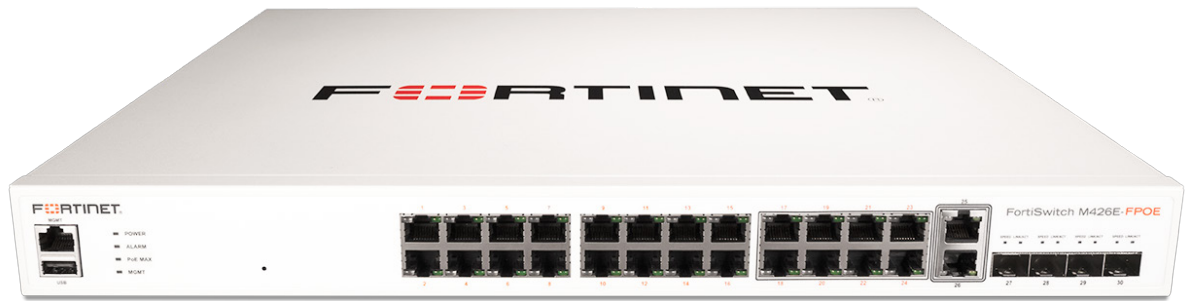


# FortiSwitch™ Secure Access



## Highlights

- Designed for installations from desktops to wiring closets
- Ideal for SD-Branch deployments
- Centralized security and access management from FortiGate interfaces with FortiLink
- Optimal for converged network environments; enabling voice, data, and wireless traffic to be delivered across a single network
- Supports non-FortiLink deployments through onboard GUI, API, or command line configuration
- Up to 48 ports in a compact 1 RU form factor
- Stackable up to 300 switches per FortiGate, depending on model
- Supports wire-speed switching and store and forward forwarding mode

## Security, Performance, and Manageability

The FortiSwitch™ Secure Access Family delivers outstanding security, performance, and manageability. Secure, simple, and scalable, FortiSwitch is the right choice for threat-conscious businesses of all sizes.

Tightly integrated into the Fortinet Security Fabric via FortiLink, FortiSwitch can be managed directly from the familiar FortiGate interface. This single-pane-of-glass management provides complete visibility and control of users and devices on the network regardless of how they connect. This makes the FortiSwitch ideal for SD-Branch and campus deployments with applications that range from desktop to data center aggregation, enabling businesses to converge their security and network access.

Available in



Appliance

## Integration

### Security Fabric Integration through FortiLink

FortiLink is an innovative proprietary management protocol that allows our FortiGate Next-Generation Firewall to seamlessly manage any FortiSwitch. FortiLink enables the FortiSwitch to become a logical extension of the FortiGate, integrating it directly into the Fortinet Security Fabric. This management option reduces complexity and decreases management costs as network security and access layer functions are enabled and managed through a single console. FortiLink integration enables centralized policy management, including role-based access and control, making it easy to implement and manage.

## Collection

### Entry 100 Series

- Entry level switch
- 8-48 GE ports, PoE+ capable
- Desktop to wiring closet
- 2-4 GE SFP uplink ports
- 4× 10GE SFP+ uplink ports

### Mid-Range 200 Series

- Mid-level switch
- 24-48 GE ports, PoE+ capable
- Typical wiring closet switch
- 4 GE SFP uplink ports

### Premium 400 Series

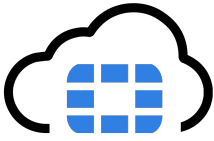
- Enterprise switch
- 24-48 GE and Multi-Gig port options, PoE+ and UPOE options
- Larger wiring closet or high throughput requirements
- 4× 10 GE SFP+ uplink ports

### Aggregation 500 Series

- Aggregation switch
- 24-48 GE ports, PoE+ capable
- Larger wiring closet or high throughput requirements
- 4× 10 GE SFP+ and 2× 40 GE QSFP+ uplink ports



## Deployment

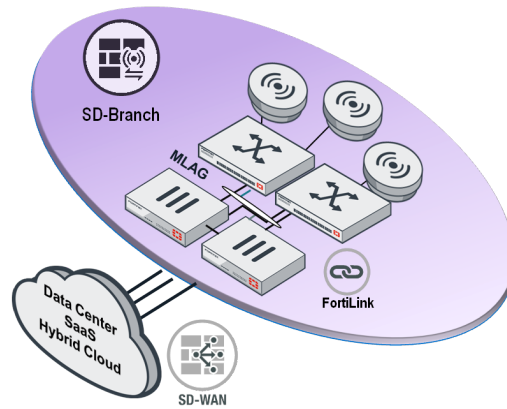


### Overview

FortiSwitch is commonly managed and deployed through our FortiGate with FortiLink but can also be deployed and managed in non-FortiGate environments. Cloud management for both deployment options shown below is available through FortiCloud.

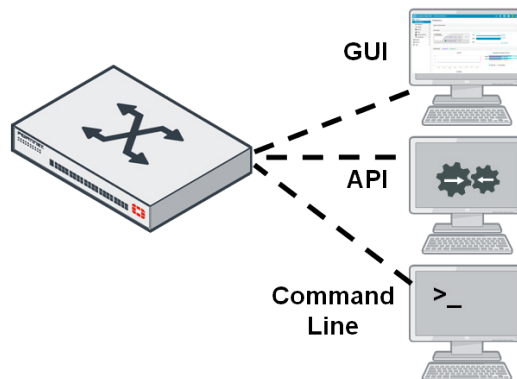
### FortiGate

- Deployment and management via FortiLink
- Security extended from NGFW
- Most common Fortinet deployment model



### Non-FortiGate

- Standalone GUI or CLI
- Manage at scale with FortiSwitch Manager
- Industry standard, no Fortinet Security Fabric integration



