

1-Port 10/100/1000T Ethernet over Coaxial Converter



200/200Mbps Downstream/Upstream, High-performance Gigabit Ethernet over Coaxial Solution

To fulfill the needs of long distance and higher speed required Ethernet over Coaxial applications, PLANET Technology offers the VC-232G new-generation Ethernet over Coaxial Converter with the brand-new VDSL2 Super Vector 35b profile. It features 1 **10/100/1000BASE-T RJ45** port and 1 **BNC** female connector with a compact-sized metal housing, making the placement of the unit convenient. Working well with a pervasive coaxial network, the VC-232G provides an excellent bandwidth of up to a total duplex data rate of up to **200/200Mbps (G.INP, Sym, 8dB)** over a distance of **200m** and **90/88Mbps** over a long distance of **800m**. It is ideal for extending the distance and signal conversion by transmitting the Ethernet data from the coaxial cable to another 100-meter UTP cable for various IP network devices such as HD IP cameras, wireless access points, NVRs and digital signage.

Superior Upstream and Downstream Transmission

The VC-232G is based on the two-core networking technology, **Gigabit Ethernet** and **VDSL2** (Very-high-data-rate Digital Subscriber Line 2). The VC-232G offers a stable yet high-speed point-to-point network access up to a duplex data transmission rate of 300Mbps. It provides 2 selective transmission modes -- asymmetric mode or **symmetric mode** -- for the transmission of upstream and downstream signals.

- Asymmetric mode--downstream up to **300Mbps** and upstream up to **100Mbps**
- Symmetric mode--downstream up to **200Mbps** and upstream up to **200Mbps**

The symmetric mode provides similar transmission rate on both downstream and upstream. On the other hand, the asymmetric mode performs higher transmission quality in short range. In all, when the VC-232G is in symmetric mode, it provides better upstream performance, and when it is in asymmetric mode, it gives better downstream performance.

- Supports ITU-T G.993.2 **VDSL2 Profile 17a/30a/35b**
- Supports ITU-T G.993.5 G.Vectoring and G.INP
- Upstream/Downstream bandwidth up to 200/100Mbps
- CO/CPE mode selectable via DIP switch
- Selectable target band plan and SNR margin
- One BNC connector for VDSL connection
- Uses existing RG59/RG6 coaxial cable
- Used in pairs to extend Point-to-Point connection up to 1.4km
- Supports a packet size of up to 1522 bytes, IEEE 802.1Q VLAN tag transparency
- Advantage of minimum installation time (Simply by Plug-and-Play)
- Supports extensive LED indicators for network diagnosis
- Co-work with PLANET media converter chassis (MC-700/ MC-1500/ MC-1500R/MC-1500R48)
- Compact in size and easy to install

IP Ethernet over Long Distance Existing Coaxial Cables

The VC-232G is also a Long Reach Ethernet (LRE) solution which provides a quick replacement and smooth migration solution from existing analog system to full digital system. A normal UTP cable can only be extended up to 100 meters, but with the VC-232G, the distance for Ethernet networking can be extended up to 1,400 meters (4,593ft.), which is ideal for the following network applications:

- Long-distance IP network devices
- IP digital signage
- Cable TV to IPTV
- Distance video education
- Electronic billboards
- Other applications

If you have coaxial cable in your existing environment, you can install a pair of the VC-232G very simply without the need to build additional network wires, thus saving costs for network construction.

