

Cloud Services Gateway

CSG700 Series Appliances Datasheet

Introduction

Versa Networks Cloud Services Gateway (CSG) is a next-generation enterprise software-defined networking appliance that is based on x86 architecture to deliver cloud-native SD-WAN, SD-Security, and SD-Routing services. CSG700 series appliances are ideal for customers deploying Versa Secure Cloud IP platform architecture in small and medium branch offices.

Versa CSG700 series appliances are supported by the Versa Secure Cloud IP Platform's centralized management, Versa Director, and Versa Analytics software. Versa's software-defined infrastructure and Secure SD-WAN architecture enable enterprises to migrate from legacy WANs and to transform to a Software-Defined WAN solution, thus achieving superior business agility, branch modernization, and lower TCO.

Product Description

Versa CSG700 series appliances are designed for deployment in mid-to higher level Enterprise branches to deliver industry's richest set of networking functions. The versatile CSG700 series appliances deliver carrier-grade reliability, with enterprise-grade routing, SD-WAN and next-generation security while supporting a diverse set of WAN access technologies (MPLS and broadband), wireless WAN access technologies (3G, 4G-LTE, LTE Advanced) and non-Ethernet connectivity options including A/VDSL2 and T1/E1.

CSG700 series appliances have

- Ethernet WAN and LAN ports for connectivity and can be ordered with optional factory-installed LTE module(s) for 4G/LTE-A access, T1/E1 NIC, and A/VDSL2 NIC.
- Integrated 802.11ac Access Point (AP) module is orderable as an add-on factory-installed module, to provide enterprise-grade WLAN coverage for the branch.
- Add-on POE+ NIC module powered with an external power-supply-unit (PSU) allows the appliance to support the powering of up to 4 PoE connected devices (up to 60 Watts in total, with each port supporting up to 30 Watts).
- Add-on T1/E1-NIC provides 4 ports of T1/E1 interfaces to allow seamless connectivity via legacy WAN networks while supporting PPP, HDLC and Frame Relay encapsulations. For more details, please refer to the T1/E1-NIC Datasheet.
- Add-on A/VDSL2-NIC provides 1 port A/VDSL2 interface that supports VDSL2 up to 200+ Mbps in upstream and downstream directions. In addition, it auto-detects ADSL connections and adapts itself to ADSL where VDSL is not present. A/VDSL2-NIC comes in two flavors; Annex A (for POTS based connections) and Annex B (for ISDN based connections). Please refer to the A/VDSL2-NIC datasheet for more details.
- Designed to be aesthetically pleasing, the CSG700 series appliances are passively cooled and fanless, making them suitable for deployment in an office environment. They can also be deployed in a standard 19" rack.



The CSG700 series appliances consists of the following base models

- **CSG730** is optimized for deployment in small branches that require advanced application and cloud intelligence with hierarchical QoS, providing a cost-effective SD-WAN solution.
- **CSG750** is a compact, powerful appliance perfect for deployment in medium-sized branches that need advanced SD-Security (NGFW and UTM) along with comprehensive advanced application and cloud-intelligent SD-WAN services on-premises.
- **CSG770** is a high performance, powerful appliance for deployment at medium to larger branches that require a scalable uCPE (universal CPE) solution with advanced application and cloud-intelligent SD-WAN services, advanced SD-Security (NGFW and UTM) and flexibility for hosting third-party VNFs (virtual network functions) on-premises.



CSG 700 series Front View and Back View

Versa Director supports configuration, monitoring, and provisioning of CSG appliances, and Versa Analytics provides device, network, and security analytics for the CSG appliances. The CSG700 series appliances can be deployed by managed service providers (MSPs) for scalable managed services and by enterprises of all sizes from small and medium businesses to Fortune 500 companies. The CSG700 series appliances have been designed for ease of use whether deployed as a desktop unit or deployed in a rack. For an office deployment, the CSG700 series appliances are elegantly designed to fit seamlessly into modern office decor. The fanless architecture increases device resiliency and allows the appliances to be deployed in environments where silent operation is mandatory, such as in banks, retail offices, and SOHO.

For rack-mounted deployments, the port side of the CSG700 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 GPS, WLAN, and LTE connectors.

The Cloud Services Gateway Advantage

The CSG700 series appliances are highly performing, scalable entry-level and medium-branch appliances for Secure SD-WAN and SD-Branch deployments.