## Product Offerings

### Model Numbers

FS-108E-POE, FS-108E-FPOE, FS-108F, FS-108F-POE, FS-108F-FPOE, FS-124E, FS-124E-POE, FS-124E-FPOE, FS-148E, FS-148E-POE, FS-124F, FS-124F-POE, FS-124F-FPOE, FS-148F, FS-148F-POE, FS-148F-FPOE, FS-224D-FPOE, FS-224E, FS-224E-POE, FS-248D, FS-248E-POE, FS-248E-FPOE, FS-424E-FIBER, FS-M426E-FPOE, FS-424E, FS-424E-POE, FS-424E-FPOE, FS-448E, FS-448E-POE, FS-448E-FPOE, FS-524-D, FS-524D-FPOE, FS-548D, FS-548D-FPOE

## Features

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

FORTISWITCH FORTILINK MODE (WITH FORTIGATE)	FORTISWITCH FORTILINK MODE (WITH FORTIGATE)
<b>Management and Configuration</b>	<b>Security and Visibility</b>
Auto Discovery of Multiple Switches	802.1X Authentication (Port-based, MAC-based, MAB)
8 to 300 Managed Switches depending on FortiGate model	Syslog Collection
FortiLink Stacking (Auto Inter-Switch Links)	DHCP Snooping
Software Upgrade of Switches	Device Detection
Centralized VLAN Configuration	MAC Black/While Listing (FortiGate)
Switch POE Control	Policy Control of Users and Devices (FortiGate)
Link Aggregation Configuration	Block Intra-VLAN Traffic
Spanning Tree	Network Device Detection
LLDP/MED	Host Quarantine on Switch Port
IGMP Snooping	Integrated FortiGate Network Access Control (NAC) function
L3 Routing and Services (FortiGate)	FortiGuard IoT identification
Policy-Based Routing (FortiGate)	FortiSwitch recommendations in Security Rating
Virtual Domain (FortiGate)	Switch Controller traffic collector
Automated detection and recommendations	Port Statistics
Dynamic Port Profiles for FortiSwitch ports	Clients Monitoring
Provision firmware upon authorization	<b>UTM Features</b>
Health Monitoring	Firewall (FortiGate)
<b>High Availability</b>	IPC, AV, Application Control, Botnet (FortiGate)
Support FortiLink FortiGate in HA Cluster	
LAG support for FortiLink Connection	
Active-Active Split LAG from FortiGate to FortiSwitches for Advanced Redundancy	



## Features

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

FORTISWITCH
<b>Layer 2</b>
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 4x10G SFP+ or 4x1G SFP)
Time-Domain Reflectometry (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
<b>Services</b>
IGMP proxy / querier
MLD Snooping
MLD proxy / querier
IGMP Snooping

FORTISWITCH
<b>Layer 3</b>
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
<b>Security and Visibility</b>
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.



## Features

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

FORTISWITCH	FORTISWITCH
<b>High Availability</b>	<b>Management</b>
Multi-Chassis Link Aggregation (MCLAG)	IPv4 and IPv6 Management
<b>Quality of Service</b>	Telnet / SSH
IEEE 802.1p Based Priority Queuing	HTTP / HTTPS
IP TOS/DSCP Based Priority Queuing	SNMP v1/v2c/v3
IEEE 1588 PTP (Transparent Clock)	SNTP
Explicit Congestion Notification	Standard CLI and Web GUI Interface
Egress priority tagging	Software download/upload: TFTP/FTP/GUI
Percentage Rate Control	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
<b>RFC and MIB Support*</b>
<b>BFD</b>
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)
<b>BGP</b>
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
<b>DHCP</b>
RFC 2131: Dynamic Host Configuration Protocol
RFC 3046: DHCP Relay Agent Information Option
RFC 7513: Source Address Validation Improvement (SAVI) Solution for DHCP
<b>IP/IPv4</b>
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
<b>IP Multicast</b>
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
<b>RFC and MIB Support*</b>
<b>IPv6</b>
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
<b>IS-IS</b>
RFC 1195: Use of OSI IS-IS for Routing in TCP/IP and Dual Environments
RFC 5308: Routing IPv6 with IS-IS
<b>MIB</b>
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
<b>RFC and MIB Support*</b>
<b>OSPF</b>
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
<b>OTHER</b>
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
<b>RFC and MIB Support*</b>
<b>RADIUS</b>
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)
<b>RIP</b>
RFC 1058: Routing Information Protocol
RFC 2080: RIPng for IPv6
RFC 2082: RIP-2 MD5 Authentication
RFC 2453: RIPv2
RFC 4822: RIPv2 Cryptographic Authentication
<b>SNMP</b>
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 108E-POE	FORTISWITCH 108E-FPOE
<b>Hardware Specifications</b>		
Total Network Interfaces	8x GE RJ45 and 2x GE SFP	8x GE RJ45 and 2x GE SFP
Dedicated Management 10/100 Port	0	0
RJ-45 Serial Console Port	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	4 (802.3af/at)	8 (802.3af/at)
PoE Power Budget	65 W	130 W
Mean Time Between Failures	> 10 years	> 10 years
<b>System Specifications</b>		
Switching Capacity (Duplex)	20 Gbps	20 Gbps
Packets Per Second (Duplex)	30 Mpps	30 Mpps
MAC Address Storage	8 K	8 K
Network Latency	4µs	4µs
VLANs Supported	4 K	4 K
Link Aggregation Group Size	8	8
Total Link Aggregation Groups	8	8
Packet Buffers	512 KB	512 KB
DRAM	256 MB DDR3	256 MB DDR3
FLASH	32 MB	32 MB
ACL	640	640
Spanning Tree Instances	16	16
<b>Dimensions</b>		
Height x Depth x Width (inches)	1.7 x 8.2 x 13	1.7 x 8.2 x 13
Height x Depth x Width (mm)	44 x 209 x 330	44 x 209 x 330
Weight	4.3 lbs (1.95 kg)	4.5 lbs (2.04 kg)
<b>Environment</b>		
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	AC Built in	AC Built in
Redundant Power	—	—
Power Consumption* (Average / Maximum)	70.19 W / 71.10 W	135.19 W / 136.10 W
Heat Dissipation	17.7 BTU/h	17.7 BTU/h
Operating Temperature	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)
Storage Temperature	-40°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)
Humidity	10%–90% non-condensing	10%–90% non-condensing
Air-Flow Direction	side-to-back	side-to-back
Noise Level	Fanless	Fanless
<b>Certification and Compliance</b>		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	
<b>Warranty</b>		
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 108E-POE