Easy and Flexible Installation

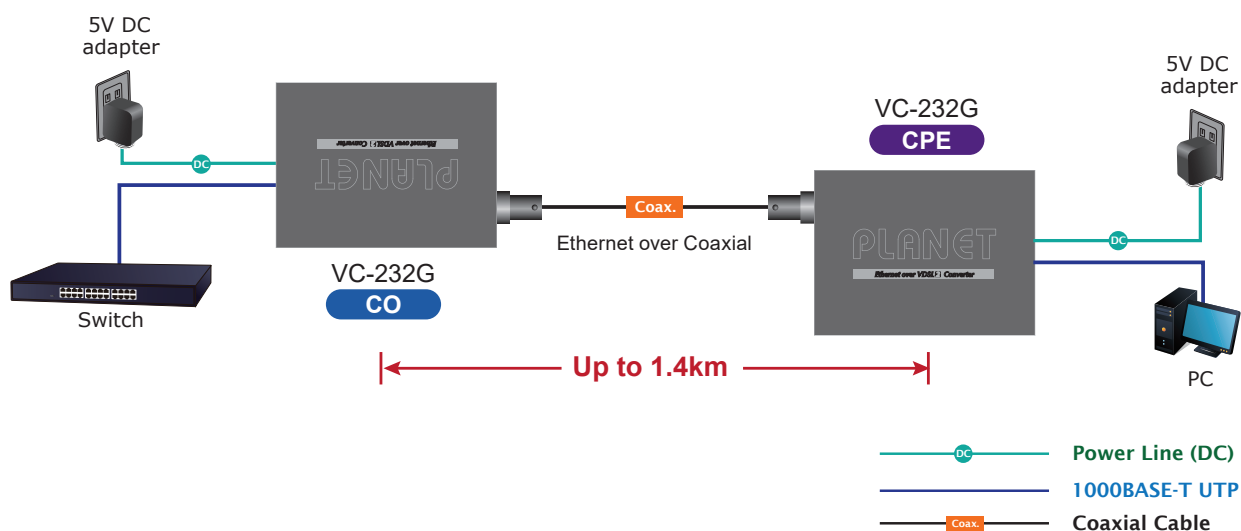
The VC-232G offers two operation modes, the client-side CPE and central-side CO, making any network applications easy and flexible. The CPE or CO mode can be adjusted by using the built-in DIP switch. For point-to-point connection, one VC-232G in CPE mode and the other one in CO mode must be set up as a pair of converters to perform the connection. This enables the administrator to efficiently manage the network over coaxial cable, making long-distance transmission better.

