE 802.3ad Link Aggregation with LACP
Unicast/Multicast traffic balance over trunking port (dst-ip, dst-mac, src-dst-ip, src-dst-mac, src-ip, src-mac)
IEEE 802.1AX Link Aggregation
Spanning Tree Instances (MSTP/CST)
IEEE 802.3x Flow Control and Back-pressure
IEEE 802.3 10Base-T
IEEE 802.3u 100Base-TX
IEEE 802.3z 1000Base-SX/LX
IEEE 802.3ab 1000Base-T
IEEE 802.3ae 10 Gigabit Ethernet
IEEE 802.3az Energy Efficient Ethernet
IEEE 802.3bz Multi Gigabit Ethernet
IEEE 802.3 CSMA/CD Access Method and Physical Layer Specifications
Storm Control
MAC, IP, Ethertype-based VLANs
Virtual-Wire
Split Port (QSFP+ breakout to 4×10G SFP+ or 4×1G SFP)
Time-Domain Reflectcometry (TDR) Support
LAG min/max bundle
Rapid PVST interoperation
Ingress Pause Metering
Loop Guard
Per-port storm control
Priority-based Flow Control (802.1Qbb)
IEEE 802.1ad QinQ
VLAN Mapping
IEEE 802.3ba, 802.3bj, and 802.3bm 40 and 100 Gigabit Ethernet
Auto topology
Dynamically shared packet buffers
Services
IGMP proxy / querier
MLD Snooping
MLD proxy / querier
IGMP Snooping

FORTISWITCH
Layer 3
Static Routing (Hardware-based)
Dynamic Routing Protocols: OSPFv2, RIPv2, VRRP, BGP, ISIS *
Multicast Protocols: PIM-SSM *
ECMP
Bidirectional Forwarding Detection (BFD)
DHCP Relay
IP conflict detection and notification
DHCP server
Unicast Reverse Path Forwarding - uRPF
IPv6 route filtering
Filtering routemaps based on routing protocol
Security and Visibility
Port Mirroring
Admin Authentication Via RFC 2865 RADIUS
IEEE 802.1X Authentication Port-based
IEEE 802.1X Authentication MAC-based
IEEE 802.1X Guest and Fallback VLAN
IEEE 802.1X MAC Access Bypass (MAB)
IEEE 802.1X Dynamic VLAN Assignment
Radius CoA (Change of Authority)
Radius Accounting
MAC-IP Binding
sFlow
ACL
IEEE 802.1ab Link Layer Discovery Protocol (LLDP)
IEEE 802.1ab LLDP-MED
IEEE 802.1ae MAC Security (MAC Sec)
DHCP-Snooping
Dynamic ARP Inspection
Sticky MAC and MAC Limit
IEEE 802.1X open auth
IEEE 802.1X EAP pass-through
Flow Export (NetFlow and IPFIX)
ACL Multistage
ACL Multiple Ingress
ACL Schedule
IP source guard
IPv6 RA Guard
LLDP-MED ELIN support
Per-port and per-VLAN MAC learning limit
Assign VLANs via Radius attributes (RFC 4675)
Wake on LAN

*Requires 'Advanced Features' License.

FortiSwitch™ Secure Campus   Data Sheet

Features

Refer to the FortiSwitch Feature Matrix for details about the features supported by each FortiSwitch model.

FORTISWITCH
High Availability
Multi-Chassis Link Aggregation (MCLAG)
Quality of Service
IEEE 802.1p Based Priority Queuing
IP TOS/DSCP Based Priority Queuing
IEEE 1588 PTP (Transparent Clock)
Explicit Congestion Notification
Egress priority tagging
Percentage Rate Control

FORTISWITCH
Management
IPv4 and IPv6 Management
Telnet / SSH
HTTP / HTTPS
SNMP v1/v2c/v3
SNTP
Standard CLI and Web GUI Interface
Software download/upload: TFTP/FTP/GUI
Managed from FortiGate
Support for HTTP REST APIs for Configuration and Monitoring
Dual Firmware Support
RMON Group 1
Packet Capture
SPAN, RSPAN, and ERSPAN
Link Monitor
POE Control Modes
System Temperature and Alert
Syslog UDP/TCP
Provide warning if L2 table is getting full
Display Average Bandwidth and Allow Sorting on Physical Port / Interface Traffic
System alias command
SNMP v3 traps
Automation Stitches