FortiSwitch 108E-FPOE

## Specifications

	FORTISWITCH 108F	FORTISWITCH 108F-POE	FORTISWITCH 108F-FPOE
<b>Hardware Specifications</b>			
Total Network Interfaces	7x GE RJ45, 1x GE/POE-PD RJ45, and 2x GE SFP	8x GE RJ45 and 2x GE SFP	8x GE RJ45 and 2x GE SFP
Dedicated Management 10/100 Port	0	0	0
RJ-45 Serial Console Port	1	1	1
Form Factor	Desktop	Desktop / 19" rack bracket	Desktop / 19" rack bracket
Power over Ethernet (PoE) Ports	0	8 (802.3af/at)	8 (802.3af/at)
PoE Power Budget	0	65 W	130 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
<b>System Specifications</b>			
Switching Capacity (Duplex)	20 Gbps	20 Gbps	20 Gbps
Packets Per Second (Duplex)	30 Mpps	30 Mpps	30 Mpps
MAC Address Storage	8 K	8 K	8 K
Network Latency	4 μs	4 μs	4 μs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	8	8	8
Packet Buffers	512 KB	512 KB	512 KB
DRAM	256 MB DDR3	256 MB DDR3	256 MB DDR3
FLASH	32 MB	32 MB	32 MB
ACL	768	768	768
Spanning Tree Instances	16	16	16
<b>Dimensions</b>			
Height x Depth x Width (inches)	1.18 × 4.72 × 7.09	1.73 × 8.23 × 9.85	1.73 × 8.23 × 9.85
Height x Depth x Width (mm)	30 × 120 × 180	44 × 209 × 250	44 × 209 × 250
Weight	1.36 lbs (0.62 kg)	3.75 lbs (1.70 kg)	4.05 lbs (1.84 kg)
<b>Environment</b>			
Power Required	100–240V AC, 50/60 Hz / PoE-PSE(af)	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	12V/1A DC power adapter included, PoE-PD Built in	AC built in	AC built in
Redundant Power	No	No	No
Power Consumption	6.2 W	74.4 W	139.2 W
Heat Dissipation	21.142 BTU/h	34.12 BTU/h	34.56 BTU/h
Operating Temperature	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)
Storage Temperature	-49°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)
Humidity	5%–95% non-condensing	5%–95% non-condensing	5%–95% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	Fanless	Fanless	Fanless
<b>Certification and Compliance</b>			
FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2			
<b>Warranty</b>			
Fortinet Warranty			
Limited lifetime* warranty on all models			

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



FortiSwitch 108F



FortiSwitch 108F-POE



FortiSwitch 108F-FPOE



## Specifications

	FORTISWITCH 124E	FORTISWITCH 124E-POE	FORTISWITCH 124E-FPOE
<b>Hardware Specifications</b>			
Total Network Interfaces	24x GE RJ45 and 4x GE SFP	24x GE RJ45 and 4x GE SFP	24x GE RJ45 and 4x GE SFP
Dedicated Management 10/100 Port	0	0	0
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	0	12 (802.3af/at)	24 (802.3af/at)
PoE Power Budget	0	185 W	370 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
<b>System Specifications</b>			
Switching Capacity (Duplex)	56 Gbps	56 Gbps	56 Gbps
Packets Per Second (Duplex)	83 Mpps	83 Mpps	83 Mpps
MAC Address Storage	8 K	8 K	8 K
Network Latency	4µs	4µs	4µs
VLANs Supported	4 K	4 K	4 K
Link Aggregation Group Size	8	8	8
Total Link Aggregation Groups	8	8	8
Packet Buffers	512 KB	512 KB	512 KB
DRAM	256 MB DDR3	256 MB DDR3	256 MB DDR3
FLASH	32 MB	32 MB	32 MB
ACL	640	640	640
Spanning Tree Instances	16	16	16
<b>Dimensions</b>			
Height x Depth x Width (inches)	1.7 × 8.2 × 13	1.7 × 12.2 × 17.3	1.7 × 12.2 × 17.3
Height x Depth x Width (mm)	44 × 209 × 330	44 × 309 × 440	44 × 309 × 440
Weight	4.7 lbs (2.13 kg)	11.1 lbs (5.03 kg)	11.2 lbs (5.03 kg)
<b>Environment</b>			
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	—	—	—
Power Consumption* (Average / Maximum)	15.83 W / 17.79 W	202.78 W / 205.45 W	387.78 W / 390.45 W
Heat Dissipation	54 BTU/h	60.67 BTU/h	60.67 BTU/h
Operating Temperature	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)
Storage Temperature	-40°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)
Humidity	10%–90% non-condensing	10%–90% non-condensing	10%–90% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	Fanless	39.3 dBA	42.5 dBA
<b>Certification and Compliance</b>			
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2		
<b>Warranty</b>			
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 124E



