



IVC-2004PT



**Extends Ethernet over coaxial or twisted pair cables**

## Overview

The PLANET IVC-2004PT, an Industrial grade Ethernet Extender with PoE supported, that integrates three advanced technologies:

- Ethernet extend over coaxial cable or phone wire
- IEEE 802.3af Power over Ethernet
- Industrial wide range operating temperature

The IVC-2004PT is designed to utilize the existing **coaxial cables** or **phone wires** to extend the UTP Ethernet over 100m distance limitation and transmits both power and data over single Ethernet cable to remote PoE capable devices in demanding environments.

## Description

### IEEE 802.3af Power over Ethernet Integrated

The IVC-2004PT provides 4 10/100Mbps copper ports with 4-Port IEEE 802.3af Power over Ethernet inject interfaces delivered in an IP-30 rugged strong case. Supporting up to 15.4Watts power per port for any remote IEEE 802.3af powered device (PD) such as PoE IP cameras and PoE wireless LAN access point, the IVC-2004PT is an ideal solution to deploy surveillance system, secure control and wireless service in climatically demanding wide temperature range (-40 to 75 Degree C) environments.

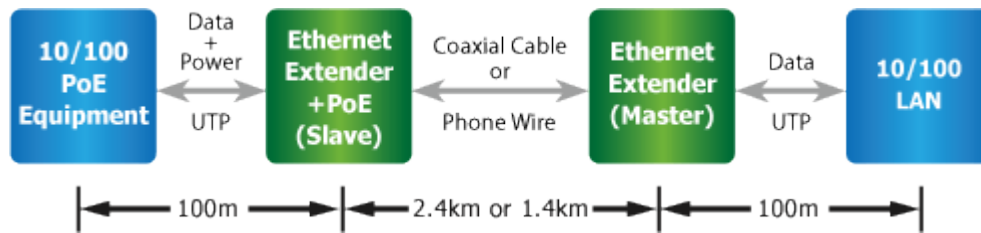
### Long Reach Ethernet

To extend the network distance and provide reliable Ethernet networking in harden environments, the IVC-2004PT equips one asymmetric / symmetric Ethernet extender port– the extender port can be RJ-11 or BNC Connector. Customers can use either BNC or RJ-11 for their network deployment and the IVC-2004PT offers the absolutely fastest data transmission speed up to 99/65Mbps over existing coaxial cable and telephone wire without the need for rewiring.

## Applications

### Flexible Combination of Applications

The IVC-2004PT can provide a new local Intranet for apartments, intelligent transportation systems, building automation, campus and hospitality environments using existing cables. The IVC-2004PT can be adjusted to Master or Slave mode via a DIP switch. It also can also connect with another IVC-2004PT or with other PLANET Ethernet extenders- the IVC-2002, VC-201A and VC-202A, to easily expand a current network.

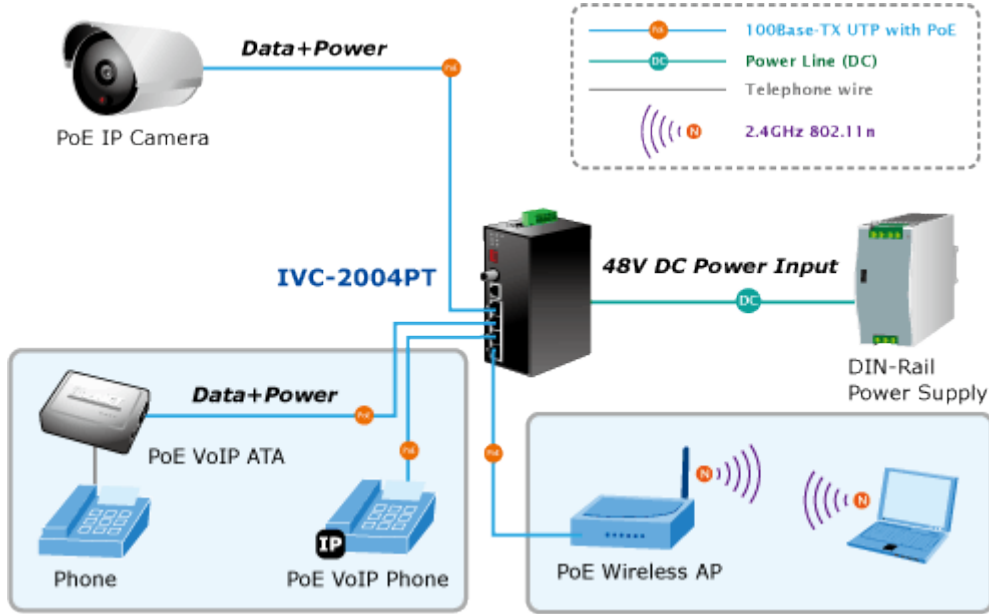


### Environmentally Hardened Design for Industrial PoE Networks

The IVC-2004PT 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 IVC-2004PT is packaged in a compact, IP-30 rugged strong case that allows operating in wide temperature range of -40 to 75 Degree C and installation with either DIN Rail or Wall mounting for efficient use of cabinet space.

### Industrial Area Department / Workgroup PoE Switch

With 4 PoE, in-line power interfaces, the PoE Industrial Ethernet Extender IVC-2004PT can build a powerful centrally controlled IP phone system, IP camera system, or wireless AP group. For instance 4 IP cameras or wireless Access Points can be installed for surveillance or to build a wireless roaming environment. Without the power-socket limitation the installation of cameras or WLAN Access Points is easy.