Features

ALL FORTISWITCH MODELS
RFC and MIB Support*
BFD
RFC 5880: Bidirectional Forwarding Detection (BFD)
RFC 5881: Bidirectional Forwarding Detection (BFD) for IPv4 and IPv6 (Single Hop)
RFC 5882: Generic Application of Bidirectional Forwarding Detection (BFD)
BGP
RFC 1771: A Border Gateway Protocol 4 (BGP-4)
RFC 1965: Autonomous System Confederations for BGP
RFC 1997: BGP Communities Attribute
RFC 2545: Use of BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
RFC 2796: BGP Route Reflection - An Alternative to Full Mesh IBGP
RFC 2842: Capabilities Advertisement with BGP-4
RFC 2858: Multiprotocol Extensions for BGP-4
RFC 4271: BGP-4
RFC 6286: Autonomous-System-Wide Unique BGP Identifier for BGP-4
RFC 6608: Subcodes for BGP Finite State Machine Error
RFC 6793: BGP Support for Four-Octet Autonomous System (AS) Number Space
RFC 7606: Revised Error Handling for BGP UPDATE Messages
RFC 7607: Codification of AS 0 Processing
RFC 7705: Autonomous System Migration Mechanisms and Their Effects on the BGP AS_PATH Attribute
RFC 8212: Default External BGP (EBGP) Route Propagation Behavior without Policies
RFC 8654: Extended Message Support for BGP
DHCP
RFC 2131: Dynamic Host Configuration Protocol
RFC 3046: DHCP Relay Agent Information Option
RFC 7513: Source Address Validation Improvement (SAVI) Solution for DHCP
IP/IPv4
RFC 2697: A Single Rate Three Color Marker
RFC 3168: The Addition of Explicit Congestion Notification (ECN) to IP
RFC 5227: IPv4 Address Conflict Detection
RFC 5517: Cisco Systems' Private VLANs: Scalable Security in a Multi-Client Environment
RFC 7039: Source Address Validation Improvement (SAVI) Framework
IP Multicast
RFC 2362: Protocol Independent Multicast-Sparse Mode (PIM-SM): Protocol Specification
RFC 2710: Multicast Listener Discovery (MLD) for IPv6 (MLDv1)
RFC 4541: Considerations for Internet Group Management Protocol (IGMP) and Multicast Listener Discovery (MLD) Snooping Switches
RFC 4605: Internet Group Management Protocol (IGMP)/Multicast Listener Discovery (MLD)-Based Multicast Forwarding ("IGMP/MLD Proxying")
RFC 4607: Source-Specific Multicast for IP

ALL FORTISWITCH MODELS
RFC and MIB Support*
IPv6
RFC 2464: Transmission of IPv6 Packets over Ethernet Networks: Transmission of IPv6 Packets over Ethernet Networks
RFC 2474: Definition of the Differentiated Services Field (DS Field) in the and IPv6 Headers (DSCP)
RFC 2893: Transition Mechanisms for IPv6 Hosts and Routers
RFC 4213: Basic Transition Mechanisms for IPv6 Hosts and Router
RFC 4291: IP Version 6 Addressing Architecture
RFC 4443: Internet Control Message Protocol (ICMPv6) for the Internet Protocol Version 6 (IPv6) Specification
RFC 4861: Neighbor Discovery for IP version 6 (IPv6)
RFC 4862: IPv6 Stateless Address Auto configuration
RFC 5095: Deprecation of Type 0 Routing Headers in IPv6
RFC 6724: Default Address Selection for Internet Protocol version 6 (IPv6)
RFC 7113: IPv6 RA Guard
RFC 8200: Internet Protocol, Version 6 (IPv6) Specification
RFC 8201: Path MTU Discovery for IP version 6
IS-IS
RFC 1195: Use of OSI IS-IS for Routing in TCP/IP and Dual Environments
RFC 5308: Routing IPv6 with IS-IS
MIB
RFC 1213: MIB II parts that apply to FortiSwitch 100 units
RFC 1354: IP Forwarding Table MIB
RFC 1493: Bridge MIB
RFC 1573: SNMP MIB II
RFC 1643: Ethernet-like Interface MIB
RFC 1724: RIPv2-MIB
RFC 1850: OSPF Version 2 Management Information Base
RFC 2233: The Interfaces Group MIB using SMIv2
RFC 2618: Radius-Auth-Client-MIB
RFC 2620: Radius-Acc-Client-MIB
RFC 2665: Definitions of Managed Objects for the Ethernet-like Interface Types
RFC 2674: Definitions of Managed Objects for Bridges with Traffic Classes, Multicast Filtering and Virtual LAN extensions
RFC 2787: Definitions of Managed Objects for the Virtual Router Redundancy Protocol
RFC 2819: Remote Network Monitoring Management Information Base
RFC 2863: The Interfaces Group MIB
RFC 2932: IPv4 Multicast Routing MIB
RFC 2934: Protocol Independent Multicast MIB for IPv4
RFC 3289: Management Information Base for the Differentiated Services Architecture
RFC 3433: Entity Sensor Management Information Base
RFC 3621: Power Ethernet MIB
RFC 6933: Entity MIB (Version 4)

* RFC and MIB supported by FortiSwitch Operating System. Check FortiSwitch Feature Matrix for model specific support.

