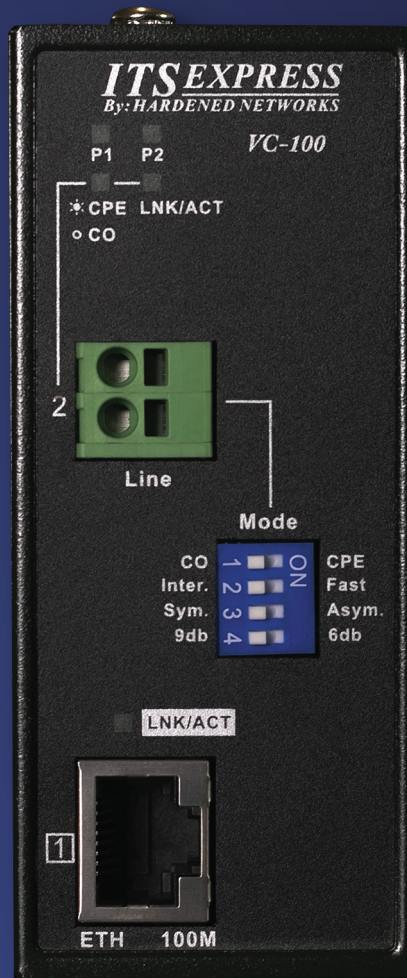


# HN

# HARDENED NETWORKS



VC-100

# HN

## Where Innovation Meets Reliability



VC-100 converts Ethernet to VDSL2 and back to ethernet to extend an ethernet connection over a pair of existing copper cables.

Distance will vary up to 1.5 miles (2400m) over the existing traffic signal interconnect (copper cable) bandwidth will vary depending on the cable type, gauge, cable quality, splices, terminations, and length.

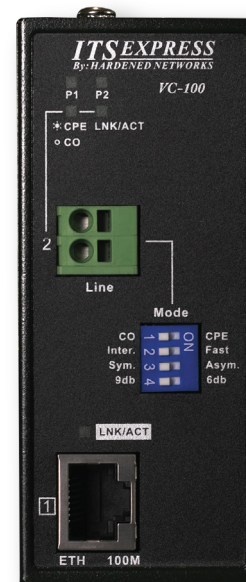
Typical bandwidth will be between 1 MB to 100 MB, depending on factors, including cable separation (interference), moisture intrusion, impedance, cable design, etc.

**Our exciting new Flex-Technology revolutionizes speed upgrades in hardened switches!**

Now you can purchase switches with any higher speed SFPs 10gig /2.5 gig and connect them to your existing slower speed 100 or 1000 optics without requiring like optics. Make your upgrade path fast, simple, and pain-free!

Ask your sales representative today!

- Steady VDSL2 data link distance up 1.5 miles
- 24AWG UTP cable
- Supports two wire transmission
- DIP switches provided for easy configuration mode for Master (CO)/Slave (CPE)
- Supports asymmetric and symmetric bandwidth modes
- Ethernet port support of full/half duplex operation
- Auto MDI/MDI-X switching function
- Redundant 12-48VDC power inputs with terminal block
- Rigid IP-30 mini-type housing design
- Din-rail and wall mounting enabled



ITS Express/ Hardened Networks products have been specifically engineered to exceed the challenging demands of extreme environmental conditions and high bandwidth 5k multicast video streams.

Whether a media converter or a Full Layer 3 switch, the design incorporates best-in-class chipsets to provide an extremely robust, redundant architecture able to be reliable in any integration.

Switch Model	VC-100
<b>Physical Ports</b>	
100 Base-TX Ports in RJ45 Auto MDI/MDIX	1
100Mbps Ethernet Extender Ports	1 (Support 2-wired)
<b>Technology</b>	
Ethernet Standards	-IEEE 802.3u for 100Base-TX -VDSLITU T G.993.1 -VDSL2ITU T G.993.2
Processing	Store and Forward
<b>Performance</b>	
VDSL Speed	Refer to Appendix A.
<b>Power</b>	
Overload Current Protection	Present
Input Power	Dual 12 - 48 VDC power inputs at 4 pin terminal block
Power Consumption (Typ.)	4.75 watts
<b>Physical Characteristics</b>	
Dimension (W x D x H)	41(W) X 70(D) X 95.5 (H)mm (1.61 X 2.76 X 3.76 inch)
Weight (lb/g)	0.6lb/272g
Enclosure	IP-30
<b>Environmental</b>	
Storage Temperature	-40 to 75C (-40 to 167F)
Operating Temperature	-40 to 85C (-40 to 185F)
Operating Humidity	5% to 95% Non-condensing
<b>Regulatory Approvals</b>	
EMI	FCC Part 15, CISPR (EN55022) Class A
EMS	-EN61000-4-2 (ESD) -EN61000-4-3 (RS) -EN61000-4-4 (EFT) -EN61000-4-5 (Surge) -EN61000-4-6 (CS) -EN61000-4-8 -EN61000-4-11
Shock	IEC 60068-2-27
Free Fall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Warranty	1 Year

# Other Solutions

Hardened Networks has created variety of high quality products to fit your needs. If you did not find what you needed in the VC-100, please browse our other solutions.

## Ethernet Switches



**ITS-8012-24 V3**

- 4 Ultra Fiber Ports SFP+ 100Mb/1000Mb/2.5Gb/10Gb
- 4 Enhanced Fiber Ports SFP 100Mb/1000Mb/2.5Gb
- 16 Copper Ports 10Mb/100Mb/1000Mb
- 176 GBPS Back-Plane



**ITS-8042 V3**

- 2 Ultra Fiber Ports SFP+ 100Mb/1000Mb/2.5Gb/10Gb
- 2 Enhanced Fiber Ports SFP 100Mb/1000Mb/2.5Gb
- 8 Copper Ports 10Mb/100Mb/1000Mb
- 96 GBPS Back-Plane



**ITS-8012-24+ V3**

- 4 Ultra Fiber Ports SFP+ 100Mb/1000Mb/2.5Gb/10Gb
- 4 Enhanced Fiber Ports SFP 100Mb/1000Mb/2.5Gb
- 16 Copper Ports 10Mb/100Mb/1000Mb
- Two sets of bypass fiber ports
- 176 GBPS Back-Plane



**ITS-8042+ V3**

- 2 Ultra Fiber Ports SFP+ 100Mb/1000Mb/2.5Gb/10Gb
- 2 Enhanced Fiber Ports SFP 100Mb/1000Mb/2.5Gb
- 8 Copper Ports 10Mb/100Mb/1000Mb
- Two sets of bypass fiber ports
- 96 GBPS Back-Plane

## Communications



**ITS- MC-1000**

- 10Mb/100Mb/1000Mbps Ethernet BASE-T/TX to SFP (MM or SM)
- Optical port supports 100Mb or 1000Mb full duplex data



**ITS- MC-100**

- 10Mb/100Mbps Ethernet BASE-T/TX to SFP (MM or SM)
- Flexible power 18-46VAC/12-60 VDC



**ITS- VC-100**

- High Speed VDSL-2 Technology
- 10Mb/100Mbps Ethernet BASE-T/TX to a pair of copper cables
- Flexible power 18-46VAC/12-60 VDC

We here at Hardened Networks are proud to carry products that are certified by:



Express Supply, Inc.

[www.expressupply.net](http://www.expressupply.net)

(407) 497-8614