FortiSwitch 124E-POE



FortiSwitch 124E-FPOE



## Specifications

	FORTISWITCH 148E	FORTISWITCH 148E-POE
<b>Hardware Specifications</b>		
Total Network Interfaces	48x GE RJ45 and 4x GE SFP	48x GE RJ45 and 4x GE SFP
Dedicated Management 10/100 Port	0	0
RJ-45 Serial Console Port	1	1
Form Factor	1 RU Rack Mount	1 RU Rack Mount
Power over Ethernet (PoE) Ports	0	24 (802.3af/at)
PoE Power Budget	0	370 W
Mean Time Between Failures	> 10 years	> 10 years
<b>System Specifications</b>		
Switching Capacity (Duplex)	104 Gbps	104 Gbps
Packets Per Second (Duplex)	155 Mpps	155 Mpps
MAC Address Storage	16 K	16 K
Network Latency	3860 ns	3860 ns
VLANs Supported	4 K	4 K
Link Aggregation Group Size	8	8
Total Link Aggregation Groups	16	16
Packet Buffers	1.5 MB	1.5 MB
DRAM	256 MB DDR3	256 MB DDR3
FLASH	64 MB	64 MB
ACL	640	640
Spanning Tree Instances	16	16
<b>Dimensions</b>		
Height x Depth x Width (inches)	1.73 × 12.2 × 17.3	1.73 × 13.7 × 17.3
Height x Depth x Width (mm)	44 × 309 × 440	44 × 348 × 440
Weight	8.6 lbs (3.9 kg)	11.5 lbs (5.2 kg)
<b>Environment</b>		
Power Required	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
Power Supply	AC Built in	AC Built in
Redundant Power	No	No
Power Consumption* (Average / Maximum)	19.804 W / 22.137 W	389.742 W / 393.109 W
Heat Dissipation	67.574 BTU/h	78.82 BTU/h
Operating Temperature	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)
Storage Temperature	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)
Humidity	10%–90% non-condensing	10%–90% non-condensing
Air-Flow Direction	side-to-back	side-to-back
Noise Level	36.9 dBA	38.7 dBA
<b>Certification and Compliance</b>		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	
<b>Warranty</b>		
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 148E



FortiSwitch 148E-POE

## Specifications

	FORTISWITCH 124F	FORTISWITCH 124F-POE	FORTISWITCH 124F-FPOE
<b>Hardware Specifications</b>			
Total Network Interfaces	24x GE RJ45 and 4x 10GE SFP+	24x GE RJ45 and 4x 10GE SFP+	24x GE RJ45 and 4x 10GE SFP+
Dedicated Management 10/100 Port	0	0	0
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	0	12 (802.3af/at)	24 (802.3af/at)
PoE Power Budget	0	185 W	370 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
<b>System Specifications</b>			
Switching Capacity (Duplex)	128 Gbps	128 Gbps	128 Gbps
Packets Per Second (Duplex)	190 Mpps	190 Mpps	190 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	16	16	16
Packet Buffers	2 MB	2 MB	2 MB
DRAM	512 MB DDR3	512 MB DDR3	512 MB DDR3
FLASH	64 MB	64 MB	64 MB
ACL	768	768	768
Spanning Tree Instances	16	16	16
<b>Dimensions</b>			
Height x Depth x Width (inches)	1.73 × 9.06 × 12.99	1.73 × 10.24 × 17.32	1.73 × 10.24 × 17.32
Height x Depth x Width (mm)	44 × 230 × 330	44 × 260 × 440	44 × 260 × 440
Weight	4.48 lbs (2.03 kg)	7.85 lbs (3.56 kg)	8.42 lbs (3.82 kg)
<b>Environment</b>			
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	No	No	No
Power Consumption* (Average / Maximum)	24.8 W / 26.3 W	235.9 W / 237.4 W	449.8 W / 451.3 W
Heat Dissipation	89.683 BTU/h	102.982 BTU/h	118.327 BTU/h
Operating Temperature	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)
Storage Temperature	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)
Humidity	10%–90% non-condensing	10%–90% non-condensing	10%–90% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	Fanless	46.3 dBA	45.8 dBA
<b>Certification and Compliance</b>			
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2		
<b>Warranty</b>			
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 124F



FortiSwitch 124F-POE



FortiSwitch 124F-FPOE



## Specifications

	FORTISWITCH 148F	FORTISWITCH 148F-POE	FORTISWITCH 148F-FPOE
<b>Hardware Specifications</b>			
Total Network Interfaces	48x GE RJ45 and 4x 10GE SFP+	48x GE RJ45 and 4x 10GE SFP+	48x GE RJ45 and 4x 10GE SFP+
Dedicated Management 10/100 Port	0	0	0
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	0	24 (802.3af/at)	48 (802.3af/at)
PoE Power Budget	0	370 W	740 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
<b>System Specifications</b>			
Switching Capacity (Duplex)	176 Gbps	176 Gbps	176 Gbps
Packets Per Second (Duplex)	260 Mpps	260 Mpps	260 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	16	16	16
Packet Buffers	2 MB	2 MB	2 MB
DRAM	512 MB DDR3	512 MB DDR3	512 MB DDR3
FLASH	64 MB	64 MB	64 MB
ACL	768	768	768
Spanning Tree Instances	16	16	16
<b>Dimensions</b>			
Height x Depth x Width (inches)	1.73 × 10.24 × 17.32	1.73 × 12.20 × 17.32	1.73 × 12.20 × 17.32
Height x Depth x Width (mm)	44 × 260 × 440	44 × 310 × 440	44 × 310 × 440
Weight	7.63 lbs (3.46 kg)	10.32 lbs (4.68 kg)	10.32 lbs (4.68 kg)
<b>Environment</b>			
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	No	No	No
Power Consumption* (Average / Maximum)	55.8 W / 57 W	474.8 W / 476.3 W	893.5 W / 895.7 W
Heat Dissipation	194.37 BTU/h	195.73 BTU/h	198.46 BTU/h
Operating Temperature	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)	32°–113°F (0°–45°C)
Storage Temperature	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)
Humidity	10%–90% non-condensing	10%–90% non-condensing	10%–90% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	42.8 dBA	46.9 dBA	46.5 dBA
<b>Certification and Compliance</b>			
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2		
<b>Warranty</b>			
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 148F



