

Cloud Service Gateway

CSG1000 Series Appliance Datasheet

Introduction

Versa Cloud Service Gateway (CSG) series appliances are a family of next-generation enterprise software-defined networking appliances that are based on x86 architecture to deliver Secure SD-WAN with comprehensive integrated security, full-featured SD-WAN, scalable advanced routing, genuine multitenancy, and ZTNA on-premises. Versa CSG1000 series appliances run VOS™ (Versa Operating System) are targeting enterprises with high performance branch, and campus WAN edge deployments.

Versa CSG1000 appliances enable Software-Defined branch and campus through consolidation of multiple functions into one, achieving superior business agility, seamless connectivity and lower TCO (total cost of ownership). Versa CSG appliances enable secure, scalable and reliable enterprise-wide networking.

Versa provides a differentiated architecture which integrates security, routing, SD-WAN, multi-tenancy and analytics in a single software operating system VOS. Versa Director and Versa Concerto management applications provide configuration, monitoring, and provisioning while Versa Analytics provides device, network, and security analytics. The Versa CSG1000 series appliances can be deployed by managed service providers (MSPs) for scalable managed services and by enterprises of all sizes.

Product Description

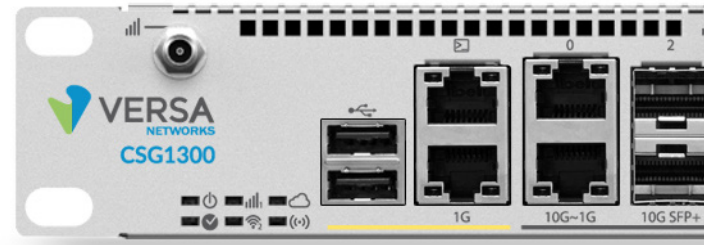
High performance Versa CSG1000 series appliances deliver carrier-grade reliability, high performance and high compute capacity for enterprise-grade routing, SD-WAN, next-generation security and uCPE use-cases.

Versa CSG1000 series come with a diverse set of LAN and WAN interfaces including Ethernet and non-Ethernet (ie: ADSL2+/VDSL2, T1E1) options as well as wireless (LTE Advanced Pro, WiFi AP and ready for 5G) for WAN and LAN purposes.

Versa CSG1000 base units come pre-populated with 16 interfaces in the form of 8x 10GE and 8x 1GE interfaces without requiring our customers to order them separately. Two of the 10GE interfaces are 10/5/2.5/1GE capable multi-rate copper interfaces optimal for external (ie: mmWave or sub-6) 5G, latest GPON or other high performance WAN connection capabilities. Additional 10GE interfaces are offered in the form of SFP+ interfaces which can carry 10GE or 1GE Fiber or copper modules giving our customers connectivity options.

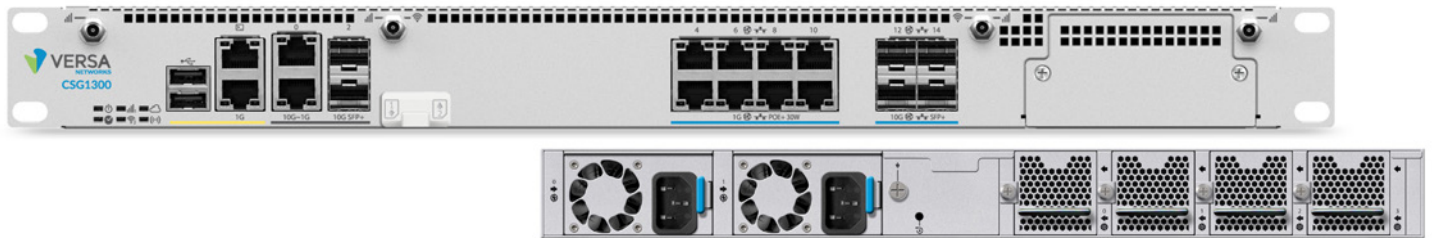
While Versa CSG1000 interfaces are marked with appropriate WAN or LAN markers, and port numbers for ease of installation and cabling convenience, any port can be defined as LAN or WAN using software controls which gives additional level of flexibility to the network operator.

Designed with in-field hot replaceable fans and power supply units, with front to back cooling, high-performance envelope, Versa CSG1000 series appliances are setup to meet and exceed requirements of high performance WAN edge deployments. CSG1K units come with faceplate integrated rack mount ears making installation on standard 19" wide standard racks easy.



The VERSA CSG1000 series appliances consists of the following base models:

- **Versa CSG1300** is a powerful appliance designed for large enterprise branches or campus environments, catering to users who need sophisticated Secure SD-WAN along with comprehensive application and cloud-intelligent SD-WAN services on-premises.
- **Versa CSG1500** is a high-performance appliance for deployment in larger enterprise branch, or campus locations for users who require advanced Secure SD-WAN along with comprehensive advanced application and cloud-intelligent SD-WAN services on-premises.



