

4-Port 10/100Base-TX + 1-Port BNC / RJ-11 Industrial Ethernet Extender



Ideal integration of Industrial Ethernet Extender

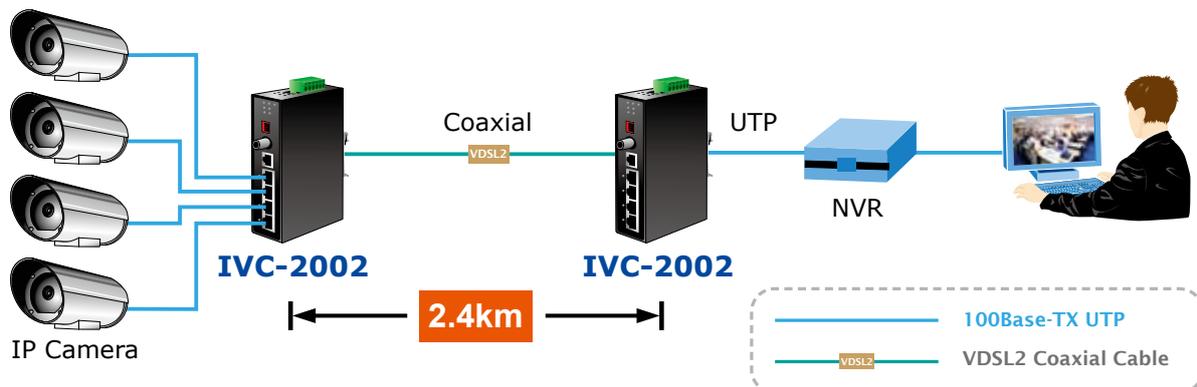
To fulfill the market demand, PLANET now releases one amazing product named IVC-2002. The IVC-2002 is positioned as an Industrial Ethernet Extender. It has a switching architecture with 4 RJ-45 10/100Mbps Ethernet ports and one asymmetric or symmetric Ethernet over VDSL port– the VDSL port can be RJ-11 or BNC Connector. Customer can use either BNC or RJ-11 for their network deployment and it offers the absolutely fastest data transmission speed over existing coaxial cable and telephone wire without the need of rewiring. Furthermore, the IVC-2002 is also compatible with PLANET VC-201A and VC-202A. Without spending extra cost, users can easily re-deploy a new local Internet in the apartment, hotel, campus and hospitality environment by applying the IVC-2002 on the original network structure.

Environmentally Hardened Design for Industrial Networks

The IVC-2002 provides a high level of immunity to electromagnetic interference and heavy electrical surges typical of environments like plant floors or in curb side traffic control cabinets. The Industrial Ethernet Extender can operate in wide temperature range of -40 to 75 Degree C so it can be placed in almost any location. The IVC-2002 is packaged in a compact, IP-30 metal case that allows either DIN or panel mounting for efficient use of cabinet space. The Extender provides an integrated power supply with a wide range of voltages (12 ~ 48V DC) for worldwide operability or for dual-redundant, reversible polarity, 12 ~ 48V DC power supply inputs for high availability applications requiring dual or backup power inputs.

Efficient Usage, Cost Effective and Great Performance

The Ethernet over VDSL2 combines the Ethernet and VDSL technology to transmit the Ethernet format data by using VDSL signaling over the existing coaxial cable and telephone wire. Therefore, it will be very good for deploying network by using the existing coaxial cable and telephone wire to transmit data to the Internet with minimum cost. The IVC-2002 can adjust to Master or Slave mode via a DIP switch. When IVC-2002 (RJ-11) is connected with the other IVC-2002 device, the performance will be up to 99/63Mbps for asymmetric data rate within 200m and up to 28/2Mbps for asymmetric data rate at 1.4km. The IVC-2002 (BNC) performance is up to 99/65Mbps for asymmetric data rate within 200m and up to 31/4Mbps for asymmetric data rate at 2.6km. This capability is ideal for use as an Ethernet extender for your existing Ethernet network.



