Media Conversion

Various Ways of FTTx Deployment

- ■ **Largest Variety of Modules**
- ■ **Carrier-Grade Optical Systems**
- ■ **SNMP Central Management**

- ■ **Versatile Installation**
- ■ **OAM FTTX Management**
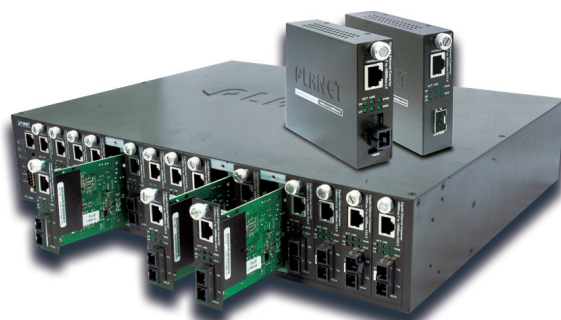
Pioneer of IP Innovation

What is Media Converter?

The main purpose of copper to fiber Media Converter is to solve the distance limit between the Ethernet and Local Area Network. Through the transition of copper to fiber media converters, the networking distance can extend to as long as 120 kilometers and still sustain the transmission performance as high as 100Mbps to 1000Mbps. Therefore, most ISP, Telecom and big enterprises nowadays adopt optical fiber to build up the backbone network in physical layer.

Media converter now has become the necessary transmission medium between copper and fiber. It is a cost-effective solution that extends fiber networking compared with adopting optic fiber only. The data signals conversion can usually be processed in the Fast Ethernet or Gigabit Ethernet networking. With the VDSL2 standard applied more widely, PLANET Technology now also delivers the Ethernet over VDSL2 Media Converter for data and voice transmission in a longer distance.

| Twisted Pair | ◄···► | Fast Ethernet Media Converter / Gigabit Media Converter | ◄···► | Optical Fiber |

| Twisted Pair | ◄···► | Ethernet over VDSL2 Media Converter | ◄···► | VDSL Phone Line / Coaxial |

WDM (SC)

ST

LC

SC

VF-45

SMI

MT-RJ

For Fast Ethernet / Gigabit Ethernet Media Converter

■ Fiber Connector Type

Various types of connector can be applied depending on the network installation demand and usage.

Phone Line

Coaxial

For Ethernet over VDSL2 Media Converter

■ Cable Type

Three types of fiber optic cable are commonly used: single mode, multimode and plastic optical fiber (POF). Single mode fiber only allows one light signal to travel at a time therefore the data can be delivered up to 120km far away. Multimode fiber is thick enough for light to follow several paths through the code. Multimode fiber is the best fit to use in short lengths, such as those used in LANs and SANs (Storage Area Networks). It allows data to be delivered up to 550 meters. For different transmission distance requirements, users can choose the most suitable cable type for fiber optic deployment.

■ Transmission mode

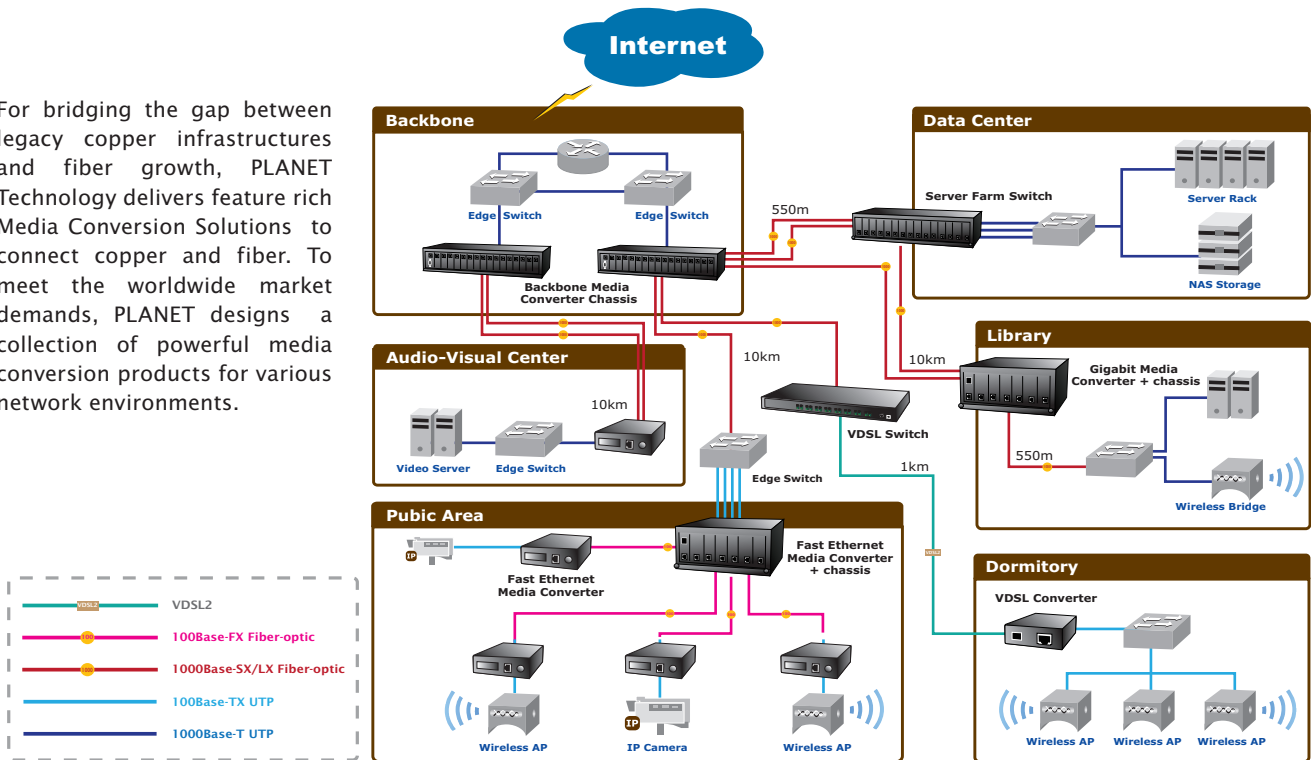Two types of transmission mode are used in the fiber optic data delivery:

❑ **Two-wires**

❑ **Single wire (WDM)**

■ **WDM (Wavelength Division Multiplexing) runs in pair yet saving wiring cost**

Single mode

Multimode

Benefits of PLANET Media Conversion Applications

For bridging the gap between legacy copper infrastructures and fiber growth, PLANET Technology delivers feature rich Media Conversion Solutions to connect copper and fiber. To meet the worldwide market demands, PLANET designs a collection of powerful media conversion products for various network environments.

Internet

Backbone
Edge Switch Edge Switch
Backbone Media Converter Chassis

Data Center
Server Farm Switch
Server Rack
NAS Storage
550m

Audio-Visual Center
Video Server Edge Switch
10km

Library
Gigabit Media Converter + chassis
550m
Wireless Bridge
10km 10km

VDSL Switch
Edge Switch
1km

Pubic Area
Fast Ethernet Media Converter
Fast Ethernet Media Converter + chassis
Wireless AP IP Camera Wireless AP

Dormitory
VDSL Converter
Wireless AP Wireless AP Wireless AP

VDSL2
100Base-FX Fiber-optic
1000Base-SX/LX Fiber-optic
100Base-TX UTP
1000Base-T UTP

Meet the Increasing Demands of FTTx

Easier in installation, cost-effective in TCO and Metro Ethernet or FTTx (Fiber to the x) become the trends of network deployment for the next generation. Building a network solution of FTTH (Fiber to the Home), PLANET MC family of chassis and FST/GST converters offer the multiple selections for ISPs.

Smart and Management

The family of PLANET FST / GST converters is equipped with a set of DIP-Switches which helps installers not only to choose duplex or speed but also obtain smart LLCF (Link Loss Carry Forward) and LLR (Link Loss Return) capability.

Power / Link Redundancy

To co-work with the chassis, PLANET MC-1600MR/ MC-1610MR, the family of FST / GST converters will obtain two kinds of redundancy, link redundancy and power redundancy.

Protect Investment

New networking applications can take the advantage of an Ethernet connection for both power and connectivity. PLANET media converter products bring the power and data from the carrier and needs no extra power supply which saves additional investment of deployment.

Extension & Expansion

With the feature-rich chassis, at least 16 converters can easily expand the fiber-optic networks by simply plug and play. The wiring distance of PLANET media converter chassis is extendable from 2 up to 120 kilometers and the media converter transmission distance is up to 120 kilometers and available upon request as well.

Media Conversion through VDSL

By taking use of the existing telephone line to allow media conversion via the VDSL2 technology, PLANET VDSL media converter products make the last mile come true faster than ever before.

Who Needs Media Conversion?

PLANET's Media Conversion Solution is designed for FTTx installation by ISPs, enterprises and campuses. With industry-leading features, the product family highly satisfies the diverse demands from worldwide customers who could stay with their budgets.

▶ *Network Distance Extension*

▶ *Variety of Transmission Speed*

▶ *Easy and Flexible Installation*

▶ *Higher Bandwidth for Modern Network*

▶ *Centralized Management*

■ Telecom / ISP

Building a network solution of FTTH (Fiber To the Home) or FTTC (Fiber to the Curb) for ISPs, PLANET Manageable family of chassis and FST, GST converters offer the multiple selections for FTTx deployment. Manageable family is a series of managed Media Conversion Center that provides hot plug and play slots for various types of converters.

■ Community and School

PLANET Media Conversion Solution enables fast networking deployment, either with Fast Ethernet or Gigabit Ethernet, between each building in broad area network such as community and campus. By taking the advantage of the extension distance feature from fiber optics, it is more flexible to build the surveillance system in the community or campus and enhance the community / campus security. PLANET Media Conversion Solution is also applicable in wireless LAN construction and act as the most stable backbone for networking.

■ Enterprise / Government

For large organization like enterprises and government, PLANET MC series Media Converter family enables an efficient and sound FTTB (Fiber To the Building) construction. PLANET MC series Media Converter family helps the enterprises quickly and safely expand the Ethernet network between its headquarter and branch offices over long distance. While the enterprises having branches in different locations, Media Converter helps to connect those areas within a shared yet still stable LAN Ethernet.
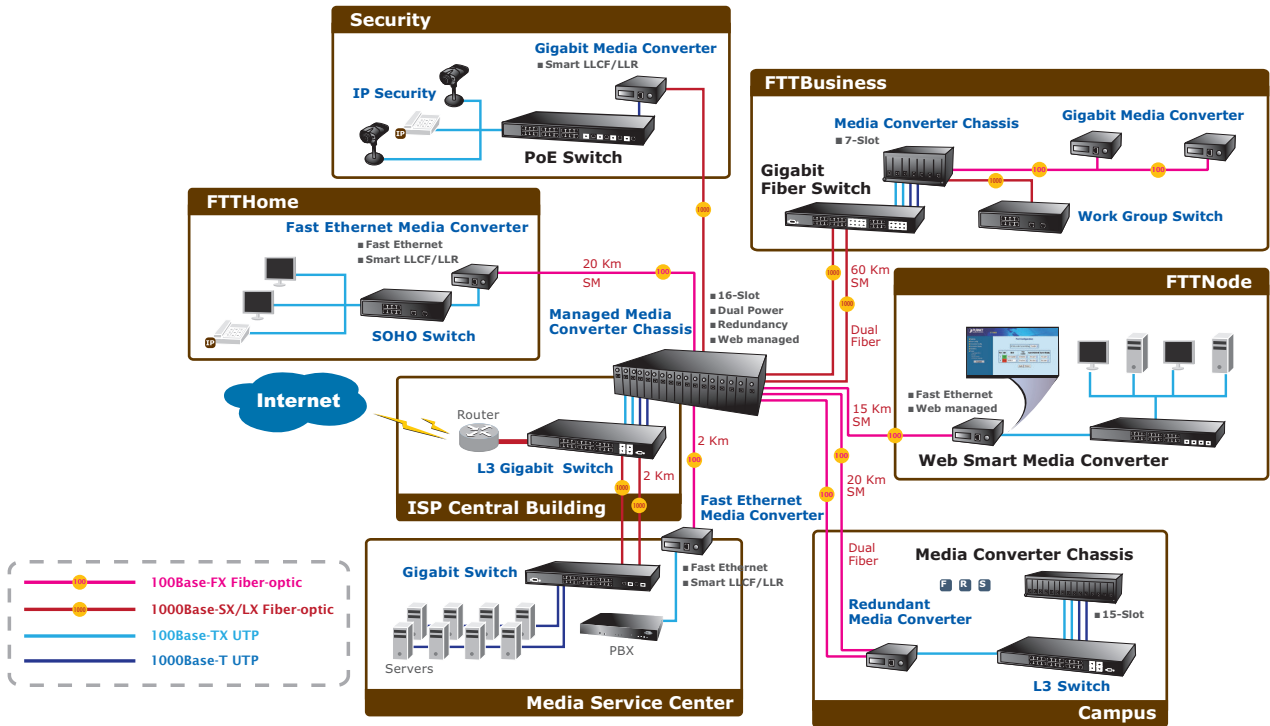
■ Manufacturer and Factory

It can assure of the quality control, safety and PLANET's Industrial Ethernet Media Converter Solution offers high reliability to make sure the continuous industrial operation in harsh environments such as factory floors, outdoor space, and extreme temperatures. The Industrial Ethernet upgrades traditional, proprietary factory-floor networks to a low-cost, high-performance, and scalable architecture.

■ SOHO / Home User

A POF (Plastic Optical Fiber) cable can easily pass through a small aperture between house furnishings and decoration. POF converter is best suited for home IP devices and services distribution. With the growing popularity of IPTV, Video and Audio streaming, home theaters, and home security surveillance, the thin, tenacity, simple installation and low cost features make home fiber and cable deployment more easier.

