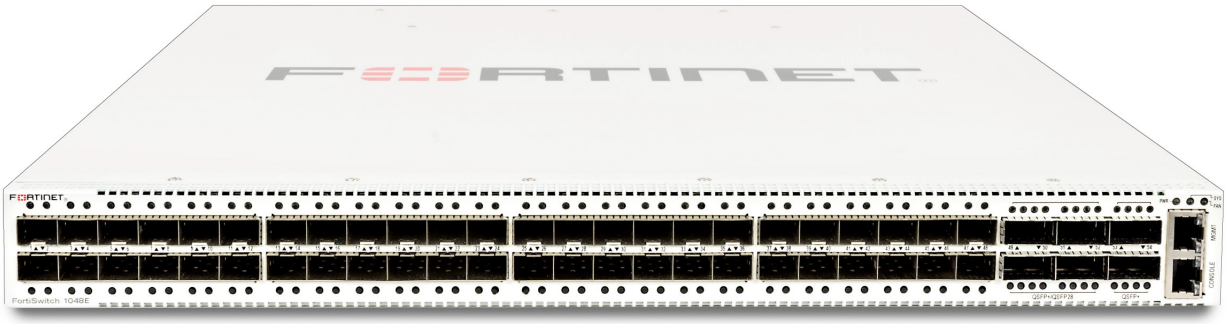
FortiSwitch™ Campus Core and Data Center

FS-1024E, FS-T1024E, FS-T1024F-FPOE, FS-1048E, FS-3032E, FS-2048F

Available in

Appliance



The FortiSwitch™ campus core and data center family excel in performance, security, and resiliency, making them the optimal choice for both campus core and data center networking needs.

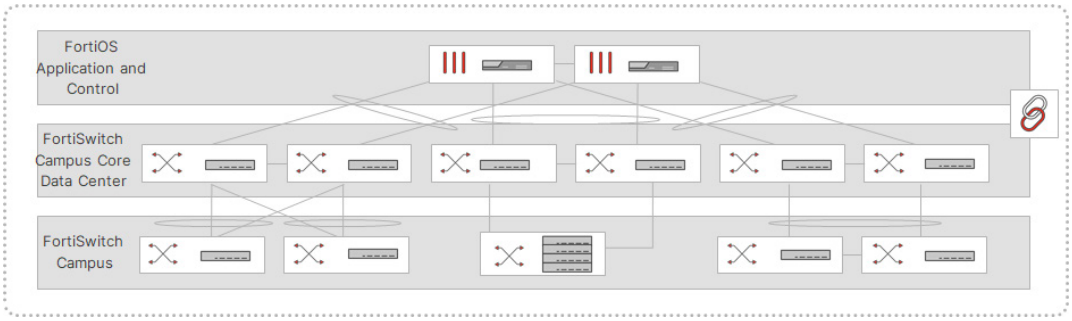
The proliferation of virtualization, cloud computing, and the increasing volume of data generated by users and IoT devices has necessitated dense high-bandwidth Ethernet networking and aggregation. In these environments, the paramount concerns are data security, performance, and resiliency. These dynamic settings demand efficient network management, monitoring, and optimization efforts while simplifying overall network complexity. The FortiSwitch campus core and data center switching architecture empowers network administrators with the requisite performance, control, and manageability for these demanding scenarios. Its seamless security integration and user-friendly management interface establish a robust foundation for your next-generation campus core or data center.

Highlights

- High throughput with low latency
- Standalone or Integrated deployment options
- Zero-touch deployment
- On premise and cloud based management
- Intuitive management
- Access control and policy enforcement
- Scalable and flexible
- Dual hot-swappable power supplies
- Up to 48 access ports in a compact 1 RU form

Secure Networking with FortiLink

FortiLink is an innovative proprietary management protocol, enabling seamless integration and centralized management between a FortiGate Next-Generation Firewall and the FortiSwitch Ethernet switching platform. FortiLink transforms the FortiSwitch into a logical extension of the FortiGate, streamlining the management of the both Ethernet data center and network security functions via unified interface. Offering high performance with low latency, FortiGate NGFW and FortiSwitch campus core and data center switching can support the demands of high-speed traffic inspection and segmentation.



Segmentation and Policy Enforcement

FortiSwitch campus core and data center switching architecture can augment and further the security policies at the FortiSwitch access switch layer and enable high speed data traffic segmentation through FortiLink. This process grants IT administrators control over traffic within segments and limits threat exposure. Policy enforcement is simplified, while next-generation firewall (NGFW)-level policies ensure effective security at the core of your network.

SASE

The FortiSwitch enterprise architecture establishes a foundation for zero-trust network access (ZTNA) and secure access service edge (SASE), offering flexibility in deploying the desired level of security at the network edge.