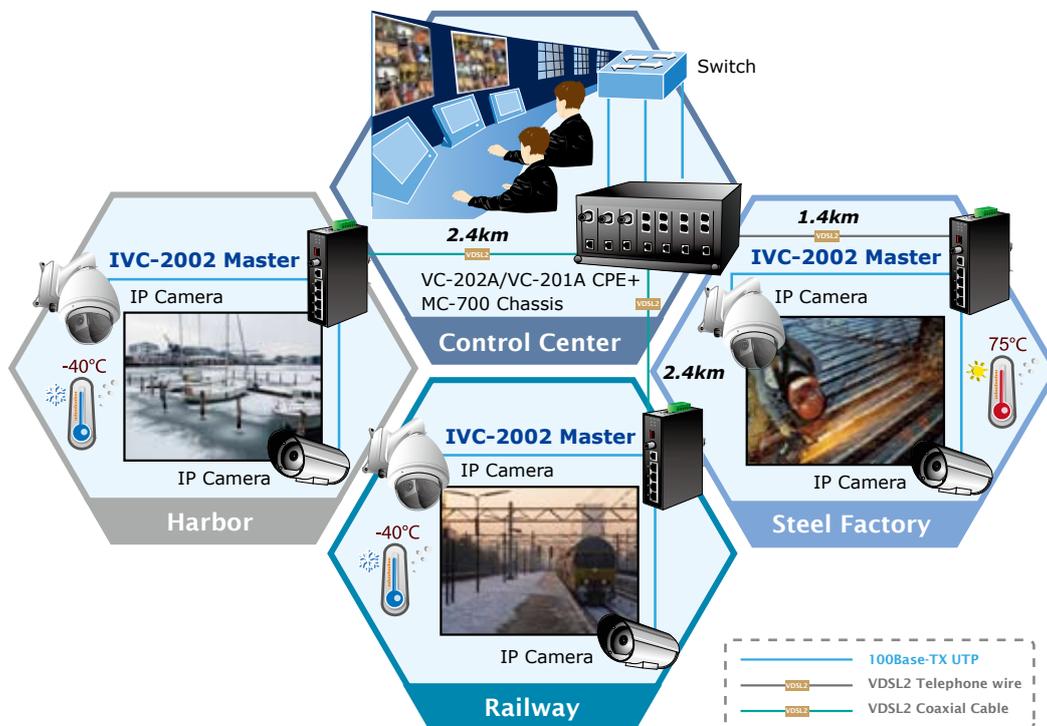
KEY FEATURES

- Cost-effective VDSL2 Master / Slave bridge solution
- -40 to 75 Degree C operating temperature
- Redundant Power Design: 12~48V DC redundant power with polarity reverse protect function
- IP-30 metal case protection
- One box design, Master / Slave selectable via DIP Switch
- Defines Asymmetric (Band Plan 998) and Symmetric band plans for transmission of Upstream and Downstream signals
- 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
- Supports up to 1536 bytes packet size, 802.1Q VLAN tag transparent
- Integrated address look-up engine, supports 2K absolute MAC addresses
- VDSL2 Standalone transceiver for simple bridge modem application
- Selectable Target Band Plan and Target SNR Margin
- Supports extensive LED indicators for network diagnostics
- DIN Rail and Wall Mount Design

APPLICATIONS

Flexible Industrial Extender integrates BNC and RJ-11 Connection

The IVC-2002 is compatible with PLANET VC-201A and VC-202A, which helps users to deploy a new local Internet in apartment, hotel, campus and hospitality environment without spending extra cost. Users can easily re-deploy the original network structure by using PLANET IVC-2002 with no further effort. For example, PLANET MC-700, MC-1500, MC-1500R chassis with VC-201A and VC-202A inside are set as CPE (Customer Premises Equipment) which need to be placed in the wiring center (MDF room) and connected to the telephone line system or coaxial cable system. Meanwhile, connect an IVC-2002 converter with Master mode to the PLANET Chassis through the telephone lines or coaxial cables. On the other hand, the IVC-2002 with the slim type IP-30 metal shape is ideal for most heavy Industrial demanding environments.



