



## Versa LTE Advanced Pro Module for CSG1300 and CSG1500 Platforms

Versa CSG1300 and CSG1500 series appliances can be optionally equipped with factory-installed (internal) enterprise grade LTE Advanced Pro modules. Versa's LTE Advanced Pro module supports CAT12 LTE capabilities to provide a high-performance WAN link experience. LTE Advanced pro based WAN links can be used as either a primary link or backup link. As with the all components of Versa's portfolio and solutions, the LTE Advanced Pro Module functionality is centrally managed and controlled by Versa Director with network and device analytics provided by Versa Analytics.

### THE VERSA WIRELESS ADVANTAGE

The integrated global LTE Advanced pro Module is based on industry-leading and industry-proven CAT12 LTE chipsets used in commercially available enterprise-grade products today. The global LTE Advanced Pro module, when integrated with CSG1300 and CSG1500 series appliances, provides unique advantages of performance, deployment flexibility and agility. Here are some of the key highlights:

#### LTE-Advanced-Pro Module Performance

The integrated LTE Module is capable of CAT 12 LTE Advanced connectivity. It provides downlink performance of up to 600 Mbps and uplink performance of up to 150 Mbps. With Carrier Aggregation, LTE Advanced Pro delivers 4x the bandwidth of LTE. This delivers higher performance connectivity solutions as primary or backup WAN links. The module supports over the air (OTA) upgrades to always ensure the latest firmware and software can be published to the device. It also supports Secure Boot for tamper protection. In deployments where LTE-A Pro is not available, the Versa LTE-A Pro Modem will auto-scale back

to LTE Advanced, LTE, 4G or 3G depending on mobile network availability, wireless plan purchased and other factors.

#### LTE Based Connectivity

CSG1300 or CSG1500 series appliances can be deployed with up to 2 integrated LTE-A Pro modules. There are specific orderable SKU's for the CSG1300 and CSG1500 units that can be ordered with one or more factory installed LTE modems. In addition to the internal modems, the CSG1300 and CSG1500 can support USB-connected LTE modems support use-case deployments that require more than 2 simultaneous LTE modems.

Versa FlexVNF, the software appliance operating system auto-recognizes LTE-A pro/LTE-A/LTE modems, auto configures mobile interfaces and will leverage the high performance of the modem for data plane, management plane and control plane functions, while uniquely identifying that the underlying medium is LTE.

Versa FlexVNF manages individual LTE interfaces based on specific deployment configurations as a primary WAN interface as well 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 Versa FlexVNF can be applied and leverage the LTE interface.

In addition to supporting fully featured services over LTE and managing traffic traversing the LTE interface, Versa FlexVNF also has the contextual intelligence of identifying volume and rate of data and control traffic to ensure effective utilization of LTE network resources. Examples of this intelligence and advanced control are LTE Focused Dynamic SD-WAN Probes, Adaptive Probing capabilities and suppression.

## SIM Cards Support

CSG1300 and CSG1500 appliances come equipped with 2 nano-SIM card slots, each SIM slot maps to a specific radio module. If the unit is ordered with one LTE-A Pro modem, the modem is installed and identified on internal mobile slot #1. If the unit is ordered with two LTE-A Pro modems, then both mobile module slots within the appliance are populated, and each SIM card slots map to each LTE slot accordingly. SIM cards are externally accessible, located behind easily identifiable SIM slot doors. SIM slot doors are designed to ensure you can easily insert or remove SIM cards while still keeping SIM cards secured.

Versa CSG1300 and CSG1500 units do not ship with SIM cards pre-installed. Customers will need to purchase to purchase SIM card(s) from an available mobile provider. Versa recommends using pre-activated SIM cards to ensure the most positive experience in deployment.

Once inserted, SIM cards are auto detected by the platform and platform connects to the recognized LTE-A Pro/LTE-A/LTE/4G/3G network accordingly. SIM cards can also be host-swapped, enabling a fast and easy transition from one mobile network provider to another. Upon insertion of a new Sim card, CSG1300 and CSG1500 appliance will auto-detect the new SIM card and connect to the corresponding mobile network.

