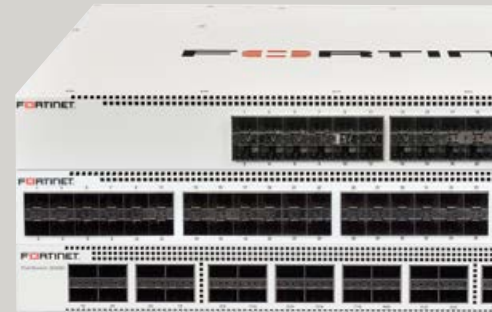




FortiSwitch™
Data Center Switches



FortiSwitch

FortiSwitch 1024D, 1048D and 3032D

Data Center Switches

FortiSwitch Data Center switches deliver outstanding throughput, resiliency and scalability for organizations with high performance network requirements. They are ideal for Top of Rack server or firewall aggregation applications, as well as enterprise network core or edge deployments, where high performance 10 GE or 40 GE is required. Purpose-built to meet the needs of today's bandwidth intensive data centers and enterprise networks, FortiSwitch Data Center switches deliver high-performance with a low Total Cost of Ownership.

High-performance and resilient managed data center switch

Designed in a compact 1 RU form factor, FortiSwitch Data Center switches are equipped with dual hot swappable power supplies to maximize network uptime. With 10 GE access ports and a high-throughput backplane, the FortiSwitch Data Center switches satisfy the Top of Rack server or firewall aggregation performance requirements of today's virtualization centric data centers.

Advanced Link Aggregation with 802.11ad and Link Aggregation Control Protocol provide increased uplink, server aggregation, or firewall aggregation throughput. Other advanced switch capabilities, such as large MAC address tables, jumbo frame support and port security, are standard features.

The high speed switching fabric is also well suited to enterprise network core or backbone network installations. FortiSwitch Data Center switches are a future-proof investment, providing the flexibility of deploying 1 GE, 10 GE or even 40 GE if required.

Key Features & Benefits

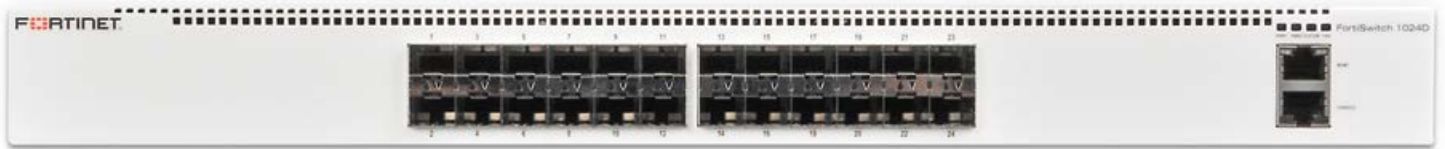
10 GE Capability	Future-proofed 10 GE to satisfy the bandwidth requirements of intensive data center and network core applications.
Dual Power Supply Units	Maximizes network availability by eliminating the downtime associated with single power supplies.
Web and CLI Management	Configuration and visibility into the network is made simple via a web-based interface or CLI.

Purpose-built to meet the needs of today's bandwidth intensive data centers and enterprise networks, FortiSwitch Data Center switches deliver high-performance with a low Total Cost of Ownership.

Highlights

- High capacity switch suitable for Top of Rack or enterprise network deployments.
- Maximum availability through dual hot swappable power supplies.
- Simply management via a web-based or command line interface.
- Switch security features protect vulnerable infrastructure without adding latency.
- 1 GE or 10 GE access ports, in a compact 1 RU form factor.
- 40 GE capability option.

