Product Specifications

10/100/**1000**BASE-T to **Dual 100**/1000BASE-X **SFP**

Media Converter

GT-1205A

Version 4.0

Change History:

Revision	Date	Author	Change List
Version 4.0	2019/7/8	Marc Liao	Function Enhance - Add dual SFP slots supports 100FX SFP module with hardware DIP switch designed.
Version 3.0	2017/1/19	Marc Liao	Hardware change - Chipset changed Marvell 88E6122 to Marvell 88E6320
Version 2.0	2013/2/22	Marc Liao	Function Enhance - Add 2-Port Fiber Redundant Function
Version 1.0	2011/8/23	Norman Tsai	Initial Release

Author:	Marc Liao	**Editor:**	Kent Kang
Reviewed By:		**Approved By:**	Kent Kang

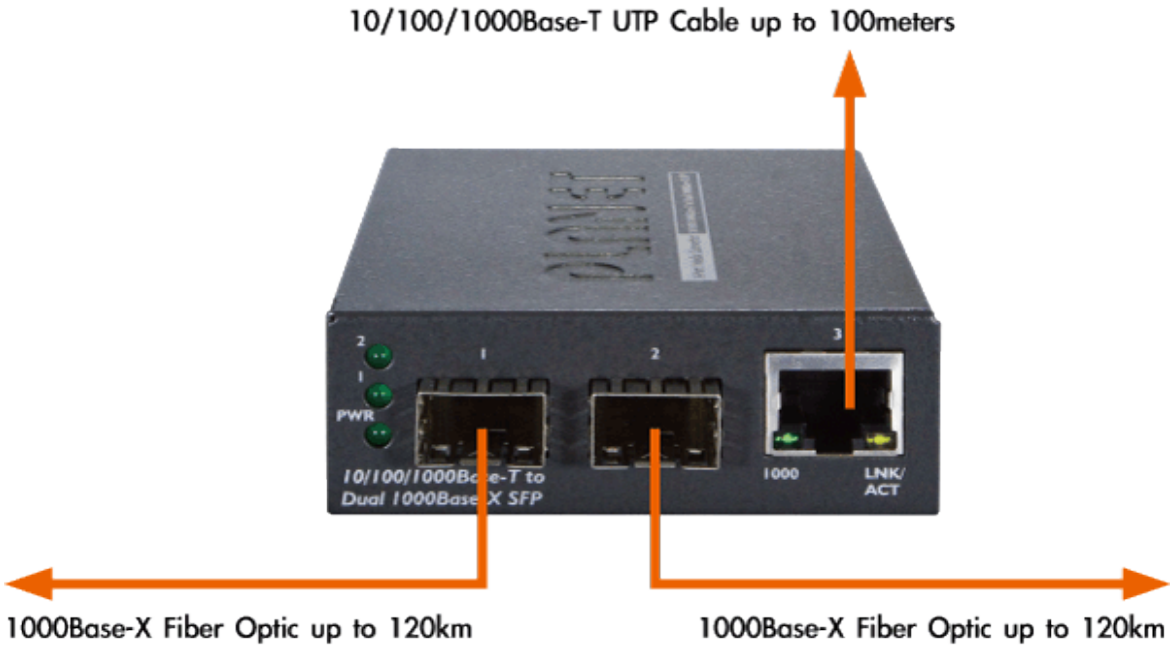
1. PRODUCT DESCRIPTION

PLANET GT-1205A Gigabit SFP Media Converter is upgraded by providing **dual SFP slots**, accepting **100FX or 1000X SFP module,** and other features shown below:

- **DIP Switch for 100FX or 1000X SFP module supports on dual SFP slots**
- **DIP Switch for 3-port operation in Gigabit switch mode or redundant mode**
- **Redundant hardware fiber port**

Highly Convenient and Distance Extendable

The GT-1205A is equipped with one 10/100/1000BASE-T port and dual SFP slots to support conversion between 10/100/1000BASE-T and 100/1000BASE-Xnetworks. The dual SFP slots make the Ethernet signals connect easily and efficiently by adding single-mode or multi-mode media modules or the combination of both types. The GT-1205A provides high reliability and flexibility to extend the media transmission distance up to 550m or 2km (multi-mode fiber) and 10km or longer 20/40/80/120 kilometers (single-mode fiber or WDM fiber), depending on the optional **100**/1000BASE-SX/LX SFP modules.



Adjustable DIP Switch for 100FX or 1000X SFP Module Selection

Via the built-in DIP switch on rear panel, the GT-1205A can be configured as 100BASE-FX SFP module or 1000BASE-X SFP module on its dual SFP slots. The GT-1205A can be connected over fiber optic cabling at a distance extended from 550 meters to 2km (multi-mode fiber) and to 10/20/40/80/120 kilometers (single-mode fiber or WDM fiber), using the PLANET MFB/MGB series 100/1000BASE-X SFP modules.