Applications

Point-to-Point Application -- LAN to LAN Connection

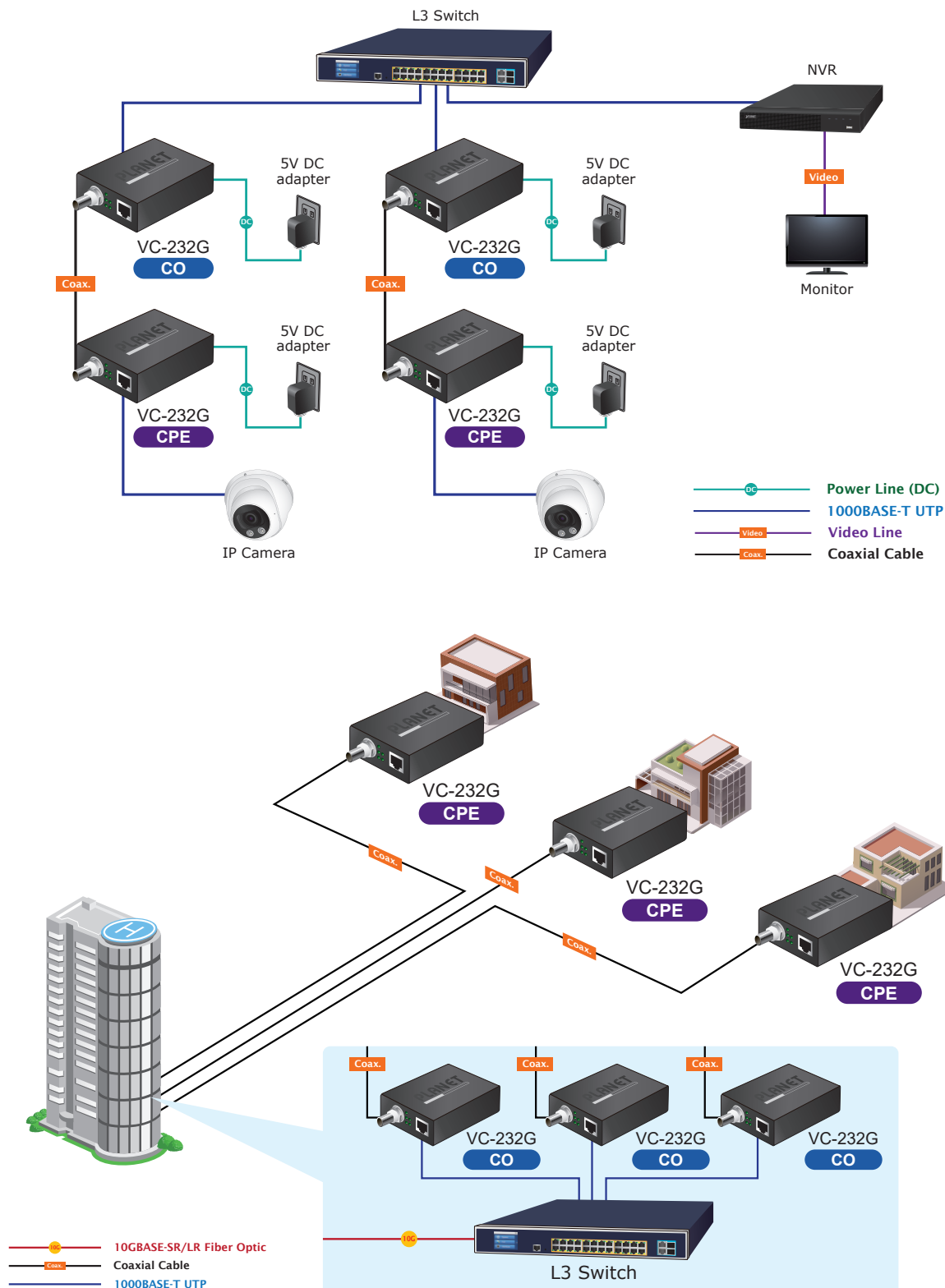
One set of the VC-232G could be used to link two local Area networks that are located in different places. Through the coaxial cable, it could set up a 200/100Mbps asymmetric backbone, but one VC-232G must be **Master (CO mode)** and the other one is **Slave (CPE mode)**.

Point to Point Application



Community/Campus Surveillance and Security over IP

To take advantage of digital surveillance system and keep the benefits of coaxial cable, the VC-232G helps the community, campus and enterprises to upgrade analog camera system to IP camera surveillance without using additional new wires. The VC-232G is a switching architecture with one RJ45 port and one BNC Ethernet over Coaxial port. Just plug in the UTP cable of IP camera to Ethernet port and the existing coaxial cable to the BNC connector to easily deploy and extend the distance with signal conversion by transmitting the Ethernet data from the standard coaxial cable.



