

# 10/100BASE-TX to 100BASE-FX Smart Media Converter



## *Distance Extended with Fiber Optic Cable*

PLANET FST-80x Smart Media Converter series provides media conversion between 10/100BASE-TX and 100BASE-FX interfaces, such as multi-mode ST/SC connectors (2km), single-mode SC connector (15/35/50km) and single fiber connector using the wavelength-division multiplexing (WDM) technology (20/60km) to enable to extend links over long distances using fiber optic cable.

## *Enhanced Smart Management Features*

The FST-80x series provides auto MDI/MDI-X on their TP port and store-and-forward mechanism to eliminate faulty packets. Use the DIP switch from the FST-80x to configure the available smart functions, such as the half/full duplex, auto-negotiation / force and 10/100Mbps options for TP and fiber interfaces. Besides, the Link Loss Return (LLR) and Link Loss Carry Forward (LLCF) functions can immediately alarm network administrator once there is a media link issue, thus helping to monitor the status of the entire network.

## *Easy Installation*

The FST-80x series can be connected easily and cost-effectively as these smart media converters can be used as a standalone unit when powered on by its DC adapter, or used as a slide-in module connected to PLANET 19-inch, 16-slot web smart/managed media converter chassis (MC-1600MR/MC-1600MR48 and MC-1610MR/MC-1610MR48). When working with the web smart/managed media converter chassis, the status of the FST-80x can be monitored via the local RS-232 console and remote web interface.

## Standards

- Complies with IEEE 802.3, 10BASE-T, IEEE 802.3u, 100BASE-TX and 100BASE-FX Ethernet standards

## Interface

- One 10/100BASE-TX port with RJ45 connector
- One 100BASE-FX port with ST/SC/WDM connector supporting multi-mode or single-mode fiber optic cable
- Auto-negotiation and auto-MDI / MDI-X for 10/100BASE-TX port

## Layer 2 Features

- Back-pressure and IEEE 802.3x compliant flow control and full wire-speed forwarding rate
- Link Loss Return (LLR) switch on each fiber optic is to aid in troubleshooting remote network connections
- Link Loss Carry Forward (LLCF) works with LLR in diagnosing network connections

## Smart Management

- Provides DIP switch for setting fiber ( HDX/FDX), UTP ( auto-negotiation / manual), speed (10/100Mbps), duplex mode (half/full), LLR ( disable/enable), LLCF ( disable/enable)
- Manageable through web smart/managed media converter chassis system (MC-1600MR/MC-1610MR series)