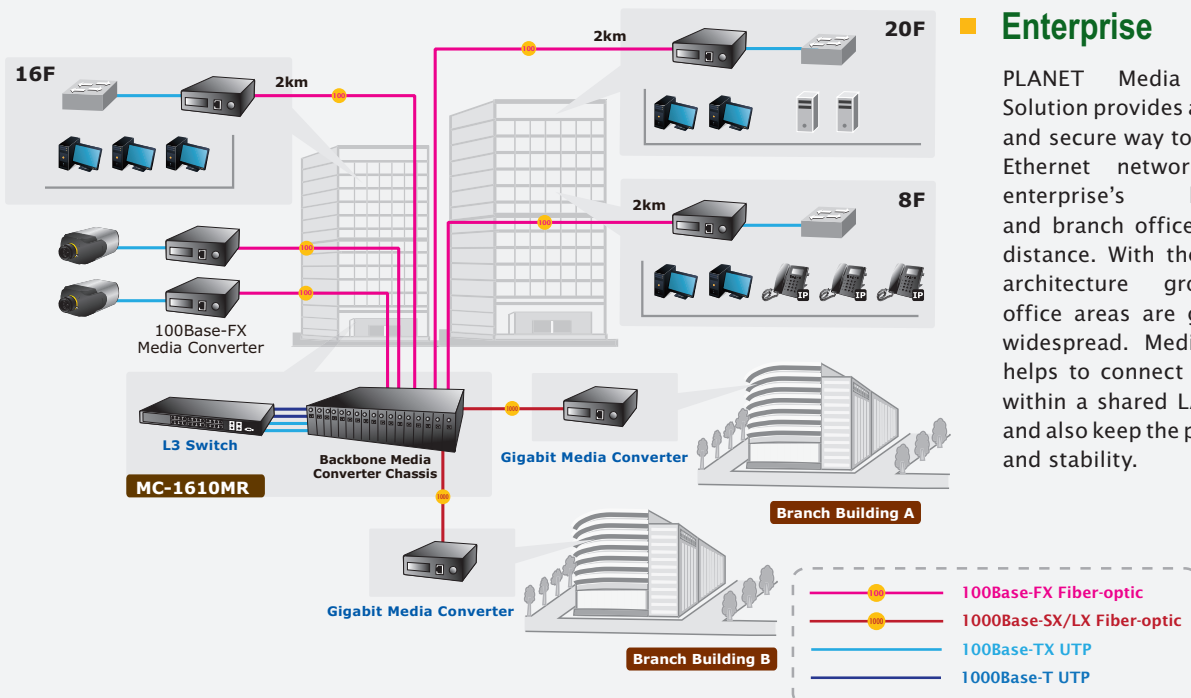# Media Conversion Application

■ **Telecom**

PLANET manageable Media Converter family is designed for the applications such as FTTx installation for ISPs and telecoms. Through the management interface, the entire status of the converter will be clearly demonstrated within the chassis from on/off and status of ports, as well as the advanced features like redundant links.

Security
Gigabit Media Converter
■ Smart LLCF/LLR
IP Security
PoE Switch

FTTBusiness
Media Converter Chassis
■ 7-Slot
Gigabit Media Converter
Gigabit Fiber Switch
Work Group Switch

FTTHome
Fast Ethernet Media Converter
■ Fast Ethernet
■ Smart LLCF/LLR
SOHO Switch
20 Km SM

Managed Media Converter Chassis
■ 16-Slot
■ Dual Power
■ Redundancy
■ Web managed

60 Km SM
Dual Fiber
15 Km SM

FTTNode
■ Fast Ethernet
■ Web managed
Web Smart Media Converter

Internet
Router
L3 Gigabit Switch
ISP Central Building
2 Km
2 Km
Fast Ethernet Media Converter
■ Fast Ethernet
■ Smart LLCF/LLR

20 Km SM
Dual Fiber
Media Converter Chassis
Redundant Media Converter
■ 15-Slot
L3 Switch
Campus

100 — 100Base-FX Fiber-optic
1000 — 1000Base-SX/LX Fiber-optic
— 100Base-TX UTP
— 1000Base-T UTP

Gigabit Switch
Servers
PBX
Media Service Center

16F
2km
100Base-FX Media Converter

20F
2km

8F
2km

L3 Switch
MC-1610MR
Backbone Media Converter Chassis
Gigabit Media Converter
Branch Building A

Gigabit Media Converter
Branch Building B

■ **Enterprise**

PLANET Media Converter Solution provides a high speed and secure way to expand the Ethernet network between enterprise's headquarter and branch offices over long distance. With the enterprise architecture growing up, office areas are going to be widespread. Media Converter helps to connect those areas within a shared LAN Ethernet and also keep the performance and stability.

100 — 100Base-FX Fiber-optic
1000 — 1000Base-SX/LX Fiber-optic
— 100Base-TX UTP
— 1000Base-T UTP

Media Conversion Application

■ ISP FTTX Last Mile (VDSL)

VDSL media converter is an ideal solution for FTTx (Fiber to the Building, Fiber to the Campus or Fiber to the Node) last mile solution. 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 Ethernet over VDSL converter 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 to built through 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.

Ethernet over VDSL2 Converter
VC-231
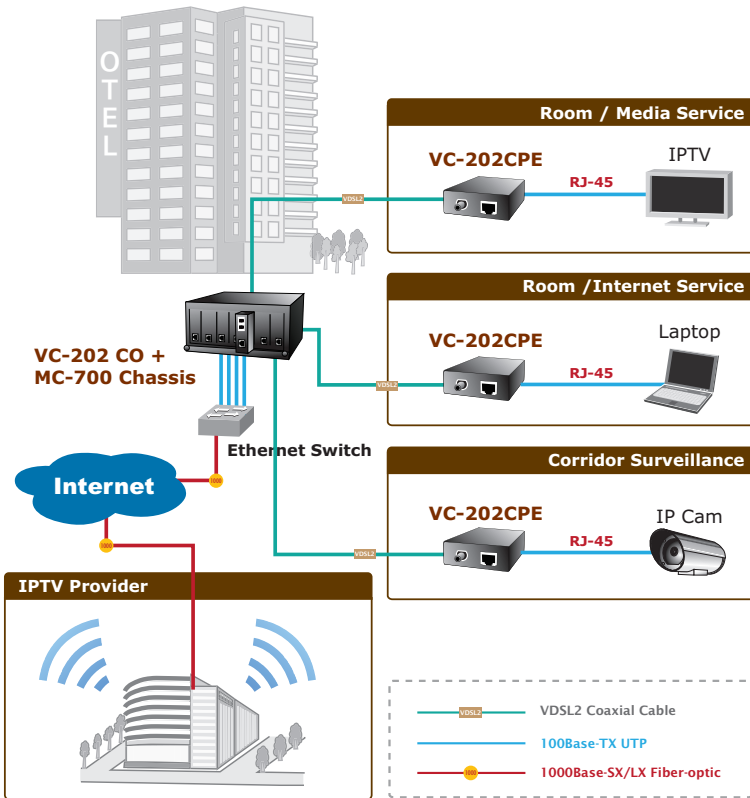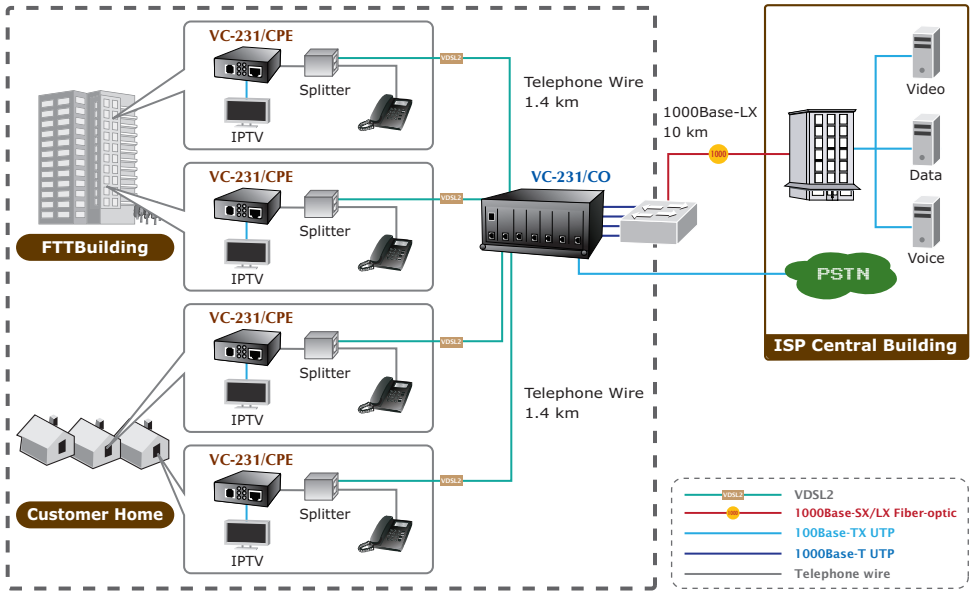
■ Hotel

IPTV, VOD and digital message broadcasting services are the worldwide hot trends, and more and more service providers have upgraded the client end devices from analog system to digital system gradually. The Ethernet over Coaxial Media Converter is the best solution to quickly provide cost-effective, high speed network services by utilizing the existing coaxial cable infrastructure. IP network installation is straightforward and requires no new wiring. With enough bandwidth, the 100/65 Mbps symmetric capability of Ethernet over Coaxial Media Converter enables many Multi-Media services on local Internet to come true, such as VOD (Video on Demand), Voice over IP, Video phone, IPTV, distance education, and so on. The Ethernet over Coaxial Media Converter provides excellent bandwidth to satisfy the triple play devices for entertainment and communication. Meanwhile, this kind of infrastructure will minimize the burden on the Internet.

Media Conversion Solution

Fast Ethernet	P.9

Standard 10/100Base-TX to 100Base-FX
FT-80x Series (2~50km)

Web Smart 10/100Base-TX to 100Base-FX
FT-90x Series (2~50km)

Manageable 10/100Base-TX to 100Base-FX
FST-80x Series (2~50km) / FST-81x Series (2~50km)

Redundant 10/100Base-TX to 100Base-FX (SFP)
FT-1105A / FT-1205A

Industrial 10/100Base-TX to 100Base-FX
IFT-802 / IFT-802S15 / IFT-802S50

POF 10/100Base-TX to 100Base-FX
FT-807 / FT-807L

PoE 10/100Base-TX to 100 Base-FX
FTP-802 / FTP-802S15

Gigabit Ethernet	P.10

Standard 1000Base-T to 1000Base-SX/LX
GT-70x Series (550m~120km)

Standard 10/100/1000Base-T to 1000Base-SX/LX
GT-80x Series (550m~120km)

Manageable 10/100/1000Base-T to 1000Base-SX/LX
GT-90x Series (550m~120km)

Industrial 10/100/1000Base-T to 1000Base-SX/LX
IGT-90x Series (550m~120km)

Manageable 1000Base-T to 1000Base-SX/LX
GST-70x Series (550m~120km)

Manageable 10/100/1000Base-T to 1000Base-SX/LX
GST-80x Series (550m~120km)

Ethernet over VDSL	P.16

10/100Base-TX over VDSL2
VC-201A, Phone Line (17a)   VC-231 (30a)
VC-202, Coaxial   VC-234 (30a)
VC-204, Phone Line (17a)

Serial over Ethernet	P.26

RS-232 / RS-422 / RS-485 to 10/100Base-TX
ICS-100

RS-232 / RS-422 / RS-485 to 100Base-FX
ICS-102 / ICS-102S15

Industrial RS-232 / RS-422 / RS-485 to 10/100Base-TX
ICS-2100

Industrial RS-232 / RS-422 / RS-485 to 100Base-FX
ICS-2102 / ICS-2102S15

Video Optical Transmission	P.30

Video over Fiber Optic
VF-102-T / VF-102-R

Internet Video Server	P.31

H.264 Video Server
IVS-H120

A s the need for distance extension and stable transmission quality, PLANET offers the Media Conversion Solution featuring Fast Ethernet, Gigabit Ethernet and Industrial fiber optic applications via media converter and media converter chassis.

Fast Ethernet

▶ **10/100Base-TX to 100Base-FX**

The Fast Ethernet Media Converter FT/FST/FTP series product automatically adapts to the highest level of performance supported by the device connected the STP port, when the device is a switch or a workstation that supports full duplex. These converters adapt to the full-duplex mode and provide effective 200Mbps bandwidth, when the device is a hub or workstation which only supports half duplex. They are also fit for the half-duplex mode and provide nominal 100Mbps bandwidth. The fiber connectors of converter operate at 1310nm and include ST/SC/MTRJ/VF45/WDM fiber connector types. Multimode models support up to 2km and single mode models support up to 15/30/50km are available. Both PoE and Fiber optical interfaces, the FTP-8 series is ideal devices for public area requiring PoE deployment.

Gigabit Ethernet

▶ **1000Base-T to 1000Base-SX/LX**

For highly performance, PLANET Gigabit / Smart Gigabit Ethernet Media converter GT/GST series has compact size for twisted-pair to fiber-optic media conversion and provides SC/WDM/mini-GBIC (SFP) fiber connectors. The GT/GST series is fully complies with IEEE 802.3z 1000Base-SX/LX and IEEE 802.3ab 1000Base-T standard. The GT/GST series with compact designed can be use with provided external power adapter or installed on PLANET's dump Media converter chassis.

The GST Series 1000Base-T or 10/100/1000Base-T to 1000Base-SX/ LX Smart Media converter products can operate alone or install into Web Smart Chassis System. While these converters are installed into the chassis, each converter can be configured and monitored through console, and web interface.

For standalone use, the GST series Smart Media Converter provides Auto MDI/MDI-X on its TP port and Store-and-Forward mechanism for eliminate faulty packets. Use the DIP switch from the GST series to configure the available smart functions, such as the half / full duplex, auto-negotiation / force and speed options for TP and fiber interface. Also the LLR and LLCF function can immediately alarm network administrator the media link issue and provide efficient solution to monitor the entire network.

Industrial Managed Gigabit Ethernet Media Converter
IGT-902T / IGT-902TS

Media Conversion Solution

■ Web Smart Fast Ethernet Media Converter

For efficient and powerful management function, the Web Smart Fast Ethernet Media Converter FT-90x Series provide the built-in IP-based Web interface for remote management functions, such as

- ❏ **Ingress/Egress bandwidth control**
- ❏ **Flow control**
- ❏ **802.1p QoS**
- ❏ **Port Statistics**

Remote Management function helps reduce the amount of valuable time that a network administrator spends detecting and locating network problems, otherwise it requires visual inspection of cabling and equipment.

■ VDSL2 CO / CPE Ethernet over VDSL Converter

The PLANET VC-series VDSL2 CO/CPE converter is based on two core networking technologies: Ethernet and VDSL (Very-high-data-rate Digital Subscriber Line) and DMT (Digital Multi-Tone). These technologies offer the absolute fastest possible data transmission speeds over existing copper telephone lines without the need for rewiring.

The VC-231/VC-234 VDSL2 converter has a switching architecture with RJ-45 10/100Mbps Ethernet port and one VDSL port (with 1/2 RJ-11 connectors). The transition bandwidth can be up to 100/100Mbps within 300m or 49/2Mbps for 1.4km. The long range connections provide ultra-high performance solution to transit high quality triple-play services, such as IPTV, video stream, VoIP and data over the pervasive telephone line network. It also offers the most flexible approach to new network trend and existing network upgrades.

Media Converter Chassis

▶ **Standard Media Converter Chassis**

Providing more capacity to the converters in one chassis, the MC-700/1500/1500R provides 7/15-Slot in the 10/19"-Rack for saving more space to fiber-optic wiring which can ease the maintenance of media conversion.

