10/100/1000BASE-T to 100/1000BASE-X SFP Managed Media Converter

Remotely-managed Gigabit Converter

PLANET GT-915A 10/100/1000BASE-T to 100/1000BASE-X Managed Media Converter is developed to meet the advanced demand of network applications but it comes with the easy Plug and Play feature. The GT-915A provides 10/100/1000Mbps Ethernet on RJ45 port and offers highly-stable Gigabit SFP fiber performance. It supports conversion between 10/100/1000BASE-T and 100/1000BASE-X Ethernet, which includes SFP slot with single-mode or multi-mode media as required. The Ethernet signal allows three types of segments to connect easily, efficiently and inexpensively.

Enhanced Management & Cybersecurity Features Make Networking More Efficient & Secure

Enhanced Smart Management Features

The GT-915A provides auto MDI/MDI-X on its TP port and built-in L**ink Fault Pass-through** function (**LFP**). The LFP function includes **Link Loss Carry Forward** (**LLCF**) and **Link Loss Return** (**LLR**), both of which can immediately alarm administrators the problem of the link media and provide efficient solution to monitoring the net.

■ LLCF means when a device connected to the converter and the TP line loses the link, the converter's fiber port will disconnect the link of transmission.

■ LLR means when a device connected to the converter and the fiber line loses the link, the converter's fiber port will disconnect the link of transmission.

Therefore, the GT-915A greatly supports the administrators to manage the network efficiently.

Physical Port

- One 1G/100/10BASE-T RJ45 interface with auto MDI/MDI-X function
- One 1G/100BASE-X SFP interface

Layer 2 Features

- Supports VLAN.
  - IEEE 802.1Q tagged VLAN
  - Supports provider bridging (VLAN Q-in-Q, IEEE 802.1ad).
  - VLAN transparent
- Storm Control support
  - Broadcast/Multicast/DLF (Destination Lookup Failure)/ARP/ICMP
- Store-and-Forward mechanism
- Non-blocking full wire-speed forwarding rate
- 16K jumbo frame size support
- Prevents packet loss with back pressure (half-duplex) and IEEE 802.3x pause frame flow control (full-duplex).
- Automatic address learning and address aging
- Supports port status/Ethernet statistics on both TP and fiber interfaces.
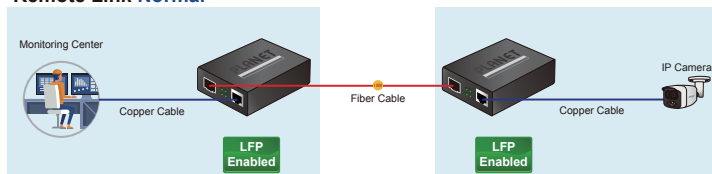- Supports Link Fault Passthrough (LFP) and Link Layer Discovery Protocol (LLDP).

OAM Compliant

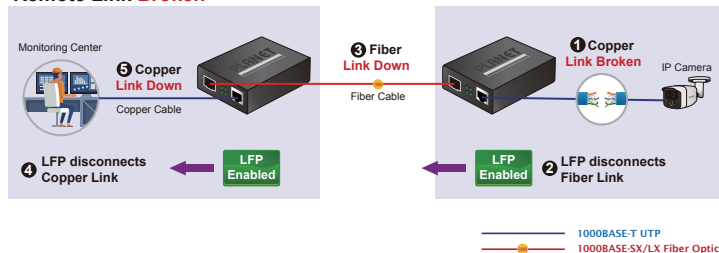- TS-1000 OAM / IEEE 802.3ah OAM / Loop Back Test

Quality of Service

- Ingress Shaper and Egress Rate Limit per port bandwidth control
- 8 priority queues on all converter ports
- Strict priority and Weighted Round Robin (WRR) CoS policies
- Traffic classification
  - IEEE 802.1p CoS
  - IP DSCP
  - IP Address

