FortiSwitch Data Center switches deliver outstanding throughput, resiliency and scalability for organizations with high performance data center 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 GbE is required. Purpose-built to meet 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 switches

Both the FortiSwitch-548B and 248B-DPS are 1 RU form factors, equipped with dual hot swappable power supplies to maximize network uptime. 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 FortiSwitch-548B is Fortinet’s flagship data center switch, delivering up to 960 Gbps of aggregate Ethernet switching capacity over 48 SFP+ ports, capable of either 1 or 10 GbE speeds. With a 10 GbE switching fabric in a compact 1 RU switch, the FortiSwitch-548B satisfies Top of Rack server or firewall aggregation requirements of today’s data centers. The high speed switching fabric of the FortiSwitch-548B is also well suited to 10 GbE enterprise network core or backbone network installations. The FortiSwitch-548B is a future-proof investment, enabling 1 GbE to be deployed today, while enabling the upgrade to 10 GbE in the future.

The FortiSwitch-248B-DPS is a high performance 1 GbE switch, with 4 dual-speed 1/10 GbE SFP+ uplinks ports, which can be aggregated together to provide up to 40 Gbps of total uplink throughput. This switching platform is designed for data center Top of Rack installations, or as a high performance network access switch for the enterprise wire closet. The FortiSwitch-248B-DPS ensures compatibility with existing 1 GbE equipment, while providing a 10 GbE uplink capability for increased throughput to the enterprise network core.

### Highlights

- High capacity switches suitable for Top of Rack or enterprise network deployments.
- Up to 48 dual-speed 1 GbE or 10 GbE ports, in a compact 1 RU form factor.
- Up to 960 Gbps throughput and 128K MAC addresses support with 80 Gbps link aggregation.
- Maximum availability through dual hot swappable power supplies.
- Simple management via a web-based or command line interface.
- Switch security features protect vulnerable infrastructure without adding latency.
Key Features & Benefits

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Density in a Small Form Factor</td>
<td>48 ports in a 1 RU package, facilitates flexible deployment of network segments and easily enables network expansion.</td>
</tr>
<tr>
<td>10 GbE Capability</td>
<td>Future proofed 10 GbE to satisfy the bandwidth requirements of intensive data center and network core applications.</td>
</tr>
<tr>
<td>Dual Power Supply Units</td>
<td>Maximizes network availability by eliminating the downtime associated with single power supplies.</td>
</tr>
<tr>
<td>Web and CLI Management</td>
<td>Configuration and visibility into the network is made simple via a web-based interface or CLI.</td>
</tr>
</tbody>
</table>

FortiSwitch 548B/248B-DPS Deployment Example

![FortiSwitch 548B/248B-DPS Diagram](image-url)
FEATURES

Layer 2
- Wire speed L2 switching performance
- 10/100/1000 BASE-T ports supporting auto-sensing, auto-negotiation
- Flow control
  - IEEE 802.3x full duplex mode
  - Back-pressure flow control in half duplex mode
- Broadcast, unicast and multicast storm protection
- IGMP snooping
- VLAN
  - IEEE 802.1Q VLAN
  - GARP/GVRP/GMRP
  - Up to 512 VLANs, with up to 3965 VLAN IDs
  - Port-based VLAN
  - Protocol-based VLAN Spanning Tree
  - IEEE 802.1q Multiple Spanning Tree
  - Link aggregation
    - Up to 6 trunk groups
    - Up to 8 ports per trunk group
    - 802.3ad link aggregation and LACP
    - Static trunk group
  - Load balance for unicast and multicast traffic
  - Port mirror (many-to-1)

Multicast
- Layer-2 IGMP snooping

Quality of Service
- 802.1p-based CoS
  - 8 priority queues per port
- IP TOS/precedence-based CoS
- DSCP-based CoS
- Policy-based DiffServ
  - IEEE 802.1d Spanning Tree Protocol
  - IEEE 802.1s Multiple Spanning Tree Protocol
- Link aggregation
  - Up to 6 trunk groups
  - Up to 8 ports per trunk group
  - 802.3ad link aggregation and LACP
  - Static trunk group
  - Load balance for unicast and multicast traffic
  - Port mirror (many-to-1)

Performance Specifications
- Forwarding mode: Store-and-forward
- Mean Time Between Failures (MTBF): 198,185 hours for FortiSwitch-548B and 46,140 hours for FortiSwitch-248B-DPS

Security
- User/password-protected system management
- RADIUS client
- TACACS+ client
- SSH v1/v2
- SSL v3/TLS v1
- IEEE 802.1X
- Port MAC lock

Quality of Service
- 802.1p-based CoS
  - 8 priority queues per port
- IP TOS/precedence-based CoS
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- Policy-based DiffServ
  - IEEE 802.1d Spanning Tree Protocol
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- Link aggregation
  - Up to 6 trunk groups
  - Up to 8 ports per trunk group
  - 802.3ad link aggregation and LACP
  - Static trunk group
  - Load balance for unicast and multicast traffic
  - Port mirror (many-to-1)

Management
- Web switch management
- BOOTP and DHCP for IP address assignment
- DHCP relay
- XMODEM/FTP/TFTP
- Dual firmware images
  - Up to three configuration files including factory default
- SSH v1/v2
  - SNMP v1, v2c, and v3 switch management
  - Private Enterprise MIB
- RMON groups 1, 2, 3, and 9
- Port mirror (many-to-1)