▶ **Manageable Media Converter Chassis**

The PLANET Media Converter Chassis MC-1600MR and MC-1610MR provide 16-Slot and one management module in the 19"-Rack. The management function enables network administrator to monitor and set the connect system status via remote Web interface or via RS-232 console port to set the converters, yet eases the maintenance of media conversion. MC-1600MR and MC-1610MR are specially worked with FST / GST series media converters.

Standard Media Converter Chassis	*P.18*
7-Slot / AC Power MC-700	
15-Slot / AC Power MC-1500	
15-Slot / AC Power / DC Power MC-1500R (with optional Redundant Power)	

Web Smart Media Converter Chassis	*P.22*
16-Slot / AC Power MC-1600MR (With optional Redundant Power)	
16-Slot / 48V DC Power MC-1600MR48 (With optional Redundant Power)	

SNMP /OAM Managed Media Converter Chassis	*P.22*
16-Slot / AC Power MC-1610MR (With optional Redundant Power)	
16-Slot / DC Power MC-1610MR48 (With optional Redundant Power)	

POF Converter

PLANET POF converter, FT-807/FT-807L, is a 10/100Base-TX shielded twisted pair (STP) to Fast Ethernet 100Base-FX fiber converter. FT-807/FT-807L works independently and supports full-duplex operations at its fiber-optic interface in the form factor of SMI (Small Multimedia Interface) interface. The FT-807/FT-807L auto-adapts to the highest level of performance supported by the device connected to the STP port.

- ❏ **Complies with IEEE 802.3u, 10/100Base-TX and 100Base-FX**
- ❏ **RJ-45 TP to POF (Plastic Optic Fiber interface) conversion**
- ❏ **IEEE 1394b SMI Patch Cord, up to 50m**

- ❏ **Low-Cost and High-Speed Data Transmission**
- ❏ **Compact Size and Easy Installation**
- ❏ **Industrial Converter**

Industrial Converter

The PLANET Industrial Media Converter, IFT-80x/IGT-90x, offers rich management and security features which fulfill the industrial regulatory conditions to prevent from system damages, power failure, and vibration conditions. While adopting PLANET´s Industrial Ethernet Solution which complies with all the requirements of industrial applications, customers may enjoy high reliability, fast recovery capability, and safe Ethernet network operation.

Product Matrix - Fast Ethernet Media Converter

Description	10/100Base-TX to 100Base-FX							
Model	FT-801	FT-802	FT-802S15	FT-802S35	FT-802S50	FT-803	FT-806A20	FT-806B20
Product Image								
Ports — Copper	1 x 10/100Base-TX port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X							
Ports — Optical	1 x 100Base-FX port							
Optic Interface — Connector	ST	SC				MTRJ	WDM	
Optic Interface — Mode	Multi-mode	Multi-mode	Single mode			Multi-mode	Single mode	
Optic Interface — Distance	2km	2km	15km	35km	50km	2km	20km	20km
Optic Wavelength	1300nm	1300nm	1310nm	1310nm	1310nm	1300nm	TX:1310 RX:1550	TX:1550 RX:1310
Launch Power (dBm) — Max.	-14	-14	-7	-5	0	-1.5	-8	-8
Launch Power (dBm) — Min.	-19	-19	-20	-9	-5	-4.7	-14	-14
Receive Sensitivity (dBm)	-34.5	-34.5	-28	-32	-34	-38	-31	-31
Maximum Input Power (dBm)	-14	-14	-8	-5	-8	-8	0	0
Cable — Twisted-pair	10Base-T: 2-pair UTP Cat. 3,4,5, up to 100 m 100Base-TX: 2-pair UTP Cat. 5, up to 100 m							
Cable — Fiber-optic Cable	50/125μm or 62.5/125μm multi-mode fiber cable		9/125μm single-mode cable			MTRJ Multi-mode Fiber cable	9/125μm single-mode cable	
Speed — Twisted-pair	10/20Mbps for Half / Full-duplex, 100/200Mbps for Half / Full duplex							
Speed — Fiber-optic	200Mbps for Full-Duplex							
Packet Forwarding Rate (64Bytes)	14880pps @ 10Mbps, 148810pps @ 100Mbps							
Maximum Packet Forward Size	1600Bytes							
DIP Switches	Rear DIP-switch: FX duplex mode selection Side DIP-switch: LFP (Link Fault Pass-through) mode selection							
LED Indicators	System: Power TP: Link/Active, Full-Duplex/Collision, Speed Fiber: Link/Active, Full-Duplex/Collision							
Dimension (W x D x H)	94 x 70 x 26 mm							
Weight	200g							
Power	External Power Adaptor 5V DC / 2A max.							
Power Consumption	5.5 Watts (maximum)							
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Humidity: 10~90% RH (Operating), 5~90% RH (Storage)							
Emissions	FCC Class A, CE Certification Class A							
Standards	IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX, 100Base-FX IEEE 802.3x Flow Control							
Compatible Media Converter Chassis	MC-700 / 1500 / 1500R							

Gigabit Ethernet Media Converter

Description	1000Base-T to 1000Base-SX/LX						
Model	GT-702	GT-702S	GT-706A15	GT-706B15	GT-706A60	GT-706B60	GT-705A
Product Image							
Ports — Copper	1 x 1000Base-T port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X						
Optical	1 x 1000Base-SX/LX port						
Optic Interface — Connector	SC	SC	WDM				SFP
Mode	Multi-mode	Single mode	Single mode				vary on module
Distance	220m~550m	10km	15km	15km	60km	60km	vary on module
Optic Wavelength (nm)	850	1310	TX:1310 RX:1550	TX:1550 RX:1310	TX:1310 RX:1550	TX:1550 RX:1310	-
Launch Power (dBm) — Max.	-4	-3	-3	-3	+5	+4	-
Min.	-9.5	-9.5	-9	-9	0	-1	-
Receive Sensitivity (dBm)	-12.5 (62.5/125) -13.5 (50/125)	-20	-21	-21	-25	-25	-
Maximum Input Power (dBm)	-18	-3	-3	-3	-2	-2	-
Cable — Twisted-pair	1000Base-T: 4-pair UTP Cat. 5e, 6 up to 100 m						
Fiber-optic cable	50/125µm or 62.5/125µm multi-mode fiber cable	9/125µm single-mode cable					vary on module
Speed — Twisted-pair	2000Mbps for Full-duplex						
Fiber-optic	2000Mbps for Full-Duplex						
Packet Forwarding Rate (64Bytes)	1488095pps @ 1000Mbps						
Maximum Packet Forward Size	9218 Bytes						
DIP Switches	Rear DIP-switch: Fiber Auto-negotiation bypass mode selection						
LED Indicators	System: Power TP: Link, Active Fiber: Link, Active, Full / Half-Duplex						
Dimension (W x D x H)	94 x 70 x 26 mm						
Weight	200g						
Power	External Power Adaptor 5V DC / 2A max.						
Power Consumption	5.5 Watts (maximum)						
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Humidity: 10~90% RH (Operating), 5~90% RH (Storage)						
Emissions	FCC Class A, CE Certification Class A						
Standards	IEEE 802.3ab, 1000Base-T IEEE 802.3z, 1000Base-SX/LX						
Compatible Media Converter Chassis	MC-700 / 1500 / 1500R						

Gigabit Ethernet Media Converter

Description	10/100/1000Base-T to 1000Base-SX/LX						
Model	GT-802	GT-802S	GT-806A15	GT-806B15	GT-806A60	GT-806B60	GT-805A
Product Image							
Ports — Copper	1 x 10/100/1000Base-T port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X						
Ports — Optical	1 x 1000Base-SX/LX port						
Optic Interface — Connector	SC	SC	WDM				SFP
Optic Interface — Mode	Multi-mode	Single mode	Single mode				vary on module
Optic Interface — Distance	220m~550m	10km	15km	15km	60km	60km	vary on module
Optic wavelength (nm)	850	1310	TX:1310 RX:1550	TX:1550 RX:1310	TX:1310 RX:1550	TX:1550 RX:1310	-
Launch Power (dBm) — Max.	-4	-3	-3	-3	+5	+4	-
Launch Power (dBm) — Min.	-9.5	-9.5	-9	-9	0	-1	-
Receive Sensitivity(dBm)	-12.5 (62.5/125) -13.5 (50/125)	-20	-21	-21	-25	-25	-
Maximum Input power(dBm)	-18	-3	-3	-3	-2	-2	-
Cable — Twisted-pair	1000Base-T: 4-pair UTP Cat. 5e, 6 up to 100 m						
Cable — Fiber-optic cable	50/125μm or 62.5/125μm multi-mode fiber cable	9/125μm single-mode cable					vary on module
Speed — Twisted-pair	10/20Mbps for Half / Full-duplex 100/200Mbps for Half / Full-duplex 2000Mbps for Full-duplex						
Speed — Fiber-optic	2000Mbps for Full-Duplex						
Packet Forwarding Rate (64Bytes)	14880pps @ 10Mbps 148810pps @ 100Mbps 1488095pps @ 1000Mbps						
Maximum Packet Forward Size	9216 Bytes						
LED Indicators	System: Power TP: Link / Active, Speed Fiber: Link / Active						
DIP Switch	LFP function Disable / Enable						
Dimension (W x D x H)	94 x 70 x 26 mm						
Weight	200g						
Power	External Power Adaptor 5V DC / 2A max.						
Power Consumption	5 Watts						
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Humidity: 10~90% RH (Operating), 5~90% RH (Storage)						
Emissions	FCC Class A, CE Certification Class A						
Standards	IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX IEEE 802.3ab, 1000Base-T IEEE 802.3z, 1000Base-SX/LX IEEE 802.3x Flow control						
Compatible Media Converter Chassis	MC-700 / 1500 / 1500R						
Other Features	IEEE 802.3ah / TS-1000 OAM Compliant, In-band OAM management Remote Loopback Dying gasp event notification						

WEB / SNMP / OAM Remotely Managed Gigabit Converter

The PLANET FT-90x and GT-90x series Managed Media Converter developed to fill the advanced demand from further Network applications and equipped with the feature of plug and play and standalone installation. For efficient management, the Managed Media Converters are equipped with remote Web interface. With its built-in Web-based management, they act as an easy-to-use, platform-independent management and configuration facility.
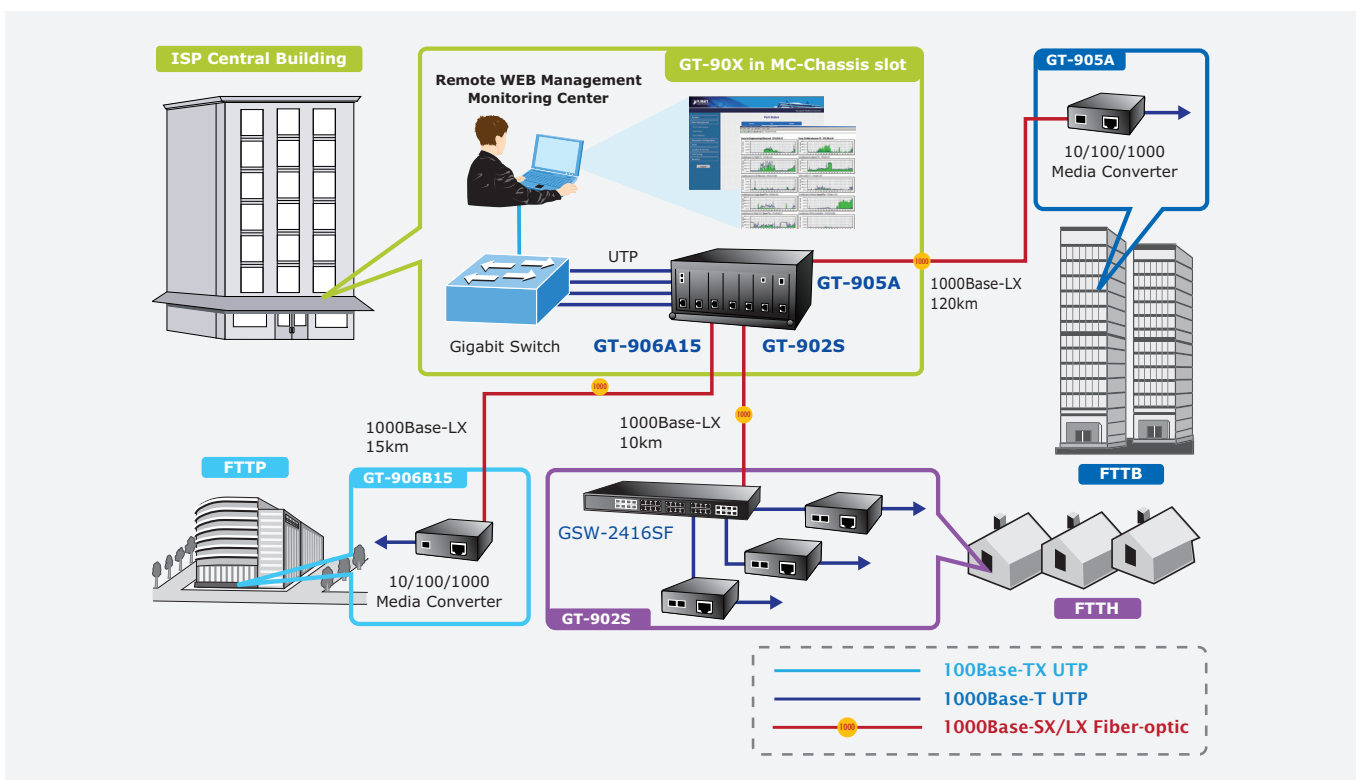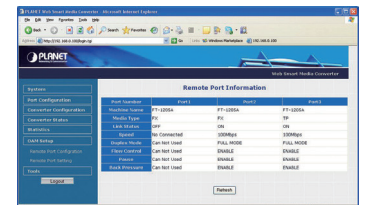
The GT-90x series also supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software. Moreover, the TS-1000 / 802.3ah OAM protocol (Operations, Administration, and Maintenance) supported helps remote device be managed and monitored by GT-90x.

Enhanced Traffic Control Features

The series Managed converter can be programmed for advanced management functions such as IP address configuration, DHCP Client function, port configuration, converter configuration, 802.1Q Tag VLAN, Q-in-Q VLAN, Ingress/Egress bandwidth control, QoS and Layer protocol filter, broadcast storm and bandwidth control, to enhance bandwidth utilization.