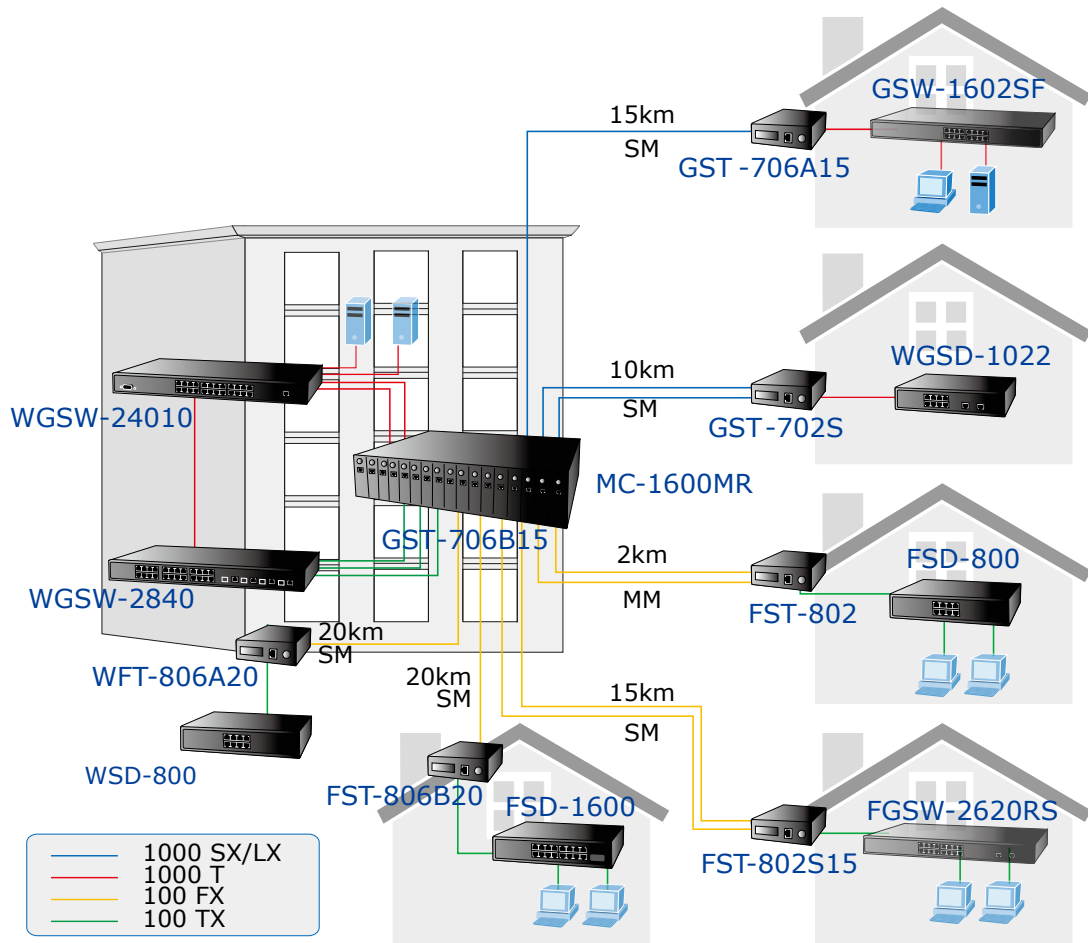
## Hardware

- Used as a stand-alone device or works with web smart/managed media converter chassis for up to 16 converters with redundant power supply for optional expanding use
- LED indicators for converter status
- Choice of fiber-connector from ST/SC/WDM, multi-mode/single-mode fiber
- EMI standards complies with FCC, CE class B

## Applications

### Standalone and Centrally-managed Media Converter Installation

PLANET FST-80x adopts the advanced media conversion technology to meet the demand for today's growing networking. It provides a diverse choice of fiber connecting types to meet different network applications. It is very flexible for the FST-80x to work as a standalone device or to be installed in the central web smart media converter chassis for centralized management, which supports hot swapping to avoid network downtime. The FST-80x is ideal for building a network solution of FTTH (Fiber to the Home) or FTTC (Fiber to the Curb) and FTTB (Fiber to the Building) for ISPs, campuses and enterprises.



## Product Specifications

Hardware Specifications	
Standards	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX and 100BASE-FX
Copper Port	1 x 10/100BASE-TX port, auto-negotiation, auto-MDI-MDI-X
Optical Port	1 x 100BASE-FX
Fiber Connector	FST-801: ST / Multi-mode -- 2km FST-802: SC / Multi-mode -- 2km FST-802S15: SC / Single Mode -- 15km FST-802S35: SC / Single Mode -- 35km FST-802S50: SC / Single Mode -- 50km FST-806A20: WDM SC / Single Mode -- 20km FST-806B20: WDM SC / Single Mode -- 20km FST-806A60: WDM SC / Single Mode -- 60km FST-806B60: WDM SC / Single Mode -- 60km
Optical Wavelength	FST-801: 1310nm FST-802: 1310nm FST-802S15: 1310nm FST-802S35: 1310nm FST-802S50: 1310nm FST-806A20: TX: 1310nm, RX: 1550nm FST-806B20: TX: 1550nm, RX: 1310nm FST-806A60: TX: 1310nm, RX: 1550nm FST-806B60: TX: 1550nm, RX: 1310nm
Maximum Launch Power (dBm)	FST-801: -14 FST-802: -14 FST-802S15:0 FST-802S35:-8 FST-802S50:0 FST-806A20:-8 FST-806B20:-8 FST-806A60:0 FST-806B60:0
Minimum Launch Power (dBm)	FST-801: -20 (62.5/125 $\mu$ m), -23.5 (50/125 $\mu$ m) FST-802: -20 (62.5/125 $\mu$ m), -23.5 (50/125 $\mu$ m) FST-802S15: -20 FST-802S35: -15 FST-802S50:-5 FST-806A20:-14 FST-806B20:-14 FST-806A60:-5 FST-806B60:-5
Receive Sensitivity (dBm)	FST-801: -31.8 FST-802: -31.8 FST-802S15: -32 FST-802S35:-34 FST-802S50: -35 FST-806A20:-31 FST-806B20:-31 FST-806A60:-34 FST-806B60:-34
Maximum Input Power (dBm)	FST-801: -14 FST-802: -14 FST-802S15:0 FST-802S35:0 FST-802S50:0 FST-806A20:0 FST-806B20:0 FST-806A60:0 FST-806B60:0
Speed	Ethernet: 10/20Mbps for half / full-duplex Fast Ethernet: 100/200Mbps for half / full-duplex
Maximum Forward Packet Size	1600Bytes

