

# Versa ADSL2+/VDSL2 Module for CSG Platforms

Versa CSG appliances can be optionally equipped with ADSL-VDSL2 NIC module. Versa ADSL-VDSL2 NIC module supports single WAN interface that allows our customers to connect to VDSL2 and ADSL networks.

ADSL2+/VDSL2 NIC provides built-in secure and cost-effective connectivity solution to our customers directly from CSG platforms without the need to deploy a separate xDSL modem. This NIC provides high-speed digital data transmission between customer premises equipment (CPE) and the central-office DSL access multiplexer (DSLAM), located on telco premises.

Versa Secure SD-WAN solution with built-in ADSL2+/VDSL2 WAN port addresses connectivity needs of our customers ranging from small businesses to large enterprise branch offices and to home offices.

Integrated solution allows our customers to manage built-in ADSL2+/VDSL2 WAN connection from single pane of glass, Versa Director and Versa Analytics. Native integration gives unparalleled WAN visibility, and statistics on the WAN network which allows Versa software to manage traffic dynamically for best user and application experience.

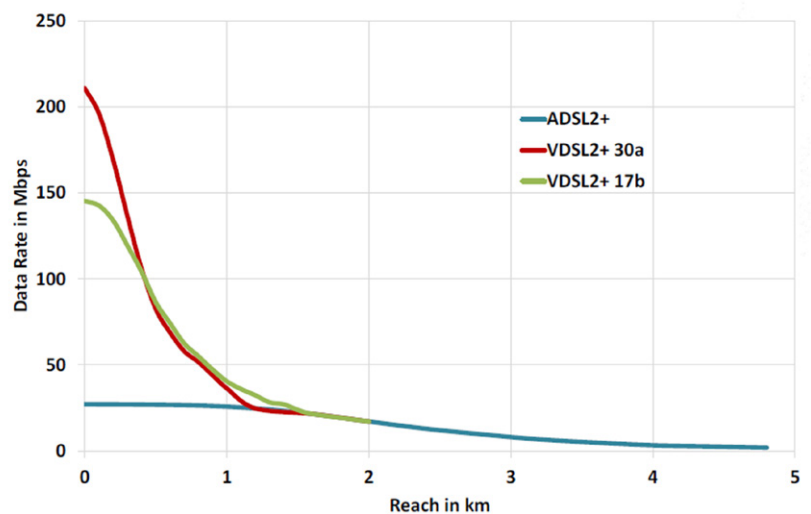
Our customers can now deploy rich set of SD-WAN, Security and Routing features directly on ADSL2+/VDSL2 interfaces driving business-class security; voice, video, and data along with differentiated classes of service (CoS), and market leading Application Intelligence and Network Performance Management features of Versa OS.

## Performance and Range

ADSL2+/VDSL2 NIC is built on high performance chipset that conforms to VDSL2 or ADSL2+ standards driving up to 200 Mbps performance on downstream and on upstream on twisted pair-based connections using bandwidth up to 30 MHz.

Versa ADSL2+/VDSL2 NIC incorporates automatic sensing and fallback to ADSL where VDSL2 is not available.

Versa ADSL/VDSL2-NIC supports wide spectrum of high performance and long range that you may need. Please see the following graph for performance and distance range variation.



Note that actual performance and range values will be dependent on real life deployment conditions. VDSL2 and ADSL2+ performance is a function of many variables, including the DSLAM line card, DSLAM software version, VDSL profile and band plan, line-noise conditions, loop length, and other environmental factors.

## Specifications

<b>NIC Module flavors</b>	<p><b>ADSL2+/VDSL2 NIC comes in two flavors</b></p> <p>Annex A for POTS based DSL line connections</p> <p>Annex B for ISDN based DSL line connections</p> <p>Please ensure that you order the right SKU for your deployments</p>
<b>Port</b>	1 RJ45 port
<b>Standards supported</b>	<p><b>Annex A</b></p> <p>VDSL2: ITU-T G.993.2 Profiles 8, 12, 17, 30 MHz</p> <p>VDSL2 G.993.2 Profile 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a</p> <p>ADSL: ITU-T G.992.1/3/5 Annexes A, L and M</p> <p>ITU-T G.993.5 Vectoring</p> <p>ITU-T G.998.4 PHY Layer Re-Transmission profiles up to 30 MHz</p> <p><b>Annex B</b></p> <p>VDSL2: ITU-T G.993.2 Profiles 8, 12, 17, 30 MHz</p> <p>VDSL2 G.993.2 Profile 8a, 8b, 8c, 8d, 12a, 12b, 17a, 30a</p> <p>ADSL: ITU-T G.992.1/3/5 Annexes B and J, T1.413</p> <p>ITU-T G.993.5 Vectoring</p> <p>ITU-T G.998.4 PHY Layer Re-Transmission profiles up to 30 MHz</p>
<b>Performance and reach</b>	<p>VDSL2: up to 200 Mbps</p> <p>ADSL2+: up to 24 Mbps</p> <p>Or up to 5 km (over 16,000 ft) maximum reach</p>
<b>Encapsulation</b>	<p>ATM – LLC or VC-MUX based transparent bridging within the NIC with VPI/VCI configuration option. Network packet processing by Versa OS (FlexVNF) including full set of L2, L3, L4-7 functions including VLAN and other means to separate traffic.</p> <p>In addition, support for VLAN, PPPoE, PPPoEoA encapsulation options are supported by ADSL2+/VDSL2-NIC</p>
<b>Other Features</b>	<p>Dying Gasp</p> <p>Support for TR-048/067, TR-100, TR-114 for remote monitoring and diagnostics</p> <p>Firmware Upgradable</p>
<b>Over-voltage Protection</b>	Built-in impulse over-voltage protection
<b>Field Installation</b>	ADSL/VDSL2-NIC can be installed on (or removed from) CSG300 appliances while CSG platform is powered off. While it is built-into CSG700 appliances from the factory

## Ordering Information

Versa ADSL/VDSL2-NIC module adds DSL capability to CSG Series appliances. Versa ADSL/VDSL2-NIC is available as a separate option when ordering CSG300 series appliances and it can be installed upfront or after. However, it will have to be ordered in built-in form for CSG700 Series. For further details, please refer to the Versa ordering guide.

Learn more at <http://www.versa-networks.com> and follow us on Twitter @versanetworks.