■ Features

- ❑ Built-in Web interface for remote management and setup
- ❑ Manual IP address setting / DHCP client for IP address assignment
- ❑ Event trap and SNMP trap support
- ❑ Supports Port Status / Ethernet Statistics on both TP and Fiber interface
- ❑ Loop detection / Broadcast / Multicast / Unicast storm control
- ❑ Management VLAN / IEEE 802.1Q VLAN groups
- ❑ 802.1p Tag Priority / IP address priority / IP DSCP option in Quality of Service Mode and Strict Priority / Weighted Round Robin (WRR) QoS policies
- ❑ TS-1000 OAM / IEEE 802.3ah OAM / Loop Back Test
- ❑ Password setting, IP setting and devices description setting through Planet Smart discovery utility
- ❑ SNMP v1 / v2c monitor / private Enterprise MIB (GT-90x)
- ❑ 16 TCP / UDP Filter groups (GT-90x)
- ❑ Q-in-Q Double Tagged VLAN (GT-90x)

Media Conversion

Managed Fast Ethernet Media Converter

		10/100Base-TX to100-Base FX						
Model		**FT-902**	**FT-902S15**	**FT-902S35**	**FT-902S50**	**FT-906A20**	**FT-906B20**	**FT-905A**
Product Image								
Ports	**Copper**	1 x 10/100Base-TX port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X						
	Optical	1 x 100Base-FX port						
Optic Interface	**Connector**	SC				WDM		SFP
	Mode	Multi-mode	Single mode					vary on module
	Distance	2km	15km	35km	50km	20km	20km	vary on module
Optic Wavelength		1300nm	1310nm	1310nm	1310nm	TX:1310 RX:1550	TX:1550 RX:1310	-
Launch Power (dBm)	**Max.**	-14	-7	-5	0	-8	-8	-
	Min.	-19	-20	-9	-5	-14	-14	-
Receive Sensitivity (dBm)		-34.5	-28	-32	-34	-31	-31	-
Maximum Input Power (dBm)		-14	-8	-5	-8	0	0	-
Cable	**Twisted-pair**	10Base-T: 2-pair UTP Cat. 3,4,5, up to 100 m 100Base-TX: 2-pair UTP Cat. 5, up to 100 m						
	Fiber-optic Cable	50/125μm or 62.5/125μm multi-mode fiber cable	9/125μm single-mode cable					vary on module
Speed	**Twisted-pair**	10/20Mbps for Half / Full-duplex 100/200Mbps for Half / Full duplex						
	Fiber-optic	200Mbps for Full-Duplex						
Packet Forwarding Rate (64Bytes)		14880pps @ 10Mbps 148810pps @ 100Mbps						
Maximum Packet Forward Size		2046 Bytes						
LED Indicators		System: Power TP: Link/Active, Full-Duplex/Collision, Speed Fiber: Link/Active, Full-Duplex/Collision						
Dimension (W x D x H)		94 x 70 x 26 mm						
Weight		200g						
Power		External Power Adaptor 5V DC / 2A max.						
Power Consumption		5.5 Watts (maximum)						
Environment		Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Humidity: 10~90% RH (Operating), 5~90% RH (Storage)						
Emissions		FCC Class A, CE Certification Class B						
Standards		IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX, 100Base-FX IEEE 802.3x Flow Control IEEE 802.1p Class of Service						
Compatible Media Converter Chassis		MC-700 / 1500 / 1500R						
Note.		Reset Button at the front panel for reset to factory default						

Managed Gigabit Ethernet Media Converter

		10/100/1000Base-T to 1000Base-SX/LX						
Model		GT-902	GT-902S	GT-906A15	GT-906B15	GT-906A60	GT-906B60	GT-905A
Product Image								
Ports	Copper	1 x 10/100/1000Base-T port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X						
	Optical	1 x 1000Base-SX/LX port						
Optic Interface	Connector	SC	SC	WDM				SFP
	Mode	Multi-mode	Single mode	Single mode				vary on module
	Distance	220m-550m	10km	15km	15km	60km	60km	vary on module
Optic Wavelength		850nm	1310nm	TX:1310 RX:1550	TX:1550 RX:1310	TX:1310 RX:1550	TX:1550 RX:1310	-
Launch Power (dBm)	Max.	-4	-3	-3	-3	+5	+4	-
	Min.	-9.5	-9.5	-9	-9	0	-1	-
Receive Sensitivity (dBm)			-20	-21	-2	-25	-25	-
Maximum Input Power (dBm)		-18	-3	-3	-3	-2	-2	-
Cable	Twisted-pair	1000Base-T: 4-pair UTP Cat. 5e, 6 up to 100 m						
Fiber-optic Cable		50/125µm or 62.5/125µm multi-mode fiber cable	9/125µm single-mode cable	9/125µm single-mode cable				vary on module
Packet Forwarding Rate (64Bytes)		14880pps @ 10Mbps 148810pps @ 100Mbps 1488095pps @ 1000Mbps						
Maximum Packet Forward Size		9218 Bytes						
Management		Web / SNMP v1, v2c						
Smart Functions		Manual IP address setting / DHCP client for IP address assignment SNMP v1 / v2c monitor / private Enterprise MIB Event trap, SNMP trap and dying gasp event notification Speed duplex mode configuration / Flow Control setting / bandwidth Control on TP / Fiber port Supports Port Status / Ethernet Statistics on both TP and Fiber interface Loop detection / Broadcast / Multicast / Unicast storm control Management VLAN / 16 IEEE 802.1Q VLAN groups / Q-in-Q VLAN 802.1p Tag Priority / IP address priority / IP DSCP option in Quality of Service Mode and Strict Priority / Weighted Round Robin (WRR) QoS policies TS-1000 OAM / IEEE 802.3ah OAM / Loop Back Test 16 TCP / UDP Filter groups Password setting, IP setting and devices description setting through Planet Smart discovery utility						
LED Indicators		System: Power TP: Link / Active, Speed Fiber: Link / Active						
Dimension (W x D x H)		94 x 70 x 26 mm						
Weight		400g						
Power		External Power Adaptor 5V DC / 2A max.						
Power Consumption		5.6 Watts (maximum)						
Environment		Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Hummidity: 10%~90% RH (operating) 5%~90% RH (Storage)						
Emissions		FCC Class A, CE Certification Class A						
Standards		IEEE 802.3, 10Base-T, IEEE 802.3u, 100Base-TX IEEE 802.3ab, 1000Base-T, IEEE 802.3z, 1000Base-SX/LX IEEE 802.3x Flow control						
Compatible Media Converter Chassis		MC-700 / 1500 / 1500R						

Redundant Fast Ethernet Media Converter

■ **Fault Tolerant Redundant Link for Critical Network Applications**

The PLANET FT-1105A / FT-1205A are designed for optical fiber networks that require rapid link redundancy. With the auto-recover function, the redundant media converter provides the rapid response time required for critical applications, such as ISPs, telecoms, hospitals, banks and enterprises.
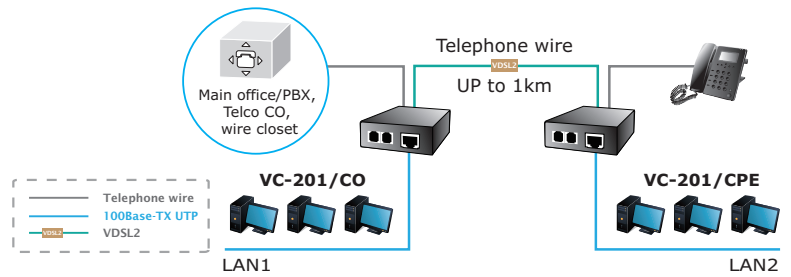
Via the build-in DIP-switches, the converter can be configured as 3-Port Ethernet switch or 2-Port Redundant media converter. With the 3-Port Switch mode, it can operate Store-and-Forward mechanism with high performance. With the 2-Port redundant Mode, it provides less than 10ms redundancy of link for highly critical Ethernet applications.

Internet Link path redundant

Site to Site Fiber Link Redundancy - ISP, Bank and Enterprise
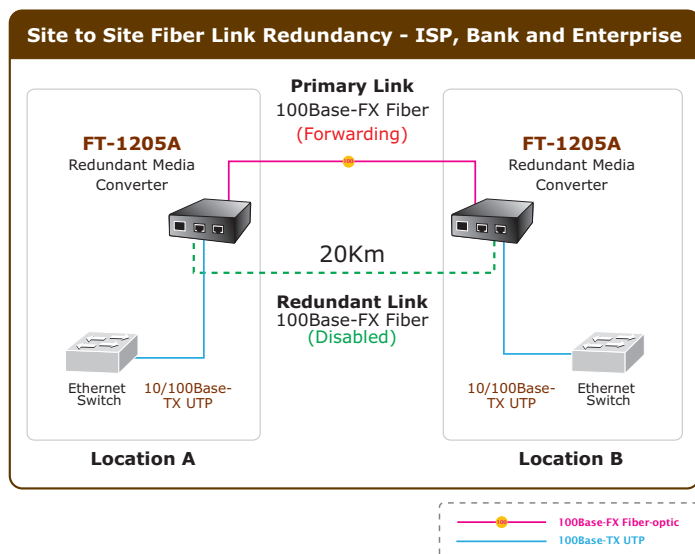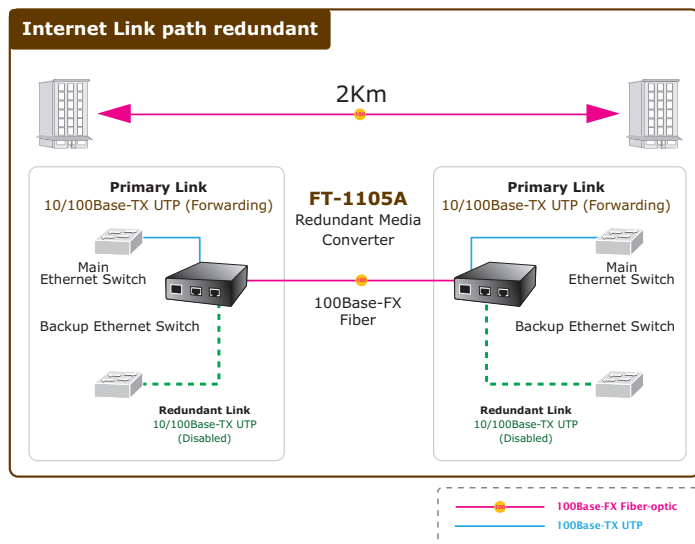
Description		Redundant Fast Ethernet Media Converter	
Model		FT-1105A	FT-1205A
Product Image			
Ports	10/100 TP	2	1
	Optical	1 x 100Base-FX port	2 x 100Base-FX port
Optic Interface	Connector	SFP	SFP
	Mode	vary on module	vary on module
	Distance	vary on module	vary on module
Cable	Twisted-pair	100Base-Tx: 2-pair UTP Cat. 3, 4, 5 up to 100 m	
	Fiber-optic Cable	50/125μm or 62.5/125μm multi-mode fiber cable 9/125μm single-mode fiber cable	
Speed	Twisted-pair	10/20Mbps for Half / Full-duplex 100/200Mbps for Half / Full duplex	
	Fiber-optic	200Mbps for Full-Duplex	
Packet Forwarding Rate (64Bytes)		14880pps @ 10Mbps 148810pps @ 100Mbps	
Maximum Packet Forward Size		2046 Bytes	
LED Indicators		System: Power TP: Link/Active, Full-Duplex/Collision, Speed Fiber: Link/Active, Full-Duplex/Collision	
Dimension (W x D x H)		94 x 70 x 26 mm	
Weight		200g	
Power		External Power Adaptor 5V DC / 2A max.	
Power Consumption		5.5 Watts (maximum)	
Environment		Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Humidity: 10~90% RH (Operating) 5~90% RH (Storage)	
Emissions		FCC Class A, CE Certification Class A	
Standards		IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX, 100Base-FX IEEE 802.3x Flow Control	
Compatible Media Converter Chassis		MC-700 / 1500 / 1500R	

VDSL2 CO / CPE Ethernet over VDSL Converter

Up to 100/100Mbps symmetric data rate within 300m and 49/2Mbps for 1.4km long range connections provides ultra-high performance to the pervasive telephone line network. The PLANET VDSL2 Converter Series 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.
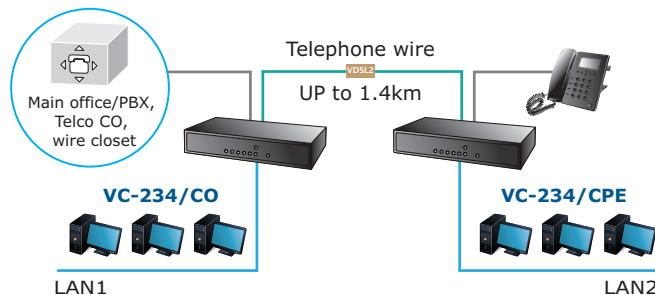
Main office/PBX, Telco CO, wire closet

Telephone wire UP to 1km

VC-201/CO   VC-201/CPE

Telephone wire
100Base-TX UTP
VDSL2

LAN1   LAN2

Description		VDSL2 CO / CPE Ethernet over VDSL Converter		
Model		**VC-201A**	**VC-202A**	**VC-231**
Product Image				
Ports	**10/100Base-TX**	1 RJ-45, Auto-negotiation and Auto-MDI/MDI-X		1 RJ-45, Auto-negotiation and Auto-MDI/MDI-X
	VDSL	1 x RJ-11, female Phone Jack	1 x BNC, female connector	1 x RJ-11, female Phone Jack
	PHONE	1 RJ-11, Built-in splitters for POTS connection	N/A	Optional RJ-11 accessory
DIP Switches (Functionality)		DIP-1: CO / CPE mode select DIP-2: Selectable Fast / Interleaved mode DIP-3: Selectable target band Plan DIP-4: Selectable target SNR mode	DIP-1: CO / CPE mode select DIP-2: Selectable Fast / Interleaved mode DIP-3: Selectable target data rate DIP-4: Selectable target SNR mode	DIP-1: CO / CPE mode select DIP-2: Selectable Fast / Interleaved mode DIP-3: Selectable target profile DIP-4: Selectable target SNR mode
Encoding		DMT (Discrete Multi-Tone) line coding		
LED Indicators		System: Power, VDSL2: LNK/ACT, CO mode, CPE mode, TP: LNK/ACT, Speed		
Cable	**Ethernet**	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 wires (AWG24 or better) up to 1.6km	50 ohm: RG58A/U, RG58C/U, RG58/U 75 ohm: RG6	Twisted-pair telephone wires (AWG24 or better) up to 1.4km
Speed / Performance	**Ethernet**	10/20Mbps for Half / Full-duplex, 100/200Mbps for Half / Full duplex		
		(Down Stream / Up Stream)		
	VDSL2	17a profile 200m -> 100/55Mbps 400m -> 90/50Mbps 600m -> 70/40Mbps 800m -> 60/25Mbps 17a profile 1000m -> 45/15Mbps 1200m -> 35/10Mbps 1400m -> 30/6Mbps 1600m -> 25/4Mbps	17a profile 200m -> 100/65Mbps 400m -> 100/65Mbps 600m -> 100/58Mbps 800m -> 100/52Mbps 17a profile 1000m -> 100/42Mbps 1200m -> 90/36Mbps 1400m -> 80/27Mbps 1600m -> 70/10Mbps 30a profile 300m -> 100/100Mbps 400m -> 90/90Mbps 600m -> 61/40Mbps 800m -> 54/8Mbps	17a profile 300m -> 86/65Mbps 400m -> 86/52Mbps 600m -> 81/36Mbps 800m -> 72/19Mbps 1000m -> 60/9Mbps 1200m -> 59/6Mbps 1400m -> 50/2Mbps
Maximum Packet Forward Size		1536 Bytes		
Dimension (W x D x H)		94 x 70 x 26 mm		
Weight		400g		199g
Power		External Power Adaptor 5V DC / 2A max.		
Power Consumption		5.6 Watts (maximum)		6.6 Watts (maximum)
Environment		Operating Temperature: 0~50 Degree C, Storage Temperature: -40~70 Degree C, Humidity: 10~90% RH (Operating), 5~90% RH (Storage)		
Emissions		FCC Class A, CE Certification Class A		
Standards		■ IEEE 802.3, 10Base-T ■ IEEE 802.3u, 100Base-TX, 100Base-FX ■ IEEE 802.3x Flow Control ■ ITU-T ▶ G.993.1 (VDSL) ▶ G.997.1 ▶ G.993.2 VDSL2 (Profile 17a Support) (VC-201A/VC-202A/VC-204) ▶ G.993.2 VDSL2 (Profile 30a Support) (VC-231/VC-234)		
Compatible Media Converter Chassis		MC-700 / 1500 / 1500R		

