Versa CSX2000 Series

Introduction

Versa CSX2000 series appliances are latest additions to Versa's family of software-defined Ethernet switching platforms. Versa CSX2000 series switching platforms are ideal for enterprise LAN edge and access deployments targeting small to mid size branch or campus network deployments. CSX2000 series switching platforms expand Versa's Secure SD-LAN portfolio further to cover broader set of needs, deployment scenarios, new price-performance points.

CSX2000 series switches combine best in class merchant Ethernet switch chipset for enterprise branch and campus networks, with its dedicated x86 based processor sub-system to deliver cutting edge Secure SD-LAN capabilities.

CSX2000 units are powered by VOS™ (Versa Operating System) natively. The same VOS™ that runs on WAN Edge, cloud edge deployments and on Enterprise class CSX4000, CSX8000 switching platforms, now runs on CSX2000 platforms, providing solid software foundation for SD Branch. Together with Versa Secure SD-WAN platforms, Versa Secure SD-LAN solutions, now with the addition of CSX2000 platforms, provide Software Defined Branch and Software Defined Campus solutions with embedded Layer4-7 security, SD-WAN, SD-LAN, ZTNA on-premises, IoT Security all in one.

Product Description

Versa CSX2000 series switching platforms deliver carrier-grade reliability, line-rate Ethernet switching, together with built-in x86 based compute for enterprise-grade routing, SD-LAN, on-premises ZTNA, inline device fingerprinting and identification, Software Defined Access and Software Defined LAN Perimeter capabilities.

Natively integrated security functions running on the CSX2000 based LAN Edge/ Access switch revolutionizes LAN solutions. Such capabilities ensure right level of granular access control, user and device authentication, micro-segmentation, device classification and ZTNA functions implemented at the entry point to enterprise LAN. Applying such critical decisions at the entry point to LAN provides best device and user traffic management, traffic separation, policy based traffic management capabilities.

Versa Secure SD-LAN solution running on CSX2000 units support traditional L2, L3 forwarding. Versa recommends use of SDN based overlays to be used on uplink ports or connections to realize the full potential of Versa Secure SD-LAN solution.

Versa CSX2000 series platforms offer LAN edge/access and high-speed uplink ports to provide non-blocking, high performance LAN solution. CSX2000 switching ports are driven by best in class, feature-rich and highly scalable, market leading campus class Ethernet switch chipset from the leading merchant silicon vendor. Options of single-rate GE and multi-rate GE ports with built-in PoE++ capacities are available. CSX2000 LAN edge Ethernet switches offer different SKUs to provide single rate or multi-rate GE access ports to provide connectivity to other network elements in the LAN environment.

Furthermore, select SKUs of CSX2000 provide MACSEC at line rate across all of its ports to encrypt traffic in sensitive networks environments.

CSX2000 series switching platforms interoperate seamlessly with rest of CSX switching family products, CSX4000 and CSX8000 series forming enterprise class LAN solutions scaling from few switches all the way to hundreds or thousands of switches all working in harmony thanks to Versa's standard based highly scaleable SDN solutions, Versa Secure SD-LAN.

Product Details

Versa CSX2000 units come with 24 or 48 port LAN edge/access interfaces with PoE++ (90W), and 4 to 6 high speed interfaces consisting of 10GE SFP+ or SFP28 (10/25 GE) interfaces. CSX2000 units do not use proprietary cables or interfaces. All interfaces are standard based and they can be used for uplink or downlink or access or trunk purposes.

High performance switching ASIC is dedicated to driving all of these interfaces at line rate, while the switching ASIC is also connected with high-speed interfaces to high performance x86 complex that runs VOS while VOS provides Layer-4-7stateful services.

VOS based CSX2000 platforms have built-in intelligence to program embedded switch fabric to drive L2, L3, VXLAN, QoS, ACLs, MPLS, IPv4/v6, unicast/multicast and other functions at line rate across LAN interfaces. All traffic that is received by LAN interfaces will first be processed by the Ethernet switch and if the destination is another LAN port where no stateful functions need to be applied to the traffic, the traffic will be forwarded at line rate to destination port(s). If traffic needs to go through Layer-4-7 stateful processing for on-premises ZTNA, device fingerprinting, user/group level traffic management, advanced SD-Access or for other security or application intelligence purposes, these flows will be sent to x86 processor running VOS natively to be processed by VOS. VOS running on the x86 processing complex will pick flows and will process them seamlessly and hand off to LAN interfaces depending on traffic destinations and intent defined by policies. One needs to ensure that desired security, application intelligence or other services remain within the processing envelope of the x86 processing complex.

All stateless and stateful processing and forwarding of flows will be handled intelligently within the platform seamlessly. Such intelligent processing allows our customers to benefit from best of both worlds; high performance line-rate forwarding for LAN traffic combined together with rich set of stateful functions for L4-L7 for targeted traffic profiles. The combination of seamless traffic handling and traffic management that combines performance with state opens doors for many new applications and use-cases that are unmatched in the market.

Advantages of CSX2000 Switching Platforms

Use of VOS, single OS, now on CSX2000 switching product line, with no difference, simplifies configuration, provisioning, deployment, operations, monitoring and troubleshooting efforts.

CSX2000 Secure SD-LAN switching platforms are deployed and provisioned with minimal effort, thanks to proven ZTP capabilities of VOS. CSX2000 Secure SD-LAN switching platforms are managed by the same Versa Director as Versa Secure SD-WAN, providing single pane of glass. Furthermore, the same big data analysis tool, Versa Analytics, that you may be used to from SD-WAN and Security use-cases are now available for LAN visibility and analysis for CSX2000 platforms too, thanks to single universal OS, VOS.