SPECIFICATION

Product	4-Port 10/100Base-TX + 1-Port BNC / RJ-11 Industrial Ethernet Extender	
Model	IVC-2002	
Hardware Specification		
Ports	<ul style="list-style-type: none"> • 10/100Base-TX: 4 RJ-45, Auto-Negotiation and Auto-MDI / MDI-X • Coaxial: 1 BNC, female connector • Phone-Line: 1 RJ-11, female connector 	
DIP Switch	4 position DIP switch	
Functionality	<ul style="list-style-type: none"> • Master / Slave mode select • Selectable fast and interleaved mode • Selectable target Band Plan • Selectable target SNR mode 	
Encoding	<ul style="list-style-type: none"> • DMT (Discrete Multi-Tone) line coding <ul style="list-style-type: none"> - ITU-T G.997.1 - ITU-T G.993.1 - ITU-T G.993.2 (Profile 17a Support) 	
LED Indicators	<ul style="list-style-type: none"> • System <ul style="list-style-type: none"> P1 (Green) P2 (Green) Fault (Green) • VDLS2 <ul style="list-style-type: none"> Master (Green) Slave (Green) ACT (Green) Sync. (Green) • 10/100Mbps port <ul style="list-style-type: none"> LNK/ACT (Green) 	
Cabling	<ul style="list-style-type: none"> • Ethernet : 10Base-T: 2-pair UTP Cat.3, 4 and 5 up to 100m (328ft) • Ethernet : 100Base-TX: 2-pair UTP Cat.5, 5e and 6 up to 100m (328ft) • Coaxial Cable: 50ohm, RG58A / U, RG58C / U, RG58 / U or equivalent; 75ohm, RG-6 (Distance up to 2.4km) • Twisted-pair telephone wires (AWG24 or better) up to 1.4km 	
Performance	RJ-11 (Phone-Line)	
	Asymmetric	Symmetric
	200m -> 99/63Mbps	200m -> 91/99Mbps
	400m -> 91/48Mbps	400m -> 74/79Mbps
	600m -> 71/32Mbps	600m -> 54/51Mbps
	800m -> 53/18Mbps	800m -> 38/34Mbps
	1000m -> 38/8Mbps	1000m -> 27/21Mbps
	1200m -> 33/5Mbps	1200m -> 24/15Mbps
	1400m -> 28/2Mbps	1400m -> 21/10Mbps
	BNC (Coaxial Cable)	
Asymmetric	Symmetric	
200m -> 99/65Mbps	200m -> 95/99Mbps	
400m -> 99/64Mbps	400m -> 92/97Mbps	
600m -> 97/59Mbps	600m -> 81/82Mbps	
800m -> 94/51Mbps	800m -> 71/70Mbps	
1000m -> 84/45Mbps	1000m -> 60/57Mbps	
1200m -> 73/37Mbps	1200m -> 50/44Mbps	
1400m -> 61/28Mbps	1400m -> 42/33Mbps	
1600m -> 54/20Mbps	1600m -> 37/27Mbps	
1800m -> 48/13Mbps	1800m -> 29/22Mbps	
2000m -> 38/9Mbps	2000m -> 23/21Mbps	
2200m -> 35/6Mbps	2200m -> 19/17Mbps	
2400m -> 31/4Mbps	2400m -> 19/13Mbps	
Dimension (H x W x D)	135 x 87.8 x 32 mm	
Weight	495g	
Power Requirement	12V DC ~ 48V DC	
Power Consumption	5.64Watts / 19BTU	
Operating Temperature	-40 ~ 75 Degree C	
Operating Humidity	5~90%, relative humidity, non-condensing	
Storage Temperature	-40 ~ 85 Degree C	
Storage Humidity	5~90%, relative humidity, non-condensing	

Standard Conformance	
Regulation Compliance	FCC Part 15 Class A, CE
Stability Testing	IEC60068-2-32 (Free Fall)
	IEC60068-2-27 (Shock)
	IEC60068-2-6 (Vibration)
Standards Compliance	IEEE 802.3 10Base-T
	IEEE 802.3u 100Base-TX
	IEEE 802.3x Full Duplex Pause Frame Flow-Control
	ITU-T
	- G.993.1 - G.997.1 - G.993.2 (Profile 17a Support)

ORDERING INFORMATION

IVC-2002	4-Port 10/100Base-TX + 1-Port BNC / RJ-11 Industrial Ethernet Extender (-40 ~ 75 Degree C)
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RELATIVE PRODUCTS

IVC-2004PT	Industrial Ethernet Extender with 4-Port PoE (1 BNC / RJ-11 + 4-Port 10/100TX PoE -17a Profile, -40~75 DegreeC)
VC-201A	Ethernet over VDSL2 Converter (1*RJ-45, 1*VDSL2 / RJ-11, 1*Phone-17a)
VC-202A	Ethernet over Coaxial Converter (1*RJ-45 and 1*BNC-17a)