VDSL2 CO / CPE Ethernet over VDSL Converter

LAN to LAN Connection

Ethernet over VDSL2 and Telephone Network

Telephone wire
UP to 1.4km

Main office/PBX,
Telco CO,
wire closet

VC-234/CO   VC-234/CPE

LAN1   LAN2

Telephone wire
100Base-TX UTP
VDSL2

Description	VDSL2 CO / CPE Ethernet over VDSL Converter	
Model	**VC-204**	**VC-234**
Product Image		
Ports — 10/100Base-TX	4 RJ-45, Auto-negotiation and Auto-MDI/MDI-X	4 RJ-45, Auto-negotiation and Auto-MDI/MDI-X
VDSL	1 x RJ-11, female Phone Jack	1 x RJ-11, female Phone Jack
PHONE	1 RJ-11, Built-in splitters for POTS connection	1 RJ-11, Built-in splitters for POTS connection
DIP Switches (Functionality)	DIP-1: CO / CPE mode select DIP-2: Selectable Fast / Interleaved mode DIP-3: Selectable target band Plan DIP-4: Selectable target SNR mode	DIP-1: CO / CPE mode select DIP-2: Selectable Fast / Interleaved mode DIP-3: Selectable target profile DIP-4: Selectable target SNR mode
Encoding	DMT (Discrete Multi-Tone) line coding	
LED Indicators	System: Power, VDSL2: LNK/ACT, CO mode, CPE mode, TP: LNK/ACT, Speed	
Cable — Ethernet	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 wires (AWG24 or better) up to 1.6km	Twisted-pair telephone wires (AWG24 or better) up to 1.4km
Speed / Performance — Ethernet	10/20Mbps for Half / Full-duplex, 100/200Mbps for Half / Full duplex	
	(Down Stream / Up Stream)	
VDSL2	17a profile 200m -> 100/55Mbps 400m -> 90/50Mbps 600m -> 70/40Mbps 800m -> 60/25Mbps 17a profile 1000m -> 45/15Mbps 1200m -> 35/10Mbps 1400m -> 30/6Mbps 1600m -> 25/4Mbps	30a profile 300m -> 100/100Mbps 400m -> 90/90Mbps 600m -> 69/55Mbps 800m -> 48/9Mbps 17a profile 300m -> 99/70Mbps 400m -> 99/60Mbps 600m -> 90/45Mbps 800m -> 50/28Mbps 1000m -> 40/12Mbps 1200m -> 20/7Mbps 1400m -> 20/4Mbps
Maximum Packet Forward Size	1536 Bytes	
Dimension (W x D x H)	155 x 86 x 26 mm	155 x 8 6 x 20 mm
Weight	380g	380g
Power	External Power Adaptor 5V DC / 2A max.	
Power Consumption	7.2 Watts (maximum)	7.2 Watts (maximum)
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -40~70 Degree C, Humidity: 10~90% RH (Operating), 5~90% RH (Storage)	
Emissions	FCC Class A, CE Certification Class A	
Standards	■ IEEE 802.3, 10Base-T ■ IEEE 802.3u, 100Base-TX, 100Base-FX ■ IEEE 802.3x Flow Control ■ ITU-T ▶G.993.1 (VDSL) ▶G.997.1 ▶G.993.2 VDSL2 (Profile 12a Support), Annex A (VC-202) ▶G.993.2 VDSL2 (Profile 17a Support) (VC-201A/VC-204) ▶G.993.2 VDSL2 (Profile 30a Support) (VC-231/VC-234)	
Compatible Media Converter Chassis	MC-700 / 1500 / 1500R	

Standard Media Converter Chassis

The MC-700 / 1500 / 1500R media chassis allows the connectivity of up to fifteen PLANET Fast Ethernet / Gigabit Ethernet / VDSL2 Converter in one chassis. The fans with LED indicators for system cooling keep you informed of the system and FAN status.

The independent power supply in each bay of the MC-700 / 1500 / 1500R can freely install the converters without interrupting the rest of the networks. Moreover, each bay of the media center can deploy to the PLANET's converter family like Fast Ethernet twisted pair to Fiber-optic conversion, Gigabit TP to SX/LX conversion, VDSL2, etc.

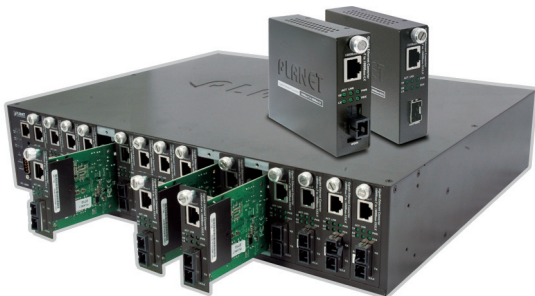| Description	Media Converter Chassis		
Model	MC-700	MC-1500	MC-1500R
Product Image			
Slots	7 open slots	15 open slots	15 open slots
LED Indicatiors	Power x 1 FAN x 1	Power x 1 FAN x 2	Power x 2 FAN x 2
Dimension (W x D x H)	217 x 140 x 88.5 mm, 2U	440 x 180 x 103 mm, 2.4U	440 x 180 x 103 mm, 2.4U
Weight	2kg	5kg	5.5kg
Power Requirement	100~240V AC, 50/60Hz	100~240V AC, 50/60Hz	100~240V AC -48V DC (-30~-60V DC)
Power Output Per Slot	DC 5V, 2A minimum		
Power Consumption	40 Watts	75 Watts	90 Watts
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Humidity: 10~90% RH (operating), 5~90% RH (Storage)		
Emissions	FCC Class A, CE-Mark Class A		
Network Standards	IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX, 100Base-FX IEEE 802.3ab, 1000Base-T IEEE 802.3x Flow Control		
Compatible Media Converter model	PLANET FT-80x/FT-90x/FT-1105A/FT-1205A Series, GT-70x/GT-80x/GT-90x Series, VC-201/ VC-202,VC-231, ICS-10x Series		
Installation	Rack Mounting		

Smart Fast Ethernet Media Converter

Description	Smart Fast Ethernet Media Converter						
Model	FST-801 FST-811	FST-802 FST-812	FST-802S15 FST-812S15	FST-802S35 FST-812S35	FST-802S50 FST-812S50	FST-806A20 FST-816A20	FST-806B20 FST-816B20
Product Image							
Ports — Copper	1 x 10/100Base-TX port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X						
Ports — Optical	1 x 100Base-FX port						
Optic Interface — Connector	ST	SC				WDM	
Optic Interface — Mode	Multi-mode	Multi-mode	Single mode			Single mode	
Optic Interface — Distance	2km	2km	15km	35km	50km	20km	20km
Optic Wavelength	1310nm	1310nm	1310nm	1310nm	1310nm	TX:1310 RX:1550	TX:1550 RX:1310
Launch Power (dBm) — Max.	-14	-14	-7	-5	0	-8	-8
Launch Power (dBm) — Min.	-19	-19	-20	-9	-5	-14	-14
Receive Sensitivity (dBm)	-34.5	-34.5	-28	-32	-34	-31	-31
Maximum Input Power (dBm)	-14	-14	-8	-5	-8	0	0
Cable — Twisted-pair	10Base-T: 2-pair UTP Cat. 3,4,5, up to 100 m 100Base-TX: 2-pair UTP Cat. 5, up to 100 m						
Cable — Fiber-optic Cable	50 / 125μm or 62.5 / 125μm multi-mode fiber cable		9 / 125μm single-mode cable				
Speed — Twisted-pair	10/20Mbps for Half / Full-duplex 100/200Mbps for Half / Full duplex						
Speed — Fiber-optic	200Mbps for Full-Duplex						
Packet Forwarding Rate (64Bytes)	14880pps @ 10Mbps 148810pps @ 100Mbps						
Maximum Packet Forward Size	FST-80x: 1600 Bytes; FST-81x: 9000 Bytes;						

DIP Switches

FST-80x:
- DIP-1: Fiber Full / Half duplex modes select
- DIP-2: Copper Forced Mode / Auto-negotiation Mode
- DIP-3: Copper Speed 10Mbps / 100Mbps
- DIP-4: Copper Full / Half duplex modes select
- DIP-5: Fiber LLR (Link Loss Return) Enable / Disable
- DIP-6: Fiber LLCF(Link Loss Carry Forward) Enable / Disable

FST-81x:
- DIP-1: Flow Control Disable / Enable
- DIP-2: LEP Function Disable / Enable

LED Indicators	System: Power TP: Link/Active, Full-Duplex/Collision, Speed Fiber: Link/Active, Full-Duplex/Collision
Dimension (W x D x H)	94 x 81 x 26 mm
Weight	400g
Power	External Power Adaptor 5V DC / 2A max.
Power Consumption	FST-80x: 6.7 Watts (maximum) FST-81x: 3.2 Watts (maximum)
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Humidity: 10%~90% RH (operating) 5%~90% RH (Storage)
Emissions	FCC Class B, CE Certification Class B
Standards	IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX, 100Base-FX IEEE 802.3x Flow Control
Compatible Media Converter Chassis	MC-1600MR / MC-1600MR48 / MC-1610MR / MC-1610MR48
Other Features (FST-81X)	IEEE 802.3ah / TS-1000 OAM Compliant, In-band OAM management Remote Loopback Dying gasp event notification

Smart Gigabit Media Converter

Description	Smart Gigabit Media Converter						
Model	GST-702 GST-802	GST-702S GST-802S	GST-706A15 GST-806A15	GST-706B15 GST-806B15	GST-706A60 GST-806A60	GST-706B60 GST-806B60	GST-705A GST-805A
Product Image							
Ports — Copper GST-70X	1 x 1000Base-T port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X						
Ports — Copper GST-80X	1 x 10/100/1000Base-T port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X						
Ports — Optical	1 x 1000Base-SX/LX port						
Optic Interface — Connector	SC	SC	WDM				SFP
Optic Interface — Mode	Multi-mode	Single mode	Single mode				vary on module
Optic Interface — Distance	220m / 550m	10km	15km	15km	60km	60km	vary on module
Optic Wavelength	850nm	1310nm	TX:1310 RX:1550	TX:1550 RX:1310	TX:1310 RX:1550	TX:1550 RX:1310	-
Launch Power (dBm) — Max.	-4	-3	-3	-3	+5	+4	-
Launch Power (dBm) — Min.	-9.5	-9.5	-9	-9	0	-1	-
Receive Sensitivity (dBm)	-12.5 (62.5/125) -13.5 (50/125)	-20	-21	-21	-25	-25	-
Maximum Input power (dBm)	-18	-3	-3	-3	-2	-2	-
Cable — Twisted-pair	1000Base-T: 4-pair UTP Cat. 5e, 6 up to 100 m						
Cable — Fiber-optic Cable	50/125µm or 62.5/125µm multi-mode fiber cable	9/125µm single-mode cable					vary on module
Speed — Twisted-pair	2000Mbps for Full-duplex						
Speed — Fiber-optic	2000Mbps for Full-Duplex						
Packet Forwarding Rate (64Bytes)	1488095pps @ 1000Mbps						
Maximum Packet Forward Size	9000 Bytes						
DIP Switches	DIP-1: Fiber Forced Mode / Auto-negotiation Mode DIP-2: Fiber LLCF(Link Loss Carry Forward) Enable / Disable						
LED Indicators	System: Power TP: Link, Active Fiber: Link, Active, Full / Half-Duplex						
Dimension (W x D x H)	94 x 81 x 26 mm						
Weight	400g						
Power	External Power Adaptor 5V DC / 2A max.						
Power Consumption	8.5 Watts (maximum)						
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Humidity: 10%~90% RH (Operating) 5%~90% RH (Storage)						
Emissions	FCC Class B, CE Certification Class B						
Standards	IEEE 802.3ab, 1000Base-T IEEE 802.3z, 1000Base-SX/LX						
Compatible Media Converter Chassis	MC-1600MR / MC-1600MR48 / MC-1610MR / MC-1610MR48						
Other Features (GST-80X)	IEEE 802.3ah / TS-1000 OAM Compliant, In-band OAM management Remote Loopback Dying gasp event notification						

19" Manageable Media Converter Chassis with 16-Slot

■ **Flexibility and Remote Manageable Fiber-Optic Networking for FTTx, ISP MAN / LAN, Enterprise and Campus**

For the powerful advanced function and cost effective, PLANET Manageable Media Converter Chassis MC-1610MR / MC-1600MR series provide 16 slots and one management system in a 19"-rack chassis. The MC-1610MR / MC-1600MR series is designed for the applications such as FTTx installation for ISPs, telecoms, campuses and enterprises. Various types of optic connectors, and fiber-optic wires on the distance basis are provides flexibly.

The 16-Slots for optional FST-8 / GST-7 / GST-8 series Fast /Gigabit Ethernet Smart Media converter installation makes building a network solution of FTTH (Fiber to the Home), FTTB(Fiber to the Building) or FTTC(Fiber to the Curb) for ISPs, enterprises and campuses, MC-1610MR series builds the FTTx easily. Therefore, the MC-1610MR series will perfectly satisfy diverse demands while providing reliable and efficient network solution based on distance and installation budgets.