Features

ALL FORTISWITCH MODELS
RFC and MIB Support*
OSPF
RFC 1583: OSPF version 2
RFC 1765: OSPF Database Overflow
RFC 2328: OSPF version 2
RFC 2370: The OSPF Opaque LSA Option
RFC 2740: OSPF for IPv6
RFC 3101: The OSPF Not-So-Stubby Area (NSSA) Option
RFC 3137: OSPF Stub Router Advertisement
RFC 3623: OSPF Graceful Restart
RFC 5340: OSPF for IPv6 (OSPFv3)
RFC 5709: OSPFv2 HMAC-SHA Cryptographic Authentication
RFC 6549: OSPFv2 Multi-Instance Extensions
RFC 6845: OSPF Hybrid Broadcast and Point-to-Multipoint Interface Type
RFC 6860: Hiding Transit-Only Networks in OSPF
RFC 7474: Security Extension for OSPFv2 When Using Manual Key Management
RFC 7503: OSPF for IPv6
RFC 8042: CCITT Draft Recommendation T.4
RFC 8362: OSPFv3 Link State Advertisement (LSA) Extensibility
OTHER
RFC 2030: SNTP
RFC 3176: InMon Corporation's sFlow: A Method for Monitoring Traffic in Switched and Routed Networks
RFC 3768: VRRP
RFC 3954: Cisco Systems NetFlow Services Export Version 9
RFC 5101: Specification of the IP Flow Information Export (IPFIX) Protocol for the Exchange of Flow Information
RFC 5798: VRRPv3 (IPv4 and IPv6)

ALL FORTISWITCH MODELS
RFC and MIB Support*
RADIUS
RFC 2865: Admin Authentication Using RADIUS
RFC 2866: RADIUS Accounting
RFC 4675: RADIUS Attributes for Virtual LAN and Priority Support
RFC 5176: Dynamic Authorization Extensions to Remote Authentication Dial In User Service (RADIUS)
RIP
RFC 1058: Routing Information Protocol
RFC 2080: RIPng for IPv6
RFC 2082: RIP-2 MD5 Authentication
RFC 2453: RIPv2
RFC 4822: RIPv2 Cryptographic Authentication
SNMP
RFC 1157: SNMPv1/v2c
RFC 2571: Architecture for Describing SNMP
RFC 2572: SNMP Message Processing and Dispatching
RFC 2573: SNMP Applications
RFC 2576: Coexistence between SNMP versions

* RFC and MIB supported by FortiSwitch Operating System. Check FortiSwitch Feature Matrix for model specific support.

Specifications

	FORTISWITCH-424E-FIBER	FORTISWITCH-M426E-FPOE
Hardware Specifications		
Total Network Interfaces	24x GE SFP and 4× 10GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	16x GE RJ45, 8× 2.5 GE RJ45 ports, 2× 5 GE RJ45, and 4× 10 GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP
Dedicated Management 10/100 Port	1	1
RJ-45 Serial Console Port	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	N/A	24 [16× 802.3af/at, 8× 802.3af/at/UPOE (60W)]
PoE Power Budget	N/A	420 W
Mean Time Between Failures	> 10 years	> 10 years
System Specifications		
Switching Capacity (Duplex)	128 Gbps	172 Gbps
Packets Per Second (Duplex)	204 Mpps	255 Mpps
MAC Address Storage	32 K	16 K
Network Latency	< 1μs	< 1μs
VLANs Supported	4 K	4 K
Link Aggregation Group Size	8	8
Total Link Aggregation Groups	Up to number of ports	Up to number of ports
Packet Buffers	4 MB	2 MB
Memory	1 GB DDR4	1 GB DDR4
Flash	256 MB	256 MB
ACL	1.5k	1k
Spanning Tree Instances	16	16
Route Entries (IPv4)	16k	1000
Host Entries	16k	5k
Dimensions		
Height x Depth x Width (inches)	1.75 × 7.87 × 17.3	1.73 × 16.14 × 17.3
Height x Depth x Width (mm)	44 × 200 × 440	44 × 410 × 440
Weight	5.62 lbs (2.55 kg)	13.00 lbs (5.9 kg)
Environment		
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	AC built in	AC built in
Redundant Power	Redundant AC	Redundant AC
Power Consumption* (Average / Maximum)	36 W / 38 W	441 W / 442 W
Heat Dissipation	132.5 BTU/h	132.734 BTU/h
Operating Temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
Storage Temperature	-4°F to 158°F (-20°C to 70°C)	-4°F to 158°F (-20°C to 70°C)
Humidity	5% to 95% non-condensing	5% to 95% non-condensing
Air-Flow Direction	side-to-back	side-to-back
Noise Level	32.8 dBA	35 dBA
Certification and Compliance		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	
Warranty		
Fortinet Warranty	Limited lifetime** warranty on all models	