DIP Switch	DIP-1: Fiber full / half duplex mode DIP-2: Copper forced mode / auto-negotiation mode DIP-3: Copper speed 10Mbps / 100Mbps DIP-4: Copper full / half duplex mode DIP-5: Fiber LLR (Link Loss Return) enable / disable DIP-6: Fiber LLCF(Link Loss Carry Forward) enable / disable
LED Indicator	System: PWR TP: LNK/ ACT, FDX/ COL, 100 FX: LNK/ ACT, FDX/ COL
Power Input	DC 5V, 2A
Power Consumption	6.2 watts/ 21 BTU (maximum)
Dimensions (W x D x H)	94 x 81 x 26 mm
Weight	0.22kg
Cable	10BASE-T: 2-pair Cat3, 4, 5 UTP cable, up to 100 meters 100BASE-TX: 2-pair Cat5 UTP cable, up to 100 meters 100BASE-FX: -50/ 125µm or 62.5/ 125µm multi-mode fiber cable, up to 2km - 9/ 125µm single-mode cable, providing long distance of 15/20/35/50/60km
Operating Environment	0~50 degrees C, 5~90% RH
Storage Environment	-10~70 degrees C, 5~90% RH
Emission	FCC Class B, CE mark

## Ordering Information

FST-801	10/100BASE-TX to 100BASE-FX (ST, MM) Smart Media Converter -- 2km
FST-802	10/100BASE-TX to 100BASE-FX (SC, MM) Smart Media Converter -- 2km
FST-802S15	10/100BASE-TX to 100BASE-FX (SC, SM) Smart Media Converter -- 15km
FST-802S35	10/100BASE-TX to 100BASE-FX (SC, SM) Smart Media Converter -- 35km
FST-802S50	10/100BASE-TX to 100BASE-FX (SC, SM) Smart Media Converter -- 50km
FST-806A20*	10/100BASE-TX to 100BASE-FX (SC WDM, SM) Smart Media Converter -- TX:1310nm-20km
FST-806B20*	10/100BASE-TX to 100BASE-FX (SC WDM, SM) Smart Media Converter -- TX:1550nm-20km
FST-806A60*	10/100BASE-TX to 100BASE-FX (SC WDM, SM) Smart Media Converter -- TX:1310nm-60km
FST-806B60*	10/100BASE-TX to 100BASE-FX (SC WDM, SM) Smart Media Converter -- TX:1550nm-60km
Remarks	FST-806A20/806B20 and FST-806A60/806B60 should run in pair, meaning FST-806A20 / FST-806A60 must be connected at one end while FST-806B20 / FST-806B60 at the other end.

## Related Products

MC-1600MR	16-slot Web Smart Media Converter Chassis (AC power)
MC-1600MR48	16-slot Web Smart Media Converter Chassis (DC power)
MC-1610MR	16-slot Managed Media Converter Chassis (AC power)
MC-1610MR48	16-slot Managed Media Converter Chassis (DC power)
MC-RPS130	130W Redundant Power Supply for MC-1600MR / MC-1610MR, 100-240V AC
MC-RPS48	Redundant Power Supply for MC-1600MR48 / MC-1610MR48, DC-48V