Ethernet over VDSL2 Converter

- Cost-effect VDSL2 CO/CPE bridge solution
- One box design, CO/CPE selectable via DIP Switch
- Complies with IEEE 802.3, IEEE 802.3u and IEEE 802.3x standards
- DMT (Discrete Multi-Tone) line coding
- Half duplex Back pressure and IEEE 802.3x Full Duplex Pause frame flow control
- Built-in POTS splitter
- Two RJ-11 connectors for each VDSL port, one for VDSL connection and one for POTS connection
- Voice and data communication can be shared based on the existing telephone wire simultaneously
- Supports up to 1536 bytes packet size, IEEE 802.1Q VLAN tag transparent
- VDSL2 stand-alone transceiver for simple bridge modem application
- Advantage of minimum installation time (Simply as Plug-and-Play)
- Selectable target data rate and target SNR margin
- Supports extensive LED indicators for network diagnostics
- Co-work with PLANET MC family, Media Chassis (MC-700/1000R/1500)
- Compact in size, easy installation

High-Performance of Ethernet over VDSL Solution
Up to 100/55 Mbps asymmetric data rate within 300m and 30/6 Mbps for 1km long range connections provides ultra-high performance to the pervasive telephone line network. The PLANET VC-201 is an Ethernet-over-VDSL2 product with high performance. It is based on two core networking technology, Ethernet and VDSL2 (Very-high-data-rate Digital Subscriber Line 2). This technology offers the absolutely fastest data transmission speeds over existing copper telephone lines without the need of rewiring.

Implements with Existing Telephone Copper Wires
The VC-201 Long Reach Ethernet (LRE) converter has a switching architecture with one RJ-45 Ethernet port and two RJ-11 phone jacks –one for VDSL connection and one for POTS (Plain Old Telephone Service) / ISDN connection. To share the existing phone line with POTS or ISDN, the VC-201 has built-in POTS/ISDN splitter. It is no need to replace the existing copper wiring. And just plug into the existing RJ-11 telephone jack for connecting a high-performance VDSL2 network. This capability is ideal for use as an Ethernet extender to an existing Ethernet network.

Delivers High-Demand Services Connectivity for ISP / Triple Play Devices
With enough bandwidth, the 100/55Mbps symmetric capability of VC-201 enables many Multi-Media services to come true on local Internet, such as VOD (Video on Demand), Voice over IP, Video phone, IPTV, Internet caching server, distance education, and so on. The VC-201 provides the excellent bandwidth to satisfy the triple play devices for home entertainment and communication.

Easy Installation
The Converter is plug and play without any software to configure and also fully compliant with all kinds of network protocols. Moreover, the rich diagnostic LEDs on the front-panel provide the operating status of individual port and the whole system. There are two selectable models of the VC-201. One is used for client side (CPE) and the other is central side (CO).To setup one pair of converters for point-to-point connection, one set must be CPE mode and the other one is CO mode via a built-in DIP Switch.

Data Sheet

SPECIFICATION

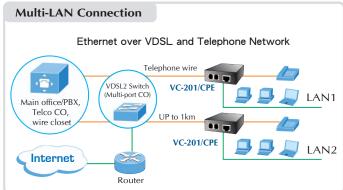|		
Product		Ethernet over VDSL 2 Converter
Model		VC-201
Hardware Specification		
Ports	10/100Base-TX	1 RJ-45, Auto-negotiation and Auto-MDI/MDI-X
	VDSL	1 RJ-11, female Phone Jack
	PHONE	1 RJ-11, Built-in splitters for POTS connection
DIP Switch		4 position DIP switch
Functionality		CO / CPE mode select Selectable fast and interleaved mode Selectable target data rate Selectable target SNR mode
Encoding		VDSL-DMT ◦ ITU-T G.993.1 VDSL ◦ ITU-T G.997.1 ◦ ITU-T G.993.2 VDSL2 (Profile 12a Support), Annex A
LED Indicators		One Power 3 for RJ-11/VDSL2 WAN : ◦ Green, LNK/ACT ◦ Green, CO mode ◦ Green, CPE mode 2 for per RJ-45 10/100Base-TX port ◦ Green, LNK/ACT. ◦ Green, Speed
Cabling		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 (AWG24 or better) up to 1.2km
Performance		Full VDSL2 bandwidth up to: (Down Stream / Up Stream) ◦ 200m -> 100/55Mbps ◦ 400m -> 90/40Mbps ◦ 600m -> 70/10Mbps ◦ 800m -> 48/8Mbps ◦ 1000m -> 30/6Mbps
Dimension (H x W x D)		26 x 70 x 97mm
Weight		0.4 kg
Power Requirement		5V DC 2A
Operating Temperature		0~50 degree C
Storage Temperature		-25~70 degree C
Operating Humidity		10% to 90% , relative humidity, non-condensing
Storage Humidity		10% to 90% , relative humidity, non-condensing
Standard Conformance		
Regulation Compliance		FCC Part 15 Class A, CE
Standards Compliance		IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX ITU-T ◦ G.993.1 (VDSL) ◦ G.997.1 ◦ G.993.2 VDSL2 (Profile 12a), Annex A

APPLICATIONS

Ethernet Distance extension

Two VC-201 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 with maximum 100/55Mbps data rate. Telephone service can still be used while the modems are in operation. These two charts listed below are typical applications for the Ethernet over VDSL converter.
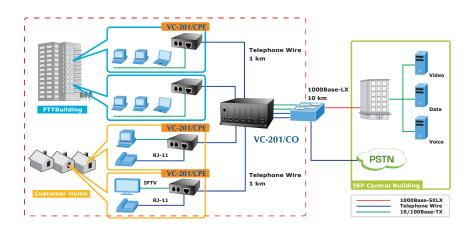

MTU/MDU/Hospitality Solution

The VC-201 is the best solution to quickly provide cost-effective, high speed network services to multi-unit buildings, such as residential (multi-dwelling units) and commercial (multi-tenant units) buildings, hotels and hospitals. By utilizing the existing telephony infrastructure, network installation is straightforward and requires no new wiring. With up to 100/55Mbps, Video on Demand, IP telephony and various broadband services can be easily provisioned.

Last Mile of FTTx deployment

The VC-201 is a great and ideal solution for FTTx (Fiber to the Building, Fiber to the Campus or Fiber to the Node) applications, it supports high bandwidth VDSL2 over existing telephone wires in the "last mile" from the ISP / Telecom / Service provider's fiber node to the buildings and customers' home. The 10/100Mbps port of VC-201 can be directly connected to a PC or to Ethernet devices such as Ethernet Switches and Broadband Routers. It is excellent for phone line network built by Internet because every room or house could use the existing phone line to transmit data in the Internet and the whole building could share the Internet to the wider area network with minimum cost.

ORDERING INFORMATION

VC-201	Ethernet over VDSL 2 Converter (2 x RJ-11, 1 x RJ-45)

RELATIVE PRODUCT - MEDIA CONVERTER CHASSIS

MC-700	10" Media Converter Chassis / 7Slots / 100~240V AC
MC-1000R	19" Media Converter Chassis with Redundant Power capability / 10 Slots / 100~240V AC
MC-1500	19" Media Converter Chassis / 15 Slots / 100~240V AC
RPS-120W	120W Redundant Power Supply (100~240V AC) for MC-1000R

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