Remote Link Normal

Monitoring Center
Copper Cable
Fiber Cable
Copper Cable
IP Camera

LFP Enabled
LFP Enabled

Remote Link Broken

Monitoring Center

❸ **Fiber Link Down**
❶ **Copper Link Broken**
IP Camera

❺ **Copper Link Down**
Copper Cable
Fiber Cable

❹ **LFP disconnects Copper Link**
LFP Enabled
LFP Enabled
❷ **LFP disconnects Fiber Link**

1000BASE-T UTP
1000BASE-SX/LX Fiber Optic

Network with Cybersecurity Helps Minimize Security Risks

The GT-915A comes with enhanced cybersecurity to fend off cyberthreats and cyberattacks. It supports SSHv2, TLSv1.2 and SNMPv3 protocols to provide strong protection against advanced threats. Served as a key point to transmit data to customer's critical equipment in a business network, the cybersecurity feature of the IGT-900-Series protects the management and enhances the security of the mission-critical network without any extra deployment cost and effort.

GT-915A

Secure Management

TLSv1.2 **SNMPv3** **SSHv2**

User-friendly and Centralized Web Management Interface

For efficient management, the GT-915A is equipped with a remote Web/SNMP interface. With its built-in Web-based management, PLANET GT-915A acts as an easy-to-use, platform-independent management and configuration facility. The GT-915A also supports standard Simple Network Management Protocol (SNMP) and can be managed via any standard-based management software.

OAM Management

The TS-1000/802.3ah OAM (operation, administration, and maintenance) protocol supported enables remote OAM compliant device to be managed and monitored by the GT-915A.

Remotely-managed Solution

PLANET's Universal Network Management System (**UNI-NMS**) and **CloudViewerPro App** support IT staff to remotely manage all network devices and monitor the GT-915A operation statuses. Thus, they're designed for both the enterprises and industries

Security

- IPv4/IPv6 IP-based ACL
- IPv4/IPv6 IP-based ACE
- MAC-based ACL
- MAC-based ACE

Management

- IPv4 and IPv6 dual stack management
- Management Interfaces
  - Web HTTP management
  - Telnet Command Line Interface
  - SNMP v1, v2c monitoring
  - SSHv2, TLSv1.2 and SNMP v3 secure access
- System Maintenance
  - Firmware upload/download via HTTP
  - Reset button for system reboot or reset to factory default
- Network Time Protocol (NTP)
- SNMP Management
- − SNMP trap for interface link up and link down notification
- − Four RMON groups (history, statistics, alarms and events)
- Network Diagnostic
  - SFP-DDM (Digital Diagnostic Monitor)
- Syslog remote alarm
- Local system Log
- PLANET Smart Discovery Utility for deploy management
- PLANET Remote Management
  - PLANET NMS Controller and CloudViewerPro for deployment management

Case and Installation

- External 5V DC, 2A power supply
- 0 to 50 degrees C operating temperature
- Supports 6000 VDC Ethernet ESD protection
- Wall mounting or DIN-rail installation
- Works with PLANET's 10"/19" Media Converter Chassis (MC-700/MC-1500/MC-1500R/MC-1500R48)
- Plug and Play installation

where deployments of the GT-915A can be as remote as possible, without having to go to the actual location once a bug or faulty condition is found. With the UNI-NMS or CloudViewerPro app, all kinds of businesses can now be speedily and efficiently managed from one platform.

NMS Controller   CloudViewerPro App

Enhanced Traffic Control

The GT-915A 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, and broadcast storm and bandwidth control to enhance bandwidth utilization.

Intelligent SFP Diagnosis Mechanism

The GT-915A supports SFP-DDM (digital diagnostic monitor) function that greatly helps network administrator to easily monitor real-time parameters of the SFP transceivers, such as optical output power, optical input power, temperature, laser bias current, and transceiver supply voltage.

