

Product Specification

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

IFT-802T

IFT-802TS15

IFT-805AT

Version 1.0

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Change History:

Revision	Date	Author	Change List
Version 1.0	2010/7/5	Norman Tsai	Initial release

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Reviewed by:	Kent Kang	Approved by:	Tom Shih

1. PRODUCT DESCRIPTION

The IFT-80xT are industrially hardened media converters which specially designed to operate under -40 to 75°C environment temperature. The IFT-80xT provides highly reliable and stable working for demand of harsh environment.

The IFT-80xT provide high level of immunity to electromagnetic interference and heavy electrical surges typical of environments found on plant floors or in curb side traffic control cabinets. The feature of operating temperature range of -40 to 75 Degrees C coupled with hazardous location certification allows the media converter to be placed in almost any location.

The IFT-80xT is packaged in a compact, IP-30 standard metal that allows either DIN or panel mounting for efficient use of cabinet space. The media converter provides an integrated power supply with a wide range of voltages (12 to 48V DC) for worldwide operability or dual-redundant, reversible polarity, 24V DC and 48V DC power supply inputs for high availability applications requiring dual or backup power inputs.

The IFT-80xT provides 1 x 10/100Base-TX and 1 x 100Base-FX optic-fiber SC interface. It provides Multi-mode, Single-mode 100Base-FX SC interface and 100Base-FX SFP slot. The IFT-802T fiber transmit distance can be 2km, IFT-802TS15 fiber transmit distance can be 15km and IFT-805AT is vary on SFP module.

With Fast Ethernet SFP interface, the IFT-805AT is with high reliability and flexibility to extend the distance from 2km to 20Km. It depends on the MFB family Fast Ethernet SFP modules.

MFB family Fast Ethernet SFP module comes with one of the following models. The following list the available Modules for IFT-805AT.

Fast Ethernet SFP module List		
Model	Interface	Fiber connector and distance
MFB-TFX	SFP-Port 100Base-FX Module	LC, Multi-Mode (1310nm) -2km (-40~75°C)
MFB-TF20	SFP-Port 100Base-FX Module	LC, Single Mode (1310nm) – 20km (-40~75°C)

* Models with last two numbered characters indicate the maximum distance in km.

2. PRODUCT FEATURES

➤ **Physical Port**

IFT-802T

- 1-Port 10/100Base-TX RJ-45
- 1-Port 100Base-FX interface for up to 2km (Multi-mode fiber 62.5/125μm / 50/125μm)

IFT-802TS15

- 1-Port 10/100Base-TX RJ-45
- 1-Port 100Base-FX interface for up to 15km (Single mode fiber 9/125μm)

IFT-805AT

- 1-Port 10/100Base-TX RJ-45
- 1-Port 100Base-FX SFP slot (Distance depend on SFP module)

➤ **Industrial Design**

- Slim type IP-30 Metal case
- -40°C~75°C Operating Temperature
- DIN Rail and Wall Mount Design
- 12 to 48V DC, redundant power with polarity reverse protect function and connective removable terminal block for master and slave power
- Supports EFT protection 6000 VDC for power line
- Supports 6000 VDC Ethernet ESD protection

➤ **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
- Store-and-Forward Switching Architecture
- Features Store-and-Forward mode with wire-speed filtering and forwarding rates
- Prevents packet loss with back pressure (Half-Duplex) and IEEE 802.3x PAUSE frame flow control (Full-Duplex)
- Support to handle up to 1522bytes packet size
- CSMA/CD Protocol
- Automatic source address learning and aging

3. PRODUCT SPECIFICATION

3.1 MAIN COMPONENT

Switch MAC + PHY	IC Plus IP178D x1	
Fiber Transceiver	IFT-802T	AXFE-1311-0127 Transceivers 3.3V x1
	IFT-802TS15	LS32-A3C-PI-N Transceivers 3.3V x1
	IFT-805AT	Depend on SFP module