Versa Secure SD-LAN solutions help our customers migrate from legacy or proprietary LAN solutions to standards-based software defined Ethernet switching solution based on latest merchant chipset while achieving superior business agility, seamless connectivity and lower TCO (total cost of ownership). Built-in Layer-4-7 security, micro segmentation and software defined access with granular control on the LAN edge gives our customers the option to admit devices and users on right parts of the network, and secure their traffic in N-S and in E-W directions. With embedded security functions, Versa CSX2000 appliances enable secure, scalable and reliable enterprise-wide LAN networking solutions.

Target Deployments

Use-cases and deployments targeted with this consolidated platform include:

- Secure LAN Edge / Access for Small Medium Enterprise branch and Campus environments
- Integrated compute for stateful security and other functions
- High performance uplink connections from LAN Edge to Aggregation and Core layers in LAN

Resiliency and Manageability Advantage

The Versa CSX2000 series appliances are designed for resiliency and durability to ensure business continuity and services. The CSX2000 appliances come with secure BIOS and securing booting capabilities.

The Versa CSX2000 series appliances have clearly designed LEDs that are intuitive to instantly provide device and interface status for ease of manageability.

Most CSX2000 platforms are designed with redundant in-field hot replaceable fans and power supply units, with front to back cooling, and line rate performance envelope. Versa CSX2000 series appliances are setup to meet and exceed requirements of target LAN Edge deployments.

Secure Platform Advantage

The platform hardware has been designed with security use-cases in mind. A TPM chip along with hardware based crypto acceleration integrated into the appliance ensures the integrity and security of critical data, such as encryption and authentication keys. Also, the appliance is built with Secure Boot capabilities. Furthermore select CSX2000 platforms support MACSEC natively across all of its ports at line rate.

CSX2300, CSX2500, CSX2500M front and rear view

Performance and Scaling of Embedded Switching Complex

Switching Capacity (full-duplex)	Up to 178Gbps
PPS (full-duplex)	182Mpps
Fully shared egress packet Buffer	4MB
L2MC	1K
LAGs	128
Members per LAG	8
Virtual Ports	2K
Virtual Forwarding Instances	1K
VLANs	4K
VRF	1K
VLAN translation	4K ingress, 2K egress
MAC based VLANs	4K
ECMP groups	256 with total of 1024 members
ECMP members per group	64 max

CSX2200 front and rear view

Hardware Specifications

	CSX2200	CSX2300	CSX2500	CSX2500M
Networking Interfaces				
Ethernet switching interfaces	24x 1GE PoE++ (90W) 6x SFP+ (10GE)	48x 1GE PoE++ (90W) 6x SFP+ (10GE)	32x 1GE PoE++ (90W) 16x 2.5/1GE PoE++ (90W) 6x SFP+ (10GE)	32x 1GE PoE++ (90W) 16x 2.5/1GE PoE++ (90W) 2x SFP+ (10GE) 4x SFP28 (25/10GE)
MACSEC	No			Yes (all ports, at line rate)
Management	1x GE Cu (dedicated Mgmt port), 1x RJ45 RS232 console, 1x USB			
Storage	128GB SSD			
Other Interfaces and Modules				
TPM	Yes			
Secure Boot	Yes			
Crypto Acceleration	Built-in hw crypto offload engine			
Physical Characteristics				
Unit Weight	10Kg (22 lb)	10.75kg (23.7 lb)		
Unit Dimensions	(W) 440mm, (D) 310 mm, (H) 44mm	(W) 440mm, (D) 410 mm, (H) 44mm		
PSU and fans	Fixed, single 950W (115VAC) PSU and Fan, front to back airflow	Field Replaceable, Redundant 2x1200W (230VAC) PSU, 1+1 redundancy Fans, front to back airflow		
Unit Power	100 – 240 VAC, 50 – 60Hz			
Cooling	Front to Back Cooling			
Mounting	Rack mountable unit			
Operational and Compliance				
Operational Temperature	0-40C @ 3,000 m altitude (32F to 104F)			
Storage Temperature	-40 to 70 C			
Humidity	5-90%			
Environmental	ROHS compliant			
Safety	UL/CSA62368-1, IEC60950-1, IEC62368-1 standards			
Regulatory	FCC Part 15, Class A (US), CE (EU), CB (IEC)			

Warranty and Support

Versa CSX2000 series appliances include a 2-year Return to Factory (RTF) Warranty. Versa Networks offers enhanced warranty and advanced replacement options which can be ordered with the hardware. For more details, please refer to the Versa CSG/CSX Appliance Ordering Guide.

Ordering Guide

Versa CSX2000 series appliances are versatile platforms providing a variety of optional capabilities to suit the needs of the enterprise. Ordering information for the CSX2000 series appliances is provided in the Versa CSG/CSX Appliance Ordering Guide. CSX part numbers are structured logically to make the process of ordering flexible and intuitive. For more details on how to order CSX 2000 series appliances, please refer to the ordering guide.

About Versa Networks

Versa Networks the leader in SASE offers fully featured SD-WAN with integrated NGFW/UTP, ZTNA, advanced scalable routing, SD-LAN, genuine multi-tenancy, big-data based analytics and latest AI-ML technologies as part of its single stack software solution. Versa Networks is privately held and funded by Sequoia Capital, Mayfield, Artis Ventures, Verizon Ventures, Comcast Ventures, Liberty Global Ventures, and Blackrock Ventures.