Specifications

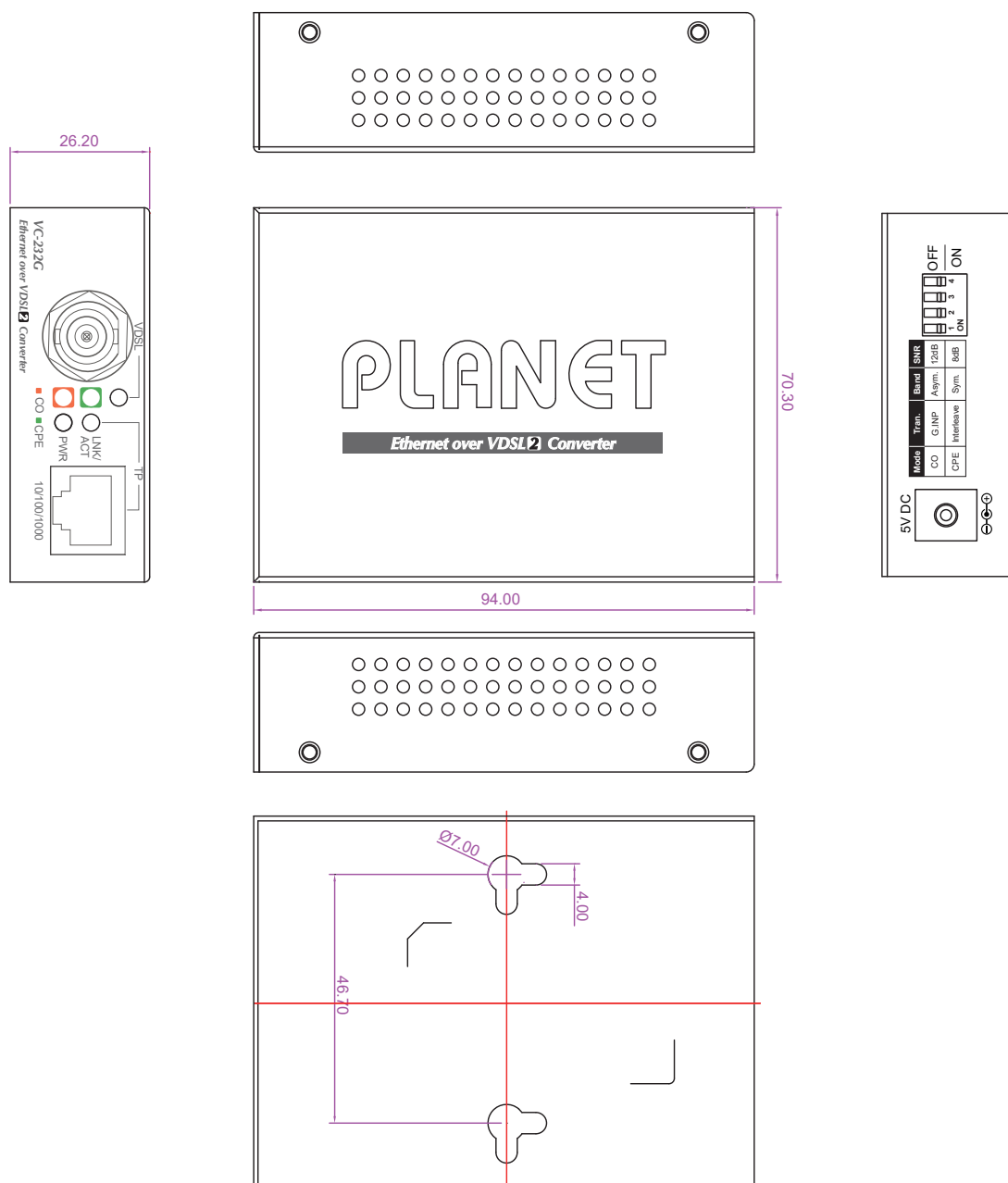
Product	VC-232G				
Hardware Specifications					
Hardware Version	3				
TP interface	1 10/100/1000BASE-T RJ45 auto-MDI/MDI-X port				
	1 BNC female Ethernet over Coaxial				
VDSL Interface	Cabling	Coaxial cable: 75 ohm RG-6/U cable, less than12Ω/1000 ft RG-59/U cable, less than 30Ω/1000 ft.			
	Maximum Distance	Max. 1400m with data transmission (4,593ft.)			
Functionality	DIP-1	Select CO or CPE mode			
	DIP-2	Select G.INP or Interleaved mode			
	DIP-3	Select Band Profile (Asymmetric or Symmetric)			
	DIP-4	Select SNR of 12dB or 8dB			
Dimensions (W x D x H)	97 x 70 x 26 mm				
Weight	205g				
Power Requirement	DC 5V, 2A external power				
LED Indicators	■ 1 x power: Green ■ 1 x 10/100/1000BASE-T LNK/ACT: Green ■ 1 x VDSL: Green ■ 1 x CO: Green ■ 1 x CPE: Green				
Housing	Metal				
Switch Specifications					
Switch Processing Scheme	Store-and-Forward				
Address Table	1K entries				
Maximum Packet Size	1522bytes				
Standards Conformance					
VDSL Compliance	■ VDSL-DMT ■ ITU-T G.993.1 VDSL ■ ITU-T G.997.1 ■ ITU-T G.993.2 VDSL2 (Profile 17a/30a/35b support) ■ ITU-T G.993.5 G. Vectoring ■ ITU-T G.998 ■ G.INP				
Standards Compliance	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.3ab Gigabit Ethernet IEEE 802.1p Class of Service ITU-T G.993.1 VDSL ITU-T G.997.1 ITU-T G.993.2 VDSL2 (Profile 17a/30a/35b Support) ITU-T G.993.5 G.Vectoring and G.INP ITU-T G.998				
Regulatory Compliance	FCC Part 15 Class A, CE				
Environment					
Temperature	Operating: 0~50 degrees C Storage: -10~70 degrees C				
Humidity	Operating: 5~95% (non-condensing) Storage: 5~95% (non-condensing)				
Performance					
Coaxial Performance*	Distance (meter)	Interleave (Upstream/Downstream: Mbps)			
		Asymmetric		Symmetric	
		8dB	12dB	8dB	12dB
	200m	57/246	54/218	169/150	156/137
	400m	57/209	54/181	147/132	132/120
	600m	53/155	49/128	120/100	103/87
	800m	50/118	47/97	98/79	87/67

