PLANET
Networking & Communication

VC-102M / VC-102S

Ethernet over VDSL Converter

PLANET's state-of-the-art Ethernet-over-VDSL products are based on two core networking technologies: Ethernet and VDSL (Very-high-data-rate Digital Subscriber Line). This technology offers the absolute fastest possible data transmission speeds over existing copper telephone lines without the need for rewiring.

The VC-102 Ethernet over VDSL converters have a switching architecture with one RJ-45 10/100Mbps Ethernet port and one VDSL port (with 2 RJ-11 connectors). When the VC-102M is used to connect to a VC-102S as a standalone pair, up to 5 speeds can be selected by a DIP switch on the VC-102M to compensate for connection distance. The selected speed can be up to 15/17Mbps asymmetric data rate at 1.05km and up to 5/5Mbps asymmetric data rate at 1.5km. This configuration is ideal for use as an Ethernet extender for your existing Ethernet network. The VC-102S can also be connected to PLANET's new 16 VDSL-port + 2 gigabit-slots stackable switch, the VC-1602, to offer the most flexible approach to new network design and existing network upgrades.

Fully compatible with Cisco LRE switch and CPE modems, PLANET's VDSL solution provides a much cheaper replacement and smooth migration for existing Cisco LRE networks.

►► Key Feature

- Cisco LRE switch / CPE compatible
- Complies with IEEE802.3, IEEE802.3u and IEEE802.3x standards
- 5 selectable transmission modes through DIP switch on VC-102M or management interface of VC-1602
- QAM (Quadrature Amplitude Modulation) line code
- Designed based on Frequency Division Duplexing
- Half duplex Back pressure and IEEE802.3x Full Duplex Pause frame flow control
- Built-in POTS/ISDN splitter
- Two RJ-11 connectors for each VDSL port, one for VDSL connection and one for POTS/ISDN connection
- Voice and data communication can be shared on the existing telephone wire simultaneously
- Support up to 1536 bytes packet size, 802.1Q VLAN tag transparent
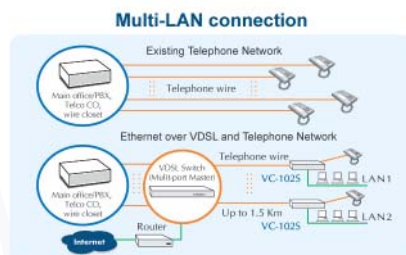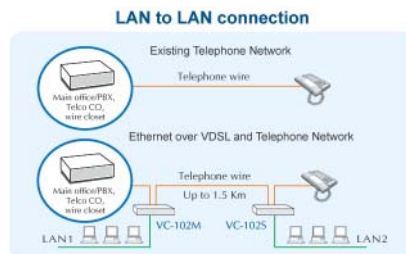- Support extensive LED indicators for network diagnostics

ProductInter		Ethernet over VDSL Converter	
Model		VC-102M	VC-102S
Ports	10/100Base-TX	1 RJ-45	1 RJ-45
	VDSL (Each with 2 RJ-11 connectors)	1 (Master)	1 (Slave)
LED	System	PWR, STATUS	PWR
	Ethernet	100, LNK/ACT, FDX/COL	
	VDSL	LNK, ACT	
DIP switch		5 position DIP switch	-
Mode/Distance(Based on AWG24 wires)		ANSI - 15/4Mbps asymmetrical rate up to 4100 feet (1.25km) ETSI - 11/4Mbps asymmetrical rate up to 4100 feet (1.25km) VE-5 - 5/5 Mbps symmetrical rate up to 5000 feet (1.5km) VE-10 - 11/11Mbps symmetrical rate up to 4100 feet (1.25km) VE-15 - 15/17Mbps asymmetrical rate up to 3500 feet (1.05km)	
Cables		10Base-T: 2-pair UTP Cat.3,4,5 up to 100m (328ft) 100Base-TX: 2-pair UTP Cat.5, up to 100m (328ft) VDSL: twisted-pair telephone or ISDN wires (AWG24 or better) up to 5000ft (1.5km)	
Splitter		Built-in splitters for POTS/ISDN connection	
System Memory		8k bytes Ethernet transmit and 16k bytes Ethernet receive buffers	
Dimensions (WxDxH)		147 x 118 x 30mm	
Mounting Type		Desktop placement	
Power Supply		12V/1A DC external power adapter	
Operational Environment		Temperature: 0~50 degree C (operating), -20~70 degree C (storage) Humidity: 10~90%, non-condensing	
Certification		FCC Class B, CE	
Standard Compliance		IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3x Full Duplex PAUSE frame flow control Ehternet over VDSL	

▶▶ Applications

❏ *Ethernet Distance extension:*

The VC-102M and VC-102S acting as a standalone pair is good for Ethernet distance extension over existing telephone wires. With just one pair of AWG-24 copper wire, you can easily connect two Ethernet networks together (maximum 1.5 kilometers) with a maximum 15/17Mbps data rate. Telephone service can still be used on the pair while the modems are in operation.

❏ *MTU/MDU/Hospitality Solution:*

VDSL is the best solution to quickly provide cost-effective, high speed network services to multi-unit buildings, such as residential (multidwelling units) and commercial (multitenant units) buildings, hotels and hospital. By utilizing the existing telephony infrastructure, network installation is straightforward and requires no new wiring. With up to 15/17Mbps, Video on Demand, IP telephony and various broadband services can be easily provisioned.

LAN to LAN connection

Multi-LAN connection

▶▶ Ordering Information

▶ **VC-102M**   Ethernet over VDSL Converter (1 VDSL-master, 1 Ethernet)
VC-102S   Ethernet over VDSL Converter (1 VDSL-slave, 1 Ethernet)