Cloud Services Gateway

CSG700 Series Appliances Datasheet

Introduction

Versa Cloud Services Gateway (CSG) 700 series is next-generation branch networking and security appliances delivering SD-WAN, NGFW, UTM, on-premises ZTNA and carrier class routing features all in one appliance. Versa CSG700 series appliances are ideal for enterprise branch offices that require integrated high performance branch connectivity and security solutions.

Versa CSG700 series appliances run VOS natively and get managed by Versa's centralized management; Versa Concerto, Versa Director, and Versa Analytics software. Versa's software-defined architecture enables enterprises migrate from legacy WAN, routing and security solutions that are typically separate solutions, over to Versa's integrated solution, achieving superior business agility, branch modernization, solution consolidation and lower TCO.

Product Description

Versa CSG700 series appliances are designed for deployment in Enterprise branches to deliver industry's richest set of branch networking and security functions. The versatile CSG700 series appliances deliver carrier-grade reliability while supporting a diverse set of WAN access technologies (MPLS and broadband), mobile connectivity options (via sub-6 class 5G, Advanced LTE modules), enterprise grade WLAN AP option, together with additional Ethernet (copper, with and without PoE, fiber GE interface add-on options) and non-Ethernet connectivity options such as A/VDSL2 and T1/E1 interfaces.

CSG700 series appliances offer

- Copper and fiber-based Ethernet WAN and LAN ports comes built-into the appliance and additional interfaces are available via NICs.
- Factory-installed, integrated 5G, or Advanced LTE module(s) can be ordered to provide WAN connections over the air.
- Factory installed, integrated 802.11ac Access Point (AP) module can be ordered to provide enterprise-grade wireless LAN coverage for the branch.
- POE+ NIC module powered with an external power-supply-unit (PSU) can be ordered to support powering of up to 4 PoE connected devices (up to 120 Watts in total).
- T1/E1-NIC option to provide 4 ports of T1/E1 interfaces to allow seamless connectivity via legacy WAN networks while supporting PPP, HDLC and Frame Relay encapsulations for legacy WAN connections.
- A/VDSL2-NIC option to provide one port of VDSL2 with up to 200+ Mbps in upstream and downstream directions. A/VDSL2-NIC is capable of auto-detecting ADSL2 connections where VDSL is not available and adapts itself to ADSL. A/VDSL2-NIC comes in two flavors; Annex A (for POTS based connections) and Annex B (for ISDN based connections).
- Designed to be aesthetically pleasing, the CSG700 series appliances are passively cooled (fanless), making them suitable for deployment in an office environment with zero noise. CSG700 appliances can also be deployed in a standard 19" rack with rack mount ears.

The CSG700 series appliances consists of the following base models

- **CSG730:** optimized for deployment in small enterprise branches that require advanced application and cloud intelligence with hierarchical QoS, to provide a cost-effective SD-WAN solution. CSG730 can operate in wider temperature range environments.
- **CSG750:** a powerful appliance ideal for deployment in medium-sized enterprise branches that need advanced SD-WAN and Security (NGFW, UTM, ZTNA) features deployed together in a single appliance.
- **CSG770:** a high performance branch appliance for deployment at medium to larger branches that require higher performance SD-WAN or Security solution. Furthermore, a scalable uCPE (universal CPE) is supported along with the rest of features to provide flexibility for hosting third-party VNFs (virtual network functions) using a single appliance.

CSG 700 series Front View and Back View

Centralized Versa Concerto or Versa Director is used to configure, monitor and provision of CSG appliances, while Versa Analytics provides device, network, application and security analytics based on big-data based analysis. Versa CSG700 series appliances can be deployed by managed service providers (MSPs) as part of their offering or by enterprises themselves. Versa CSG700 series appliances have been designed for ease of deployment and ease of use thanks to its ZTP and centralized management options.

Versa CSG700 series appliances can be deployed flexibly on a shelf, desk or in a rack. CSG700 series appliances are elegantly designed to fit seamlessly into modern office décor environments. The fanless architecture increases device resiliency and allows the appliances to be deployed in environments where operation without any noise is mandatory or desired.

Versa CSG700 series appliances provide ease of access and management while being rack mounted, thanks to its design that offers interfaces, antenna, power connections and indicators on front side of the unit all in a single side. Status LEDs provide succinct visualization of the operational status of the device with cloud connection and other indicators for technicians on premises.

The Cloud Services Gateway Advantage

Versa CSG700 series appliances are high performance, scalable branch appliances for Secure SD-WAN and SD-Branch deployments.