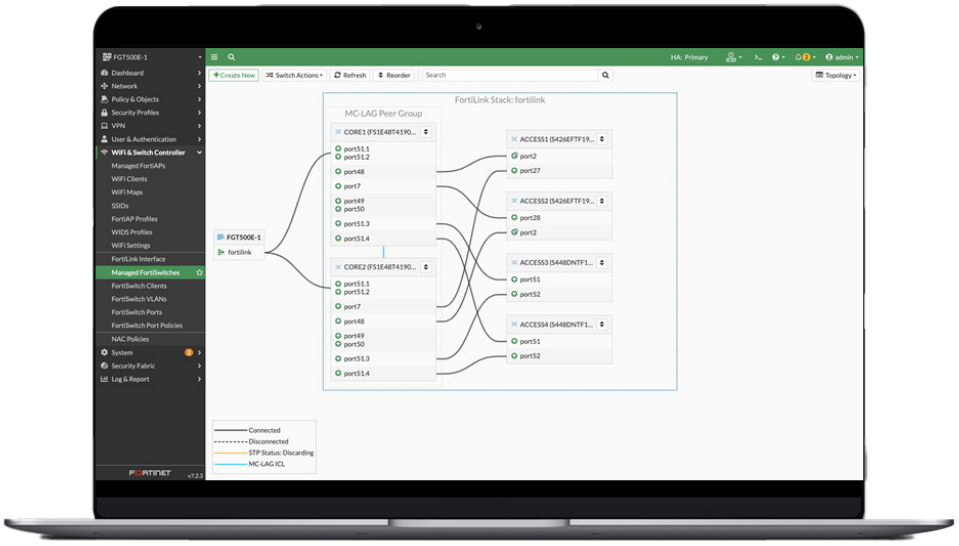
Operational Simplicity

FortiSwitch switching architecture enables secure deployment and management within minutes through zero-touch deployment. Whether in standalone or FortiLink mode, automation and orchestration offer intuitive workflows and unified views for provisioning, management, and optimization, accessible through both FortiCloud and on-premises management.

Centralized management provides a unified, single view encompassing both the LAN and security, ensuring a consistent user experience that optimizes operational efficiency while simplifying management, optimization, and troubleshooting. This activity results in a reduced mean time to repair for both network and security issues.

Scalable and Flexible Campus Core and Data Center

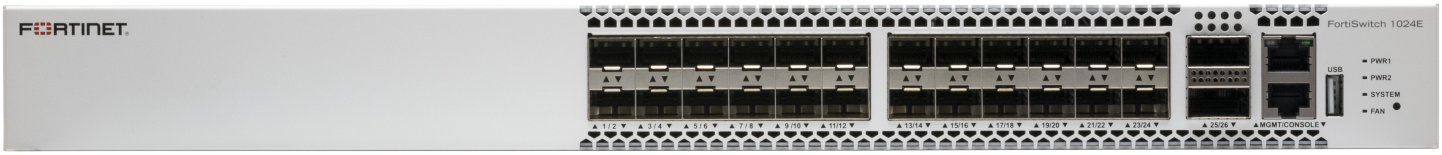
FortiSwitch enterprise architecture scales effortlessly to meet the demands of today's next-generation campus cores and data centers, all without compromising on security. Supporting up to 48 ports within a compact 1 RU form factor, FortiSwitch minimizes rack space usage while delivering the requisite performance and scalability. Each switch series in the campus core and data center family offers models that enable the administrator to choose the appropriate media for their environment through a wide range of Fortinet transceivers. This feature also applies to the uplinks, with speeds up to 100 GE supporting various media.