Versatility and Flexibility

CSG700 series appliances are based on Intel's x86 architecture, taking advantage of the latest performance enhancements for packet processing, encryption offload, and quick-assist technology to deliver the most efficient, high performance appliance for the branch. The innovative CSG700 series appliances are engineered to deliver high-performance and scalable multi-tenant, cloud-native enterprise-grade networking and security services, such as routing, SD-WAN, NGFW, CGNAT, and UTM.

Resiliency and Manageability Advantage

The CSG700 series appliances are designed for resiliency and durability to ensure business continuity and services. The fanless design and architecture, even in the highest performing model, ensure a long mean time between failure (MTBF). The appliances come with dual BIOS support for increased resiliency and reliability during BIOS upgrades. The CSG700 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 for FIPS 140-2 compliance and comes configured from the factory as a trusted platform. Preinstalled FIPS stickers provide default factory sealing and deliver the assurance of tamper proof operation. A TPM chip integrated into the appliance ensures the integrity and security of critical data, such as encryption and authentication keys.

LTE Advantage

4G/LTE support is ubiquitous across all models and can be used as a primary or backup WAN access link for the branch and remote sites. Enterprise customers can deploy CSG700 series appliances with up to four independent LTE-A links simultaneously, providing unmatched resiliency and flexibility for wireless WAN access from the branch.

Each appliance can be ordered with two factory-installed enterprise grade internal CAT-6 LTE Advanced (LTE-A) modems to provide simultaneous connectivity (Active/Active) to two active LTE access links. Each LTE modem provides performance up to 300 Mbps downstream and up to 50 Mbps upstream.

The embedded LTE-A modules are firmware controlled, allowing for maximum carrier flexibility and independence. The appliance has two externally accessible SIM card slots, one for each embedded LTE-A modem. If the appliance is configured with two LTE-A modems, each SIM card is used to control one LTE radio each. The appliance also has two USB slots that can be simultaneously connected to two LTE dongles. With two internal modems and two USB attached modems, customers can deploy up to four simultaneous LTE WAN connections. For more information see the LTE Datasheet.

Wi-Fi Advantage

Each CSG700 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 255 wireless clients concurrently. 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

The 4-port PoE+ Network Interface Card (NIC) module can provide up to a total of 60 Watts of power to four connected devices, delivering 15.4 Watts (802.3af) or 30 Watts (802.3at) of power to each device. Note, a second PSU (power supply unit) is required for the CSG700 series appliances to provide the additional power needed to distribute power for operating the PoE ports. APs, cameras, VoIP phones, and other PoE-capable devices can be powered without using AC adapters by leveraging the POE ports on the appliance.

CSG700 Series platforms also support additional NIC options such as ADSL/VDSL2 NIC and T1/E1 NIC. For more details please refer to respective datasheets.

GPS Advantage

The CSG700 series appliances have an internal GPS for automatically identifying the location of the device using GPS and GLOSNASS positioning systems. The device location is uploaded to Versa Director and Versa Analytics, and is used to facilitate provisioning and device mapping for use cases such as placing the device on a map and geo-fencing.

Scaling and Performance

Customers can select the correct CSG700 series appliance model based on the expected throughput and the required features for their branch architecture. The table below lists the expected throughput of each appliance model.

	CSG730	CSG750	CSG770
Recommended Deployment	Small Branch	Medium Branch	Medium / Large Branch
Throughput			
Routing	400 Mbps	2,500 Mbps	3,750 Mbps
Stateful Firewall	250 Mbps	1,500 Mbps	2,800 Mbps
SD-WAN DIA	250 Mbps	1,500 Mbps	2,800 Mbps
SD-WAN site to site	150 Mbps	800 Mbps	1500 Mbps
NGFW with SD-WAN	N/A	800 Mbps	1500 Mbps
NGFW + AV with SD-WAN	N/A	300 Mbps	800 Mbps
NGFW + IPS with SD-WAN	N/A	200 Mbps	450 Mbps
NGFW + UTM with SD-WAN	N/A	125 Mbps	250 Mbps
Scaling			
Concurrent HTTP Sessions	32,000	100,000	300,000
New HTTP Sessions per Second	750	2,500	8,500
Concurrent IPsec Tunnels	256	1,000	5,000





** For a complete list of software features supported by Versa Networks for the WAN edge, see the Versa Networks VOS datasheet.

