

Pluribus Freedom 9372-T Switch

High-Performance Open Network Switch with Advanced Network Services for Leaf and Top of Rack Deployments with 48xRJ-45 Ports Supporting 100M, 1/10GBASE-T and 6xQSFP+ Ports Supporting 1x40GbE or 4x10GbE

Highlights

- Compact 1 RU standards-based open network switch built on ONIE
- Optimized to support Netvisor ONE OS advanced services
- Deployment-proven Broadcom StrataXGS® Trident2+ switching ASIC
- Intel Atom CPU supports integrated network services
- Sustained performance and throughput for all configurations
- VXLAN supported in hardware
- Minimal power consumption with up to 93% power efficiency, reduces operating costs
- Reversible airflow supports hot-aisle and cold-aisle placement
- Low heat dissipation minimizes cooling requirements



Product Overview

The Pluribus Freedom™ 9372-T 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 2+ switching ASIC, the Pluribus Freedom 9372-T switch is optimized to deliver the advanced networking and service capabilities of the Pluribus Netvisor® ONE Operating System (OS). The Pluribus Freedom 9372-T 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 data center networking requirements.

The Pluribus Freedom 9372-T switch delivers wire-speed Layer 2 and Layer 3 switching and routing with sustained packet forwarding performance of 1.44Tbps full duplex and 1Bpps throughput with all network services enabled. The Pluribus Freedom 9372-T switch provides 48xRJ-45 ports supporting 100M, 1/10GBASE-T and 6xQSFP+ ports that can each be configured as 1x40GbE or 4x10GbE uplink connections.

The platform is built for high availability environments with redundant and hot swappable power and fan units. The switch is power efficient and offers air-flow flexibility to support hot or cold aisle deployments. The compact design of the Pluribus Freedom 9372-T minimizes its deployment footprint, requires less power and lowers cooling requirements, which reduces the cost of data center network operations.

System Highlights

- Wire-speed Layer 2 and Layer 3 forwarding up to 1.44Tbps (full duplex) and 1Bpps
- 48xRJ-45 copper, supporting 10GBASE-T, 1000BASE-T and 100BASE-TX Ethernet on Cat 6, Cat 6 A and Cat 7 twisted-pair cable
- 48xRJ-45 Copper, supporting 1000BASE-T and 100BASE-TX on Cat 5e UTP, Cat 6, Cat 6A and Cat 7 twisted-pair cable
- 6x40 QSFP switch ports, each supporting 40GbE (DAC, 40GBASE-SR4/LR4) or 4x10GbE (DAC or fiber breakout cable)
- Broadcom StrataXGS® Trident2+ switching ASIC
- Intel Atom C2538 quad-core 2.4GHz x86 processor
- VXLAN services supported in hardware at wire-speed
- 16MB integrated packet buffer
- All ports on front; PSUs and fans accessible from rear
- Hot-swappable, load-sharing, redundant AC PSUs power input option
- 348 Watts maximum power consumption with efficiency of up to 93%
- 4+1 redundant, hot-swappable fan modules
- Configurable hot/cold aisle with port-to-power and power-to-port airflow
- 1 RU compact form factor mountable in either a standard 19" or 21" rack

Unified Cloud Fabric™

The Unified Cloud Fabric (UCF) delivers the benefits of hyperscale agility, simplicity and availability to data centers, unified cloud networks and many other networking applications. The UCF unites networks across multiple dimensions: switches and servers, overlay and underlay networks, and distributed clouds. Powered by the Linux-based Netvisor® ONE operating system, the UCF solution features fabric-wide provisioning from any single switch in the fabric, resulting in massive service delivery speed-up and error reduction. This automation is achieved in a distributed, controller-less fashion, without the need for costly and complex software-defined networking appliances. The UCF solution offers a rich set of Layer 2 and Layer 3 overlay services to allow network architects and engineers to solve virtually any networking problem with agility in the overlay while maintaining a highly stable and scalable underlay. When deployed in servers with data processing units (DPUs), the fabric provides even finger-grained microsegmentation with distributed firewalls at the individual application level.

