# FortiSwitch™ Data Center Series

**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.
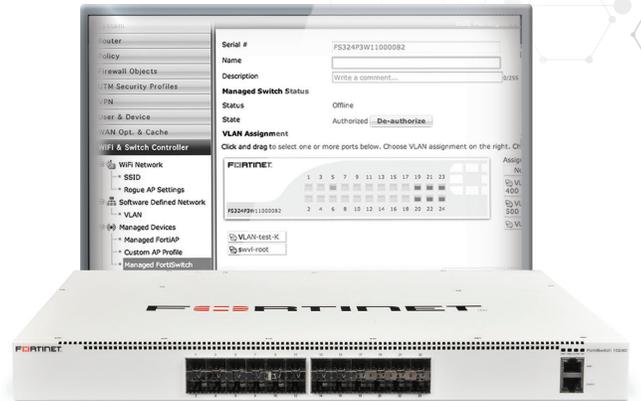
## Security Fabric Integration

Reduces complexity and decreases management cost with network security functions managed through a single console via FortiGate.

This integration allows all users to be authenticated against the same user database, regardless of whether they connect to the wired or wireless network, including temporary guest users.

In addition, same security policy can apply to a user or device regardless of how or where they connect to the network.

## Designed for Data Centers

Future-proofed 10 GE to satisfy the bandwidth requirements of intensive data center and network core applications and maximizes network availability with dual power supplies.

## Product Offerings

FortiSwitch 1024D, 1048D and 3032D

## 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

# DEPLOYMENT

## FortiLink Mode

The FortiSwitch Secure Access Switch series integrates directly into the FortiGate* Connected UTM, with switch administration and access port security managed from the familiar FortiGate interface. Regardless of how users and devices connect to the network, you have complete visibility and control over your network security and access through this single pane of glass, perfectly suited to threatconscious organizations of any size.
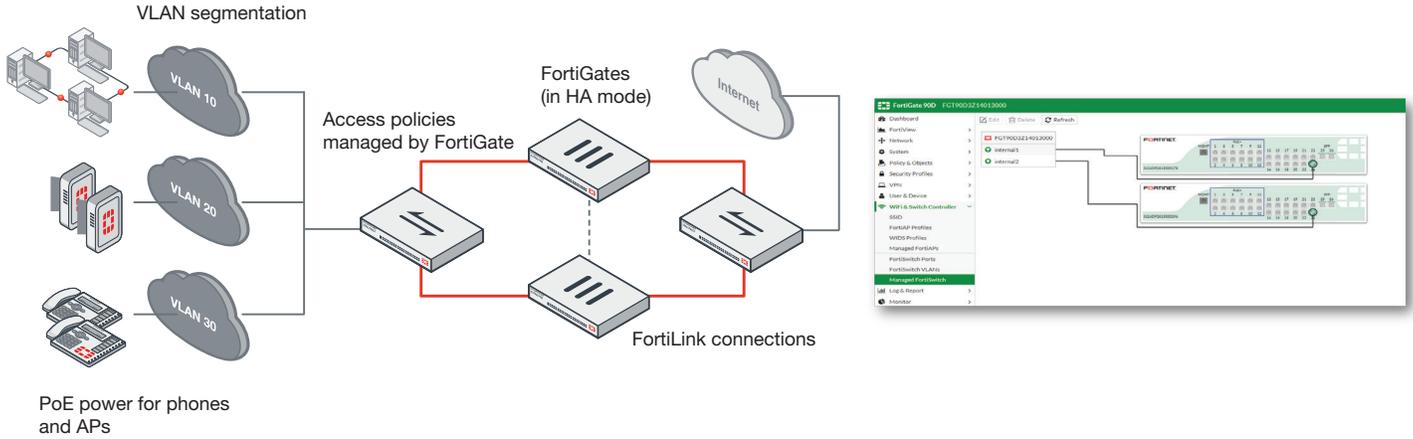