SFP DDM (Digital Diagnostic Monitor)

Voltage   Ammeter   Temperature   Power Transceiver   Power Receiver
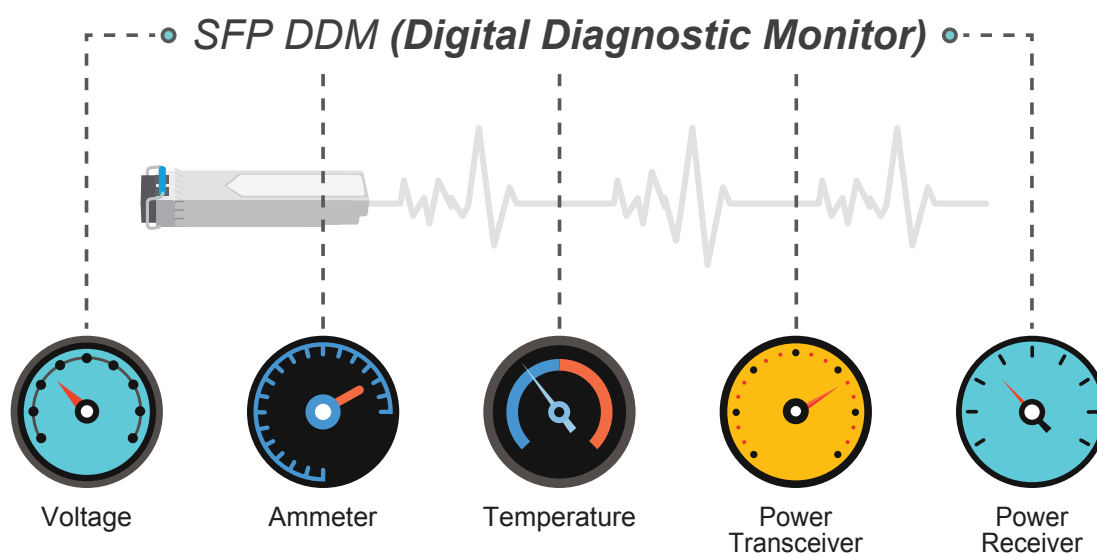
Easy Chassis Installation

The GT-915A Media Converter can be used as a stand-alone unit or as a slide-in module to PLANET Media Converter Chassis (**MC-70**0, **MC-1500** or **MC-1500R series**). The media chassis can assist in providing DC power to the GT-915A Media Converter to maintain the fiber-optic network at one centralized location. It can be DIN-rail or wall mounted for efficient use of cabinet space.