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: http://www.fortinet.com/doc/legal/EULA.pdf

FortiSwitch 424E-Fiber

FortiSwitch M426E-FPOE

Specifications

	FORTISWITCH 424E	FORTISWITCH 424E-POE	FORTISWITCH 424E-FPOE
Hardware Specifications			
Total Network Interfaces	24x GE RJ45 and 4×10 GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	24x GE RJ45 and 4×10 GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	24x GE RJ45 and 4×10 GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP
Dedicated Management 10/100 Port	1	1	1
RJ-45 Serial Console Port	1	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	—	24 (802.3af/at)	24 (802.3af/at)
PoE Power Budget	N/A	250 W	421 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
System Specifications			
Switching Capacity (Duplex)	128 Gbps	128 Gbps	128 Gbps
Packets Per Second (Duplex)	204 Mpps	204 Mpps	204 Mpps
MAC Address Storage	16 K	16 K	16 K
Network Latency	< 1µs	< 1µs	< 1µs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	Up to number of ports	Up to number of ports	Up to number of ports
Packet Buffers	2 MB	2 MB	2 MB
Memory	1 GB DDR4	1 GB DDR4	1 GB DDR4
Flash	256 MB	256 MB	256 MB
ACL	1k	1k	1k
Spanning Tree Instances	16	16	16
Route Entries (IPv4)	1000	1000	1000
Host Entries	5k	5k	5k
Dimensions			
Height x Depth x Width (inches)	1.75 × 10.23 × 17.3	1.75 × 16.14 × 17.3	1.75 × 16.14 × 17.3
Height x Depth x Width (mm)	44 × 260 × 440	44 × 410 × 440	44 × 410 × 440
Weight	6.83 lbs (3.1 kg)	11.57 lbs (5.25 kg)	12.72 lbs (5.77 kg)
Environment			
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	AC built in	AC built in	AC built in
Redundant Power	Redundant AC	Redundant AC	Redundant AC
Power Consumption* (Average / Maximum)	22.3 W / 23.6 W	281.3 W / 283.5 W	431.2 W / 433.7 W
Heat Dissipation	76.04 BTU/h	102.64 BTU/h	117.2 BTU/h
Operating Temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)	-4°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Humidity	5% to 95% non-condensing	5% to 95% non-condensing	5% to 95% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	32.3 dBA	31.8 dBA	30.9 dBA
Certification and Compliance			
		FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	
Warranty			
Fortinet Warranty		Limited lifetime** warranty on all models	

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: http://www.fortinet.com/doc/legal/EULA.pdf

FortiSwitch 424E

FortiSwitch 424E-POE

FortiSwitch 424E-FPOE

Specifications

	FORTISWITCH 448E	FORTISWITCH 448E-POE	FORTISWITCH 448E-FPOE
Hardware Specifications			
Total Network Interfaces	48x GE RJ45 and 4× 10GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	48x GE RJ45 and 4× 10GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	48x GE RJ45 and 4× 10GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP
Dedicated Management 10/100 Port	1	1	1
RJ-45 Serial Console Port	1	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	—	48 (802.3af/at)	48 (802.3af/at)
PoE Power Budget	—	421 W	772 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
System Specifications			
Switching Capacity (Duplex)	176 Gbps	176 Gbps	176 Gbps
Packets Per Second (Duplex)	262 Mpps	262 Mpps	262 Mpps
MAC Address Storage	32 K	32 K	32 K
Network Latency	<1µs	<1µs	<1µs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	Up to number of ports	Up to number of ports	Up to number of ports
Packet Buffers	4 MB	4 MB	4 MB
Memory	1GB DDR4	1GB DDR4	1GB DDR4
Flash	256 MB	256 MB	256 MB
ACL	1.5k	1.5k	1.5k
Spanning Tree Instances	16	16	16
Route Entries (IPv4)	16k	16k	16k
Host Entries	16k	16k	16k
Dimensions			
Height x Depth x Width (inches)	1.75 × 12.2 × 17.3	1.73 × 16.1 × 17.3	1.73 × 16.1 × 17.3
Height x Depth x Width (mm)	44 × 310 × 440	44 × 410 × 440	44 × 410 × 440
Weight	9.17 lbs (4.16 kg)	13.8 lbs (6.26 kg)	14.04 lbs (6.37 kg)
Environment			
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	AC built in	AC built in	AC built in
Redundant Power	Redundant AC	Redundant AC	Redundant AC
Power Consumption* (Average / Maximum)	46.5 W / 47.81 W	440.12 W / 442.234 W	921.4 W / 923.6 W
Heat Dissipation	163.032 BTU/h	163.066 BTU/h	163.1 BTU/h
Operating Temperature	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)	32°F to 122°F (0°C to 50°C)
Storage Temperature	-4°F to 158°F (-20°C to 70°C)	-4°F to 158°F (-20°C to 70°C)	-4°F to 158°F (-20°C to 70°C)
Humidity	10% to 90% non condensing	10% to 90% non condensing	10% to 90% non condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	35.5 dBA	38.3 dBA	50.7 dBA
Certification and Compliance			
		FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	
Warranty			
Fortinet Warranty		Limited lifetime** warranty on all models	