HARDWARE



FortiSwitch 1024D — front



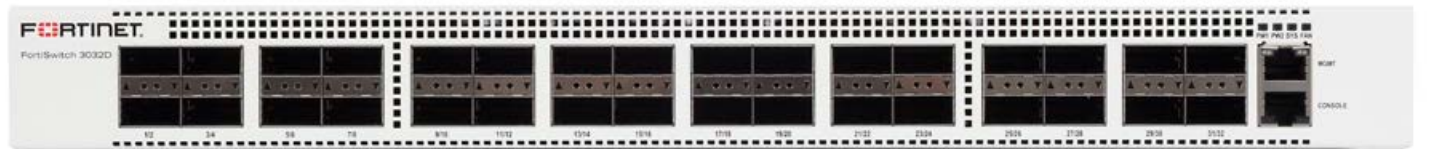
FortiSwitch 1024D — back



FortiSwitch 1048D — front



FortiSwitch 1048D — back



FortiSwitch 3032D — front



FortiSwitch 3032D — back

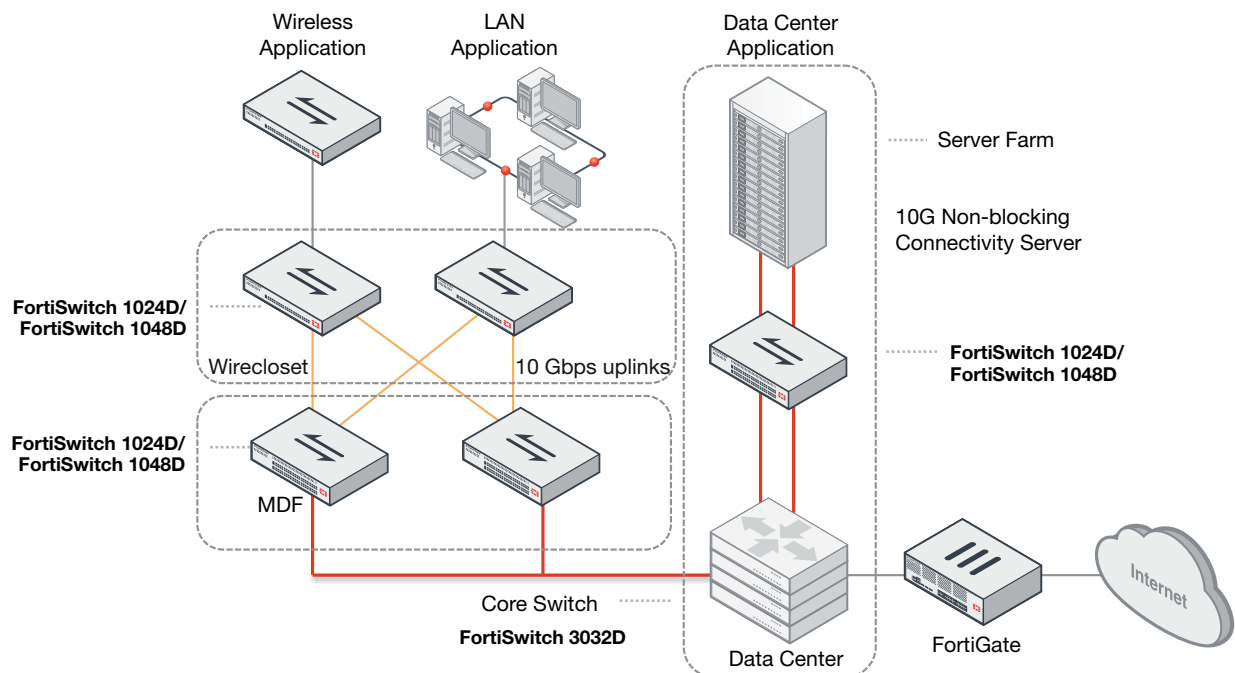
DEPLOYMENT

CAPABILITIES: FORTILINK MODE VS. STANDALONE MODE

	FS-1024D, FS-1048D and FS-3032D	
	STANDALONE SWITCH	FORTILINK MODE (FORTIGATE)
Security		
802.1x Port Authentication	Yes	Yes
MAC Address-Based Authentication	No	Yes
MAC Black/White Listing	No	Yes
Layer 3,4 Stateful Firewall to Control Access	No	Yes
TACACS+/RADIUS Admin Access	Yes	Yes
DHCP Relay/DHCP Snooping	No	Yes
Virtual Domain	No	Yes
Routing		
Layer 3, Dynamic Routing	No	Yes
Inter-VLAN Routing	No	Yes
Policy-Based Routing	No	Yes
DNS Server	No	Yes
VLANs Supported	4K	1K
Management		
Auto Discovery of Multiple Switches	1	16 (model dependent)
Software Upgrade of Switches	1 switch	Central upgrade of each switch
VLAN Configuration	1 switch	Central VLAN provisioning of entire switch network
Policy Control of Users and Devices	No	Yes
Syslog Collection	Yes	Yes (FortiGate syslog only)
Switch POE Control	Yes	Yes**
LAG support from FortiSwitch to FortiGate	Yes	Yes**
High Availability		
Support for FortiGate in HA cluster	Yes	Yes**
UTM Features		
Firewall	No	Yes
IPS, AV, Application Control	No	Yes

** Roadmap

FortiSwitch 1024D/1048D/3032D deployment example



FEATURES

	FORTISWITCH 1024D	FORTISWITCH 1048D	FORTISWITCH 3032D
Layer 2			
Jumbo Frames	Yes	Yes	Yes
IEEE 802.1D MAC Bridging/STP (compatibility mode)	Yes	Yes	Yes
IEEE 802.1w Rapid Spanning Tree Protocol (RSTP, compatibility mode)	Yes	Yes	Yes
IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)	Yes	Yes	Yes
