The Pluribus Freedom 9460-X 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 cloud data centers. Built on the deployment-proven Broadcom StrataXGS® Trident 3 switching ASIC, the Pluribus Freedom 9460-X switch is optimized to deliver the advanced networking and service capabilities of the Pluribus Netvisor® ONE Operating System (OS). The Pluribus Freedom 9460-X switch is built with the Open Network Install Environment (ONIE) to support any compatible network operating system for maximum flexibility and adaptability to meet future networking requirements.

The Pluribus Freedom 9460-X switch delivers wire-speed Layer 2 and Layer 3 switching and routing with sustained packet forwarding performance of 2.16 terabit per second (Tbps) and 1 billion packets per second (Bpps) throughput with all network services enabled. The switch provides high-density 10G ports, with 100G uplinks making it an ideal leaf/top of rack (ToR) switch. The Pluribus Freedom 9460-X switch provides 48 SFP+ server-facing ports that each support either 10GbE or 1GbE connections and 6 QSFP28 interfaces. 2 out of the 6 QSFP28 ports can be configured as 4x 10GbE or 4x25G connections, the remaining 4 QSFP28 ports operate at either 1x100GbE or 1x40GbE.

The platform is built for high availability environments with redundant and hot-swappable power and fan units. The switch is highly power efficient and offers airflow flexibility to support hot- or cold-aisle deployments. The compact design of the Pluribus Freedom 9460-X switch minimizes its deployment footprint, requires less power and lowers cooling requirements, which reduce the cost of network operations.
**System Highlights**

- Wire-speed full-duplex across all ports, Layer 2 and Layer 3 forwarding up to 2.16 Tbps full duplex and 1 Bpps
- 48 x SFP+ switch ports, supporting 10GbE (DAC, 10GBASE-SR/LR) or 1GbE (1000BASE-T/SX/LX)
- 6 x 100 QSFP28 switch ports, each supporting 100GbE (DAC, 100GBASE SR4/LR4) or 4 x 25GbE (DAC or fiber breakout cable)
- Broadcom Trident3 switching ASIC
- Intel Atom/Denverton C3558 2.2GHz quad-core x86 processor
- VXLAN services supported in hardware at wire speed
- 32 MB shared packet buffer with Dynamic Buffer Allocation
- All ports on front; PSUs and fans accessible from rear
- Hot-swappable, load sharing, redundant AC or -48 VDC PSUs
- 4+1 redundant, hot-swappable fan modules
- Configurable hot-/cold-aisle with port-to-power and power-to-port airflow
- 1RU compact form factor mountable standard 19" racks

**Adaptive Cloud Fabric**

The Pluribus Adaptive Cloud Fabric (ACF) empowers organizations to speed up their transition to a completely automated network that supports software defined data center and cloud automation principles with a simpler non-disruptive and more transparent architecture that makes it easier to deliver, manage and secure service delivery. The ACF can be deployed across a single data center, or geographically distributed to seamlessly interconnect multiple of data centers or aggregate the campus edge over existing core WAN infrastructure.

**Netvisor ONE Operating System**

Enabling simple, plug-and-play deployments, the Pluribus Freedom 9460-X switch is delivered as an integrated, turnkey solution that is shipped pre-configured with the Pluribus Netvisor ONE OS installed on the Open Network Install Environment foundation. Pluribus Netvisor ONE is a virtualized network operating system (NOS) that provides a best-in-class Layer 2 and Layer 3 networking foundation and optionally licensed advanced network services such as VXLAN, the distributed Adaptive Cloud Fabric™ architecture and embedded network performance monitoring telemetry.

**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.
Specifications

Pluribus Freedom 9460-X Switch

Switching Engine
• Broadcom BCM56771 Trident3 1.08 Tbps ASIC

Onboard CPU
• Intel Atom/Denverton C3558 2.2GHz quad-core x86 processor
• DDR4: 8GB x 2 SO-DIMM
• SPI Flash: 16 MB x 2
• 2Storage: m.2 32GB MLC

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

Interface Ports
Network Interfaces
• 48 x SFP+ each supporting 10GbE or 1GbE
• 6 x QSFP28 each supporting 100GbE or 4 x 25GbE

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

Performance
• Switching Capacity: 2.16 Tbps full duplex
• Forwarding Rate: 1 Bpps
• Jumbo frames support up to 9398 Bytes
• Packet Buffer Size: 32 MB integrated packet buffer

Physical and Environmental
• Dimensions (WxDxH): 44.25 x 47.33 x 4.395 cm (17.42 x 18.63 x 1.73 in)
• Weight: 8.815 kg (19.43 lb), with two PSUs installed
• Fans: hot-swappable 4+1 redundant fans
• Operating Temperature: 0°C to 40°C (32°F to 104°F)
• Storage Temperature: -40°C to 70°C (-40°F to 158°F)
• Operating Humidity: 5% to 95% non-condensing

LEDs
• 10G SFP+ Port LEDs: Link Speed, Link Status, Activity
• 100G QSFP28 Port LEDs: Link Status, Activity
• Ethernet Management Port LED: Link Status, Activity
• System LEDs: PSU1, PSU2, Diagnostic, Fans, Locator

Regulatory
EMI
• CE Mark
• EN55032
• CISPR 32
• AS/NZS CISPR 32
• EN55024
• CISPR 24
• CISPR 35
• EN 61000-3-3
• EN 61000-3-2
• FCC Title 47, Part 15, Subpart B Class A
• VCCI Class A
• BSMI Class A, CNS 13438
• CCC

Safety
• EN60950, UL60950
• EN62368, UL62368
• CCC
• BSMI, CNS 14336-1

Environmental
• NEBS GR63-CORE (Pre-test)

RoHS 2.0 Compliant

Operational
• PSUs: 2 redundant, load-sharing, hot-swappable AC or -48 VDC
• Input Voltage: 100-240 VAC at 50-60 Hz, -48 to -72 VDC
• Max Power: 356 Watts
• Typical Power: 270 Watts
• Hot-swappable 4+1 redundant fan modules
• Supports both hot-aisle and cold-aisle placement with reversible airflow

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

Interface Ports
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• 48 x SFP+ each supporting 10GbE or 1GbE
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Performance
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• 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
• Input Voltage: 100-240 VAC at 50-60 Hz, -48 to -72 VDC
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