Pluribus Freedom 9480-V Switch

High-Performance Open Network Switch with Advanced Network Services for Leaf and Top of Rack Deployments with up to 48 x SFP28 + 8 x QSFP28 ports, and each QSFP28 port can be configured as 4 x 25 GbE, 1 x 40 GbE, or 4 x 10 GbE by using DAC breakout cables

**Highlights**

- Compact 1 RU standards-based open network switch with ONIE software installer
- Optimized to support Netvisor ONE OS advanced services
- Deployment-proven Broadcom Trident3 switching ASIC
- Intel® Xeon® D-1518 processor quad-core 2.2 GHz
- Wire-speed, sustained performance, and throughput for all configurations
- Highly scalable VXLAN routing, bridging and gateway capabilities supported in hardware
- Hot-swappable, load-sharing, redundant AC or -48V DC PSUs
- Redundant power and fans to support high-availability operations
- Reversible airflow supports hot-aisle and cold-aisle placement

**Product Overview**

The Pluribus Freedom™ 9480-V switch is a best-in-class, programmable open network switch that provides standards-based networking to meet the stringent requirements of high-performance enterprise and service provider data centers. Built on the deployment-proven Broadcom StrataXGS® Trident 3 switching ASIC, the Pluribus Freedom 9480-V switch is optimized to deliver the advanced networking and service capabilities of the Pluribus Netvisor® ONE operating system (OS). The Pluribus Freedom 9480-V switch is Open Compute Project (OCP) Accepted. The switch comes pre-configured with the Netvisor ONE operating system but is built with the Open Network Install Environment (ONIE) to support any compatible network operating system for maximum flexibility and adaptability to future data center networking requirements.

The Pluribus Freedom 9480-V switch delivers wire-speed Layer 2 and Layer 3 switching and routing with sustained packet forwarding performance of 4 terabits per second (Tbps) full duplex and 2 billion packets per second (Bpps) throughput with all network services enabled.

The Pluribus Freedom 9480-V switch provides 48x25 GbE SFP28 plus 8x100 GbE QSFP28 ports. Each SFP28 supports 1 x 10 GbE or 25 GbE1. Each QSFP28 supports 1 x 40/100 GbE or 4 x 25 GbE or 4 x 10 GbE per port using breakout cable, making it ideal for leaf or ToR deployments.

The switch is highly power efficient and is architected for high-availability environments with redundant and hot-swappable power and fan units. The compact design of the Pluribus Freedom 9480-V switch minimizes its deployment footprint, requires less power and lowers cooling requirements, which reduces the cost of data center network operations.

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1 There are specific port templates providing the ability to mix and match 1G/10G and 25G ports. Refer to the Netvisor ONE software release notes for specific details.
Netvisor ONE Licensing Options

- **Netvisor Enterprise** — Included with the switch. It supports Layer 2 and Layer 3 switching and routing functionality with all standard networking protocols and high-availability features.
- **Netvisor Fabric** — It adds VXLAN, telemetry, Adaptive Cloud Fabric and security and segmentation capabilities (not included with the switch).
- **vNET License** — It supports multi-tenant and network/traffic segmentation requirements. Licensed one per switch. vNET Manager capabilities require Virtual Netvisor (vNV) to be deployed (not included with the switch).
- **VirtualWire+™ License** — It includes Fabric license and enables VirtualWire capabilities (not included with the switch).
- **VirtualWire™ License** — It enables VirtualWire capabilities in standalone L1 VirtualWire mode (not included with the switch).

Warranty

The Pluribus Netvisor® ONE OS and Pluribus Freedom™ Open Networking Switches are backed by a 90-Day limited warranty and access to technical support. Pluribus FreedomCare™ extended support options provide for extended support coverage, which includes advanced Product replacements, software updates and upgrades and access to 24x7 technical support. Contact Pluribus Networks or a Pluribus Networks authorized reseller for details on advanced support options.

2 Please refer to the Netvisor ONE software release notes for the supported port speeds and configurations.
### Specifications

**Pluribus Freedom 9480-V**

#### Switching Engine
- Broadcom BCM56873 Trident3 2.0 Tbps No PHYs

#### Onboard CPU
- Intel® Xeon® D-1518 processor quad-core 2.2 GHz
- DDR4: SO-DIMM 8 GB x 2
- SPI Flash: 16 MB x2
- m.2 SSD: 64 GB ML

#### Software
- Switch is loaded with Open Network Environment Install Environment (ONIE) software installer
- Pluribus Netvisor ONE OS - based upon options ordered

#### Interface Ports

**Switch Ports**
- 48x25 GbE SFP28 plus 8x100 GbE QSFP28 ports:
  - Each SFP28 supports 1 x 10 GbE or 25 GbE
  - Each QSFP28 supports 1 x 40/100 GbE or 4 x 25 GbE or 4 x 10 GbE per port using breakout cables

**Note:** When a DAC cable is used in a topology, a link issue may be encountered if the CR4 Auto-Negotiation/Link Training does not turn on. This can be solved by manually enabling CR4 Auto Negotiation/Link Training.

**Management Ports**
- 1 x RJ-45 serial console
- 1 x RJ-45 100/1000BASE-T management
- 1 x USB Type A storage

#### Performance
- Switching Capacity: 4 Tbps full duplex
- Forwarding Rate: 2 Bepps
- Jumbo frames support up to 9398 Bytes
- Packet Buffer Size: 32 MB integrated packet buffer

#### Hardware Capacity
- Please refer to the Pluribus Netvisor® ONE OS data sheet

#### Operational
- PSUs: 2 redundant, load-sharing, hot-swappable AC or -48 VDC
- AC input range: 100–240 VAC
- DC input range: -36~72 VDC
- Redundant, current sharing, PG
- Max Power: 550 Watts
- Typical Power: 465 Watts

#### Physical and Environmental
- Dimensions (WxDxH): 43.84 x 53.6 x 4.35 cm (17.26 x 21.1 x 1.71 in.)
- Weight: 10 kg (22.05 lb.), with two installed PSUs
- Operating Temperature: 0°C to 45°C (32°F to 113°F)
- Storage Temperature: -40°C to 70°C (-40°F to 158°F)
- Operating Humidity: 5% to 95% non-condensing

#### LEDs
- SFP28 Port LEDs: Link Status, Activity, Rate
- QSFP28 Port LEDs: Link Status, Activity, Rate
- Ethernet Management Port LED: Link Status, Activity
- System LEDs: Diagnostic, Locator, PSU and Fan Status

#### Regulatory

**EMI**
- CE Mark
- EN55032 Class A
- EN55024 EN61000-3-2
- EN61000-3-3
- FCC Title 47, Part 15, Subpart B Class A
- VCCI Class A
- CCC
- BSMI

**Safety**
- CB
- UL/CUL
-CCC
-BSMI

**Environmental**
- NEBS GR63-CORE (Pre-test)
- RoHS 2.0 Compliant