Versa CSM 64 series

Introduction

Many enterprises consider 5G wireless technology play crucial role for enterprise connectivity. 5G (and its predecessor 4G/LTE) provides several advantages over the traditional wired connectivity. 5G wireless connectivity provides:

- A reliable alternative to wired links. Deployment of 5G WAN link improves the network availability of the enterprise branch. Here the 5G link is used as a backup to wired links to provide connectivity when all or some of the wired links fail.
- Enhanced bandwidth for enterprise branches. In some locations 5G wireless connectivity might be the only WAN connection available. Here the 5G link is the primary link.
- Accelerates inauguration of new branch or new site that needs to be brought up and connected rapidly. Here the 5G link is used as primary link while wired WAN link is being deployed. After the wired WAN is available, 5G is continued to be used as a backup.

Versa CSG700 series appliances support integrated 5G module for providing 5G WAN connectivity. Many customers have deployed the integrated 5G module to obtain high speed WAN connectivity.

Features

- **Sub-6 Frequency Band**
- **Support for SA and NSA Modes**
- **Zero-touch provisioning for rapid and scalable deployment.**
- **Dual SIM Card Support**
- **5G Based Smart Connectivity**
- **Intelligent WAN Connectivity solution integrated with Versa Secure SD-WAN**

However, the CSG appliance with an integrated module is not suitable for all the customers and at all deployment locations. 5G technology utilizes higher band frequencies compared to previous generations of LTE/3G, making the signal more susceptible to being absorbed by physical objects in its path (e.g., building materials), resulting in significant signal loss. As the network appliances are typically deployed in the networking closet where the wired WAN connections terminate, mobile signal quality may not be at its best especially in higher frequency bands resulting in certain mobile bands not having acceptable signal qualities or experiencing lower performance in such deployments. Thus, customers need the flexibility to deploy 5G WAN device at positions with better wireless reception and decouple the deployment of the CSG appliance from 5G appliance.

Versa CSM64 series of appliances are ideal to provide high performance 5G WAN connectivity at such locations. Thanks to standard Ethernet based connectivity, now Versa CSM64 series of appliances can be placed flexibly within the site for better signal availability within limitation of Ethernet distances. Typically, deployment preference for CSG64 would be closer to windows facing signal reception path, building façade or top of the building.

Thanks to such decoupling option and placement flexibility, POE powered Versa CSM64 series appliances provide high performance mobile connectivity for the site. The CSM64 series platforms are managed by Versa Orchestrator suite which provides unified management, big-data based data analytics and detailed visibility portal across entire Versa ecosystem.

CSM64 series platform overview

CSM64 series platforms enable 5G/LTE WAN connectivity for enterprises connected with Versa Secure SD-WAN. The solution supports global sub-6 5G connectivity and is based on industry-leading, latest 5G chipset used in commercial and enterprise applications today. CSM64 series of appliances provide market leading advantages of performance, deployment flexibility, and agility. The platform is capable of supporting FR1/sub-6 class 5G based high performance connectivity to facilitate high performance deployments.

CSM64 appliance

Target use cases

Rapid deployment with high performance 5G WAN connectivity

CSM64 series appliance provides on-demand network connectivity for new locations and pop-up locations. Enterprises moving one of their current locations, expanding to new locations or just having a pop-up for an event require network connectivity from get-go. Any delay in connectivity results in loss of business and revenue. With CSM64 series of appliances, enterprises can get connected instantaneously using 5G/LTE wireless connection.

CSM64 provides high performance 5G connectivity which can be used to boot strap the branch, significantly accelerating the setup and operations. When VOS appliance and CSM64 are shipped to the newly installed site or event venue, CSM 64 provides the required connectivity to bootstrap the VOS device. CSM64 provides the intelligence to complete the Zero Touch Provisioning process of the VOS appliance without the need to wait for wired connection.

The high performance 5G WAN connectivity provides seamless access to business-critical applications for the users.

Back-up connectivity

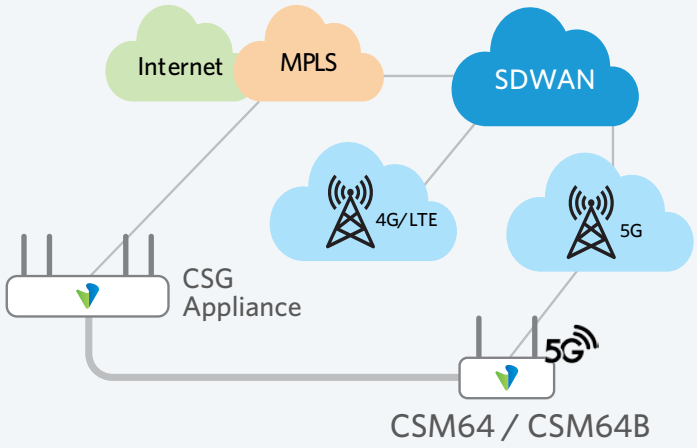
A critical component of having a successful business continuity plan is to build a reliable connectivity solution. Versa CSM64 series provides the necessary back up link when the primary/wired connection(s) fail, providing seamless connectivity for business-critical applications for users. The connectivity as well as SD-WAN probes are optimized for smart network usage tailored for metered nature of back up wireless networks.