* Selected models only

## Standalone Mode

Virtualization and cloud computing have created dense high-bandwidth Ethernet networking requirements in the data center, pushing the limits of existing data center switching. FortiSwitch Data Center switches meet these challenges by providing a high performance 10 or 40 GE capable switching platform, with a low Total Cost of Ownership. Ideal for Top of Rack server or firewall aggregation applications, as well as enterprise network core or distribution deployments, these switches are purpose-built to meet the needs of today's bandwidth intensive environments.
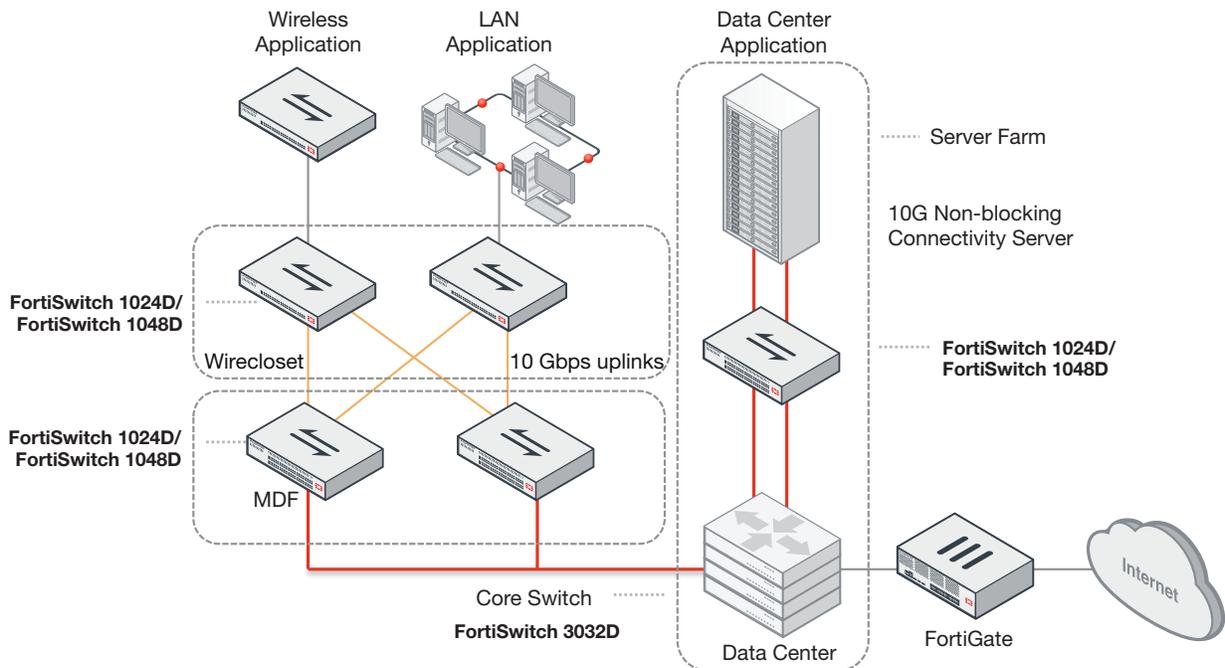
# HARDWARE
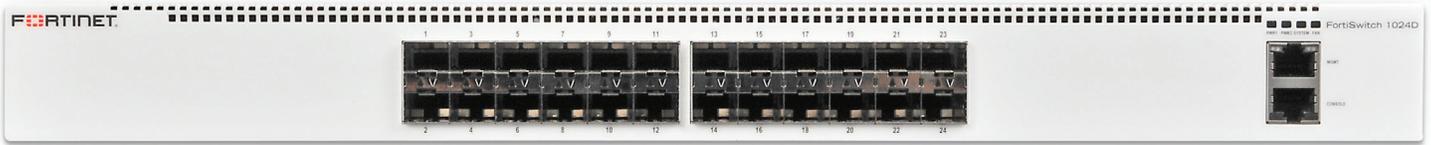