* POE models power consumption is similar to non-POE model if POE is not in use

** Fortinet Warranty Policy: http://www.fortinet.com/doc/legal/EULA.pdf

FortiSwitch 448E

FortiSwitch 448E-POE

FortiSwitch 448E-FPOE

Specifications

	FORTISWITCH 524D	FORTISWITCH 524D-FPOE
Hardware Specifications		
Total Network Interfaces	24 GE/RJ45 ports, 4× 10 GE SFP+ ports and 2× 40 GE QSFP+ Note: SFP+ ports are compatible with 1G SFP	24 GE/RJ45 ports, 4× 10 GE SFP+ ports and 2× 40 GE QSFP+ Note: SFP+ ports are compatible with 1G SFP
Dedicated Management 10/100/1000 Ports	1	1
RJ-45 Serial Console Port	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	N/A	24 (802.3af/at)
PoE Power Budget (single/dual PSU)	N/A	400 W / 720 W
Mean Time Between Failures	> 10 years	> 10 years
System Specifications		
Switching Capacity (Duplex)	288 Gbps	288 Gbps
Packets Per Second (Duplex)	428 Mpps	428 Mpps
MAC Address Storage	36 K	36 K
Network Latency	< 2μs	< 2μs
VLANs Supported	4 K	4 K
Link Aggregation Group Size	24	24
Total Link Aggregation Groups	Up to number of ports	Up to number of ports
Packet Buffers	4 MB	4 MB
Memory	2 GB DDR3	2 GB DDR3
Flash	128 MB	128 MB
ACL	1k	1k
Spanning Tree Instances	32	32
Route Entries (IPv4)	16k	16k
Multicast Route Entries	8k	8k
Host Entries	16k	16k
Dimensions		
Height x Depth x Width (inches)	1.75 × 13.8 × 17.3	1.75 × 13.8 × 17.3
Height x Depth x Width (mm)	44 × 350 × 439	44 × 350 × 439
Weight	13.6 lbs (6.2 kg)	15.74 lbs (7.14 kg)
Environment		
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	150 W AC PSU*	600 W AC PSU*
Redundant Power	Optional FS-PSU-150*	Optional FS-PSU-600*
Power Consumption (Average / Maximum)	73 W / 75 W	570 W / 579 W (full PoE load for single power supply)
Heat Dissipation	247 BTU/h	296 BTU/h (full PoE load for single power supply)
Operating Temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Humidity	5% to 95% non-condensing	5% to 95% non-condensing
Air-Flow Direction	front-to-back	front-to-back
Noise Level	57.3 dBA	57.3 dBA
Certification and Compliance		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Warranty		
Fortinet Warranty	Limited lifetime*** warranty on all models	Limited lifetime*** warranty on all models

*FS-524D, FS-524D-FPOE, FS-548D, FS-548D-FPOE Power Supply Units are Hot-Swappable.