■ **Diversified Central Management**

The management function enables network administrators to monitor media converter connection status and configure the converter via an SNMP agent, Telnet or Web browser remotely, or locally via an RS-232 console port. Its management function allow network administrator to monitor the slide in converter module connection status and configure the converter module.

Through the management interface, the entire status of the converters will be clearly demonstrated within the chassis form on/off and status/statistics of ports. The MC-1610MR series is great ideal for telecom and corporate applications where a number of fiber links need to be managed and controlled from a central location.
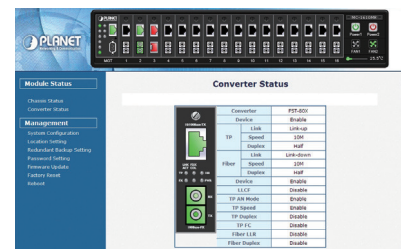
■ **Remote Media Converter monitoring and management**

The MC-1610MR media converter chassis supports two types of OAM (operations, administration, and maintenance) standards: TS-1000 OAM and IEEE 802.3ah OAM. The TS-1000 OAM provides loop back test to ensure the converter failure and remote configuration allows remote set up the module of the converter or the converter. The 802.3ah OAM supports remote failure indication, remote loopback and link monitoring IEEE 802.3ah OAM function.

■ **High Reliability Design to ensure continuous operation**

• **Power Redundant**

Provided to enhance the reliability with options of either 100~240V AC power supply unit or DC -48V power supply unit. The continuous power systems are specifically designed to handle the demands of high tech facilities requiring the highest power integrity available.

• **Temperature and FAN status Monitoring**

The managed media converter chassis is equipped with temperature senor and cooling fans to ensure reliable operation. Whenever the temperature threshold is exceeded or cooling fan stop service, the chassis sends a trap automatically to the management workstations and displayed on the Web management interface.

• **Fiber-Optic Redundant Link**

The redundancy back-up and error tolerance capability of the link can be greatly improved to guarantee the network stability. The redundant link is designed for critical networks that require fibers or copper links to automatically rapid recover less then 200ms, such as ISPs, telecom, hospitals, banks and enterprises. If the port status of master converter is link down, it forwards the packet to the slave converter's port of the backup pair.

■ Hardware

❑ High quality 19" Rack-mountable Media Converter Chassis with 16-Slot
❑ Two slots for redundant input powers, and support both AC and 48V DC power modules
❑ Hot swap for media converter modules
❑ Temperature and FAN status Monitoring

-48V DC Power Module

100~240V AC Power Module

■ Management Function

❑ Configurable through console, SSH, Web and SNMP
❑ Provides SNMP status of power, fan and converters with trap functions for any chassis and connectivity events
❑ TS-1000 and 802.3ah OAM function
❑ Reduces the effort of converter maintenance and management; diagnoses the status at one time
❑ Provides the status of fan and redundant power supplies
❑ Redundant link supports on converter module
❑ Automatically converter modules install/remove detection

Model	MC-1610MR	MC-1610MR48	MC-1600MR	MC-1600MR48
Product Image				
Slots	16 open slots			
Management Port	1 x 10/100Base-TX RJ-45, Auto-negotiation and Auto-MDI/MDI-X 1 x RS-232 Console Port			
Speed	10/20Mbps for Half / Full-duplex 100/200Mbps for Half / Full duplex			
LED Indications	Unit: Power1, Power2, Power1 FAIL, Power2 FAIL, FAN1 FAIL, FAN2 FAIL System: Management, Console TP: Link/Active			
Dimension (W x D x H)	440 x 350 x 88 mm, 2U			
Weight	6.4 kg (with one power) 7.4 kg (with Redundant Power Supply)	6.0 kg (with one power) 6.6 kg (with Redundant Power Supply)	6.4 kg (with one power) 7.4 kg (with Redundant Power Supply)	6.0 kg (with one power) 6.6 kg (with Redundant Power Supply)
Power Requirement	110~240V AC, 50/60Hz	-48V DC (-30~-60V DC)	110~240V AC, 50/60Hz	-48V DC (-30~-60V DC)
Power Output Per Slot	DC 5V, 2A minimum			
Power Consumption	10 Watts (1 power supply), System Operating, Converter not included	5.3 Watts (1 power supply), System Operating, Converter not included	8.4 Watts (1 power supply), System Operating, Converter not included	5.3 Watts (1 power supply), System Operating, Converter not included
Power Consumption	120 Watts (Full Loading)	96 Watts (Full Loading)	120 Watts (Full Loading)	96 Watts (Full Loading)
Cable	10Base-T: 2-pair UTP Cat. 3,4,5, up to 100 m 100Base-TX: 2-pair UTP Cat. 5, up to 100 m			
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -20~70 Degree C Humidity: 5%~90% RH (operating), 5%~90% RH (Storage)			
Emissions	FCC Class A, CE-Mark Class A			
Standards	IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX, 100Base-FX IEEE 802.3x Flow Control			
Compatible Media Converter Model	PLANET FST80x Series, GST-70x Series, GST-80X Series			
Installation	Rack Mounting			
Management	SNMPV1/V2C, Web, CLI, SSH		Web, Console (CLI)	

100Base-FX to 10/100Base-TX PoE Media Converter

More than a Fiber Media Converter and also can be a Power over Ethernet Injector as well !The best data link and power sourcing solution for long reach network equipment

▶ **Media Conversion : 100Base-FX to 10/100Base-TX**

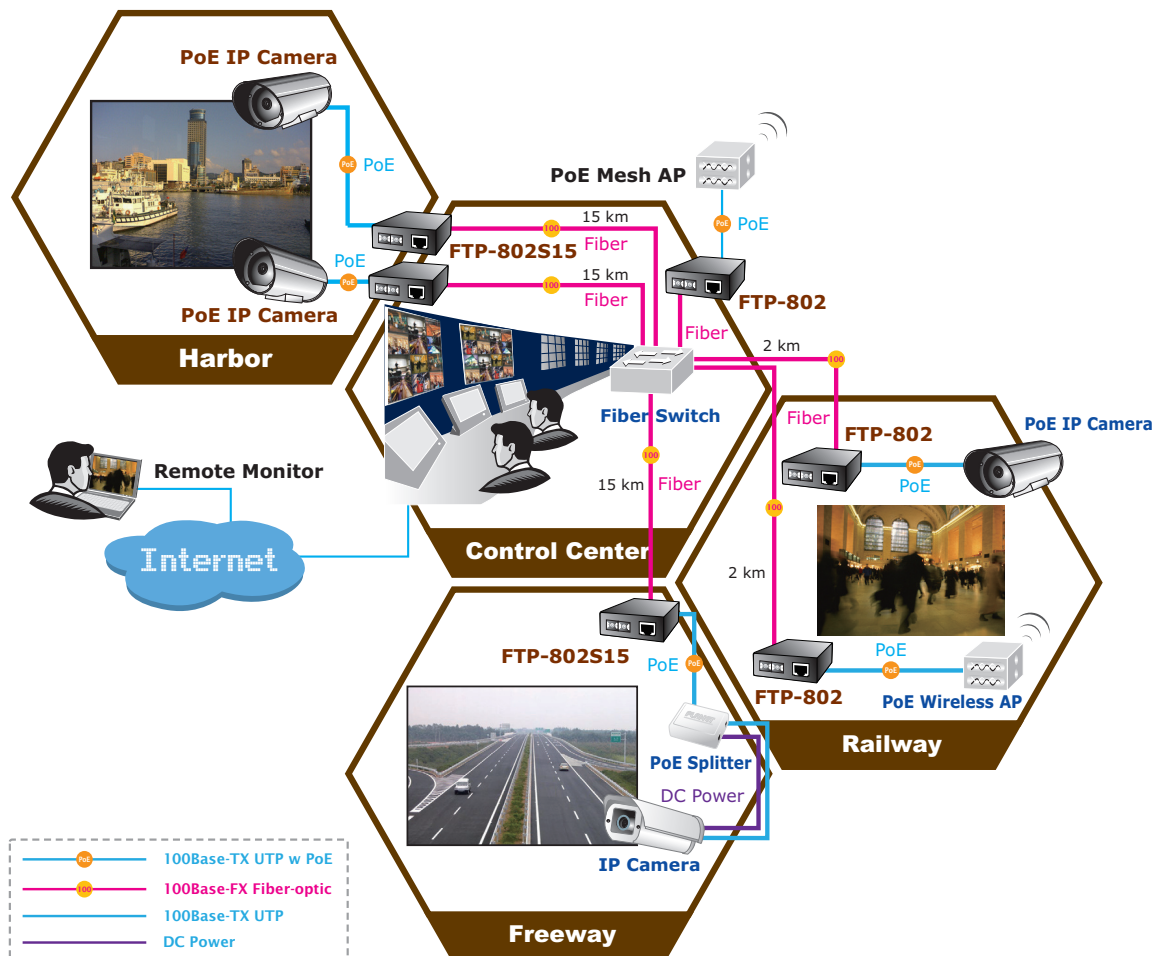▶ **Power over Ethernet : Power Sourcing Equipment(PSE), PoE Injector**

Providing both PoE and Fiber Optical interfaces, the FTP-80x is ideal for service providers, campus and public area requiring to deploy the PoE for the wireless access points, IP-based surveillance camera or IP phones in any places easily, efficiently and cost effective.

■ Advantage of Combing PoE and Media Conversion

With data, long reach fiber capability and PoE from one unit, the FTP-80x shall reduce cables and eliminate the need for dedicated electrical outlets on the wall, ceiling or any unreachable place. It frees the Security IP Camera and wireless AP deployment from restrictions due to power outlet locations. Power and data switching are integrated into one unit and delivered over a single cable, eliminating costs for additional AC wiring and reducing installation time.

■ The IEEE 802.3af equipment installation

For easy finding the power inlets, the FTP-80X provide the easiest way to power your Ethernet devices such as PLANET IEEE 802.3af Power over Ethernet Splitter (POE-151S / 152S) with non PoE Internet Camera or Wireless PoE Access Point (WAP-4060PE). For instance, Security IP Camera, Wireless Access Point and other IEEE 802.3af compliant network equipments can be easily installed around the corner in the public area such as station or freeway for surveillance demands, or builds a wireless roaming environment in the campus or airport.

PoE Media Converter

Description	PoE Media Converter	
Model	**FTP-802**	**FTP-802S15**
Product Image		
Ports — Copper	1 x 10/100Base-TX port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X with PoE injector function	
Ports — Optical	1 x 100Base-FX port	
Optic Interface — Connector	SC	SC
Optic Interface — Mode	Multi-mode	Single mode
Optic Interface — Distance	2km	15km
Optic Wavelength	1300nm	1310nm
Launch Power(dBm) — Max.	-14	-7
Launch Power(dBm) — Min.	-19	-20
Receive Sensitivity (dBm)	-34.5	-28
Maximum Input Power (dBm)	-14	-8
Cable — Twisted-pair	10Base-T: 2-pair UTP Cat. 3,4,5, up to 100 m 100Base-TX: 2-pair UTP Cat. 5, up to 100 m	
Fiber-optic cable	50/125µm or 62.5/125µm multi-mode fiber cable	9/125µm single-mode cable
PoE — Power Output	PoE 48V DC, Max. 15.4Watts, 350 mA	
PoE — Pin Assignment	1/2(+) , 3/6(-)	
Maximum Packet Forward Size	1600Bytes	
DIP Switches	Rear DIP-switch: LFP (Link Fault Pass-through) mode selection	
LED Indicators	System: Power FX / LNK: Data Active, Fiber Link TX / LNK: 10/100 Link/Active PoE in Use: Detect PD Device	
Dimension (W x D x H)	94 x 70 x 26 mm	
Weight	200g	
Power	48V DC, 0.4A External AC-to-DC adapter	
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Humidity: 10%~90% RH (operating) 5%~90% RH (Storage)	
Emissions	FCC Class A, CE Certification Class A	
Standards	IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX, 100Base-FX IEEE 802.3af Power over Ethernet IEEE 802.3x Flow Control	

PoE and Distance Extension

Switch

2km / 15km

Power

FTP-802

Outdoor AP

100Base-TX UTP with PoE   100Base-FX Fiber-optic
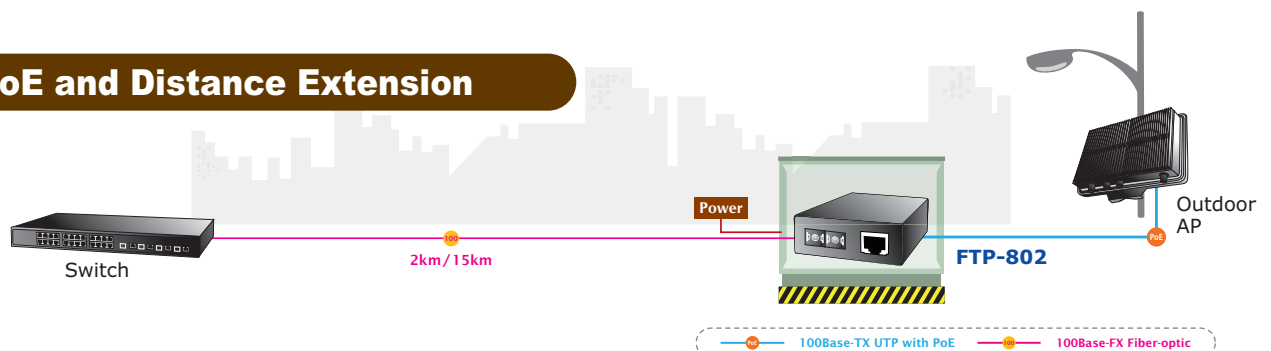
RS-232 / RS-422 / RS-485 over Fast Ethernet Media Converter

■ Cost Effective Solution for RS-232 / RS-422 / RS-485 to Ethernet Application

PLANET ICS-10x series Media Converter / Device Server provide to converts Serial RS-232 / RS-422 / RS-485 communication interface over Fast Ethernet networking. There are RJ-45 and SC connectors and single-mode/multi-mode media for your needs. Ethernet signal that allows two types of segments to connect easily, efficiently and inexpensively. This converter can be used as a stand-alone unit or as a slide-in module to the PLANET Media Converter Chassis (MC-700, MC-1500 and MC-1500R). It's time saving expense for user and SI, no need to replace the existing Serial equipment and software system.

■ Extend Distance

It extends the distance of deploying Serial equipments and hosts. The selectable fiber-Optic wires on the basis of distance are provided. Therefore, this product will perfectly satisfy the diverse demands while providing reliable and efficient network solutions based on the distance and budgets of installation.

## ■ Access Control System – Traditional Installation

Most of the enterprise and government use access control plate and Mifare or RFID to authorize entrance identity. With traditional deploy, access control machine use RS-232 or RS-485 serial interface and cables connect to login server. With connection to ICS-10x Serial over Fast Ethernet Converter, the access control machine is able to be extend over longer distances via fiber optical interface.