Versatility and Flexibility

The CSG700 series appliances are based on x86 compute architecture, taking advantage of the latest performance enhancements for packet processing and in addition they come with hardware offload functions for encryption and compression / decompression to deliver most efficient, high performance appliances for the branch.

Resiliency and Manageability Advantage

Versa CSG700 series appliances are designed for resiliency and durability to ensure business continuity and services. The fanless design, even in the highest performing model, ensures high mean time between failure (MTBF) values, reducing requirements for sparing and technician-based services. CSG700 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 class stickers provide default factory sealing and deliver evidence 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

Advanced LTE support is ubiquitous across all models and can be used as primary or backup WAN connection options for the branch appliance. Enterprise customers can deploy CSG700 series appliances with up to four independent LTE simultaneous connections, providing unmatched resiliency. Load sharing and flexibility for mobile access from the branch.

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

Embedded Advanced LTE modules are firmware controlled, allowing for maximum carrier flexibility and independence. The Versa CSG700 appliance has two externally accessible SIM card slots, one for each embedded LTE modem. If the appliance is configured with two LTE modems, each SIM card is used to control one LTE radio.

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 based WAN connections.

5G Advantage

Sub-6 based 5G support is available on CSG750 and CSG770 platforms as a primary or backup WAN connection option. Thanks to embedded 5G modem option, enterprise customers can now deploy CSG750 or CSG770 appliances making full use of higher performance connections across mobile networks.

Versa's embedded 5G modem is a sub-6 (FR1) class modem which uses 4 antennae for high performance connectivity across wide range of 5G and LTE bands. Versa CSG700 series 5G SKUs come with 4 indoor, high gain omni-directional antennae. Versa's antennae are attached using standards based SMA connectors. If desired, 3rd party antenna extenders can also be connected to the unit for improved signal characteristics. Such extension extender options can include indoor or outdoor class antennae options.

Versa CSG700's 5G module is fully firmware controlled, allowing for maximum carrier flexibility and configurability. Embedded 5G module is a global module that can be operated on networks of 5G operators across the globe.

Versa's 5G module supports 3GPP release 15 NSA/SA operations with extensive support for associated frequency bands. In addition, Versa 5G module supports CAT20 in the uplink and CAT18 in the downlink directions to serve with high performance in places that do not get viable 5G signal. While connected to 5G or to LTE CAT20/18 networks, Versa 5G module can provide high-speed connectivity that can exceed Gbps performance over the air, depending on signal and network availability in the deployment location as well as customer's data plan details.

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 within the branch. The WLAN AP module is an 802.11 a/b/g/n/an/ac (Wave2) access point that can support up to 8 SSIDs and 255 wireless clients concurrently. The embedded WLAN 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 WLAN module datasheet.

NIC Options

Versa provides two flavors of 4-port PoE+ Network Interface Card (NIC) module; while the older module can provide up to a total of 60 Watts of power to four connected devices, the new module doubles this capacity to 120W total. Each of the ports can supply its share of power from the aggregate PoE capacity and PoE power can be shifted based on the need. Note, a second PSU (power supply unit) is required for the NIC to provide the additional PoE power. Thanks to PoE NICs, WLAN APs, cameras, VoIP phones, and other PoE-capable devices can be powered without using AC adapters by leveraging the POE supplied by CSG700 series appliance.

In addition, Versa provides 8 port copper GE NIC (without PoE) and 4 port GE SFP NIC options to serve needs of our customers.

Furthermore, CSG700 Series platforms also support additional NIC options such as ADSL/VDSL2 NIC and T1/E1 NIC.

For more details on NICs, 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 appropriate Versa CSG700 series appliance model based on the expected throughput and the required features for their branch deployments. 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 (w/out TLS Proxy)	N/A	350 Mbps	700 Mbps
NGFW + AV with SD-WAN (w/TLS Proxy)	N/A	250 Mbps	550 Mbps
NGFW + IPS with SD-WAN (w/out TLS Proxy)	N/A	175 Mbps	450 Mbps
NGFW + IPS with SD-WAN (w/TLS Proxy)	N/A	150 Mbps	300 Mbps
NGFW + UTM with SD-WAN (w/out TLS Proxy)	N/A	125 Mbps	300 Mbps
NGFW + UTM with SD-WAN (w/TLS Proxy)	N/A	100 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)		

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 ordering information for the CSG 700 series appliance model with optional add-on modules is provided in the Versa Cloud Services Gateway 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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