## Agility

The CSG1300 or CSG1500 series appliances with the installed LTE-A Pro module are certified to be operated across global regions. Please refer to CSG1300 and CSG1500 hardware documentation for more details.

The Versa LTE-A Pro Module is firmware based and comes pre-installed with 3 carrier specific plus one generic image. Customers can upgrade or replace these images as necessary to address their specific network requirements.

The LTE-A Pro module, when it detects a SIM card has been inserted, will identify the appropriate firmware image and mobile operator settings based on the details detected from the inserted SIM. In most deployment scenarios, a generic firmware image will be used.

Firmware based operation allows Versa modems to connect to LTE-A Pro/LTE-A/LTE/4G/3G network with flexibility and adopt updates if/when needed by the carrier.

## Region Frequency Mapping

The factory-installed Versa LTE-A Pro Module for the CSG1300 and CSG1500 is provided with only one orderable SKU to provide global coverage. You can see the supported mobile network and frequency band coverage in the Specifications Table below.

## SPECIFICATION

Band	Description	Frequencies / MHz	APAC Modem	Americas & EMEA Modem
1	IMT Core Band	1920-1980, 2110-2170	• •	• •
2	PCS 1900	1850-1910, 1930-1990		• •
3	GSM 1800	1710-1785, 1805-1880	•	• •
4	AWS	1710-1755, 2110-2155		• •
5	850 (US, Korea, etc.)	824-849, 869-894	• •	• •
6	850 (Japan #1)	830-840, 875-885	•	
7	IMT Extension	2500-2570, 2620-2690	•	•
8	GSM 900	880-915, 925-960	• •	• •
9	1700 (Japan #2)	1749.9-1784.9, 1844.9-1879.9	•	
11	Lower PDC	1427.9-1447.9, 1475.9-1495.9	•	
12	US 700	699-716, 729-746		•
13	US 700	777-787, 746-756		•
17	US 700	704-716, 734-746		
18	850 (Japan #4)	815-830, 860-875	•	
19	850 (Japan #5)	830-845, 875-890	• •	
20	800 Digital Dividend	832-862, 791-821		•
21	1500 (Japan #6)	1447.9-1462.9, 1495.9-1510.9	•	
25	Extended PCS	1850-1915, 1930-1995		•
26	Extended CLR	814-849, 859-894		•
28	APAC	703-748, 758-803	•	

29	Lower SMH blocks	n/a, 716 – 728		•
30	WCS blocks A/B	2305–2315, 2350–2360		•
38	IMT-E	2570–2620	•	
39	China TDD	1880–1920	•	
40	China TDD	2300–2400	•	
41	BRS / EBS	2496–2690	•	•
125	WCS blocks C/D	2315-2318, 2347-2350		

\* Versa recommends to check and confirm carrier frequencies before ordering specific models • **WCEMA** • **FDD LTE** • **TDD LTE**

LTE for NA/EMEA (-LA)		LTE for APAC (-LB)
Cellular Bands	FDD/TDD LTE (Cat-6) 1-5,7,8,12,13,20,25,26,29,30,41 Carrier Aggregation 1+8; 2+(2,5,12,13,29); 3+(7,20); 4+(4,5,12,13,29); 7+(7,20); 12+30;5+30;41+41 DC-HSPA+ (42/5.76 Mbps) 1,2,3,4,5,8	FDD/TDD LTE (Cat-6) 1,3,5,7,8,18,19,21,28,38,39,40,41 Carrier Aggregation 1+(8,18,19,21); 3+(5,7,19,28); 7+(5,7,28); 19+21, 38+38, 39+39, 40+40, 41+41 DC-HSPA+ (42/5.76 Mbps) 1,5,6,8,9,19 TD-SCDMA 39

### Ordering Information

Versa LTE/4G/3G module adds Wireless WAN capability to CSG700 and CSG300 Series appliances. The Versa LTE/4G/3G module is available as an option when ordering CSG700 and CSG300 series appliances. For further details, please refer to the Versa 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. For more information, visit <https://www.versa-networks.com>