Adjustable 3-Port Switch Mode or 2 Fiber Port Redundant Mode

Via the built-in DIP switch, the GT-1205A can be configured as 3-port Ethernet switch or 2-port redundant media converter. In the 3-port switch mode, the GT-1205A can operate in Store-and-Forward mechanism with high performance; on the other hand, when in the 2-port redundant mode, it provides rapid fiber redundancy of link for highly critical Ethernet applications. The redundant mode also supports auto-recovering function. If the destination port of a packet is link-down, it will forward the packet to the other port of the backup pair.

Easy Deployment Standalone or with Chassis

The GT-1205A Gigabit Media Converter can be used as a standalone unit or as a slide-in module to the PLANET Media Converter Chassis, **MC-700** and **MC-1500** chassis series. These media chassis can assist in providing DC power to the GT-1205A Gigabit Media Converter and the fiber-optic network can be maintained at one central location. With the 3-port switch mode, they work in high performance Store and Forward mechanism, and prevent packet loss with IEEE 802.3x flow control (full-duplex) and back pressure (half-duplex) function.

Plug and Play Installation

As the GT-1205A Gigabit Media Converter fully complies with IEEE 802.3 10BASE-T, IEEE 802.3u 100BASE-TX/**FX,** IEEE 802.3ab 1000BASE-T and IEEE 802.3z 1000BASE-LX/SX, the Gigabit media conversion installation is quite quick and easy simply by using the plug and play feature.

2. PRODUCT FEATURES

■ Standard

- Complies with IEEE 802.3 10BASE-T
- Complies with IEEE 802.3u 100BASE-TX/100BASE-FX
- Complies with IEEE 802.3ab 1000BASE-T
- Complies with IEEE 802.3z 1000BASE-SX/LX
- IEEE 802.3x full-duplex flow-control, back-pressure in half-duplex eliminate packets loss

■ Interface

- Dual **100BASE-FX**/1000BASE-SX/LX SFP fiber-optic slots
- One 10/100/1000BASE-T Copper, auto MDI/MDIX function
- Auto-negotiation for 10/100/1000BASE-T; half-duplex or full-duplex for 10Mbps and 100Mbps, full-duplex for 1000Mbps
- Supports maximum frame size up to 10K jumbo packet size
- IEEE 802.1Q Tag VLAN transparent, multicast pass through

■ Redundancy

- Link status auto-detecting and redundant on dual ports with the same connector type
- Allows only the Primary-Port or the Backup-Port to activate at a time
  - When the Primary-Port link fails occurs, the traffic swaps to Backup-Port automatically
  - Once the Primary-Port link regains, the traffic swaps from the Backup-Port to the Primary-Port
- Hardware fiber port redundant

■ Mechanical

- External 5V/2.5A DC power supply
- LED indicators for easy network diagnose
- **DIP switch for 100FX or 1000X SFP module supports on dual SFP slots**
- DIP switch for 3-port operation in Gigabit switch mode or redundant mode
- Compact in size, easy installation
- Co-works with PLANET 10”/19” Media Converter Chassis (**MC-700/MC-1500/MC-1500R/MC-1500R48**)
- Wall mounting and DIN-rail installation supported

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

Chipset	**Marvell 88E6320 x 1**
Fiber Transceiver	Vary by models

3.2 FUNCTION SPECIFICATIONS

Model		**GT-1205A**
Interface Specifications		
Hardware Version		4
Ports	**Copper**	1 x 10/100/1000BASE-T port
	Fiber	2 x 100/1000BASE-X SFP slots
Cable	**Twisted-pair**	10BASE-T: 2-pair UTP Cat3,4,5, up to 100 meters 100BASE-TX: 2-pair UTP Cat 5, 5e up to 100 meters 1000BASE-T: 4-pair UTP Cat 5e,6 up to 100 meters
	Fiber-Optic Cable	**1000BASE-SX:** 50/125μm or 62.5/125μm multi-mode fiber cable, from 220 and 550 meters to 2km. **1000BASE-LX:** 9/125μm single-mode cable, with distance for 10/20/40/80/120km (vary on SFP module) **100BASE-FX:** 50/125μm or 62.5/125μm multi-mode fiber cable, up to 2km (vary on SFP module) 9/125μm single-mode cable, with distance for 20/40/60km (vary on SFP module)
Hardware Specifications		
Switch Architecture		Store and Forward
Flow Control		Back pressure for half duplex. IEEE 802.3x pause frame for full duplex
Fabric		6Gbps
Throughput (packet per second)		4.4Mpps
Maximum Packet Size		10K bytes
LED Display		**System**: One Power LED (**Green**) **Fiber Port**: Two LNK/ACT LED (**Green**) **TP Port** : One Speed LED (**Green**) , One LNK/ACT LED (**Orange**)
Power Requirement		5V DC, 2A max.
Power Consumption		2.8watts/9.5BTU per hour max.
Standard Conformance		
Standard Compliance		IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX/**100BASE-FX** IEEE 802.3ab 1000BASE-T IEEE 802.3z 1000BASE-SX/LX IEEE 802.3x Flow Control