FortiSwitch 148F-POE



FortiSwitch 148F-FPOE

## Specifications

	FORTISWITCH 224D-FPOE	FORTISWITCH 224E	FORTISWITCH 224E-POE
<b>Hardware Specifications</b>			
Total Network Interfaces	24x GE RJ45 ports and 4x GE SFP ports	24x GE RJ45 ports and 4x GE SFP ports	24x GE RJ45 ports and 4x GE SFP ports
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/802.3at)	NA	12 (802.3af/802.3at)
PoE Power Budget	370 W	NA	180 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
<b>System Specifications</b>			
Switching Capacity (Duplex)	56 Gbps	56 Gbps	56 Gbps
Packets Per Second (Duplex)	83 Mpps	83 Mpps	83 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	1.5 MB	1.5 MB	1.5 MB
DRAM	512 MB DDR3	512 MB DDR3	512 MB DDR3
FLASH	128 MB	128 MB	128 MB
ACL	512	512	512
Spanning Tree Instances	16	16	16
Route Entries (IPv4/IPv6)	64/32	64/32	64/32
Host Entries	512	512	512
<b>Dimensions</b>			
Height x Depth x Width (inches)	1.73 x 12.2 x 17.5	1.73 x 9 x 12.99	1.73 x 9 x 12.99
Height x Depth x Width (mm)	44 x 310 x 440	44 x 230 x 330	44 x 230 x 330
Weight	10.64 lbs (4.83 kg)	4.78 lbs (2.17 kg)	5.37 lbs (2.44 kg)
<b>Environment</b>			
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	Optional FRPS-740	Redundant AC	Optional FRPS-740
Power Consumption* (Average / Maximum)	380 W / 397 W	17.2 W / 17.3 W	220.18 W / 223.57 W
Heat Dissipation	85 BTU/h	59.095 BTU/h	74.29554 BTU/h
Operating Temperature	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)
Storage Temperature	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)
Humidity	10%–90% non-condensing	10%–90% non-condensing	10%–90% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	42.7 dBA	Fanless	30.6 dBA
<b>Certification and Compliance</b>			
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2		
<b>Warranty</b>			
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 224D-FPOE



FortiSwitch 224E



FortiSwitch 224E-POE



## Specifications

	FORTISWITCH 248D	FORTISWITCH 248E-POE	FORTISWITCH 248E-FPOE
<b>Hardware Specifications</b>			
Total Network Interfaces	48x GE RJ45 ports and 4x GE SFP ports	48x GE RJ45 ports and 4x GE SFP ports	48x GE RJ45 ports and 4x GE SFP ports
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/802.3at)	48 (802.3af/802.3at)
PoE Power Budget	N/A	370 W	740 W
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
<b>System Specifications</b>			
Switching Capacity (Duplex)	104 Gbps	104 Gbps	104 Gbps
Packets Per Second (Duplex)	155 Mpps	155 Mpps	155 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	1.5 MB	1.5 MB	1.5 MB
DRAM	512 MB DDR3	512 MB DDR3	512 MB DDR3
FLASH	128 MB	128 MB	128 MB
ACL	512	512	512
Spanning Tree Instances	16	16	16
Route Entries (IPv4/IPv6)	64/32	64/32	64/32
Host Entries	512	512	512
<b>Dimensions</b>			
Height x Depth x Width (inches)	1.73 × 9.68 × 17.3	1.73 × 16.1 × 17.3	1.73 × 16.1 × 17.3
Height x Depth x Width (mm)	44 × 246 × 440	44 × 410 × 440	44 × 410 × 440
Weight	7.81 lbs (3.54 kg)	12.12 lbs (5.5 kg)	13.44 lbs (6.1 kg)
<b>Environment</b>			
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	—	Optional FRPS-740	Optional FRPS-740
Power Consumption* (Average / Maximum)	38.66 W / 39.19 W	457.46 W / 466.47 W	842 W / 855.02 W
Heat Dissipation	134 BTU/h	17714268 BTU/h	162.87865 BTU/h
Operating Temperature	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)
Storage Temperature	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)
Humidity	10%–90% non-condensing	10%–90% non-condensing	10%–90% non-condensing
Air-Flow Direction	side-to-back	side-to-back	side-to-back
Noise Level	32.3 dBA	34.2 dBA	44.7 dBA
<b>Certification and Compliance</b>			
FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2			
<b>Warranty</b>			
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 248D