Campus Core and Data Center FortiOS

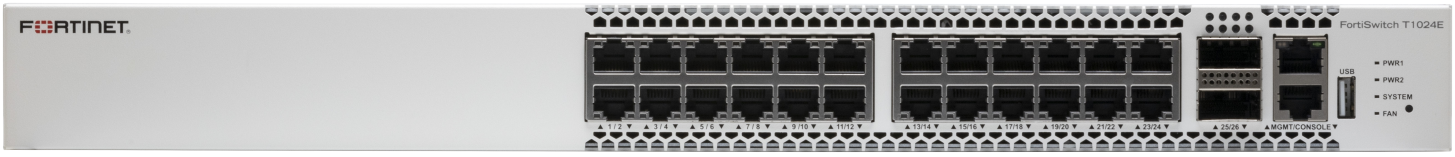
Campus Core and Data Center Cloud

Hardware



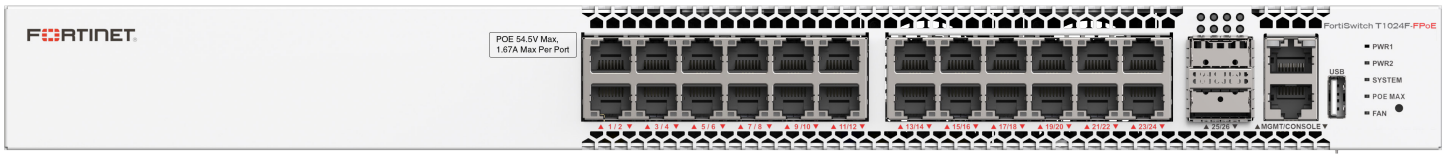
FortiSwitch 1024E — front

FortiSwitch 1024E — back

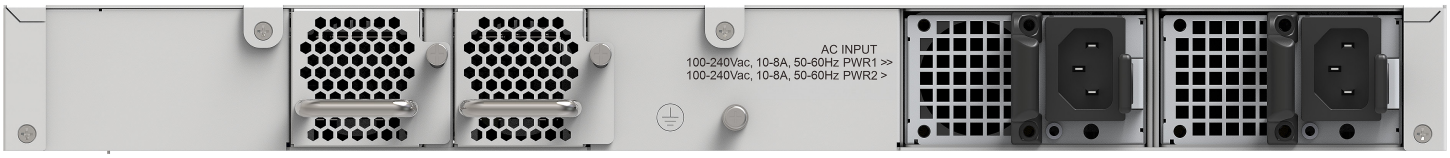


FortiSwitch T1024E — front

FortiSwitch T1024E — back

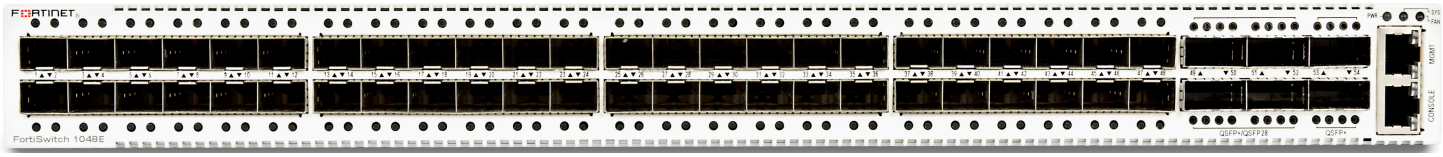


FortiSwitch T1024F-FPOE — front

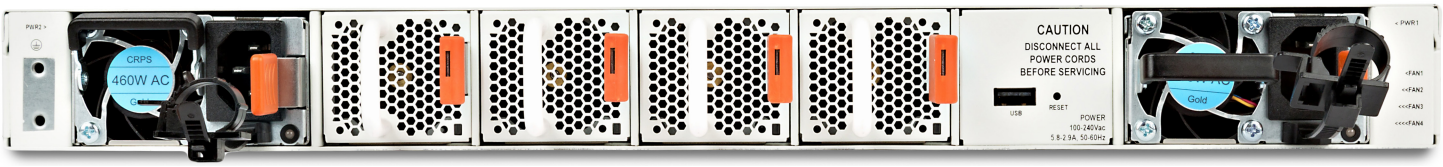


FortiSwitch T1024F-FPOE — back

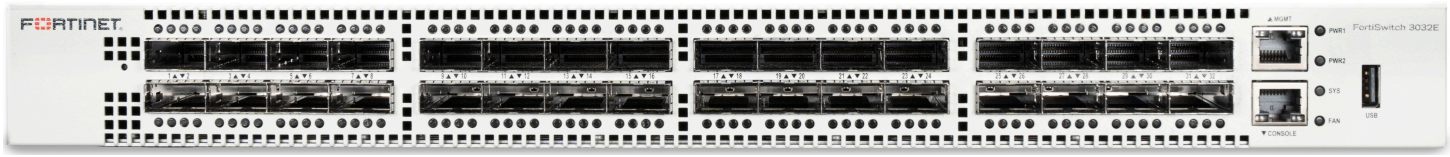
Hardware



FortiSwitch 1048E — front



FortiSwitch 1048E — back



FortiSwitch 3032E — front

FortiSwitch 3032E — back

FortiSwitch 2048F — front

FortiSwitch 2048F — back

Features

	FORTISWITCH E/F-SERIES FORTILINK MODE (WITH FORTIGATE)
Management and Configuration	
Auto Discovery of Multiple Switches	✓
Automated Detection and Recommendations	✓
Centralized VLAN Configuration	✓
Dynamic Port Profiles for FortiSwitch ports	✓
FortiLink Stacking (Auto Inter-Switch Links)	✓
FortiLink Secure Fabric	✓
FortiSwitch Management over VXLAN	✓
Health Monitoring	✓
IGMP Snooping	✓
L3 Routing and Services	✓ (FortiGate)
Link Aggregation Configuration	✓
LLDP/MED	✓
Number of Managed Switches per FortiGate	8 to 300 Depending on FortiGate Model (Please refer to admin-guide)
Policy-Based Routing	✓ (FortiGate)
Provision firmware upon authorization	✓
Software Upgrade of Switches	✓
Spanning Tree	✓
Switch POE Control	✓
Virtual Domain	✓ (FortiGate)
Security and Visibility	
802.1X Authentication (Port-based, MAC-Based, MAB)	✓
Block Intra-VLAN Traffic	✓
Clients Monitoring	✓
Device Detection	✓
DHCP Snooping	✓
DHCP/ARP Monitor	✓
FortiGuard IoT identification	✓
FortiSwitch recommendations in Security Rating	✓
FortiSwitch VLANs over VXLAN	✓
Host Quarantine on Switch Port	✓
Integrated FortiGate Network Access Control (NAC) function	✓
MAC Black/While Listing	✓ (FortiGate)
NAC Device Telemetry	✓
Network Device Detection	✓
Policy Control of Users and Devices	✓ (FortiGate)
Port Statistics	✓
Security Fabric Automation	✓