** POE models power consumption is similar to non-POE model if POE is not in use

*** Fortinet Warranty Policy: http://www.fortinet.com/doc/legal/EULA.pdf

FortiSwitch 524D

FortiSwitch 524D-FPOE

Specifications

	FORTISWITCH 548D	FORTISWITCH 548D-FPOE
Hardware Specifications		
Total Network Interfaces	48x GE/RJ45 ports, 4× 10 GE SFP+ ports and 2× 40 GE QSFP+ Note: SFP+ ports are compatible with 1G SFP	48x GE/RJ45 ports, 4× 10 GE SFP+ ports and 2× 40 GE QSFP+ Note: SFP+ ports are compatible with 1G SFP
Dedicated Management 10/100/1000 Ports	1	1
RJ-45 Serial Console Port	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	N/A	48 (802.3af/at)
PoE Power Budget (single/dual PSU)	N/A	750 W / 1440 W
Mean Time Between Failures	> 10 years	> 10 years
System Specifications		
Switching Capacity (Duplex)	336 Gbps	336 Gbps
Packets Per Second (Duplex)	512 Mpps	512 Mpps
MAC Address Storage	36 K	36 K
Network Latency	< 2µs	< 2µs
VLANs Supported	4 K	4 K
Link Aggregation Group Size	48	48
Total Link Aggregation Groups	Up to number of ports	Up to number of ports
Packet Buffers	4 MB	4 MB
Memory	2 GB DDR3	2 GB DDR3
Flash	128 MB	128 MB
ACL	1k	1k
Spanning Tree Instances	32	32
Route Entries (IPv4)	16k	16k
Multicast Route Entries	8k	8k
Host Entries	16k	16k
Dimensions		
Height x Depth x Width (inches)	1.75 × 13.8 × 17.3	1.75 × 13.8 × 17.3
Height x Depth x Width (mm)	44 × 350 × 439	44 × 350 × 439
Weight	14.1 lbs (6.4 kg)	15.74 lbs (7.14 kg)
Environment		
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	150 W AC PSU*	920 W AC PSU*
Redundant Power	Optional FS-PSU-150*	Optional FS-PSU-920*
Power Consumption (Average / Maximum)	74 W / 77 W	925 W / 961 W (full PoE load for single power supply)
Heat Dissipation	252 BTU/h	318 BTU/h (full PoE load for single power supply)
Operating Temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Humidity	5% to 95% non-condensing	5% to 95% non-condensing
Air-Flow Direction	front-to-back	front-to-back
Noise Level	57.3 dBA	57.3 dBA
Certification and Compliance		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Warranty		
Fortinet Warranty	Limited lifetime*** warranty on all models	Limited lifetime*** warranty on all models

*FS-524D, FS-524D-FPOE, FS-548D, FS-548D-FPOE Power Supply Units are Hot-Swappable.

** POE models power consumption is similar to non-POE model if POE is not in use

*** Fortinet Warranty Policy: http://www.fortinet.com/doc/legal/EULA.pdf

FortiSwitch 548D

FortiSwitch 548D-FPOE

Specifications

	FORTISWITCH 624F	FORTISWITCH 624F-FPOE
Hardware Specifications		
Total Network Interfaces	24× 1GE/2.5GE/5GE RJ45 ports and 4× 10GE/25GE SFP+/SFP28 ports	24× 1GE/2.5GE/5GE RJ45 ports and 4× 10GE/25GE SFP+/SFP28 ports
Dedicated Management 10/100/1000 Ports	1	1
RJ-45 Serial Console Port	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	—	24 (802.3 af/at/bt type 4)
PoE Power Budget	—	1440 W
Mean Time Between Failures	> 10 years	> 10 years
System Specifications		
Switching Capacity (Duplex)	440 Gbps	440 Gbps
Packets Per Second (Duplex)	654 Mpps	654 Mpps
MAC Address Storage	64 k	64 k
Network Latency	<1µs	<1µs
VLANs Supported	4 k	4 k
Link Aggregation Group Size	28	28
Total Link Aggregation Groups	Up to number of ports	Up to number of ports
Packet Buffers	8 MB	8 MB
Memory	4GB DDR4	4GB DDR4
Flash	32 MB	32 MB
Drive	32G SSD	32G SSD
ACL	36k	36k
Spanning Tree Instances	32	32
Route Entries (IPv4)	16 k	16 k
Host Entries (IPv4)	192 k	192 k
Multicast route entries	12 k	12 k
Dimensions		
Height x Depth x Width (inches)	1.75 × 17.4 × 17.3	1.75 × 17.4 × 17.3
Height x Depth x Width (mm)	44 × 442 × 440	44 × 442 × 440
Weight (kg)	6.925	7.407
Environment		
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Consumption (Maximum)	240W	1680W
Power Supply	2× 350W	2× 1200W
Redundant Power	Dual hot swappable AC	Dual hot swappable AC
Heat Dissipation	423 BTU/h	969 BTU/h
Operating Temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Humidity	5% to 95% RH non-condensing	5% to 95% RH non-condensing
Air-Flow Direction	front-to-back	front-to-back
Noise Level	54.88 dBA	54.88 dBA
Certification and Compliance		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Warranty		
Fortinet Warranty	Limited lifetime** warranty on all models	