FortiSwitch 248E-POE



FortiSwitch 248E-FPOE





## Specifications

	FORTISWITCH-424E-FIBER	FORTISWITCH-M426E-FPOE
<b>Hardware Specifications</b>		
Total Network Interfaces	24x GE SFP and 4x 10GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	16x GE RJ45, 8x 2.5 GE RJ45 ports, 2x 5 GE RJ45, and 4x 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 [16x 802.3af/at, 8x 802.3af/at/UPOE (60W)]
PoE Power Budget	N/A	420 W
Mean Time Between Failures	> 10 years	> 10 years
<b>System Specifications</b>		
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
DRAM	1 GB DDR4	1 GB DDR4
FLASH	256 MB	256 MB
ACL	1.5k	1k
Spanning Tree Instances	16	16
Route Entries (IPv4/IPv6)	16k/8k	1000/500
Host Entries	16k	5k
<b>Dimensions</b>		
Height x Depth x Width (inches)	1.75 x 7.87 x 17.3	1.73 x 16.14 x 17.3
Height x Depth x Width (mm)	44 x 200 x 440	44 x 410 x 440
Weight	5.62 lbs (2.55 kg)	13.00 lbs (5.9 kg)
<b>Environment</b>		
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°–122°F (0°–50°C)	32°–122°F (0°–50°C)
Storage Temperature	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)
Humidity	5%–95% non-condensing	5%–95% non-condensing
Air-Flow Direction	side-to-back	side-to-back
Noise Level	32.8 dBA	35 dBA
<b>Certification and Compliance</b>		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	
<b>Warranty</b>		
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
<b>Hardware Specifications</b>			
<b>Total Network Interfaces</b>	24x GE RJ45 and 4x10 GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	24x GE RJ45 and 4x10 GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	24x GE RJ45 and 4x10 GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP
<b>Dedicated Management 10/100 Port</b>	1	1	1
<b>RJ-45 Serial Console Port</b>	1	1	1
<b>Form Factor</b>	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
<b>Power over Ethernet (PoE) Ports</b>	—	24 (802.3af/at)	24 (802.3af/at)
<b>PoE Power Budget</b>	N/A	250 W	421 W
<b>Mean Time Between Failures</b>	> 10 years	> 10 years	> 10 years
<b>System Specifications</b>			
<b>Switching Capacity (Duplex)</b>	128 Gbps	128 Gbps	128 Gbps
<b>Packets Per Second (Duplex)</b>	204 Mpps	204 Mpps	204 Mpps
<b>MAC Address Storage</b>	16 K	16 K	16 K
<b>Network Latency</b>	< 1µs	< 1µs	< 1µs
<b>VLANS Supported</b>	4 K	4 K	4 K
<b>Link Aggregation Group Size</b>	8	8	8
<b>Total Link Aggregation Groups</b>	Up to number of ports	Up to number of ports	Up to number of ports
<b>Packet Buffers</b>	2 MB	2 MB	2 MB
<b>DRAM</b>	1 GB DDR4	1 GB DDR4	1 GB DDR4
<b>FLASH</b>	256 MB	256 MB	256 MB
<b>ACL</b>	1k	1k	1k
<b>Spanning Tree Instances</b>	16	16	16
<b>Route Entries (IPv4/IPv6)</b>	1000/500	1000/500	1000/500
<b>Host Entries</b>	5k	5k	5k
<b>Dimensions</b>			
<b>Height x Depth x Width (inches)</b>	1.75 × 10.23 × 17.3	1.75 × 16.14 × 17.3	1.75 × 16.14 × 17.3
<b>Height x Depth x Width (mm)</b>	44 × 260 × 440	44 × 410 × 440	44 × 410 × 440
<b>Weight</b>	6.83 lbs (3.1 kg)	11.57 lbs (5.25 kg)	12.72 lbs (5.77 kg)
<b>Environment</b>			
<b>Power Required</b>	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
<b>Power Supply</b>	AC built in	AC built in	AC built in
<b>Redundant Power</b>	Redundant AC	Redundant AC	Redundant AC
<b>Power Consumption* (Average / Maximum)</b>	22.3 W / 23.6 W	281.3 W / 283.5 W	431.2 W / 433.7 W
<b>Heat Dissipation</b>	76.04 BTU/h	102.64 BTU/h	117.2 BTU/h
<b>Operating Temperature</b>	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)
<b>Storage Temperature</b>	-40°–158°F (-40°–70°C)	-4°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)
<b>Humidity</b>	5%–95% non-condensing	5%–95% non-condensing	5%–95% non-condensing
<b>Air-Flow Direction</b>	side-to-back	side-to-back	side-to-back
<b>Noise Level</b>	32.3 dBA	31.8 dBA	30.9 dBA
<b>Certification and Compliance</b>			
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2		
<b>Warranty</b>			
<b>Fortinet Warranty</b>	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
<b>Hardware Specifications</b>			
<b>Total Network Interfaces</b>	48x GE RJ45 and 4x 10GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	48x GE RJ45 and 4x 10GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP	48x GE RJ45 and 4x 10GE SFP+ ports Note: SFP+ ports are compatible with 1 GE SFP
<b>Dedicated Management 10/100 Port</b>	1	1	1
<b>RJ-45 Serial Console Port</b>	1	1	1
<b>Form Factor</b>	1 RU Rack Mount	1 RU Rack Mount	1 RU Rack Mount
<b>Power over Ethernet (PoE) Ports</b>	—	48 (802.3af/at)	48 (802.3af/at)
<b>PoE Power Budget</b>	—	421 W	772 W
<b>Mean Time Between Failures</b>	> 10 years	> 10 years	> 10 years
<b>System Specifications</b>			
<b>Switching Capacity (Duplex)</b>	176 Gbps	176 Gbps	176 Gbps
<b>Packets Per Second (Duplex)</b>	262 Mpps	262 Mpps	262 Mpps
<b>MAC Address Storage</b>	32 K	32 K	32 K
<b>Network Latency</b>	<1µs	<1µs	<1µs
<b>VLANS Supported</b>	4 K	4 K	4 K
<b>Link Aggregation Group Size</b>	8	8	8
<b>Total Link Aggregation Groups</b>	Up to number of ports	Up to number of ports	Up to number of ports
<b>Packet Buffers</b>	4 MB	4 MB	4 MB
<b>DRAM</b>	1GB DDR4	1GB DDR4	1GB DDR4
<b>FLASH</b>	256 MB	256 MB	256 MB
<b>ACL</b>	1.5k	1.5k	1.5k
<b>Spanning Tree Instances</b>	16	16	16
<b>Route Entries (IPv4/IPv6)</b>	16k/8k	16k/8k	16k/8k
<b>Host Entries</b>	16k	16k	16k
<b>Dimensions</b>			
<b>Height x Depth x Width (inches)</b>	1.75 × 12.2 × 17.3	1.73 × 16.1 × 17.3	1.73 × 16.1 × 17.3
<b>Height x Depth x Width (mm)</b>	44 × 310 × 440	44 × 410 × 440	44 × 410 × 440
<b>Weight</b>	9.17 lbs (4.16 kg)	13.8 lbs (6.26 kg)	14.04 lbs (6.37 kg)
<b>Environment</b>			
<b>Power Required</b>	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz	100–240V AC, 50/60 Hz
<b>Power Supply</b>	AC built in	AC built in	AC built in
<b>Redundant Power</b>	Redundant AC	Redundant AC	Redundant AC
<b>Power Consumption* (Average / Maximum)</b>	46.5 W / 47.81 W	440.12 W / 442.234 W	921.4 W / 923.6 W
<b>Heat Dissipation</b>	163.032 BTU/h	163.066 BTU/h	163.1 BTU/h
<b>Operating Temperature</b>	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)	32°–122°F (0°–50°C)
<b>Storage Temperature</b>	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)	-4°–158°F (-20°–70°C)
<b>Humidity</b>	10%–90% non condensing	10%–90% non condensing	10%–90% non condensing
<b>Air-Flow Direction</b>	side-to-back	side-to-back	side-to-back
<b>Noise Level</b>	35.5 dBA	38.3 dBA	50.7 dBA
<b>Certification and Compliance</b>			
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2		
<b>Warranty</b>			
<b>Fortinet Warranty</b>	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
<b>Hardware Specifications</b>		
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
<b>System Specifications</b>		
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
DRAM	2 GB DDR3	2 GB DDR3
FLASH	128 MB	128 MB
ACL	1k	1k
Spanning Tree Instances	32	32
Route Entries (IPv4/IPv6)	16k/8k	16k/8k
Multicast Route Entries	8k	8k
Host Entries	16k	16k
<b>Dimensions</b>		
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)
<b>Environment</b>		
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°–113°F (0°–45°C)	32°–113°F (0°–45°C)
Storage Temperature	-40°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)
Humidity	5%–95% non-condensing	5%–95% non-condensing
Air-Flow Direction	front-to-back	front-to-back
Noise Level	57.3 dBA	57.3 dBA
<b>Certification and Compliance</b>		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
<b>Warranty</b>		
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
<b>Hardware Specifications</b>		
Total Network Interfaces	48x GE/RJ45 ports, 4x 10 GE SFP+ ports and 2x 40 GE QSFP+ Note: SFP+ ports are compatible with 1G SFP	48x GE/RJ45 ports, 4x 10 GE SFP+ ports and 2x 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
<b>System Specifications</b>		
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
DRAM	2 GB DDR3	2 GB DDR3
FLASH	128 MB	128 MB
ACL	1k	1k
Spanning Tree Instances	32	32
Route Entries (IPv4/IPv6)	16k/8k	16k/8k
Multicast Route Entries	8k	8k
Host Entries	16k	16k
<b>Dimensions</b>		
Height x Depth x Width (inches)	1.75 x 13.8 x 17.3	1.75 x 13.8 x 17.3
Height x Depth x Width (mm)	44 x 350 x 439	44 x 350 x 439
Weight	14.1 lbs (6.4 kg)	15.74 lbs (7.14 kg)
<b>Environment</b>		
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°–113°F (0°–45°C)	32°–113°F (0°–45°C)
Storage Temperature	-40°–158°F (-40°–70°C)	-40°–158°F (-40°–70°C)
Humidity	5%–95% non-condensing	5%–95% non-condensing
Air-Flow Direction	front-to-back	front-to-back
Noise Level	57.3 dBA	57.3 dBA
<b>Certification and Compliance</b>		
	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2
<b>Warranty</b>		
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