IEEE 802.1p Mapping to Priority Queue	No	No	No
Spanning Tree Instances (MSTP/CST)	15/1	15/1	15/1
IEEE 802.1Q VLAN Tagging	Yes	Yes	Yes
IEEE 802.3ad Link Aggregation with LACP	Yes	Yes	Yes
IEEE 802.1AX Link Aggregation	Yes	Yes	Yes
IEEE 802.3x Flow Control and back-pressure	Yes	Yes	Yes
IEEE 802.3u 100Base-TX	No	No	No
IEEE 802.3z 1000Base-SX/LX	Yes	Yes	Yes
IEEE 802.3ab 1000Base-T	Yes	Yes	No
802.3ae 10 Gigabit Ethernet	Yes	Yes	Yes
802.3 CSMA/CD Access Method and Physical Layer Specifications	Yes	Yes	Yes
Storm Control	Yes	Yes	Yes
Private VLAN	Yes	Yes	Yes
Layer 3			
Static Routing (Hardware-based)	Yes	Yes	Yes
Number of Direct Attached Hosts	ipv4=16K, ipv6=8K	ipv4=16K, ipv6=8K	ipv4=16K, ipv6=8K
Dynamic Routing	No	No	No
L3 Host/ARP Entries	16K	16K	16K
Services			
IGMP Snooping (v1/v2/v3)	4K groups	4K groups	4K groups
Security			
Port Mirroring	Yes	Yes	Yes
Admin Authentication Via RFC 2865 RADIUS	Yes	Yes	Yes
sFlow	Yes	Yes	Yes
ACL Tables	Yes, 2K entries	Yes, 2K entries	Yes, 2K entries
802.1x Authentication	Yes	Yes	Yes
Management			
Telnet / SSH	Yes	Yes	Yes
SNMP v1/v2c/v3	Yes	Yes	Yes
CLI and Web GUI Interface	Yes	Yes	Yes
Managed from FortiGate	Yes	Yes	Yes
RFC and MIB Support			
RFC 2571 Architecture for Describing SNMP Framework	Yes	Yes	Yes
RFC 2131 DHCP	Yes	Yes	Yes
RFC 854 TELNET Server	Yes	Yes	Yes
RFC 2865 RADIUS	Yes	Yes	Yes
RFC 1643 Ethernet-like Interface MIB	Yes	Yes	Yes
RFC 3176 sFlow	No	No	No
RFC 1213 MIB-II	Yes	Yes	Yes
RFC 1354 IP Forwarding Table MIB	Yes	Yes	Yes
RFC 2572 SNMP Message Processing and Dispatching	Yes	Yes	Yes
RFC 1573 SNMP MIB II	Yes	Yes	Yes
RFC 1157 SNMPv1/v2c*	Yes	Yes	Yes
RFC 2030 SNTP	Yes	Yes	Yes

* Tested with Solarwinds NPM tool. Please refer to FortiSwitch Admin Guide for details on setup.