3.3 PHYSICAL SPECIFICATIONS:

Dimensions:

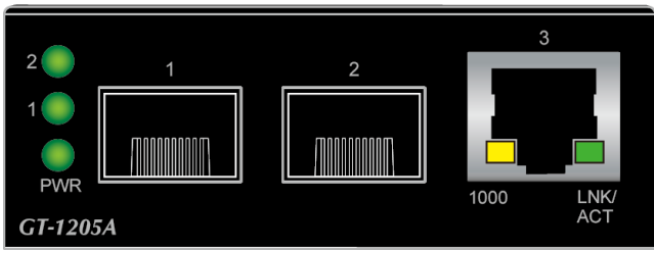
94 x 70 x 26mm (W x D x H)

Weight:

180g

■ Front Panel

The GT-1205A front panel consists of two 100/1000BASE-X SFP slots and one auto-sensing 10/100/1000Mbps Ethernet RJ45 port.



Front Panel of GT-1205A

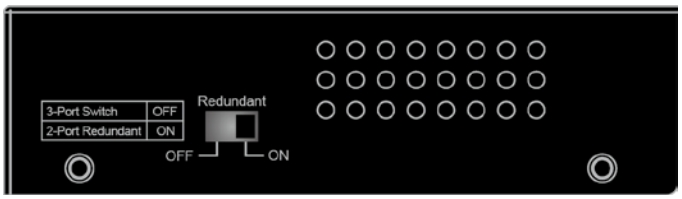
■ Rear Panel

The rear panel of the GT-1205A has one DC jack, which accepts an input power of 5V DC with 2A. The brand-new DIP switch designed for 1000BASE-X SFP module or 100BASE-FX SFP module supports on dual SFP slots. The default DIP switch mode is 1000BASE-X.

Rear Panel of GT-1205A

■ Side View

The side panel of the GT-1205A has a DIP switch for setting to the 3-port switch mode or the 2-port redundant mode. When **"ON"**, it is in the 2-port redundant mode. And when **"OFF"**, it is in the 3-port switch mode.



Side View of GT-1205A

■ LED Definition

The LED Definition of the GT-1205A is shown below:

■ **System**

LED	Color	Function
PWR	**Green**	Lit when +5V DC power is detected.

■ **100/1000BASE-X SFP Slots**

LED	Color		Function
1	**Green**	**Lit**	Indicates that the fiber optic port is linked up.
		Blink	Indicates that the converter is actively sending or receiving data over that port.
		Off	Indicates that the fiber optic port is linked down.
2	**Green**	**Lit**	Indicates that the fiber optic port is linked up.
		Blink	Indicates that the converter is actively sending or receiving data over that port.
		Off	Indicates that the fiber optil port is linked down.

■ **10/100/1000BASE-T Port**

LED	Color		Function
LNK/ACT	**Orange**	**Lit**	Indicates that the copper port is linked up.
		Blink	Indicates that the converter is actively sending or receiving data over that port.
		Off	Indicates that the copper port is linked down.
1000	**Green**	**Lit**	Indicates that the copper port is operating at 1000Mbps.
		Off	Indicates that the copper port is linked down or 10/100Mbps.

3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

Temperature: 0°C ~ 50 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

Storage:

Temperature: -10°C ~ 70 degrees C

Relative Humidity: 5% ~ 95% (non-condensing)

3.5 ELECTRICAL SPECIFICATION

Input Voltage:

External Power Adapter: DC 5V/2.5A

Power consumption:

- **System on without any devices attached**

Input Voltage	110V / 60Hz	220V / 50Hz
Watt	0.6W	1.1W
BTU	2.04BTU	3.75BTU

- **System on with Full Loading**

Input Voltage	110V / 60Hz	220V / 50Hz
Watt	2.2W	2.8W
BTU	7.5BTU	9.5BTU

- **System on with Full Loading**

Input Voltage	110V / 60Hz	220V / 50Hz
Watt	2.2W	2.8W
BTU	7.5BTU	9.5BTU

3.6 REGULATORY COMPLIANCE

FCC Class B, CE.

3.7 RELIABILITY

MTBF > 50,000 hrs @ 25 degrees C

3.8 BASIC PACKAGING

- GT-1205A x 1
- User's Manual x 1
- DC 5V, 2.5A Power Adapter x 1

3.9 PACKING INFORMATION

Box Dimensions (W x D x H):	280 × 133 × 66 mm
Weight (gross weight):	463g
Carton Dimensions (W x D x H):	595 × 375 × 325 mm
Carton Weight (gross weight):	10.0kg
Quantity:	20pcs in one carton