System Parameters
- Maximum RADIUS servers — 3
- Maximum RADIUS accounting servers — 1
- Maximum TACACS servers — 3
- Maximum IP filter addresses — 5
- Maximum telnet or SSH sessions — 5
- Maximum WEB sessions — 8
- Number of 802.1p traffic classes — 8
- Number of MSTP instances — 5
- Number of ACL — 100
- Number of rules in an ACL — 10
- Maximum classes — 32
- Maximum rules per class — 7
- Maximum member classes per policy — 10
- Maximum attributes per class — 1
- SSH v1/v2 switch management
- SSL v3/TLS v1 switch management
- Denial of service protection: TCP fragment, Min TCP HDR, ICMP Size, ICMP fragment, SIP=DIP, TCP Flag checking, TCP Fragment offset checking

Switch Security Features
- Port security and Broadcast, Multicast, Unicast
- Storm control
- Dynamic ARP inspection
- DHCP snooping
- Spanning tree guards : BPDU filter + BPDU guard + loop guard + root guard + TCN guard
- Denial of service protection: TCP fragment, Min TCP HDR, ICMP Size, ICMP fragment, SIP=DIP, TCP Flag checking, TCP Fragment offset checking

Firewall Loadbalancing
- HASH function for symmetric distribution of traffic across 8 firewalls

Network Protocols and Standards Compatibility
- IEEE 802.3 10BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3x Flow Control
  - IEEE 802.1d Spanning Tree Protocol
  - IEEE 802.1s Multiple Spanning Tree Protocol
### SPECIFICATIONS

#### Hardware Specifications

<table>
<thead>
<tr>
<th></th>
<th>FORTISWITCH-548B</th>
<th>FORTISWITCH-248B-DPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Network Interfaces (Proposed)</td>
<td>48x 10GE SFP+ ports</td>
<td>48x GE RJ45 ports and 4x GE/10GE SFP+ ports</td>
</tr>
<tr>
<td>10/100/1000 Service Ports</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RJ-45 Serial Console Port</td>
<td>1 RU Rack-Mount Appliance</td>
<td>1 RU Rack-Mount Appliance</td>
</tr>
<tr>
<td>Form Factor</td>
<td>1 RU Rack-Mount Appliance</td>
<td>1 RU Rack-Mount Appliance</td>
</tr>
</tbody>
</table>

#### System Specifications

<table>
<thead>
<tr>
<th></th>
<th>FORTISWITCH-548B</th>
<th>FORTISWITCH-248B-DPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch Type</td>
<td>Web and CLI Managed</td>
<td>Web and CLI Managed</td>
</tr>
<tr>
<td>Switch Capacity</td>
<td>960 Gbps</td>
<td>176 Gpbs</td>
</tr>
<tr>
<td>Mac Address Storage</td>
<td>up to 250K</td>
<td>32,000</td>
</tr>
<tr>
<td>VLANs Supported</td>
<td>3965 configurable with support for VTP v1/v2</td>
<td>3965 configurable with support for VTP v1/v2</td>
</tr>
<tr>
<td>Link Aggregation Group Size</td>
<td>up to 8 ports</td>
<td>up to 8 ports</td>
</tr>
<tr>
<td>Total Link Aggregation Groups</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

#### Dimensions

<table>
<thead>
<tr>
<th></th>
<th>FORTISWITCH-548B</th>
<th>FORTISWITCH-248B-DPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height x Width x Length (in)</td>
<td>1.7 x 17.1 x 15.5</td>
<td>1.67 x 17.3 x 10.8</td>
</tr>
<tr>
<td>Weight</td>
<td>16.5 lbs (7.5 kg)</td>
<td>12.83 lbs (5.82 kg)</td>
</tr>
</tbody>
</table>

#### Environment

<table>
<thead>
<tr>
<th></th>
<th>FORTISWITCH-548B</th>
<th>FORTISWITCH-248B-DPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Required</td>
<td>100–240V AC, 50–60 Hz</td>
<td>100–240V AC, 50–60 Hz</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>up to 250 W</td>
<td>up to 140 W</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Dual hot swappable AC</td>
<td>Dual hot swappable AC</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>32–113°F (0–45°C)</td>
<td>32–104°F (0–40°C)</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>32–122°F (0–50°C)</td>
<td>32–122°F (0–50°C)</td>
</tr>
<tr>
<td>Humidity</td>
<td>80% maximum relative humidity</td>
<td>5–95% RH non-condensing</td>
</tr>
</tbody>
</table>

#### Compliance

<table>
<thead>
<tr>
<th></th>
<th>FORTISWITCH-548B</th>
<th>FORTISWITCH-248B-DPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>RoHS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All performance values are “up to” and vary depending on system configuration.

### ORDER INFORMATION

<table>
<thead>
<tr>
<th>Product</th>
<th>SKU</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FortiSwitch-548B</td>
<td>FS-548B</td>
<td>48 1 GbE/10 GbE dual-speed SFP+ ports top of rack L2 switch.</td>
</tr>
<tr>
<td>FortiSwitch-248B-DPS</td>
<td>FS-248B-DPS</td>
<td>48 10/100/100 copper ethernet ports with four 1 GbE/10 GbE dual-speed uplink ports L2 switch for access edge or top of rack, with dual hot swappable AC power supplies.</td>
</tr>
</tbody>
</table>

FST-PROD-D6-SW

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