Switch Controller traffic collector	✓
Syslog Collection	✓
UTM Features	
Firewall	✓ (FortiGate)
IPC, AV, Application Control, Botnet	✓ (FortiGate)
Quality for Service Egress Priority Tagging	✓
Quality for Service Explicit Congestion Notification	✓
High Availability	
Active-Active Split LAG from FortiGate to FortiSwitches for Advanced Redundancy	✓
LAG Support for FortiLink Connection	✓
Support FortiLink FortiGate in HA Cluster	✓

Features

	FS-T1024F-FPOE	FS-1024E/FS-T1024E	FS-1048E	FS-2048F	FS-3032E
Layer 2					
Auto-Negotiation for Port Speed and Duplex	✓	✓	✓	✓	✓
Auto Topology	✓	✓	✓	✓	✓
Dynamically shared packet buffers	✓	✓	✓	✓	✓
Edge Port / Port Fast	✓	✓	✓	✓	✓
IEEE 802.1ad QnQ	✓	✓	✓	✓	✓
IEEE 802.1AX Link Aggregation	✓	✓	✓	✓	✓
IEEE 802.1D MAC Bridging/STP	✓	✓	✓	✓	✓
IEEE 802.1Q VLAN Tagging	✓	✓	✓	✓	✓
IEEE 802.1Qbb Priority-based Flow Control	✓	✓	✓	✓	✓
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)	✓	✓	✓	✓	✓
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)	✓	✓	✓	✓	✓
IEEE 802.3 CSMA/CD Access Method and Physical Layer Specifications	✓	✓	✓	✓	✓
IEEE 802.3ab 1000Base-T	✓	✓	✓	✓	✓
IEEE 802.3ad Link Aggregation with LACP	✓	✓	✓	✓	✓
IEEE 802.3ae 10 Gigabit Ethernet	✓	✓	✓	✓	✓
IEEE 802.3ba, 802.3bj, 802.3bm 40 and 100 Gigabit Ethernet	✓	✓	✓	✓	✓
IEEE 802.3by 25 Gigabit Ethernet	✓	✓	✓	✓	✓
IEEE 802.3bz Multi Gigabit Ethernet	✓	✓	—	—	—
IEEE 802.3u 100Base-TX	✓	✓	✓	✓	✓
IEEE 802.3x Flow Control and Back-pressure	✓	✓	✓	✓	✓
IEEE 802.3z 1000Base-SX/LX	✓	✓	✓	✓	✓
Ingress Pause Metering	✓	✓	✓	✓	—
Jumbo Frames	✓	✓	✓	✓	✓
LAG Min/Max Bundle	✓	✓	✓	✓	✓
Loop Guard	✓	✓	✓	✓	✓
MAC, IP, Ethertype-based VLANs	✓	✓	✓	✓	✓
PHY Forward Error Correction	✓	✓	✓	✓	✓
Private VLAN	✓	✓	✓	✓	✓
Rapid PVST Interoperation	✓	✓	✓	✓	✓
Spanning Tree Instances (MSTP/CST)	64	64	64	64	64
Split Port	✓	✓	✓	—	✓
Storm Control	✓	✓	✓	✓	✓
STP BPDU Guard	✓	✓	✓	✓	✓
STP Root Guard	✓	✓	✓	✓	✓
Unicast/Multicast traffic balance over trunking port (dst-ip, dst-mac, src-dst-ip, src-dst-mac, src-ip, src-mac)	✓	✓	✓	✓	✓
Virtual-Wire	✓	✓	✓	✓	✓
VLAN Mapping	✓	✓	✓	✓	✓