CSG 1000 series Front View and Back View

Versa CSG1300 and Versa CSG1500 appliances also provide compute resources to host 3rd party software in the form of VMs (virtual machines) without the need to purchase any specialized hardware or compute module, eliminating appliance sprawl.

For rack-mounted deployments, the port side of the Versa CSG1000 series appliances is designed to simplify operations and accessibility and to improve visibility of device operational status and health. Status LEDs provide succinct visualization of the operational status of the device and of the WLAN, and LTE connections.

The Versa CSG Appliance Advantage

The Versa CSG1000 series appliances are highly performing, scalable high-end branch appliances for Secure SD-WAN deployments.

Versatility and Flexibility

Versa CSG1000 series appliances are based on x86 architecture, taking advantage of the latest performance enhancements for packet processing, encryption offload and compression/decompression offload capabilities in hardware. Versa CSG1000 series appliances are engineered with software defined functions in mind to deliver high-performance and scalable multi-tenant, cloud-native enterprise-grade networking and security services, such as routing, SD-WAN, NGFW, CGNAT, 802.1x based access control and more functions without any limitations of proprietary ASIC based systems.

Resiliency and Manageability Advantage:

The Versa CSG1000 series appliances are designed for resiliency and durability to ensure business continuity and services. The Versa CSG1000 series appliances have specially designed LEDs that are unique and intuitive to instantly provide device and interface status for ease of manageability.

Security Advantage

The platform hardware has been designed with security use-cases in mind. A TPM chip along with 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.

3G/4G/5G Advantage

LTE-Advanced Pro support is available across all Versa CSG1000 models and can be used as primary or backup WAN access links. Enterprise customers can deploy Versa CSG1000 series appliances with up to two built-in and two additional attached LTE links simultaneously, providing unmatched resiliency and flexibility for wireless WAN access from the branch.

Each appliance is orderable with two factory-installed enterprise grade, internal LTE Advanced Pro global modems to provide simultaneous connectivity (Active/Active) to two active LTE access links. Each LTE Advanced Pro modem provides performance up to 600 Mbps downstream and up to 100 Mbps upstream connection speeds.

Embedded LTE-A Pro modules are firmware controlled, smart modems allowing maximum carrier flexibility and deployment ease. The appliance has two externally accessible SIM card slots, one for each embedded modem. If the appliance is configured with two modems, each SIM card is used to connect to one LTE network. The appliance also has two external USB slots that can be connected to an LTE dongle if desired. With two internal modems customers can deploy up to four simultaneous LTE WAN connections.

Furthermore, Versa CSG1000 appliances are 5G ready appliances, offering Sub-6 5G modem compatibility, future proofing for next gen 5G networks and connectivity needs.

Wi-Fi Advantage

Each Versa CSG1000 series appliance can be ordered with a factory-installed 802.11ac (Wave2) high-performance dual-radio access point module to deliver enterprise-grade WLAN connectivity to the branch.

The Wi-Fi AP module is an 802.11 a/b/g/n/ac (Wave2) access point that can support up to 8 SSIDs and 512 wireless clients concurrently (total 16 SSIDs). The embedded Wi-Fi AP module supports 2.4-GHz and 5-GHz frequency bands simultaneously (Dual Band, Dual Concurrent Access).

The module supports 2x2 MU-MIMO with beamforming capabilities and is suitable for small-to-medium-office deployments. The WLAN AP module also supports Mesh Wi-Fi and frequency-band steering capabilities and has the sufficient transmission power and MRC capabilities to process weak wireless signals from distant client devices, thus providing the best possible user experience. For more information, see the Wi-Fi Modem datasheet.

NIC options

While Versa CSG1000 units come with 8 built-in PoE+ ports, an additional 4 port Cu GE PoE+ 120W NIC is orderable to run total of 12 ports with PoE+ capabilities. Note, an external PSU (power supply unit supplied with the NIC) is required for the optional 4 port PoE+ NIC.

APs, cameras, VoIP phones, and other PoE-capable devices can be powered without using AC adapters by leveraging the built-in POE ports on the appliance.

Versa CSG1000 series platforms also support additional NIC options such as 8 port (non-PoE) GE NIC, 4 port SFP GE NIC, ADSL/VDSL NIC and T1/E1 NIC. For more details, please refer to respective datasheets.

Scaling and Performance

Versa CSG1000 series appliance models should be chosen based on the expected throughput and the required features for the branch architecture. The table below lists the expected throughput of each appliance model.