** Refer to the latest Versa CSG700 appliance release notes and product documentation for the latest information on supported features, interfaces, limitations, performance, and best practices

** The performance numbers are observed with Versa recommended configuration and traffic conditions. The SD-WAN performance is measured using IMIX packet size mix. The UTM traffic performance is measured assumes 1 Mb response for HTTP traffic when 100 percent traffic is inspected for UTM.

Hardware Specifications

	CSG730	CSG750	CSG770
Networking			
Wired Interfaces	2 x Cu/SFP GE combo and 4 x Cu GE ports		
Wireless Interfaces	Two configurable wireless slots for single LTE, dual LTE, and LTE/Wi-Fi combinations		
NIC Support	See NIC Details Section		
Management	1 x RJ45 RS232 console, 1 x GE Cu (dual purpose)		
Other Interfaces and Modules			
TPM	2.0		
Crypto Acceleration	QAT functionality in hardware		
USB	2 x USB 2.0		
Physical Characteristics			
Unit Weight	5.38 lb / 2.65 kg		
Unit Dimensions	1.75" / 4.45 cm (h) x 13.25" / 33.65 cm (w) x 8.75" / 22.22 cm (d)		
Shipping Box Weight	10.36 lb. / 4.7 kg		
Shipping Box Dimensions	7" / 17.78 cm (h) x 16.875" / 42.86 cm (w) x 12.25" / 31.11 cm (d)		
PSU	External AC PSU, plus additional PSU for the PoE NIC		
Unit Power	110-240 VAC, 50-60 Hz		
Total POE Power	60 W		
Cooling	Passive		
Mounting	Desk Stand, Ceiling Mount and Rack Mount		

Operational and Compliance			
Operational Temperature	(temperature) hardened appliance -13F to 140F (-25C to 60C) @ 3,000 m altitude	32F to 104F (0C to 40C) @ 3,000 m altitude	32F to 104F (0C to 40C) @ 3,000 m altitude
Storage Temperature	-4F to 158F (-20 to 70 C)		
Humidity	10-85%		
FCC Classification	FCC Part 15, Class A		
Environmental	ROHS		
Safety	CE Marketing		
Regulatory	FCC (US), CE (EU), CB (IEC), JRF/JPA(JP)    		

CSG700 NIC Module

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 upto 30W of power, with a maximum of 60W for the module, for connecting PoE devices such as cameras, access points, and VoIP handsets.

Versa Cloud Services Gateway 700 series appliances are best suited for small-to-medium branch deployments as a WAN edge appliance with routing, SD-WAN, SD-Security and uCPE capabilities. Contact your Versa sales representative for more information about upcoming interface, modules, and NIC support.

Warranty and Support

Versa Cloud Services Gateway 700 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 Cloud Services Gateway Ordering Guide.

Ordering Guide

Versa Cloud Services 700 series appliances are versatile platforms providing a variety of optional capabilities to suit the needs of the enterprise. The CSG ordering options provide similar flexibility to add optional hardware capabilities. When ordering CSG700 series appliance, WIFI or wireline (POE+) NIC can be ordered as an add on option to be factory installed with the CSG 700 series appliance. The ordering information for the CSG 700 series appliance model with optional add-on modules is provided in the Versa Cloud Services Gateway Ordering Guide. CSG part numbers are structured logically to make the process of ordering flexible and intuitive. The Part Number for CSG 700 series consists of a base platform code (e.g. CSG 730) followed by optional Wireless modules (e.g. -W for Wi-Fi module) and/or followed by optional NIC modules (e.g. -4GP for 4 port Copper PoE+ ports). For more details on how to order CSG 700 series appliances, please refer to the ordering guide.

About Versa Networks

Versa Networks is the innovator of Secure Cloud IP architecture, a next-generation software platform that delivers integrated cloud, networking and security services. Versa's visionary solution, with an unrivalled depth of features and capabilities, enables enterprises to transition off legacy WANs to achieve business agility, branch modernization, and TCO advantages toward their digital transformation journey. The company has transacted over 150,000 software licenses through service providers, partners and enterprises globally. Versa Networks is privately held and funded by Sequoia Capital, Mayfield, Artis Ventures, Verizon Ventures, Comcast Ventures, and Liberty Global Ventures.

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