Features

	FS-T1024F-FPOE	FS-1024E / FS-T1024E	FS-1048E	FS-2048F	FS-3032E
Layer 3					
Bidirectional Forwarding Detection (BFD)	✓	✓	✓	✓	✓
BGP Ethernet VPN	✓	✓	✓	✓	✓
DHCP Relay	✓	✓	✓	✓	✓
DHCP Server	✓	✓	✓	✓	✓
Dynamic Routing Protocols (IPv4/IPv6)*	OSPF, RIP, VRRP, BGP, ISIS	OSPF, RIP, VRRP, BGP, ISIS	OSPF, RIP, VRRP, BGP, ISIS	OSPF, RIP, VRRP, BGP, ISIS	OSPF, RIP, VRRP, BGP, ISIS
ECMP	✓	✓	✓	✓	✓
Filtering Routemaps based on routing protocol	✓	✓	✓	✓	✓
IGMP Proxy / Querier	✓	✓	✓	✓	✓
IGMP Snooping	✓	✓	✓	✓	✓
IP Conflict Detection and Notification	✓	✓	✓	✓	✓
IPv6 Route Filtering	✓	✓	✓	✓	✓
L3 Host Entries (IPv4/IPv6)	16k/6k	16k/6k	16k/11k	16k/8k	16k/12k
MLD Proxy / Querier	✓	✓	✓	✓	✓
MLD Snooping	✓	✓	✓	✓	✓
Multicast Protocols*	PIM-SSM	PIM-SSM	PIM-SSM	PIM-SSM	PIM-SSM
Multicast Route Entries*	8k	8k	8k	8k	8k
Policy-based Routing*	✓	✓	✓	✓	✓
Route Entries (IPv4/IPv6)	8k/4k	8k/4k	14k/6k	16k/8k	8k/4k
Static Routing (Hardware-based)	✓	✓	✓	✓	✓
Unicast Reverse Path Forwarding (uRPF)	✓	✓	✓	✓	✓
VRF*	✓	✓	✓	✓	✓
VXLAN	✓	✓	✓	✓	✓
Security and Visibility					
ACL	3K	3K	4K	3K	1K
ACL Multiple Ingress	✓	✓	✓	✓	✓
ACL Multistage	✓	✓	✓	✓	✓
ACL Schedule	✓	✓	✓	✓	✓
Admin Authentication Via RFC 2865 RADIUS	✓	✓	✓	✓	✓
Assign VLANs via Radius attributes (RFC 4675)	✓	✓	✓	✓	✓
DHCP-Snooping	✓	✓	✓	✓	✓
Dynamic ARP Inspection	✓	✓	✓	✓	✓
FIPS 140-2 (level 2) support	✓	✓	✓	✓	✓
Flow Export (NetFlow and IPFIX)	✓	✓	✓	✓	✓
IEEE 802.1ab Link Layer Discovery Protocol (LLDP)	✓	✓	✓	✓	✓
IEEE 802.1ab LLDP-MED	✓	✓	✓	✓	✓
IEEE 802.1ae MAC Security (MAC Sec)	✓	✓	—	—	—
IEEE 802.1X Authentication MAC-based	✓	✓	✓	✓	✓
IEEE 802.1X Authentication Port-based	✓	✓	✓	✓	✓
IEEE 802.1X Dynamic VLAN Assignment	✓	✓	✓	✓	✓
IEEE 802.1X EAP Pass-Through	✓	✓	✓	✓	✓
IEEE 802.1X Guest and Fallback VLAN	✓	✓	✓	✓	✓
IEEE 802.1X MAC Access Bypass (MAB)	✓	✓	✓	✓	✓
IEEE 802.1X Open Auth	✓	✓	✓	✓	✓
IP Source Guard	✓	✓	✓	✓	✓
IPv6 RA Guard	✓	✓	✓	✓	✓
LLDP-MED ELIN support	✓	✓	✓	✓	✓
MAC-IP Binding	✓	✓	✓	✓	✓
Port Mirroring	✓	✓	✓	✓	✓
RADIUS Accounting	✓	✓	✓	✓	✓
RADIUS CoA	✓	✓	✓	✓	✓
sFlow	✓	✓	✓	✓	✓
Sticky MAC	✓	✓	✓	✓	✓
Wake on LAN	✓	✓	✓	✓	✓