## Ordering Information

Product	SKU	Description
<b>FortiSwitch Models</b>		
FortiSwitch 108E-POE	FS-108E-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 8 GE RJ45 + 2 SFP ports, 4 port PoE with maximum 65 W PoE limit. Fanless.
FortiSwitch 108E-FPOE	FS-108E-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 8 GE RJ45 + 2 SFP ports, 8 port PoE with maximum 130 W PoE limit. Fanless.
FortiSwitch 108F	FS-108F	Layer 2 FortiGate switch controller compatible switch with 8 x GE RJ45 ports, 2 x GE SFP, Fanless, 12V/3A power adapter of input voltage 100 – 240VAC, and PSE dual powered.
FortiSwitch 108F-POE	FS-108F-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 8 x GE RJ45 ports, 2 x GE SFP, Fanless with automatic Max 65W POE output limit.
FortiSwitch 108F-FPOE	FS-108F-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 8 x GE RJ45 ports, 2 x GE SFP, Fanless with automatic Max 130W POE output limit.
FortiSwitch 124E	FS-124E	Layer 2 FortiGate switch controller compatible switch with 24 GE RJ45 + 4 SFP ports. Fanless.
FortiSwitch 124E-POE	FS-124E-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 SFP ports, 12 port PoE with maximum 185 W limit.
FortiSwitch 124E-F-POE	FS-124E-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 SFP ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 148E	FS-148E	Layer 2 FortiGate switch controller compatible switch with 48 GE RJ45 + 4 SFP ports.
FortiSwitch 148E-POE	FS-148E-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 SFP ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 124F	FS-124F	Layer 2 FortiGate switch controller compatible switch with 24 GE RJ45 + 4 10G SFP+ ports. Fanless.
FortiSwitch 124F-POE	FS-124F-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 10G SFP+ ports, 12 port PoE with maximum 185 W limit.
FortiSwitch 124F-FPOE	FS-124F-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 10G SFP+ ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 148F	FS-148F	Layer 2 FortiGate switch controller compatible switch with 48 GE RJ45 + 4 10G SFP+ ports.
FortiSwitch 148F-POE	FS-148F-POE	Layer 2 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 10G SFP+ ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 148F-FPOE	FS-148F-FPOE	Layer 2 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 10G SFP+ ports, 48 port PoE with maximum 740 W limit.
FortiSwitch 224D-FPOE	FS-224D-FPOE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 SFP ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 224E	FS-224E	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45 + 4 SFP ports. Fanless.
FortiSwitch 224E-POE	FS-224E-POE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 24 GE RJ45 + 4 SFP ports, 12 port PoE with maximum 180 W limit.
FortiSwitch 248D	FS-248D	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45 + 4 SFP ports.
FortiSwitch 248E-POE	FS-248E-POE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 SFP ports, 24 port PoE with maximum 370 W limit.
FortiSwitch 248E-FPOE	FS-248E-FPOE	Layer 2/3 FortiGate switch controller compatible PoE+ switch with 48 GE RJ45 + 4 SFP ports, 48 port PoE with maximum 740 W limit.
FortiSwitch 424E-Fiber	FS-424E-Fiber	Layer 2/3 FortiGate switch controller compatible switch with 24x GE SFP and 4x 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, 8x 2.5 RJ45 PoE 802.3af/at/UPOE (60W), 2x 5 GE RJ45 and 4x 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, 4x 10 GE SFP + ports.
FortiSwitch 424E-POE	FS-424E-POE	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4x 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, 4x 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, 4x 10 GE SFP + ports.
FortiSwitch 448E-POE	FS-448E-POE	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4x 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, 4x 10 GE SFP + ports, 48 port PoE+ with maximum 772 W limit.