Coaxial Performance*	Distance (meter)	G.INP (Upstream/Downstream: Mbps)			
		Asymmetric		Symmetric	
		8dB	12dB	8dB	12dB
	200m	60/265	56/212	178/152	163/137
	400m	56/221	51/190	153/135	140/121
	600m	55/132	50/130	125/102	106/87
	800m	53/119	49/96	90/88	86/66

*As there are various resistance values in the category of RG-59/U or RG-6/U cable, the actual data rate will vary on the quality of the copper wire and environmental factors.

* The performance data above is for reference only. The actual data rate will vary on the quality of the copper wire and environmental factors.

Dimensions



Ordering Information

VC-232G	1-Port 10/100/1000T Ethernet over Coaxial Converter (35b profile w/ G. vector)
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Related Products

VC-231	Ethernet over VDSL2 Converter (1 x RJ45, 1 x VDSL2/RJ11-30a)
VC-231G	1-Port 10/100/1000T Ethernet to VDSL2 Converter (35b profile w/ G.vector)
VC-231GP	1-Port 10/100/1000T 802.3at PoE+ Ethernet to VDSL2 Converter (30a profile w/G.Vectoring)
VC-234	Ethernet over VDSL2 Bridge (4 x RJ45, 1 x VDSL2/RJ11, 1 x Phone-30a)
VC-234G	Ethernet over VDSL2 Bridge (4 x RJ45, 1 x VDSL2/RJ11, 1 x Phone-30a w/G.Vectoring)
IVC-234GT	Industrial 1-Port BNC/RJ11 to 4-Port Gigabit Ethernet Extender
MC-700	7-Slot Media Converter Chassis
MC-1500	15-Slot Media Converter Chassis
MC-1500R	15-Slot Media Converter Chassis (AC Power)
MC-1500R48	15-Slot Media Converter Chassis (DC Power)

PLANET Technology Corporation

11F., No.96, Minquan Rd., Xindian Dist., New Taipei City

231, Taiwan (R.O.C.)

Tel: 886-2-2219-9518

Email: sales@planet.com.tw

Fax: 886-2-2219-9528

www.planet.com.tw



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VC-232G