* Requires 'Advanced Features' License

Features

	FS-T1024F-FPOE	FS-1024E / FS-T1024E	FS-1048E	FS-2048F	FS-3032E
High Availability					
Multi-Chassis Link Aggregation (MCLAG)	✓	✓	✓	✓	✓
Multi-Stage Load Balancing	✓	✓	✓	✓	✓
Quality of Service					
Egress Priority Tagging	✓	✓	✓	✓	✓
Explicit Congestion Notification	✓	✓	✓	✓	✓
IEEE 802.1p Based Priority Queuing	✓	✓	✓	✓	✓
IP TOS/DSCP Based Priority Queuing	✓	✓	✓	✓	✓
Percentage Rate Control	✓	✓	✓	✓	✓
Management					
Automation Stitches	✓	✓	✓	✓	✓
Display Average Bandwidth and Allow Sorting on Physical Port / Interface Traffic	✓	✓	✓	✓	✓
Dual Firmware Support	✓	✓	✓	✓	✓
HTTP / HTTPS	✓	✓	✓	✓	✓
IPv4 and IPv6 Management	✓	✓	✓	✓	✓
Link Monitor	✓	✓	✓	✓	✓
Managed from FortiGate	✓	✓	✓	✓	✓
Packet Capture	✓	✓	✓	✓	✓
PoE Control Modes	✓	—	—	—	—
RMON Group 1	✓	✓	✓	✓	✓
SNMP v1/v2c/v3	✓	✓	✓	✓	✓
SNMP v3 traps	✓	✓	✓	✓	✓
SNTP	✓	✓	✓	✓	✓
Software download/upload: SFTP/TFTP/FTP/GUI	✓	✓	✓	✓	✓
SPAN, RSPAN, and ERSPAN	✓	✓	✓	✓	✓
Standard CLI and web GUI interface	✓	✓	✓	✓	✓
Support for HTTP REST APIs for Configuration and Monitoring	✓	✓	✓	✓	✓
Syslog UDP/TCP	✓	✓	✓	✓	✓
System Alias Command	✓	✓	✓	✓	✓
System Temperature and Alert	✓	✓	✓	✓	✓
Telnet / SSH	✓	✓	✓	✓	✓
Services					
IEEE 1588 PTP (Transparent Clock)	✓	✓	✓	✓	✓

RFC Compliance

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

RFC and MIB Support*
IP Multicast
RFC 2710: Multicast Listener Discovery (MLD) for IPv6 (MLDv1)
RFC 3569: An Overview of Source-Specific Multicast (SSM)
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
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 and MIB supported by FortiSwitch Operating System. Check feature matrix in administration guide for model specific support.

RFC Compliance

RFC and MIB Support*
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 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)
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

RFC and MIB Support*
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)
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
VXLAN
RFC 7348: Virtual eXtensible Local Area Network (VXLAN)

* RFC and MIB supported by FortiSwitch Operating System. Check feature matrix in administration guide for model specific support.

Specifications

	FORTISWITCH 1024E	FORTISWITCH T1024E	FORTISWITCH T1024F-FPOE
Hardware Specifications			
Total Network Interfaces	24× 10G/1G SFP+/SFP ports and 2× 100G/40G QSFP28/QSFP+ ports	24× 10G/5G/2.5G/1G/100M BASE-T ports and 2× 100G/40G QSFP28/QSFP+ ports	24× 10G/5G/2.5G/1G/100M BASE-T ports and 2× 100G/40G QSFP28/QSFP+ ports
10/100/1000 Service Ports	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 (802.3 af/at/bt type 4)
PoE Power Budget	—	—	1440 W
System Specifications			
Switching Capacity (Duplex)	880 Gbps	880 Gbps	880 Gbps
Packets Per Second (Duplex) 64 bytes	1309 Mpps	1309 Mpps	1309 Mpps
Mac Address Storage	64k	64k	64k
Network Latency	~1µs	~1µs	~ 1µs
VLANs Supported	4k	4k	4k
IPv4/IPv6 Routing	✓	✓	✓
Link Aggregation Group Size	Up to 24	Up to 24	Up to 24
Total Link Aggregation Groups	Up to number of ports	Up to number of ports	Up to number of ports
Queues/Port	8	8	8
Packet Buffers	8 MB	8 MB	8 MB
Memory	8GB DDR4	8GB DDR4	8GB DDR4
Flash	32MB NOR	32MB NOR	32MB NOR
Drive	8GB SSD	8GB SSD	8GB SSD
Dimensions			
Height x Depth x Width (inches)	1.73 × 16.14 × 17.32	1.73 × 16.14 × 17.32	1.73 × 16.14 × 17.32
Height x Depth x Width (mm)	44 × 410 × 440	44 × 410 × 440	44 × 410 × 440
Weight	14.5 lbs (6.58 kg)	14.4 lbs (6.54 kg)	16.53 lbs (7.5 kg)
Environment			
Power Required	100–240V AC, 50–60 Hz	100–240V AC, 50–60 Hz	100–240V AC, 50–60 Hz
Power Consumption (Maximum)	176 W	128 W	1660W
Power Supply	Dual hot swappable AC	Dual hot swappable AC	Dual hot swappable AC
Heat Dissipation	599.13 BTU/h	436.48 BTU/h	5664 BTU/h
Operating Temperature	32°F to 113°F (0°C to 45°C)	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)	-40°F to 158°F (-40°C to 70°C)
Humidity	10% to 90% RH non-condensing	10% to 90% RH non-condensing	10% to 95% RH non-condensing
Air Flow	Front to back	Front to back	Front to back
Noise Level	56 dBA	57.3 dBA	64.5 dBa
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
Certification and Compliance			
		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 1048E	FORTISWITCH 2048F	FORTISWITCH 3032E
Hardware Specifications			
Total Network Interfaces	48× 10G/1G SFP+/SFP ports and 6× 40G QSFP+ ports or 4× 100G/40G QSFP28/QSFP+ ports	48× 25G/10G/1G SFP28/SFP+/SFP ports and 2× 10G/1G SFP+/SFP ports and 8× 100G/40G QSFP28/QSFP+ ports	32× 100G/40G QSFP28/QSFP+ ports
10/100/1000 Service Ports	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
System Specifications			
Switching Capacity (Duplex) *	1760 Gbps	4000 Gbps	6400 Gbps
Packets Per Second (Duplex) 64 bytes	1518 Mpps	4000 Mpps	5952 Mpps
Mac Address Storage	144 K	96k	72 K
Network Latency	< 800 ns	< 1 µs	< 1 µs
VLANs Supported	4 K	4k	4 K
IPv4/IPv6 Routing	✓	✓	✓
Link Aggregation Group Size	Up to 48	Up to 48	Up to number of ports
Total Link Aggregation Groups	Up to number of ports	Up to number of ports	Up to number of ports
Queues/Port	8	8	8
Packet Buffers	12 MB	32 MB	16 MB
Memory	8GB DDR3	8GB DDR4	8BG DDR3
Flash	128MB NOR	8GB NAND	128MB NOR
Drive	128GB SSD	32GB SSD	128GB SSD
Dimensions			
Height x Depth x Width (inches)	1.69 × 18.11 × 17.26	1.71 × 18.11 × 17.26	1.69 × 18.11 × 17.26
Height x Depth x Width (mm)	43 × 460 × 438.5	43.5 × 460 × 438.5	43 × 460 × 438.5
Weight	18.96 lbs (8.6 kg)	21.78 lbs (9.88 kg)	19.34 lbs (8.77 kg)
Environment			
Power Required	100–240V AC, 50–60 Hz	100–240V AC, 50–60 Hz	100–240V AC, 50–60 Hz
Power Consumption (Maximum)	up to 181.7 W	175,7 W	up to 463.8 W
Power Supply	Dual hot swappable AC	Dual hot swappable AC	Dual hot swappable AC
Heat Dissipation	620.4 BTU/h	406 BTU/h	1582.5 BTU/h
Operating Temperature	32°F to 113°F (0°C to 45°C)	32°F to 104°F (0°C to 40°C)	32°F to 104°F (0°C to 40°C)
Storage Temperature	-4°F to 158°F (-20°C to 70°C)	-13°F to 158°F (-25°C to 70°C)	-4°F to 158°F (-20°C to 70°C)
Humidity	10% to 90% RH non-condensing	10% to 90% RH non-condensing	10% to 90% RH non-condensing
Air Flow	Front to back	Front to back	Front to back
Noise Level	59 dBA	69.36 dBA	69.1 dBA
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
Certification and Compliance			
		FCC, CE, RCM, VCCI, BSMI, UL, CB, RoHS2	
Warranty			
Fortinet Warranty		Limited lifetime** warranty on all models	