Dynamic service provider connectivity

Wireless service levels for the a mobile service can vary based on location. Commercials can also change over time. For such reasons Enterprises would like to have flexibility to change the wireless service. Versa CSM64 provides two SIM card slots to accommodate SIMs from two providers. With CSM64, enterprises can populate 2 SIM cards. CSM 64 can be configured to designate one of the SIM card as primary which is preferred for providing the connectivity and the other as backup. The primary and back up status can be switched dynamically to change the wireless service provider. This can be updated based on performance, signal strength and/or commercial agreements. At any given time, only one SIM card can be used actively to connect to the corresponding mobile network.

Deployment

CSM64 series platforms can be powered by Power over Ethernet (PoE). Select CSG series appliances and CSG NICs have the ability to provide POE power. CSM64 appliance can connect to the PoE enabled CSG appliance with standard Ethernet cable consuming power from the network appliance without need to use an alternative power source. Alternatively, other PoE sources (e.g POE Ethernet Switch) can also be used to connect to CSM64 and to power the modem appliance. In the absence of any PoE source, a POE injector can be used to power the CSM64 appliance.



The CSM64 supports deployment flexibility to seamlessly integrate into the branch network. In the simplest form, CSM64 can be directly connected to VOS appliance for WAN connectivity. Depending on the network topology and power requirements, CSM64 may connect to the switch infrastructure. In either case, CSM64 provides seamless 5G WAN connectivity for all the use cases mentioned above.

Product description

CSM64 series of appliances provide an enterprise class POE powered high performance 5G WAN connectivity solution. CSM64 series of appliances:

- Available in two models:
  - CSM64 for indoor deployments
  - CSM64b for outdoor deployments

- Support 2 SIM cards out of which one SIM card is active facilitating connection to one mobile network while other is in standby. The network administrator can choose to switch from one SIM card to another dynamically, using remote commands, without being on site.
- Support 1x 2.5 GE Ethernet interface with POE.
- Support 1 USB 3.0.

Support for SA and NSA modes

CSGM64 supports 5G Stand-Alone (SA) mode and Non-Stand-Alone (NSA) modes of operation allowing our customers to continue utilizing 5G connections to support diverse set of 5G service providers and their 5G adoption plans as they may be going through different stages of 5G migration of their wireless network. This flexibility allows our customers to purchase 5G module once and be future proofed for expanded deployments of 5G networks and 5G network modes.

Flexibility of connection

CSM64 is an intelligent device that supports sub-6 5G and LTE Pro Advanced CAT20 and lower modes of connection to provide flexibility of connection to our customers. Our customers would use the SIM card associated with a 5G data plan that will allow the Versa modem to scan the air for related sub-6 5G frequencies for connection. If these 5G frequencies are present, it will connect to that respective network. If the 5G frequencies are absent on a given location, then Versa will look for next set of high frequency bands, starting from CAT20 and continuing to scan the air for best connectivity options to give highest performance.

5G based smart connectivity

Versa's software appliance operating system, VOS™, auto-recognizes CSM64 appliance, auto-configures mobile interface, and leverages the high performance of the modem for data plane, management plane, and control plane functions (or any combinations of these), while uniquely identifying that the underlying medium is 5G.

VOS™ manages CSM64 appliance based on specific deployment configurations as a primary WAN interface or as a backup WAN link that will only be activated upon failure or SLA-violation of SD-WAN traffic steering policies. All features (routing, SD-WAN, security) of VOS™ can be applied to leverage the 5G WAN connection.

In addition to supporting fully featured services over 5G and managing traffic traversing the 5G interface, VOS™ also has the contextual intelligence of identifying the volume and rate of data and control traffic to ensure effective utilization of Advanced Pro LTE and 5G network resources. Examples of this intelligence and advanced control are LTE / 5G focused, dynamic SD-WAN probes, adaptive probing capabilities, and suppression.

Intelligent WAN connectivity solution integrated with Versa Secure SD-WAN

CSM64 series appliances as well as Versa Secure SDWAN appliances (CSG, non-CSG) are managed by a single Versa orchestrator and is served by single data lake for near real time visibility and historical reporting.