Application

### Flexible Industrial Extender integrates BNC and RJ-11 Connection

The IVC-2004PT has a wide operating temperature ranging from -40 to 75 Degrees C for use in harsh environments. It is also compatible with PLANET Ethernet over VDSL2 Converters VC-201A and VC-202A enabling the installation of new local networks. Network administrators can re-deploy any original Planet VDSL equipment with the IVC-2004PT. For example, PLANET MC-700, MC-1500 and MC-1500R chassis with the VC-201A and VC-202A inside are set as CPE (Customer Premises Equipment) mode which is placed in the wiring centre (Control room).



Application



# IVC-2004PT Industrial Ethernet Extender with PoE Injector

Beyond 100 metres

## Key Features

### Key Features

- Ethernet over Twist pair / Coaxial
- Cost-effective Long Reach Ethernet (LRE) solution
- One box design, Master / Slave mode selectable via DIP Switch
- Selectable BNC and RJ-11 mode for the data transmission
- Defines Asymmetric (Band Plan 998) and Symmetric band plans for the transmission of Upstream and Downstream signals

## Standards

### IEEE 802.3af PoE

- 4 x Ports IEEE 802.3af Power over Ethernet / PSE Standard
- 48V DC Power Input for PoE and 12~ 36V DC for Non-PoE devices
- Supports PoE Power up to 15.4 Watts for each PoE port
- Auto-Detect powered device (PD)
- Circuit Protection prevent power interference between ports
- Remote power feeding up to 100m

## Environment

### Industrial Design

- IP-30 Aluminium Metal case Protection
- -40~75 Degree C Operating Temperature
- DIN Rail and Wall Mount Design
- Redundant Power Design: 48V DC Power Input for PoE
- Supports EFT protection 6000V DC for power line
- Supports 6000V DC Ethernet ESD protection

## Ethernet

### Data Communication

- Complies with the IEEE 802.3, IEEE 802.3u Fast Ethernet standard
- Auto-MDI / MDI-X detection and Auto-Negotiation with Half-Duplex / Full-Duplex modes for 10 / 100Base-TX RJ-45 port
- Prevents packet loss with back pressure (Half-Duplex) and IEEE 802.3x PAUSE frame flow control (Full-Duplex)
- Supports up to 1536 bytes packet size, 802.1Q VLAN tag transparent
- Integrated address look-up engine, supports 2K absolute MAC addresses

## Specifications

Model	IVC-2004PT
<b>Hardware Specification</b>	
Extender Ports	<ul style="list-style-type: none"> <li>• Coaxial: 1 BNC, female connector</li> <li>• Phone-Line: 1 RJ-11, female connector</li> </ul>
Ethernet LAN Ports	<ul style="list-style-type: none"> <li>• 10/100Base-TX: 4 RJ-45, Auto-Negotiation and Auto-MDI / MDI-X</li> <li>• 4 PoE Ports (Port1 ~ 4)</li> </ul>
DIP Switch	4 position DIP switch
Functionality	<ul style="list-style-type: none"> <li>• Master / Slave mode select</li> <li>• Selectable BNC and RJ-11 mode</li> <li>• Selectable target Band Plan</li> <li>• Selectable target SNR mode</li> </ul>
Encoding	<ul style="list-style-type: none"> <li>• DMT (Discrete Multi-Tone) line coding</li> <li>- ITU-T G.997.1</li> <li>- ITU-T G.993.1</li> <li>- ITU-T G.993.2 (VDSL2 Profile 17a Support)</li> </ul>



## Specifications

Cabling	<ul style="list-style-type: none"> <li>• Ethernet : 10Base-T: 2-pair UTP Cat.3, 4 and 5 up to 100m (328ft)</li> <li>• Ethernet : 100Base-TX: 2-pair UTP Cat.5, 5e and 6 up to 100m (328ft)</li> <li>• Coaxial Cable:             <ul style="list-style-type: none"> <li>-50ohm, RG58A / U, RG58C / U, RG58 / U or equivalent;</li> <li>-75ohm, RG-6 (Distance up to 2.4km)</li> </ul> </li> <li>• Twisted-pair telephone wires (AWG24 or better) up to 1.4km</li> </ul>
Dimension (W x D x H)	135 x 87.8 x 50 mm
Weight	631g
Power Requirement	48V DC for PoE Devices 12 ~ 36V DC for Non-PoE Devices Redundant power with polarity reverse protection function
Power Consumption	66.4Watts / 226BTU Max. (PoE) 5.64Watts / 19.24BTU (Non-PoE)
Installation	DIN Rail kit and Wall Mount ear
Alarm	Provides one relay output for power fail Alarm Relay current carry ability: 1A @ DC 24V
RJ-11 (Phone-Line)	
<b>Power over Ethernet</b>	
PoE Standard	IEEE 802.3af Power over Ethernet / PSE
PoE Type	End-Span
PoE Power Output	48V DC Per Port, 350mA. Max. 15.4 Watts
PoE Pin Assignment	1/2(+), 3/6(-)
<b>Standard Conformance</b>	
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 802.3af Power over Ethernet IEEE 802.3x Full Duplex Pause Frame Flow-Control ITU-T - G.993.1 - G.997.1 - G.993.2 (Profile 17a Support)
<b>Environment</b>	
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

## Ordering Information

IVC-2004PT	4-Port 10/100TX with PoE+ 1-Port BNC / RJ-11 Industrial Ethernet Extender (-40 ~ 75 Degree C)
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