* Full line rate with minimum packet size of 427 bytes on FS-1048E, 250 bytes on FS-3032E, and 110 bytes on FS-2048F when 2×10G ports are not in use
** Fortinet Warranty Policy: http://www.fortinet.com/doc/legal/EULA.pdf

Ordering Information

Product	SKU	Description
FortiSwitch 1024E	FS-1024E	Layer 2/3 FortiGate switch controller compatible switch with 24x GE/10GE SFP/SFP+ slots and 2× 100GE QSFP28. Dual AC power supplies.
FortiSwitch T1024E	FS-T1024E	Layer 2/3 FortiGate switch controller compatible switch with 24× 1G/2.5G/5G/10GBase-T slots and 2 × 100GE QSFP28. Dual AC power supplies.
FortiSwitch T1024F-FPOE	FS-T1024F-FPOE	Layer 2/3 FortiGate switch controller compatible PoE 802.3bt switch with 24 × 10G/5G/2.5G/1G RJ45 and 2 × 100GE QSFP28 ports. Max 1440W PoE output limit. Dual AC power supplies.
FortiSwitch 1048E	FS-1048E	Layer 2/3 FortiGate switch controller compatible switch with 48x GE/10 GE SFP/SFP+ slots and 6× 40 GE QSFP+ or 4× 100 GE QSFP28. Dual AC power supplies.
FortiSwitch-3032E	FS-3032E	Layer 2/3 FortiGate switch controller compatible switch with 32× 100 GE QSFP28, Dual AC power supplies.
FortiSwitch 2048F	FS-2048F	Layer 2/3 FortiGate switch controller compatible switch with 48× 25G SFP28 + 8× 100G QSFP28 + 2× 10G SFP+. Dual AC power supplies.
FortiEdge Cloud Management License	FC-10-FSW30-628-02-DD	FortiSwitch 1000 Series and above FortiEdge Cloud Management SKU Including FortiCare Premium (Note, FortiCare only applicable when used with FortiEdge Cloud)
FortiGate Cloud Management*	FC-10-0030E-131-02-DD	FortiGate Cloud Management, Analysis and 1 Year Log Retention.
FortiSwitchManager 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.
Accessories		
FortiSwitch Advanced Features License	FS-SW-LIC-1000	SW License for FS-1000 Series Switches to activate Advanced Features.
	FS-SW-LIC-2000	SW License for FS-2000 Series Switches to activate Advanced Features.
	FS-SW-LIC-3000	SW License for FS-3000 Series Switches to activate Advanced Features.
AC Power Supply	FS-PSU-460	Spare AC power supply for FS-1048E/1024D.
	FS-PSU-800	Spare AC power supply for FS-3032E.
	FS-PSU-300	Spare AC power supply for FS-1024E and FS-T1024E