3.2 Functional Specifications

Product	IFT-802T	IFT-802TS15	IFT-805AT
Hardware Specification			
10/100Base-TX Port	1 RJ-45 Auto-MDI/MDI-X port		
100Base-FX Port	1 SC Interface		1 SFP Slot
Fiber Port Type	SC / Multi-mode	SC / Single-mode	Vary on module
Cable Distance	2km	15km	
Optical Frequency	1310nm	1310nm	
Launch Power (dBm)	Max:-14 Min: -20	Max:0 Min: -20	
Receive Sensitivity (dBm)	-32	-32	
Maximum Input Power (dBm)	-14	0	
Installation	DIN rail kit and wall mount ear		
Maximum Frame Size	1522bytes packet size		
Flow Control	Back pressure for half duplex IEEE 802.3x Pause Frame for full duplex		
Enclosure	IP-30 Slim Type Metal Case		
LED Indicator	System: Power 1 (Green), Power 2 (Green), Fault (Green) 1x copper port: 10/100 (Green) LNK/ACT(Green) 1 x 100FX port: 100 (Green) LNK/ACT(Green)		
Power Input	12 to 48V DC Redundant power with polarity reverse protection function		
Power Consumption	3 Watts/ 10BTU (maximum)		
Protection	ESD (Ethernet): 6KVDC Surge (Power): 6KVDC		
Speed	Twisted-pair: 10/20Mbps for Half / Full-Duplex 100/200Mbps for Half / Full-Duplex Fiber-optic: 200Mbps for Full-Duplex		
Network cables	10/100Base-TX: 2-Pair UTP Cat. 3, 4, 5 (100meters, max.) EIA/TIA-568 100-ohm STP (100meters, max.) 100Base-FX: IFT-802T: Multi-mode optic fiber 62.5/125µm / 50/125µm (2km) IFT-802TS15: Single-mode optic fiber 9/125µm (15km) IFT-805AT: SFP Slot (Depend on SFP module)		
Standards Conformance			
Standards Compliance	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX / 100Base-FX IEEE 802.3x Flow Control and Back pressure		
Stability testing	IEC60068-2-32(Free fall) IEC60068-2-27(Shock) IEC60068-2-6(Vibration)		

3.3 Physical Specification

Dimensions:

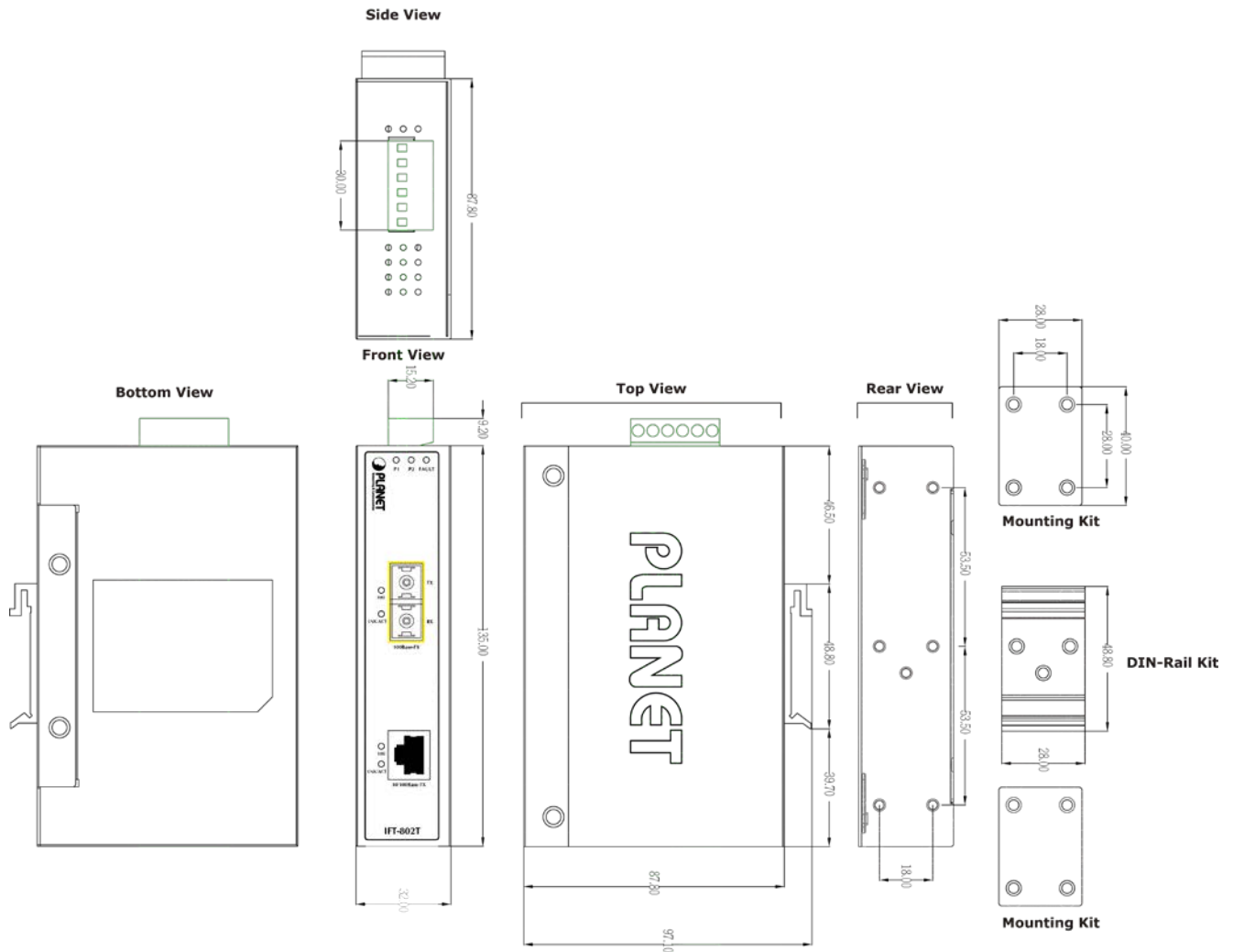
135mm (W) x 85mm (D) x 32mm (H)