FortiSwitch 1024D — front



FortiSwitch 1024D — back
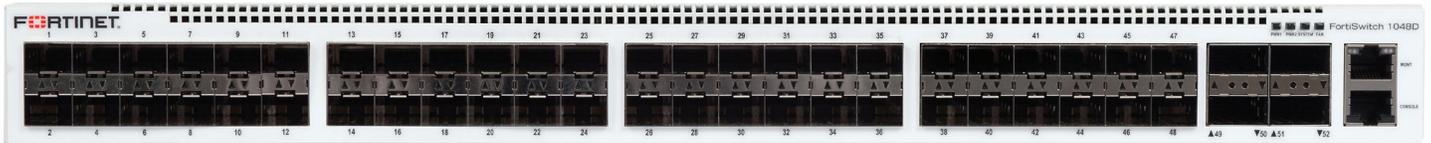


FortiSwitch 1048D — front



FortiSwitch 1048D — back
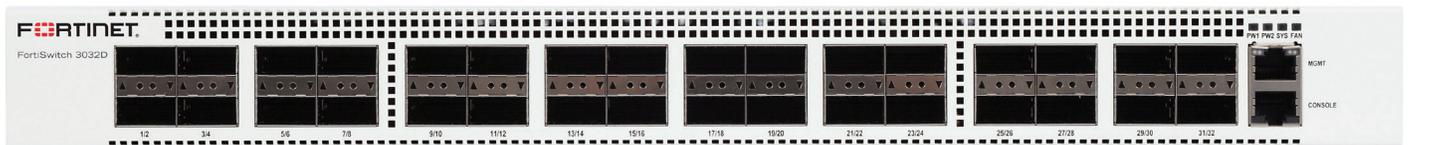


FortiSwitch 3032D — front



FortiSwitch 3032D — back

# FEATURES

| | 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 | Yes | 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

**www.fortinet.com**

# SPECIFICATIONS

| | 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 | Yes | Yes | Yes |
| 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 |
| Unicast/Multicast traffic balance over trunking port (dst-ip, dst-mac, src-dst-ip, src-dst-mac, src-ip, src-mac) | 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 |
| MAC, IP, Ethertype-based VLANS | Yes | Yes | Yes |
| Virtual-Wire | 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) | | Please refer to the Release Notes. | |
| **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 (Port and Mac-based) | Yes | Yes | Yes |
| MAC-IP Binding | 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 |
| Support for HTTP REST APIs for Configuration and Monitoring | 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



FortiSwitch 1024D



FortiSwitch 1048D



FortiSwitch 3032D

# 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. |
| 1 GE SFP RJ45 transceiver module | FS-TRAN-GC | 1 GE SFP RJ45 transceiver module for FortiSwitch D Series with SFP and SFP/SFP+ slots. |
| 1 GE SFP LX transceivers, SMF, -40–85°C operation | FR-TRAN-LX | 1 GE SFP LX transceiver module, -40–85°C, over SMF, for all systems with SFP and SFP/SFP+ slots. |
| 1 GE SFP SX transceiver module | FG-TRAN-SX | 1 GE SFP SX transceiver module for all systems with SFP and SFP/SFP+ slots. |
| 1 GE SFP transceivers, 90km range, -40–85°C operation | FR-TRAN-ZX | 1 GE SFP transceivers, -40–85°C operation, 90km range, for all systems with SFP slots. |
| 10 GBase-LRM SFP+ transceivers | FS-TRAN-SFP+LRM | 10 Gbase-LRM SFP+ transceivers, 1310nm, 220m (MM 62.5/50um fiber) range for systems with SFP+ slots. |
| 10 GBase-ER SFP+ transceivers | FS-TRAN-SFP+ER | 10 Gbase-ER SFP+ transceivers, 1550nm. single mode. 40km range, for systems with SFP+ slots. |

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