** Fortinet Warranty Policy http://www.fortinet.com/doc/legal/EULA.pdf

Specifications

	FORTISWITCH 648F	FORTISWITCH 648F-FPOE
Hardware Specifications		
Total Network Interfaces	32× 1GE/2.5GE, 16× 1GE/2.5GE/5GE RJ45 ports and 8× 10GE/25GE SFP+/SFP28 ports	32× 1GE/2.5GE, 16× 1GE/2.5GE/5GE RJ45 ports and 8× 10GE/25GE SFP+/SFP28 ports
Dedicated Management 10/100/1000 Ports	1	1
RJ-45 Serial Console Port	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	—	48 (802.3 af/at/bt type 4)
PoE Power Budget	—	1800 W
Mean Time Between Failures	> 10 years	> 10 years
System Specifications		
Switching Capacity (Duplex)	720 Gbps	720 Gbps
Packets Per Second (Duplex)	1071 Mpps	1071 Mpps
MAC Address Storage	64 k	64 k
Network Latency	<1µs	<1µs
VLANs Supported	4 k	4 k
Link Aggregation Group Size	56	56
Total Link Aggregation Groups	Up to number of ports	Up to number of ports
Packet Buffers	8 MB	8 MB
Memory	4GB DDR4	4GB DDR4
Flash	32 MB	32 MB
Drive	32G SSD	32G SSD
ACL	36k	36k
Spanning Tree Instances	32	32
Route Entries (IPv4)	16 k	16 k
Host Entries (IPv4)	192 k	192 k
Multicast route entries	12 k	12 k
Dimensions		
Height x Depth x Width (inches)	1.75 × 17.4 × 17.3	1.75 × 17.4 × 17.3
Height x Depth x Width (mm)	44 × 442 × 440	44 × 442 × 440
Weight (kg)	7.149	7.834
Environment		
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Consumption (Maximum)	300W	2100W
Power Supply	2× 350W	2× 1200W
Redundant Power	Dual hot swappable AC	Dual hot swappable AC
Heat Dissipation	590 BTU/h	1272 BTU/h
Operating Temperature	32°F to 113°F (0°C to 45°C)	32°F to 113°F (0°C to 45°C)
Storage Temperature	-40°F to 158°F (-40°C to 70°C)	-40°F to 158°F (-40°C to 70°C)
Humidity	5% to 95% RH non-condensing	5% to 95% RH non-condensing
Air-Flow Direction	front-to-back	front-to-back
Noise Level	57.97 dBA	57.97 dBA
Certification and Compliance		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
Warranty		
Fortinet Warranty	Limited lifetime** warranty on all models	

** Fortinet Warranty Policy http://www.fortinet.com/doc/legal/EULA.pdf

Ordering Information

Product	SKU	Description
FortiSwitch Models		
FortiSwitch 424E-Fiber	FS-424E-Fiber	Layer 2/3 FortiGate switch controller compatible switch with 24x GE SFP and 4× 10 GE SFP+ Uplinks
FortiSwitch M426E-FPOE	FS-M426E-FPOE	Layer 2/3 FortiGate switch controller compatible switch with 16x GE RJ45 PoE 802.3af/at, 8× 2.5 RJ45 PoE 802.3af/at/UPOE (60W), 2× 5 GE RJ45 and 4× 10 GE SFP+, with maximum 420 W PoE limit.
FortiSwitch 424E	FS-424E	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4× 10 GE SFP + ports.
FortiSwitch 424E-POE	FS-424E-POE	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4× 10 GE SFP + ports, 24 port PoE+ with maximum 283.5 W limit.
FortiSwitch 424E-FPOE	FS-424E-FPOE	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4× 10 GE SFP + ports, 24 port PoE+ with maximum 433.7 W limit.
FortiSwitch 448E	FS-448E	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4× 10 GE SFP + ports.
FortiSwitch 448E-POE	FS-448E-POE	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4× 10 GE SFP + ports, 48 port PoE+ with maximum 421 W limit.
FortiSwitch 448E-FPOE	FS-448E-FPOE	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4× 10 GE SFP + ports, 48 port PoE+ with maximum 772 W limit.
FortiSwitch 524D	FS-524D	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4× 10 GE SFP+ and 2× 40 GE QSFP+ ports.
FortiSwitch 524D-FPOE	FS-524D-FPOE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45, 4× 10 GE SFP+, 2× 40 GE QSFP+ ports, 24 port PoE with maximum 400 W limit.
FortiSwitch 548D	FS-548D	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4× 10 GE SFP+ and 2× 40 GE QSFP+ ports.
FortiSwitch 548D-FPOE	FS-548D-FPOE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45, 4× 10 GE SFP+ and 2× 40 GE QSFP+ ports, 48 port PoE with maximum 750 W limit.
FortiSwitch 624F	FS-624F	Layer 2/3 FortiGate switch controller compatible switch with 24× 5G RJ45 ports, 4× 25G SFP28 and MACSec
FortiSwitch 624F-FPOE	FS-624F-FPOE	Layer 2/3 FortiGate switch controller compatible PoE 802.3bt switch with 24× 5G RJ45 ports, 4× 25G SFP28 and MACSec. Max 1400W POE output limit
FortiSwitch 648F	FS-648F	Layer 2/3 FortiGate switch controller compatible switch with 32× 2.5G RJ45 + 16× 5G RJ45 ports, 8× 25G SFP28 and MACSec
FortiSwitch 648F-FPOE	FS-648F-FPOE	Layer 2/3 FortiGate switch controller compatible PoE 802.3bt switch with 32× 2.5G RJ45 + 16× 5G RJ45 ports, 8× 25G SFP28 and MACSec. Max 1800W POE output limit