The distance can be up to 20km in a local range. Or the ICS-10x can be linked to a XDSL router to get the internet access capability; the access control can be set and monitored over the internet.

■ Remote Manageable

The ICS-10x make connected Serial equipment becomes IP-based. That also makes them be able to connect to a TCP/IP networking immediately. Each Web-Smart converter is able to manage Web Interface. The powerful Web-Smart Media Converter supports Application mode, Serial operation mode connect alarm and IP address, etc. It helps reduce the amount of valuable time that a network administrator spends detecting and locating network problems, otherwise it requires visual inspection of cabling and equipment. Multiple connection options for large networking environment are available as well.

■ Surveillance Motion Control – Pair Connection Mode

Using pair connection along with fiber optical patch cord, the ICS-10x extend RS-232 / RS-422 / RS-485 interfaces distance from surveillance and scanner to the control keyboard/joystick which is installed in the remote monitor center.
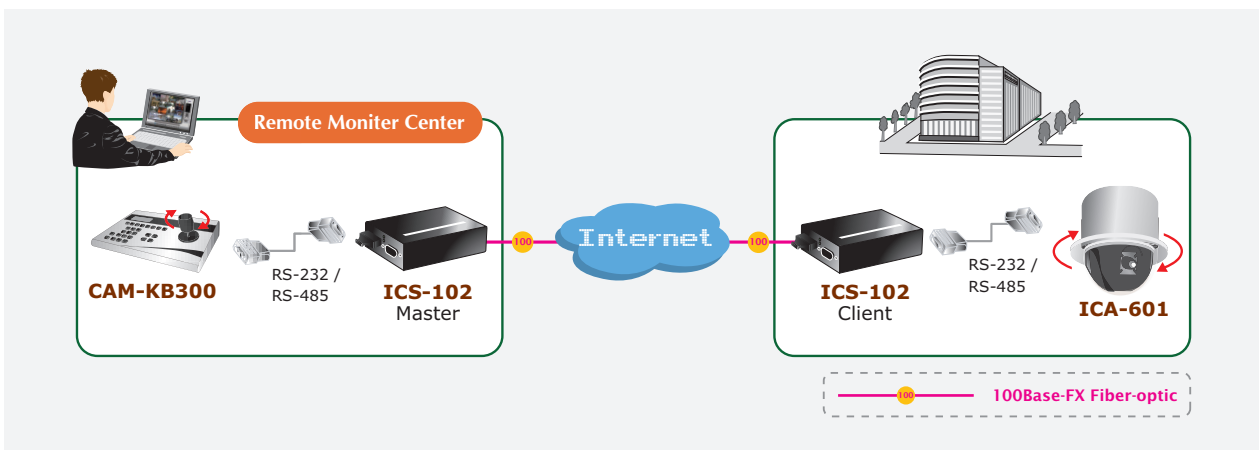
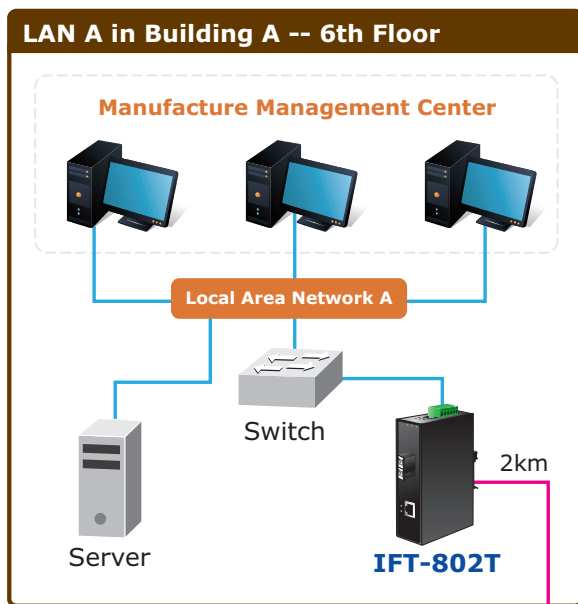# Serial over Fast Ethernet Media Converter / Device Server

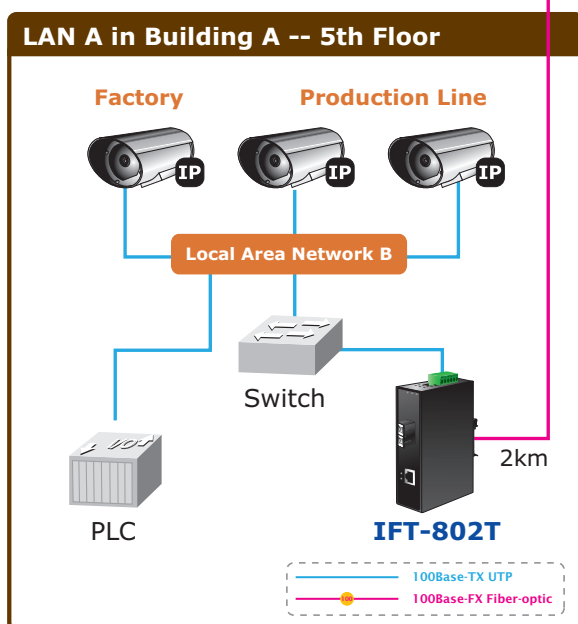| Description	Serial over Fast Ethernet Media Converter / Device Server					
Model	ICS-100	ICS-102	ICS-102S15	ICS-2100	ICS-2102	ICS-2102S15
Product Image						
Serial Port — Interface	RS-232 / RS-422 / RS-485					
Connector	3-in-1 DB9			1 x DB9, 1 x 4-Pin Terminal Block		
Baud rate (Data Rate)	110bps to 921K bps					
Data Bits	5,6,7,8					
Stop Bit	1,2					
Flow Control	None, RTS/CTS, Xon/Xoff					
Signals	RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND RS-422: Tx+, Tx-, Rx+, Rx-, GND RS-485(2-wire): Data+, Data-, GND RS-485(4-wire): Tx+, Tx-, Rx+, Rx-, GND					
Fast Ethernet Port — Standard	10/100Base-TX	100Base-FX		10/100Base-TX	100Base-FX	
Connector	RJ-45	SC		RJ-45	SC	
Mode	-	Multi-Mode	Single Mode	-	Multi-Mode	Single Mode
Distance	100m	2km	15km	100m	2km	15km
Optical Wavelength	-	1300nm	1310nm	-	1300nm	1310nm
Cable	Twisted-pair	50/125µm or 62.5/125µm multi-mode fiber cable	9/125µm single-mode cable	Twisted-pair	50/125µm or 62.5/125µm multi-mode fiber cable	9/125µm single-mode cable
Protection	Built-in 1.5KV magnetic isolation			Built-in 15KV magnetic isolation		
Hardware — LED Indicators	System: Power TP or Fiber Port: Link / Active Serial Port: Serial port mode, RS-232, RS-422 or RS-485			System: Power1, Power2, Fault TP or Fiber Port: Link / Active Serial Port: Serial port mode, RS-232, RS-422 or RS-485		
Management	Web Management, VCOM Utility PLANET Smart Discovery Utility					
Operation Mode	Virtual COM Port TCP Server TCP Client			UDP Client Pair Connection		
Dimension	94(W) x 70(D) x 26(H) mm			135(W) x 97(D) x 32(H) mm		
Weight	200g			431g		
Power Supply	External Power Adaptor 5V DC / 2A max.			12-48V DC, Redundant Power		
Power Consumption	5.5 Watts (max)			10.1 Watts (max)		
Mechanical	Metal					
Environment	Operating Temperature: 0~50 Degree C Storage Temperature: -10~70 Degree C Operating Humidity: 10%~90% RH Storage Humidity: 5%~90% RH			Operating Temperature: -10~60 Degree C Storage Temperature: -20~75 Degree C Operating Humidity: 10%~90% RH Storage Humidity: 5%~90% RH		
Emissions	FCC Class A, CE Certification Class A					
Standards	IEEE 802.3 10Base-T, IEEE 802.3u 100Base-TX / 100Base-FX EIA/TIA RS-232/422/485					
Regulatory Approval	RoHS					
Compatible Media Converter Chassis	MC-700 / 1500 / 1500R			DIN-Rail kit and Wall mount ear		
Note.	Reset Button at the rear panel for reset to factory default					

Industrial Media Converter

In the industrial networking environments, each networked device is required to keep running continuously in the hazardous status. If industrial equipment stops connection to the network, it might influence the entire operation of industrial systems and cause incredible financial losses.

The PLANET Industrial Media Converter Solution is designed with strong casing and in high endurance to extreme temperatures in harsh industrial conditions. It also provides the dynamic status report and real-time alarm messages to bring much more convenience to easily monitor and manage the entire industrial networks.

Advantage

LAN A in Building A -- 6th Floor

Manufacture Management Center

Local Area Network A

Switch

Server

2km

IFT-802T

The Ethernet port of the Switch connects to the Ethernet port of the Industrial Converter.

LAN A in Building A -- 5th Floor

Factory **Production Line**

Local Area Network B

Switch

PLC

2km

IFT-802T

- 100Base-TX UTP
- 100Base-FX Fiber-optic

The Ethernet port of the Switch connects to the Ethernet port of the Industrial Converter.

Free Fall **Shock** **Vibration** **OAM** **Din Rail**

■ Increases Reliability in Operating

The PLANET's Industrial Fast Ethernet and Gigabit Media Converter incorporate power supply with a wide range of voltages for worldwide operability or dual-redundant, reversible polarity, 12V DC to 48V DC power supply inputs for high availability applications requiring dual or backup power inputs.

■ Enhances Productivity and Efficiency

The solution can unite a company's administrative, control-level, and device-level networks into a single network. As a result, manufacturers experience great gains in collaboration, efficiency, and work quality.

■ Greater Bandwidth and Overall Functionality

The solution installation at Full-Duplex Gigabit or Fast Ethernet using switching technologies which can guarantee the throughput to all nodes hooked into the network, delivering status report in real-time to IT staff.

■ Fast Recovery and Advanced Security

The Industrial Media Converters are designed with rugged high-strength case to keep away from harmful status. The IGT-90x offer SNMP protocol and SNMP trap those allow it from a basis of every major network management system.

Industrial Media Converter

Model		IFT-802T	IFT-802TS15	IFT-805AT	IGT-902 / IGT-902T	IGT-902S / IGT-902TS	IGT-905A
Product Image							
Ports	Copper	1 x 10/100Base-TX port, RJ-45, Auto-negotiation, Auto-MDI/MDI-X			1 x 10/100/1000Base-T RJ-45 port, Auto-negotiation, Auto-MDI/MDI-X		
	Optical	1 x 100Base-FX port			1 x 1000Base-SX/LX/WDM port		
Optic Interface	Connector	SC	SC	SFP	SC	SC	SFP
	Mode	Multi-mode	Single mode	Vary on SFP	Multi-mode	Single mode	Vary on module
	Distance	2km	15km	Vary on SFP	220m/550m	10km	Vary on module
Optic Wavelength		1310nm	1310nm	Vary on SFP	850nm	1310nm	-
Launch Power (dBm)	Max.	-14	-5	Vary on SFP	-4	-3	-
	Min.	-19	-9	Vary on SFP	-9.5	-9.5	-
Receive Sensitivity (dBm)		-30	-32	Vary on SFP	-12.5(62.5/125) -13.5(50/125)	-14.4	-
Maximum Input Power (dBm)		-14	-5	Vary on SFP	-18	-20	-
Fiber-optic cable		50/125µm or 62.5/125µm multi-mode fiber cable	9/125µm single-mode cable	Vary on SFP	50/125µm or 62.5/125µm multi-mode fiber cable	9/125µm single-mode cable	Vary on module
Speed	Twisted-pair	10/20Mbps for Half / Full-duplex 100/200Mbps for Half / Full duplex			10/20Mbps for Half / Full-duplex 100/200Mbps for Half / Full-duplex 2000Mbps for Full-duplex		
	Fiber-optic	200Mbps for Full-Duplex			2000Mbps for Full-Duplex		
Maximum Packet Forward Size		1522 Bytes			9216 Bytes		
Management		-			Web / SNMP v1, v2c		
LED Indicators		System: Power, Power1, Power2, Fault TP: Link, 10/100Mbps Fiber: Link / Active			System: Power1, Power 2, Fault TP: Link / Active, Speed Fiber: Link / Active		
Dimension (W x D x H)		32 x 87.8 x 135 mm			32 x 87.8 x 135 mm		
Weight		400g			405g		
Power		12~48V DC 1. [Removable terminal block] redundant power with polarity reverse protect function for master and slave power			12~48V DC [Removable terminal block] redundant power with polarity reverse protect function for master and slave power		
Power Consumption		4.6 Watts (maximum)			7.7 Watts (maximum)		
Environment		Operating Temperature: -40~75 Degree C Storage Temperature: -40~85 Degree C Humidity: 5%~90% RH (Operating) 5%~90% RH (Storage)			Operating Temperature: -30~75 Degree C (IGT-902T / IGT-902TS) Operating Temperature: -10~60 Degree C (IGT-902 / IGT-902S) Storage Temperature: -40~85 Degree C Hummidity: 5%~90% RH (operating) 5%~90% RH (Storage)		
Emissions		FCC Class A, CE Certification Class A					
Stability Testing		IEC60068-2-32 (Free all) IEC60068-2-27 (Shock) EC60068-2-6 (Vibration)					
Standards		IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX / 100Base-FX IEEE 802.3x Flow Control			IEEE 802.3, 10Base-T IEEE 802.3u, 100Base-TX IEEE 802.3ab, 1000Base-T IEEE 802.3z, 1000Base-SX/LX IEEE 802.3x Flow Control		
Material		IP-30 Metal case			IP-30 Metal case		
Note.		Provide DIN rail kit and wall mount plate installation					

10/100Base-TX to 100Base-FX SMI / POF Fast Ethernet Converter

Low-Cost and High-Speed Data Transmission for enterprise and home

The PLANET FT-807 is a 10/100Base-TX Shielded Twisted Pair (STP) to Fast Ethernet 100Base-FX fiber converter. It supports full-duplex operations at its fiber-optic interface in the form factor of SMI (Small Multimedia Interface) interface. The FT-807 auto-adapts to the highest level of performance supported by the device connected to the STP port.