SPECIFICATIONS

	FORTISWITCH 1024D	FORTISWITCH 1048D	FORTISWITCH 3032D
Hardware Specifications			
Total Network Interfaces (Proposed)	24x GE/10 GE SFP+ ports	48x GE/10 GE SFP+ ports, 4x 40 GE QSFP+ ports	32x 40 GE QSFP+ ports
10/100/1000 Service Ports	1	1	1
RJ-45 Serial Console Port	1	1	1
Form Factor	1 RU Rack-Mount Appliance	1 RU Rack-Mount Appliance	1 RU Rack-Mount Appliance
System Specifications			
Switch Type	Web and CLI Managed	Web and CLI Managed	Web and CLI Managed
Switch Capacity	480 Gbps	1280 Gbps	2560 Gbps
Packets Per Second	714 Mpps	1920 Mpps	3840 Mpps
Mac Address Storage	128000	128000	128000
Network Latency	< 1us	< 1us	< 1us
VLANs Supported	4k	4k	4k
Link Aggregation Group Size	up to 24	Up to 24	Up to 24
Total Link Aggregation Groups	12	24	16
Queues/port	10 CoS, 5 multicast	10 CoS, 5 multicast	10 CoS, 5 multicast
Packet buffers	9 MB	9 MB	12 MB
DRAM	2 GB	2 GB	2 GB
NAND	128 MB	128 MB	128 MB
Dimensions			
Height x Width x Length (inches)	1.71 x 17.26 x 18.11	1.71 x 17.26 x 18.11	1.71 x 17.26 x 18.11
Height x Width x Length (mm)	43.5 x 438.5 x 460	43.5 x 438.5 x 460	43.5 x 438.5 x 460
Weight	17.62 lbs (8 kg)	19.40 lbs (8.8 kg)	19.40 lbs (8.8 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 140 W	up to 215.3 W	up to 387 W
Power Supply	Dual hot swappable AC	Dual hot swappable AC	Dual hot swappable AC
Operating Temperature	32–104°F (0–40°C)	32–104°F (0–40°C)	32–104°F (0–40°C)
Storage Temperature	-13–158°F (-25–70°C)	-13–158°F (-25–70°C)	-13–158°F (-25–70°C)
Humidity	10–90% RH non-condensing	10–90% RH non-condensing	10–90% RH non-condensing
Mean Time Between Failures	> 10 years	> 10 years	> 10 years
Warranty			
Fortinet Warranty	Limited lifetime* warranty on all models		

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

ORDER INFORMATION

Product	SKU	Description
FortiSwitch 1024D	FS-1024D	L2 Switch — 24x GE/10 GE SFP/SFP+ slots, dual AC power supplies.
FortiSwitch 1048D	FS-1048D	L2 Switch — 48x GE/10 GE SFP/SFP+ slots, 4x 40 GE QSFP+ slots, dual AC power supplies.
FortiSwitch 3032D	FS-3032D	L2 Switch — 32x 40 GE QSFP+ slots, dual AC power supplies.
Accessories		
40 GE QSFP+ Transceivers, Short Range	FG-TRAN-QSFP+SR	40 GE QSFP+ transceivers, short range for all systems with QSFP+ slots.
10 GE SFP+ Transceiver Module, Short Range	FG-TRAN-SFP+SR	10 GE SFP+ transceiver module, short range for all systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Long Range	FG-TRAN-SFP+LR	10 GE SFP+ transceiver module, long range for all systems with SFP+ and SFP/SFP+ slots.
10 GE SFP+ Transceiver Module, Short Range	FS-TRAN-SFP+SR	10 GE SFP+ transceiver module, short range for FortiSwitch with SFP+ and SFP/SFP+ slots.



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