Ordering Information

Product	SKU	Description
Licenses		
FortiLAN Cloud Management License*	FC-10-FSW10-628-02-DD	FortiSwitch 200-400 Series (incl all FSW Rugged Models) FortiLAN Cloud Management SKU Including Forticare 24×7. (Note, FortiCare only applicable when used with FortiLAN Cloud)
	FC-10-FSW20-628-02-DD	FortiSwitch 500-900 Series FortiLAN Cloud Management SKU Including Forticare 24×7. (Note, FortiCare only applicable when used with FortiLAN Cloud)
FortiSwitch Manager Subscription License	FC1-10-SWMVM-258-01-DD	Subscription license for 10 FortiSwitch Units managed by FortiSwitchManager VM. 24×7 FortiCare support (for FSWM VM) included.
	FC2-10-SWMVM-258-01-DD	Subscription license for 100 FortiSwitch Units managed by FortiSwitchManager VM. 24×7 FortiCare support (for FSWM VM) included.
	FC3-10-SWMVM-258-01-DD	Subscription license for 1000 FortiSwitch Units managed by FortiSwitchManager VM. 24×7 FortiCare support (for FSWM VM) included.
FortiSwitch Advanced Features License	FS-SW-LIC-400	SW License for FS-400 Series Switches to activate Advanced Features.
	FS-SW-LIC-500	SW License for FS-500 Series Switches to activate Advanced Features.
	FS-SW-LIC-600	SW License for FS-600 Series Switches to activate Advanced Features.
Accessories		
Redundant AC Power Supply	FS-PSU-150	AC power supply for FS-548D and FS-524D.
	FS-PSU-600	AC power supply for FS-524D-FPOE.**
	FS-PSU-920	AC power supply for FS-548D-FPOE.**

* When managing a FortiSwitch with a FortiGate via FortiGate Cloud, no additional license is necessary.
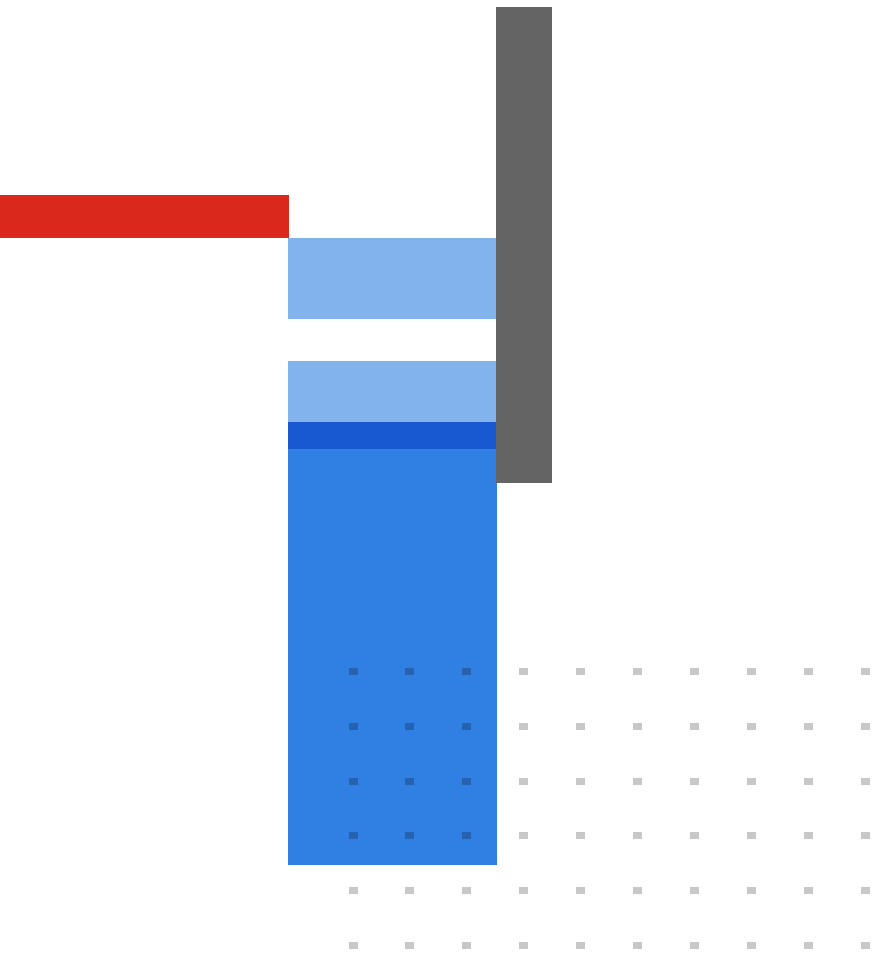
** Provides additional PoE capacity.

For details of Transceiver modules, see the Fortinet Transceivers datasheet.

Note that all PoE FortiSwitches are Alternative-A.

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.

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