	CSG1300	CSG1500
Recommended Deployment	Enterprise Branch	Enterprise Branch High Performance
Throughput		
Routing, Stateful Firewall, CGNAT	8 Gbps	28 Gbps
SD-WAN DIA, NGFW DIA	6 Gbps	18 Gbps
SD-WAN site to site	4 Gbps	14 Gbps
NGFW + SD-WAN	3.3 Gbps	12 Gbps
NGFW + AV	1.7 Gbps	5 Gbps
NGFW + AV + SD-WAN	1.2 Gbps	4 Gbps
NGFW + IPS	950 Mbps	3.5 Gbps
NGFW + IPS + SD-WAN	800 Mbps	3 Gbps
NGFW + UTM/UTP	675 Mbps	2.5 Gbps
NGFW + UTM/UTP + SD-WAN	500 Mbps	2 Gbps

(*) Performance and scaling numbers shared in product datasheets can vary from vendor to vendor depending on testing scenarios and testing methods utilized. Versa references real-life based scenarios for its performance testing. Furthermore, Versa's security functions run by default in high-security mode and performance numbers shared above are obtained in the same mode to provide best guidance to its customers. For details on each test scenario including running security functions in alternative mode such as higher performance mode, please contact Versa reps.

Hardware Specifications

	CSG1300		CSG1500	
Networking Interfaces				
Wired Interfaces	WAN: 2x 10G/5G/2.5G/1G/100M/10M Cu (multirate) 10GE ports, plus 2 x SFP+ ports LAN: 8x Cu GE with PoE/PoE+ (30W) per port and 4x SFP+/SFP all routed ports, plus 1 NIC module slot for additional LAN or WAN ports (xDSL, TDM, additional Ethernet interfaces)			
Wireless Interfaces	Dual LTE (SIM Cards externally accessible), WiFi with external antennas, Built-in GPS			
NIC Support	4P GE PoE+ (120W), T1/E1, A/VDSL (Annex A, Annex B), 8 port GE NIC, 4 port GE SFP NIC			
Management	1x GE Cu (dedicated Mgmt port), 1x RJ45 RS232 console, 2x USB			
	128GB SSD		256GB SSD	
Other Interfaces and Modules				
TPM	Yes			
Crypto Acceleration	Intel SoC built-in Quick Assist Module			
USB	2 x USB 2.0			
Physical Characteristics				
Unit Weight	CSG1300 : 9Kg (19.84 lb) CSG1500 : 9.5Kg (20.95 lb)			
Unit Dimensions	(W) 440mm, (D) 470 mm, (H) 44mm			
PSU	Internal 920W 1+1 redundancy – back to front airflow, AC to DC			
Unit Power	100 – 240 VAC			
Cooling	Front to Back Cooling with FRU fans – 3+1 redundancy			
Mounting	Rack mountable unit			
Operational and Compliance				
Operational Temperature	0-40C @ 3,000 m altitude			
Storage Temperature	-20 to 70 C			
Humidity	15-85%			
Environmental	ROHS compliant			
Safety	FCC Part 15, Class A			
Regulatory	FCC (US), CE (EU), CB (IEC), UL/CSA62368-1, IEC60950-1, IEC62368-1 standards			

Versa CSG1000 NIC Modules

Versa Versa CSG Appliance 1000 series appliances offer field-based configurability using the NIC slot. NIC slots can carry the following NICs and other additional NIC types in the near future, providing the opportunity to further configure platforms based on design requirements.

NIC Type	NIC Options	Notes
GE	4 x Cu GE with 802.3at (POE+)	4-port Cu 802.3at (POE+) ports supporting both Type 1 and Type 2 POE devices. Each port can provide up to 30W of power, with a maximum of 120W for the module. In addition, 8 port GE NIC without PoE is also offered.
GE SFP	4 x GE SFP (Fiber)	4-port Fiber NIC supports GE SFP ports, Fiber Gigabit Ethernet support for 1000Base-SX/LX, IEEE standard/network topology
ADSL / VDSL	1 RJ45 port ADSL / VDSL	Two separate NICs: Single port ADSL, VDSL module supporting Annex A (POTS) Single port ADSL, VDSL module supporting Annex B (ISDN)
T1/E1	4 x RJ45 port T1/E1	Single NIC supporting T1/E1 framing, supports all common formats and PPP, HDLC, Frame relay encapsulations

Contact your Versa sales representative for more information about upcoming interface, modules, and NIC support.

Warranty and Support

Versa CSG1000 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 Appliance Ordering Guide.

Ordering Guide

Versa CSG1000 series appliances are versatile platforms providing a variety of optional capabilities to suit the needs of the enterprise. The Versa CSG ordering options provide similar flexibility to add optional hardware capabilities. Wireless options such as LTE or WiFi are factory installed and NICs are ordered separately to be installed in the field. For details on how to order CSG 1000 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.

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