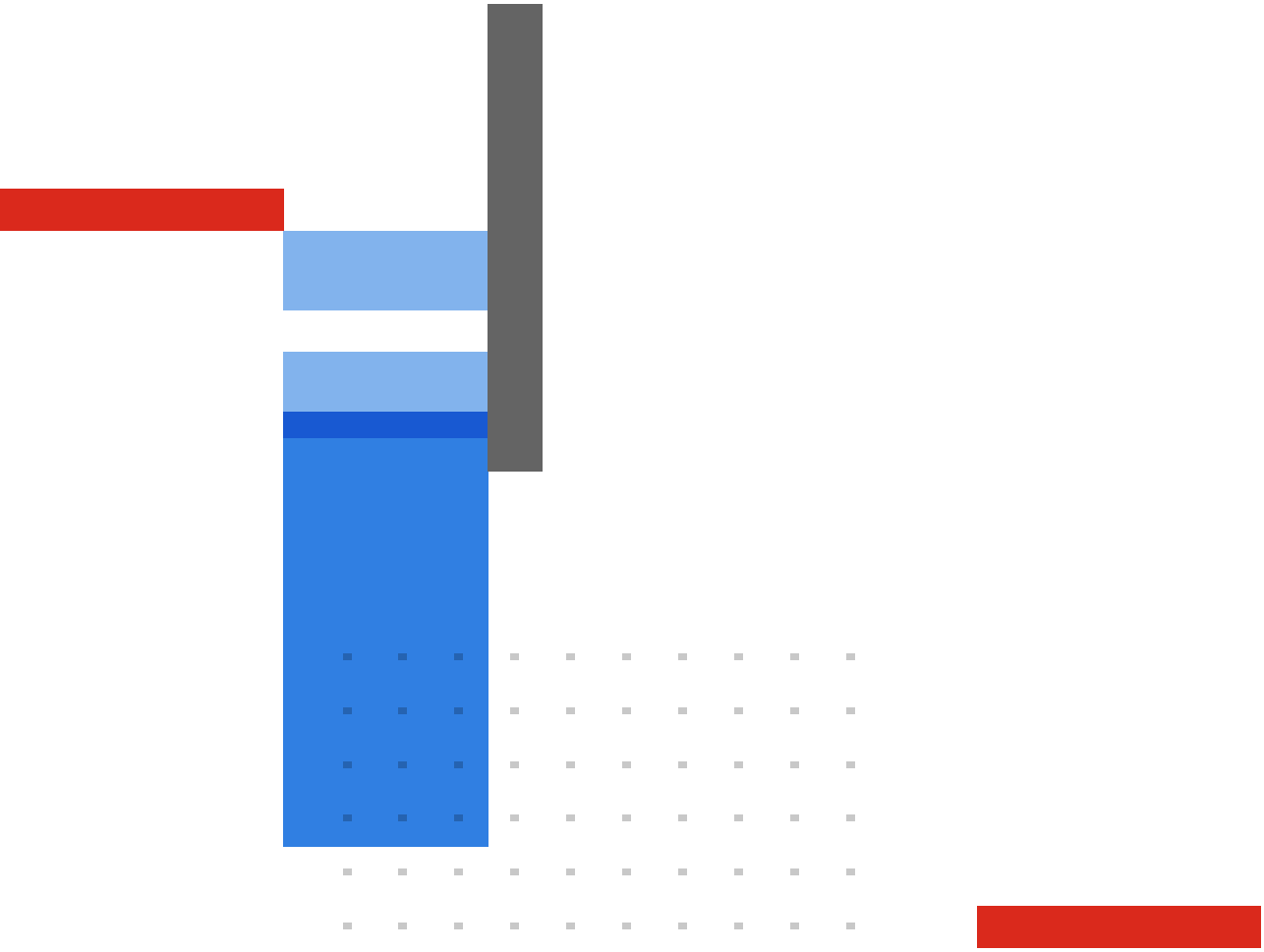
* When managing a FortiSwitch with a FortiGate via FortiGate Cloud, no additional license is necessary.

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

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

Fortinet Corporate Social Responsibility 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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