## Ordering Information

Product	SKU	Description
<b>FortiSwitch Models</b>		
<b>FortiSwitch 524D</b>	FS-524D	Layer 2/3 FortiGate switch controller compatible switch with 24 GE RJ45, 4× 10 GE SFP+ and 2× 40 GE QSFP+ ports.
<b>FortiSwitch 524D-FPOE</b>	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.
<b>FortiSwitch 548D</b>	FS-548D	Layer 2/3 FortiGate switch controller compatible switch with 48 GE RJ45, 4× 10 GE SFP+ and 2× 40 GE QSFP+ ports.
<b>FortiSwitch 548D-FPOE</b>	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.
<b>Licenses</b>		
<b>FortiLAN Cloud Management License*</b>	FC-10-FSW00-628-02-DD	FortiSwitch 100 Series (none-Rugged) FortiLAN Cloud Management SKU Including Forticare 24×7. (Note, FortiCare only applicable when used with FortiLAN Cloud)
	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)
<b>FortiSwitch Manager Subscription License</b>	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.
<b>FortiSwitch Advanced Features License</b>	FS-SW-LIC-200	SW License for FS-200 Series Switches to activate Advanced Features.
	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.
<b>Accessories</b>		
<b>External Redundant AC Power Supply</b>	FRPS-740	Redundant AC power supply for up to 2 units: FS-224D-FPOE, FS-224E-POE, FS-248E-POE, FS-248E-FPOE.
<b>Redundant AC Power Supply</b>	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.

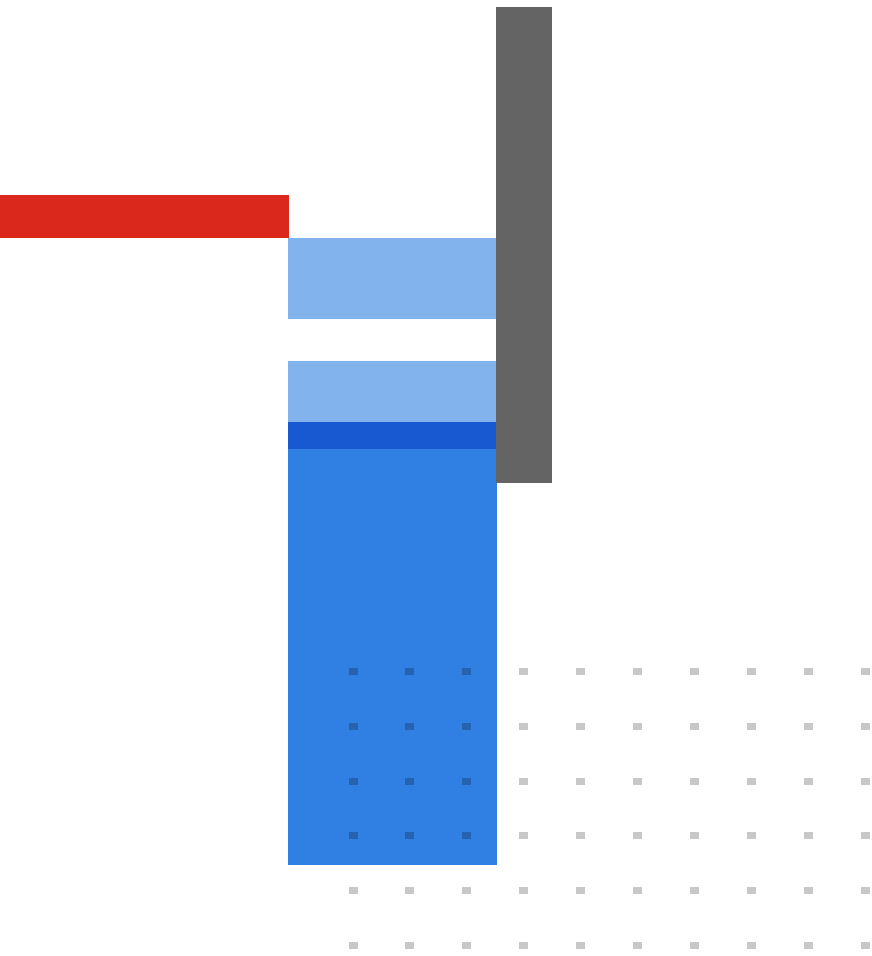
For details of Transceiver modules, see the [Fortinet Transceivers datasheet](#).

Note that all PoE FortiSwitches are Alternative-A.

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August 21, 2023

FS-SA-DAT-R53-20230821