The Avaya Virtual Services Platform 9000 Series is an agile, balanced, next-generation Ethernet Switching solution that delivers performance, capacity, and – most crucially – reliability for mission-critical networks.

9048XS-2 10 Gigabit SFP+ Ethernet Interface Module

Next-generation high-density connectivity for Virtual Services Platform 9000 Series deployments that require large scale high-performance

The Avaya Virtual Services Platform 9000 Series is an agile, streamlined, next-generation Ethernet Switching solution that delivers performance, capacity, and – most crucially – reliability for mission-critical networks. The VSP 9000's future-ready design and ultra-reliability leverages device and network virtualization to empower services integration, simplifying how Data Centers and Core networks are architected.

Features & Benefits

The 9048XS-2 48-port 10 Gigabit Ethernet Interface Module is an optional component of the Virtual Services Platform 9000 Series product. This Module provides 48 ports of 1/10 Gigabit Ethernet, as per the IEEE 802.3ae standard, and features sockets that comply with the SFP+ multi-source agreement specification.

This Module, when deployed in either of the VSP 9000 Series chassis options, provides very high-density, high-capacity connectivity solutions, particularly suited to high-performance network deployments.

The 9048XS-2, together with all VSP 9000 Series Interface Modules, seamlessly supports the complete range of conventional IP Routing and next-generation Fabric-based capabilities, without the need for any additional hardware.

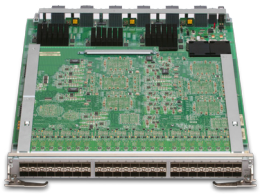
Compatibility

The 9048XS-2 Module is introduced with the VSP Operating System Software (VOSS) 4.0 release, and therefore this release will be the minimum level of software that is required to support and operate the Module.

The 9048XS-2 Module is compatible with both the existing VSP 9000 Series Chassis options, the 9010 10-Slot and 9012 12-Slot Chassis. Additionally, the 9048XS-2 is compatible with all existing Control Processor, Switch Fabric, Ethernet Interface Modules, and Power Supplies. The only proviso is that when operating the 9048XS-2 with the 9012 Chassis the new High-Speed Front Cooling Modules are required.

Overview

- High-density 1/10 Gigabit Ethernet Interface Module with SFP+ interface sockets
- 48 ports for high-capacity network and/or device connectivity
- Delivers a system density of up to 480 ports
- Compatible with all existing Chassis, Control Processor, Switch Fabric, Interface Module, and Power Supply components
- Compatible with all existing software and networking features, such as conventional IPv4 and IPv6 Routing, and SPB-based Fabric Connect network virtualization.



9048XS-2 Module

9010 & 9012 Chassis

The 9048XS-2 Module can be installed into any of the Interface Module slots of the 9010 or 9012 Chassis variants; appreciating that Slots 1 and 2 are reserved for 9080CP Control Processor Modules.

The 9048XS-2 is a distinct evolution of the first generation VSP 9000 Series Ethernet Interface Modules (specifically the current 9024XL), with this Module featuring the latest generation of Avaya's unique Route Switch Processor network processing unit, delivering important advances in terms throughput, capacity, and scaling.

It should be noted that the 9048XS-2 Module is also hardware-ready to support the IEEE 802.1AE MACsec standard for link-layer encryption. Although not available with the initial release, the product is hardware-ready for this capability, and the intention being to introduce MACsec support in a future release of software.

Module Specifications

Performance & General:

- 240Gbps Full Duplex/480Gbps Aggregate per Module/Slot – assuming five Switch Fabric Modules, or six for N+1 resiliency
- 357Mpps of packet forwarding capacity per Module/Slot
- Layer 2/3 switching with hardware-enabled ACL
- Layer 2-4 Filtering
- Both UNI & NNI Fabric interface support
- Up to 1,000k IP Routes, 128k MAC Address, and 64k ARP supported
- Seamless support for both 1 and 10Gbps Transceivers
- Jumbo Frames up to 9600 Bytes

Electrical:

- Consumption of 600 Watts with short-reach SFP+ Transceivers
- Thermal rating of 2,048BTU/hr

Physical:

- Height of 1.625 inches (4.13cm)
- Width of 15.5 inches (39.37cm)
- Depth of 24.0 inches (60.96cm)
- Weight of 14.5 pounds (6.58kg)
- Physical interface being the SFP+ MSA
- MTBF rating of 150,000 hours (17.11 years)[1]

Environmental:

- Operating temperature of 0 to 40°C (32 to 104°F)
- Storage temperature of -25 to 70°C (-13 to 158°F)
- Operating humidity of 0 to 95%
- Storage humidity of up to 92.5%
- Operating altitude of 0 to 3,000m (0 to 10,000ft)
- Free fall or drop ISO 4180-s, NSTA 1A
- Vibration IEC 68-2-6/34
- Shock or bump IEC 68-2-27/29

[1] Planning assumption.

Supported Transceivers

The 9048XS-2 Module supports the following Transceivers based on the SFP+ specification:

- 10GBASE-SR/SW SFP+ Transceiver, Duplex LC Connector, up to 400m over 50Qm OM4 MMF.
- 10GBASE-LRM SFP+ Transceiver, Duplex LC Connector, FDDI grade (62.5u) MMF up to 220m.
- 10GBASE-LR/LW SFP+ Transceiver, Duplex LC Connector, up to 10km over SMF.
- 10GBASE-ER/EW SFP+ Transceiver, Duplex LC Connector, up to 40km over SMF.
- 10GBASE-ER CDWM SFP+ Transceiver, Duplex LC Connector, up to 40km over SMF.
- 10GBASE-ZR/ZW SFP+ Transceiver, Duplex LC Connector, up to 70km over SMF.
- 10GBASE-ZR CDWM SFP+ Transceiver, Duplex LC Connector, up to 70km over SMF.
- 10GBASE-BX SFP+ Transceivers, Single LC Connector, up to 10/40km over SMF.[1]
- 10GBASE-CX Direct Attach Cable with SFP+ Transceivers and fixed Copper cable in lengths of 3, 5, 10, and 15m.

The 9048XS-2 Module also supports a wide range of SFP Transceivers that operate at 1Gbps; please refer to the product documentation for complete details.

Warranty & Support

The 9048XS-2 Module is covered by the standard 12 months warranty for Enterprise modular hardware, with the first 3 months managed via Stocking Distributors. Further support arrangements are available directly from Avaya or through an Avaya Authorized Business Partner.

The Virtual Service Platform 9000 Series and all hardware elements are subject to the Avaya life cycle management process that ensures full support during the General Availability (GA) cycle, and then provides a 6-year window for support once elements have transitioned to the End of Sales (EoS) retirement phase.

Product Availability

The 9048XS-2 Module was launched as part of the VOSS 4.0 software release, and made available in December 2014.

More Information

For further information about the Avaya Virtual Services Platform 9000 Series please visit www.avaya.com/products, and for the complete Avaya Networking portfolio, **www.avaya.com/networking**.

The VSP 9000's future-ready design and ultra-reliability leverages device and network virtualization to empower services integration, simplifying how Data Centers and Core networks are architected.

About Avaya

Avaya is a leading, global provider of customer and team engagement solutions and services available in a variety of flexible on-premise and cloud deployment options. Avaya's fabric-based networking solutions help simplify and accelerate the deployment of business critical applications and services. For more information, please visit **www.avaya.com**.

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