Weight:

430g

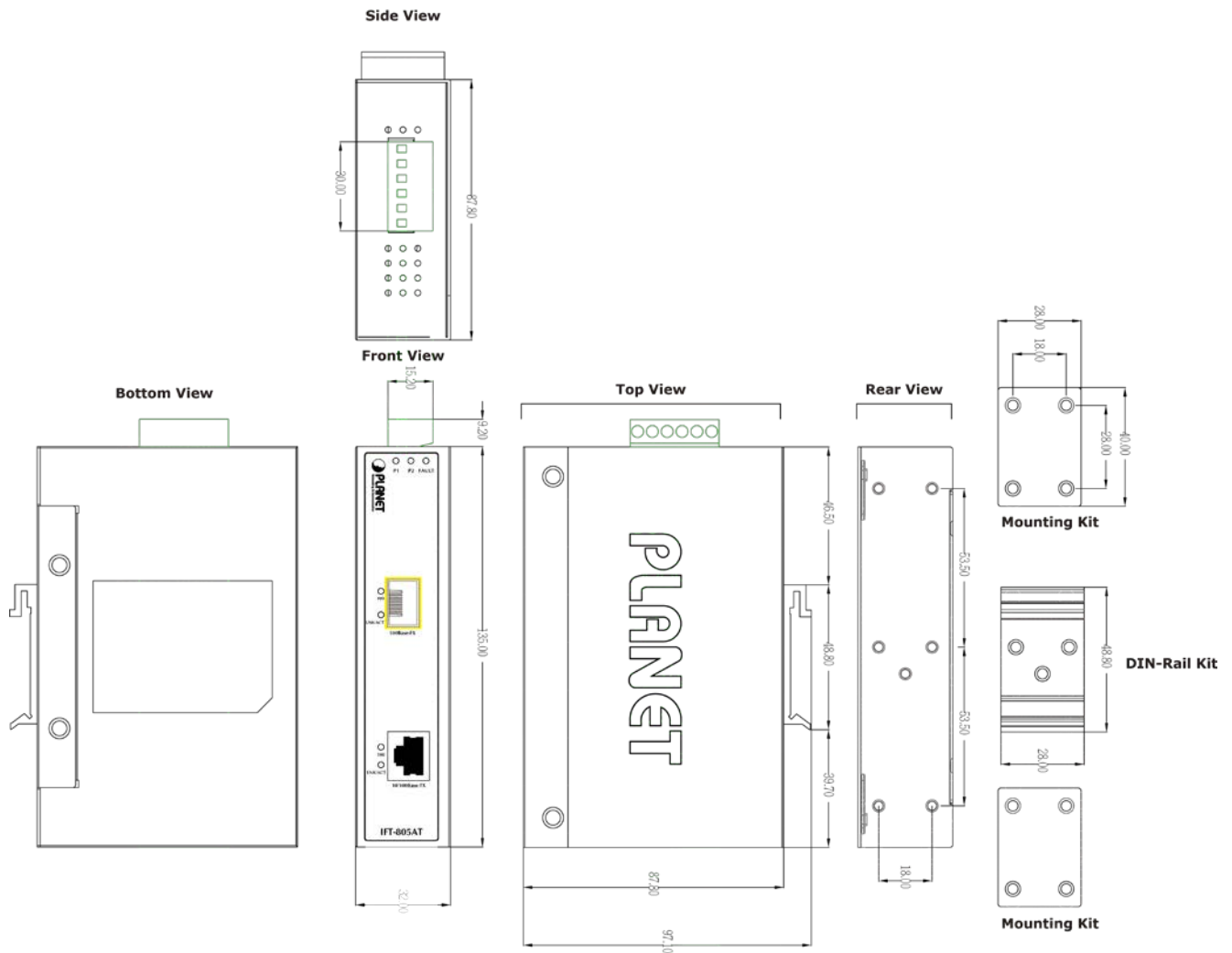
3.4 Multi-View Drawing:

■ IFT-802T and IFT-802TS15



Dimensions (unit = mm)

■ IFT-805AT



Dimensions (unit = mm)

3.5 IFT-80xT Front Panel:

IFT-802T / IFT-802TS15 Front panel



IFT-805AT Front panel



■ LED Definition

➤ System

LED	Color	Function
P1	Green	Lit: indicate the power 1 has power.
P2	Green	Lit: indicate the power 2 has power.
FAULT	Green	Lit: indicate the either power 1 or power 2 has no power.

➤ **10/100Base-TX RJ-45 Port**

LED	Color	Function
10/100	Green	Lit: To indicate TP port is successfully connecting to the network at 100Mbps. Off: To indicate TP port is successfully connecting to the network at 10Mbps.
LNK/ACT	Green	Lit: To indicate the link through that port is successfully established. Blink: To indicate TP port is actively sending or receiving data over that port.

➤ **100Base-FX SC / SFP Fiber Interface**

LED	Color	Function
100	Green	Lit: To indicate Fiber port is successfully connecting to the network at 100Mbps.
LNK/ACT	Green	Lit: To indicate the link through that port is successfully established. Blink: To indicate Fiber port is actively sending or receiving data over that port.

3.6 Environmental Specification

Operating

Model	IFT-802T	IFT-802TS15	IFT-805AT
Temperature:	-40~75 Degrees C		
Relative Humidity:	0~95% RH (non-condensing)		

Storage

Temperature: -40~85 Degrees C
 Relative Humidity: 10~95% RH (non-condensing)

3.7 Electrical Specification

Input Voltage:

External Power Supply: DC 12V~48V,

Redundant power DC 12V~48V and connective removable terminal block for master and slave power

Power Consumption:

Input Voltage	12V	24V	36V	48V
Full Load Watts	3W	2.64W	2.88W	2.88W

3.8 Regulatory Compliance

EMI:

- FCC Class A,
- CE EN61000-4-2,
- CE EN61000-4-3,
- CE EN-61000-4-4,
- CE EN61000-4-5,
- CE EN61000-4-6,

- CE EN61000-4-8,
- CE EN61000-4-11,
- CE EN61000-4-12,
- CE EN61000-6-2,
- CE EN61000-6-4

Stability Testing:

- IEC60068-2-32 (Free fall),
- IEC60068-2-27 (Shock),
- IEC60068-2-6 (Vibration)

3.9 Reliability

MTBF > 100,000Hrs

3.10 BASIC PACKAGING

- 10/100Base-TX to 100Base-FX Industrial Media Converter x 1
- User's Manual x 1
- DIN Rail Kit x 1
- Wall Mount Kit x 1
- Screws x 1(set)

3.11 PACKING DIMENSION

Dimension: 280mm (W) x 145mm (D) x 46mm (H)

Weight: 9.9kg (Gross weight)
18pcs in one carton