VOS appliances on the branch are tightly integrated with the CSM64 appliance providing intelligent traffic management capabilities (e.g., SLA based on signal strength), optimized SLA monitoring based on link status (active Vs backup), optimized probes in order to maximize the usage of wireless link over metered connection.

SIM cards support

CSM64 series appliances come equipped with 2 nano-SIM card slots, while only one SIM card is active and connected. If both SIM slots are populated, administrators can configure the SIM slot which is to be used to connect to the mobile network. The SIM card chosen for 5G connection can be switched dynamically based on pre-defined criteria (performance, time etc)

SIM cards are externally accessible as they are located behind the easily identifiable SIM slot doors. SIM slot doors are designed to ensure easy insertion or removal of SIM cards while ensuring security. Versa recommends using pre-activated 5G SIM cards to ensure the most positive initial deployment experience. Once inserted, SIM cards are auto detected by the platform and platform connects to the recognized 5G (or LTE-A Pro/LTE-A/ LTE/4G) network accordingly.

SIM cards can also be host-swapped thus enabling a fast and easy transition from one mobile network provider to another. Upon insertion of a new SIM card, CSM64 series appliance will auto-detect the new SIM card and connect to the corresponding mobile network.

Agility

The CSM64 series appliances with the installed 5G module are certified to be operated across different geo-regions. Please refer to CSM64 hardware documentation for more details.

Versa's CSM64 appliances are firmware-based smart modems to allow updates to cover patches, introduce new features, and adopt to changes in carrier network deployments. Versa's embedded 5G module supports in-device (ie: CLI or GUI driven) or over the air (OTA) upgrades to facilitate easy firmware updates.

Firmware-based operation allows Versa modems to connect to 5G, LTE-A Pro, LTE-A, LTE, 4Gnetworks with flexibility. Also, Versa allows for easy adoption of updates if/when needed by the carrier. Versa's 5G module also supports security features such as Secure Boot for anti-tamper protection.

Frequency bands

Please see the following supported mobile frequency band coverage in the specifications table on the next page.

Specifications table

Feature	CSM64	CSM64b
Modem	Sub-6 FR1 (3GPP Release 15) with CAT-20/CAT-18 LTE-A Pro, HSPA+ support	
Regional	Global	
Deployment	Indoor	Outdoor
5G Category	Sub-6, FR1 120 MHz, 2CC CA DL	
5G Bands (NSA & SA)	n1, n2, n3, n5, n7, n8, n12, n13, n14, n18, n20, n25, n26, n28, n29, n30, n38, n40, n41, n48, n66, n71, n75, n76, n77, n78, n79	
LTE Category	CAT20	
LTE Bands (FDD&TDD combined)	B1, B2(B25), B3, B4(B66), B26(B5, B18, B19), B7, B8, B12(B17), B13, B14, B20, B28, B29(DL), B30, B32(DL), B34, B38, B39, B40, B41, B42, B43, B46(LAA), B48(CBRS), B66, B71	
5G max speeds	DL: 5 Gbps, UL: 650 Mbps	
LTE max speeds	DL: 2 Gbps, UL: 200 Mbps	
Antenna	Internal	Bolt-on
LTE Carrier Aggregation	5xCA up to 19 layers DL/2xCA UL, 256-QAM DL/UL	
Global Positioning	GPSOne™ Gen 9 Band L1	
Tx Power	23 dBm (Power Class 3) 26 dBm (Power Class 2) in B41/n41	
Wired Interface	RJ45, 1x10/100/1000/2500 NBASE-T ports	
USB Data Interface	USB 3.0 Type-A	-
PSU (Optional)	Mid span POE injector	Mid span POE injector
PoE Input	POE Class 0	POE Class 0
Cooling	Convection Cooled	Convection Cooled
Mounting	Wall mount and desktop, shelf placement options	Wall mountable, Pole mounted, Desktop
Operating Temperature	-5 to 40 C	-25 to 70 C
Storage Temperature	-40 to 80 C	-40 to 80 C
FCC Classification	FCC Class A	FCC Class A

Ordering information

Please reach out to Versa Account Representative for ordering information. For further details, please refer to the Versa ordering guide.

About Versa

Versa, a global leader in SASE, enables organizations to create self-protecting networks that radically simplify and automate their network and security infrastructure. Powered by AI, the VersaONE Universal SASE platform delivers converged SSE, SD-WAN, and SD-LAN solutions that protect data and defend against cyberthreats while delivering a superior digital experience. Thousands of customers globally, with hundreds of thousands of sites and millions of users trust Versa with their mission critical networks and security.

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