Netvisor ONE Operating System

Enabling simple, plug-and-play deployments, the Pluribus Freedom 9372-T 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 Unified Cloud Fabric™ architecture and embedded network performance monitoring telemetry.

Netvisor ONE Licensing Options

- **Netvisor ONE Enterprise Edition** — This license supports Layer 2 and Layer 3 switching and routing functionality with all standard networking protocols and high-availability features.
- **Netvisor ONE Fabric Edition** — This license supports VXLAN, telemetry, Unified Cloud Fabric and security and segmentation capabilities (not included with the switch).
- **vNET** — This license 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+™** — This license includes the Fabric license and enables VirtualWire capabilities (not included with the switch).
- **VirtualWire™** — This license enables VirtualWire capabilities in standalone Layer 1 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 9372-T Switch

Switching Engine

- Broadcom (BCM56864) Trident2+

Onboard CPU

- Intel Atom C2538 quad-core 2.4GHz x86 processor
- 8GB SO-DIMM DDR3 RAM with ECC 16MB SPI NOR flash
- mSATA SSD: 32GB iSLC

Software

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

Interface Ports

Network Interfaces

- 48xRJ-45 Copper each supporting 10GbE, 1GbE or 100Mbps
- 6xQSFP each supporting 40GbE or 4x10GbE

Management Ports

- 1xRJ-45 serial console
- 1xRJ-45 100/1000BASE-T management

Optics and Cables

RJ-45 Copper ports

- 10GBASE-T on Cat 6, Cat 6A and Cat 7 twisted-pair cable
- 1000BASE-T and 100BASE-TX on Cat 5e UTP, Cat 6, Cat 6A and Cat 7 twisted-pair cable

QSFP Ports

- 40GBASE-CR4 DAC; 0.5m to 7m; passive and active
- 40GBASE-CR4 DAC to 4xSFP+ 10GBASE-CR DAC; up to 5m passive; up to 10m active
- 40GBASE-SR4: Up to 100m over OM3 MMF, 150m over OM4 MMF
- 40GBASE-SR4 to 6x10GBASE-SR: 100m over OM3, 150m OM4
- 40GBASE-LR4: Up to 10km over SM

Performance

- Wire speed Layer 2 and Layer 3 forwarding
- Switching capacity: 1.44Tbps full duplex
- Forwarding rate: 1Bpps
- Jumbo frames support up to 9398 Bytes
- Packet buffer size: 16MB 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: 90 to 264 VAC at 50-60 Hz, -48 to -72 VDC
- Input current: Max 6 A@100/120 VAC, 3 A@ 200/240 VAC, 10 A@ -72 VDC
- PSU efficiency: Up to 93% for AC PSUs
- Power input option: 12 VDC
- Max power: 348 Watts
- Typical power: 261 Watts
- Hot swappable 4+1 redundant fan modules
- Supports both hot-aisle and cold-aisle placement with reversible air flow

Physical and Environmental

- Dimensions (WxDxH): 47.3 x 44.25 x 4.39 cm (18.6 x 17.4 x 1.71 in)
- Weight: 9.5 kg (20.94 lb.), with two installed PSU modules 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

- LEDs 10G SFP+ Port LEDs: Link Speed, Link Status, Activity
- 40GbE QSFP Port LEDs: Link Status, Activity for 40GbE status
- 40G QSFP Breakout LEDs: set of 24 LEDs, 4 per QSFP port, show Link, Status, Activity 10GbE links with 4x10GbE breakout
- Ethernet Management Port LED: Link Status, Activity Console Port LED: Link Status
- System LEDs: PSU1, PSU2, Diagnostic, Fans, Locator

Regulatory

EMI

- CE Mark (EN55022 Class A)
- FCC Part 15 Class A

VCCI

Safety

- CB, EN 60950
- UL/CUL

Environmental

- Temperature: IEC 68-2-14
- Vibration: IEC 68-2-6
- Shock: IEC 68-2-29
- Acoustic noise level: Under 63dB in normal temperature (23±5°) (AC version)

RoHS-6 Compliant