The SMI (Small Multimedia Interface) is one kind of POF (Plastic Optic Fiber, commonly used in digital stereo system) interface that can suitable for low-cost and high-speed data transmission. The SMI patch cord meets the IEEE 1394b specification that can transmit data at S200 (250Mbps) speed for 50 meters, the distance range of TP port is 100 meters. The FT-807 will make the new generation multimedia life more possible and easy installation.
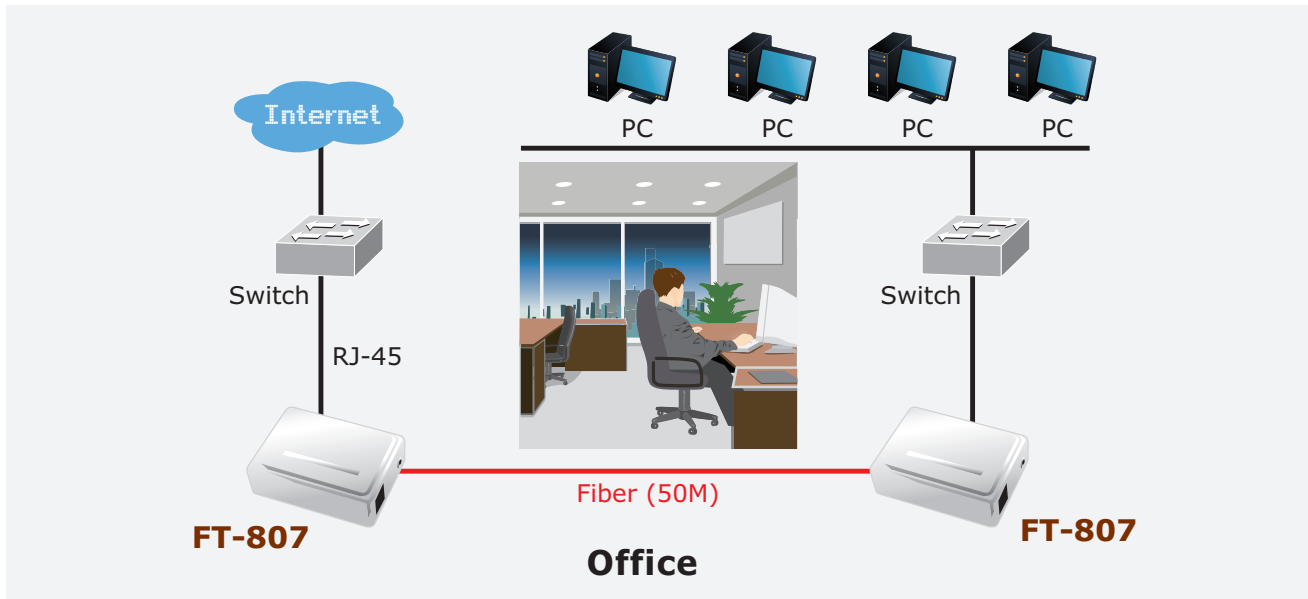
| Description	POF Media Converter	
Model	FT-807	FT-807L
Product Image		
Standards	IEEE 802.3u, 10/100Base-TX and 100Base-FX	
TP Connector	RJ-45 port (Auto-MDI/MDI-X) Twisted Pair, EIA568	
Fiber Connector	FT-807: SMI POF port (multi-mode), 650nm wavelength FT-807L: OptoLock POF port (multi-mode) 650nm wavelength	
Data Rate	10/100Mbps (TP); Auto-Negotiation for duplex mode 100Mbps (FX); full-duplex mode	
TP Cable	4 pair Cat. 3 or 5 UTP, up to 100m	
Fiber Cable	IEEE 1394b SMI Patch cord (0.98mm /1mm), up to 50m	
LED Indicators	PWR, TP. POF	
Dimensions	86 x 62 x 23 mm (W x D x H)	
Power Requirement	5V DC, 2A	
Temperature	Operating: 0~50 Degree C, Storage: -40~70 Degree C	
Humidity Operating	perating: 10~90%, Storage: 10~90% (Non-condensing)	
Regulation Compliance	FCC Part 15 Class A, CE	

FT-807

▶ **Comply with IEEE 802.3u,**
   10/100Base-TX and 100Base-FX

▶ **RJ-45 TP to POF**
   (Plastic Optic Fiber interface) conversion

▶ **IEEE 1394b SMI Patch Cord, up to 50m**

▶ **Low-Cost and High-Speed Data Transmission**

▶ **Compact Size and Easy Installation**

Benefit of using POF

Easy to integrate to the household decoration

▶ Light weight

▶ Thinner in the cable

STP   POF   Fiber
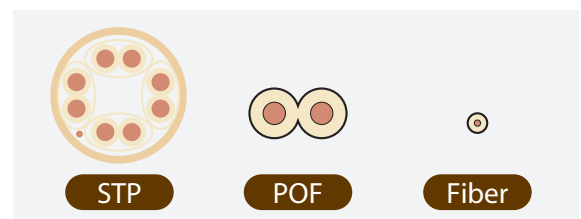
Video over Fiber Media Converter Kit

■ Low-Cost and High-Speed Video Data Transmission

Distances Analog Surveillance Transmission System

The analog cameras and DVRs are still applied mostly in traditional surveillance systems while the maintain stream turns to IP-Based surveillance gradually. To help the analog cameras deployment in long distances with high video transmission quality and reliable signal, PLANET develops the Video over Fiber media converter which successfully integrates the video signal and fiber optic transmission in a compact size mini box. The Video over Fiber media converter enables the videos to be delivered in high quality up to 20km long distance by the intelligent encoding/decoding technology. It is ideal for extending the distance and signal conversion by transmitting the Video and data over the fiber-optic cable.

■ Application

The VF-102-KIT consists of 1 channel video over fiber optical transceiver and receiver to transmit video and RS-422/485 signal through a reliable single mode / single fiber link. It is an ideal cost-effective solution for surveillance system that requires high display quality and high performance signal transmission over long distances. The VF-102-KIT can be installed easily and plug and play; that means the operator does not need to configure the pair of the video over fiber transmission.
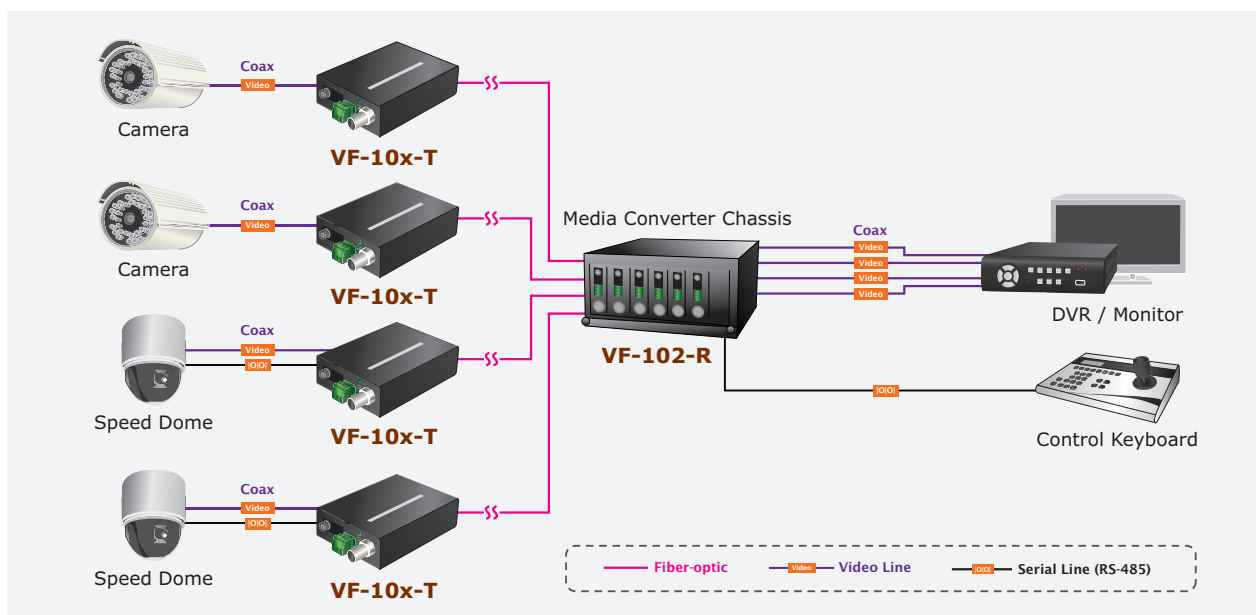
Model	VF-10x-KIT Series
Video Characteristic	
Video Channel	1 channel Bi-direction
Signal Mode	NTSC / PAL
Video Connector	BNC
Video Input / Output Impedance	75ohm / unbalanced interface
Video Input / Output Voltage	1.0 Vpp / Typical Peak-Peak value
Video Bandwidth	6.5MHz
Video Digital Bit Width	8/10 bit
Differential Gain (DG)	<1.3% (Typical Value)
Differential Phase (DP)	<1.3° (Typical Value)
SNR Weighted	63dB (Typical Value)
Data Interface	
Data Channel	1 channel
Physical Protocol	RS-485
Operation Mode	Simplex
Data Connector	3 Pin terminal block with screw clamps
Data Rate	DC-115.2Kbps
Data Distance	RS-485: 0-1200m
Bit Error Rate (BER)	<10ns

**Video over Fiber
Media Converter Kit**
VF-102-Kit

**Din Rail Installation
(Optional Kit)**

H.264 Internet Video Server

The PLANET H.264 Internet Video Server, IVS-H120, allows the conversion of any analog camera into a fully functional IP camera. It integrates the next generation video compression technology H.264 and can compress the video file size for user to transfer the images on Internet easily. It can stream digital video over an office network in the same way as current IP cameras do. By connecting IVS-H120 with an analog camera, all elements of an existing surveillance system can be upgraded to a new IP surveillance system.

Application

Simple-to-Install, Ease-of-Integration and Premium scalability

The IVS-H120 supports PLANET Media Converter Chassis. It offers flexible and scalable solution with combination of media converter chassis and converters. In the mean time, it can easily replace the existing analog DVR system into IP-based, digitalized central surveillance system that can be monitored anywhere with no boundaries.

H.264 Internet Video Server
IVS-H120

PLANET
Networking & Communication

Forbes
Asia
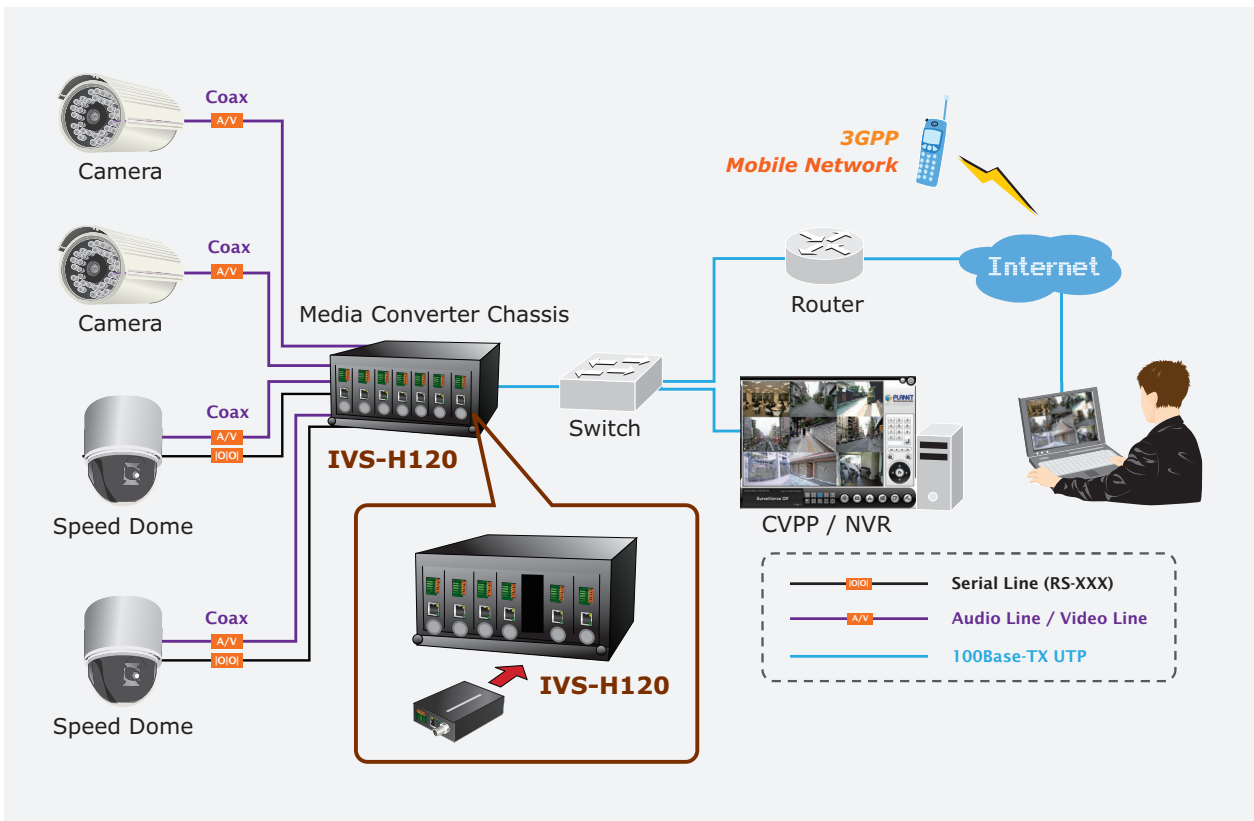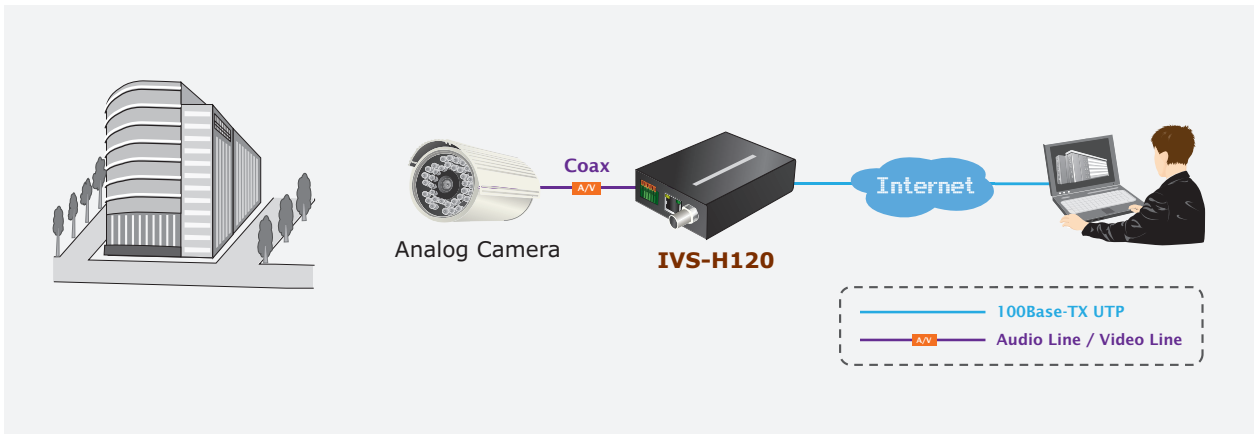
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