Optional installation method

Media Chassis Installation | **DIN-rail Installation** | **Wall-mount Installation**
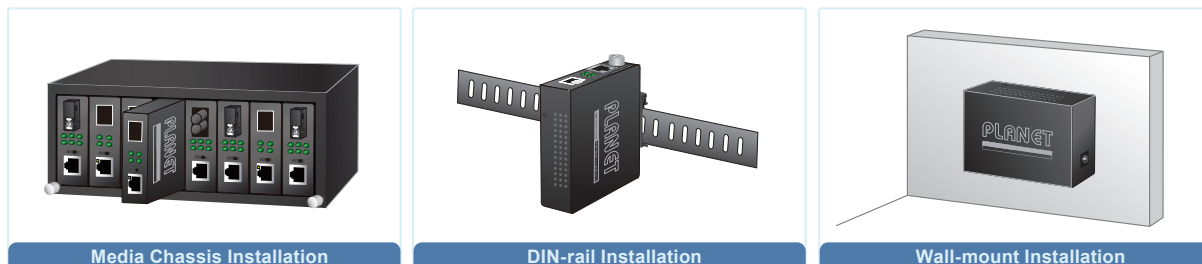
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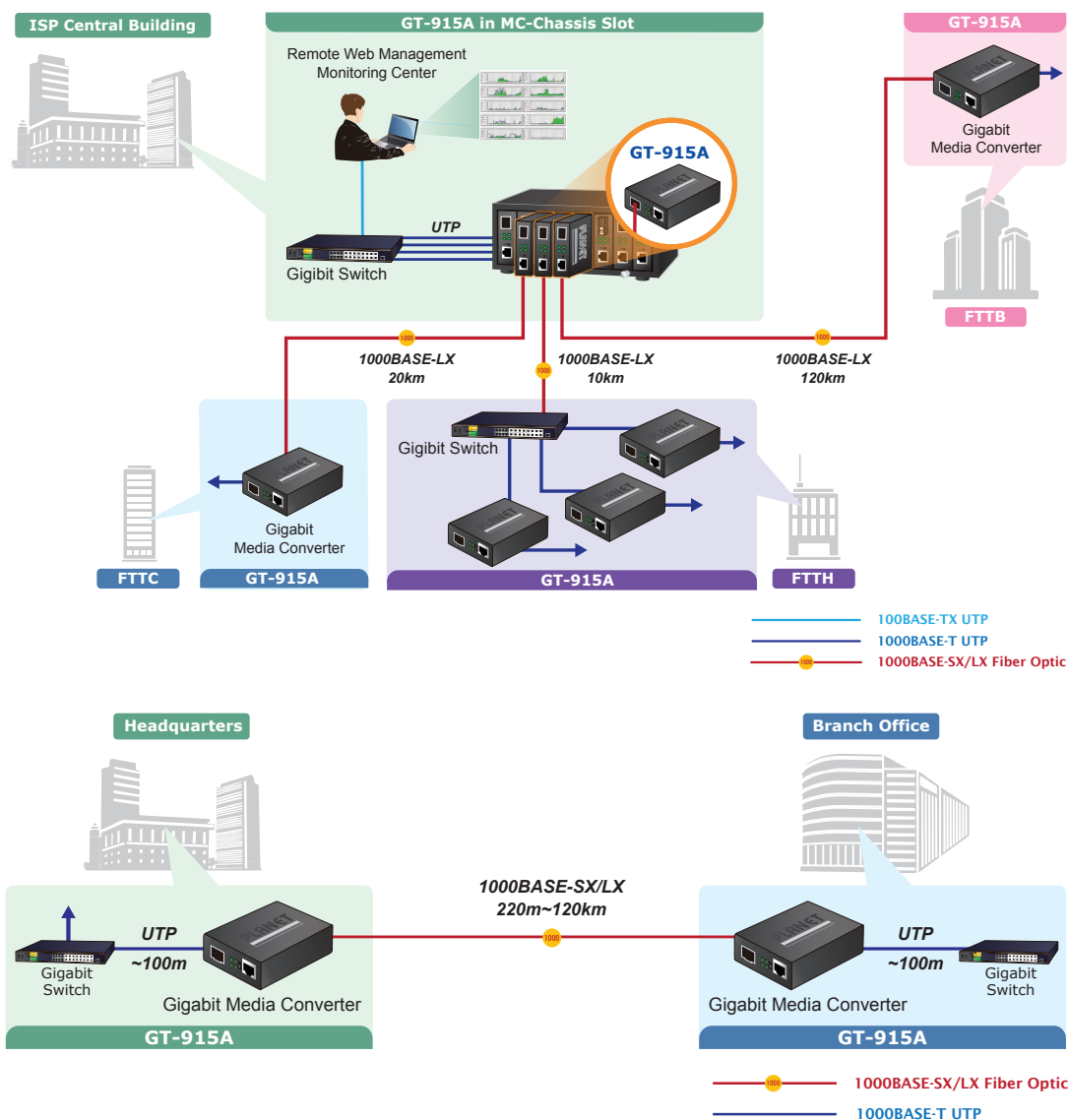
Applications

Fiber-optic Networking for ISPs, Enterprises and Homes

With high-speed data transmission and easy installation, the GT-915A can build FTTH (Fiber to the Home) and FTTC (Fiber to the Curb) for ISPs, and FTTB (Fiber to the Building) for enterprises. The GT-915A enables network administrators to easily monitor operations via the Web management interface.

Specifications

Model	GT-915A
Hardware Specifications	
Copper Interface	1 x 10/100/1000BASE-T RJ45 port (Auto-MDI/MDI-X) twisted pair
Fiber Interface	1 x 100/1000BASE-X SFP Slot
Reset Button	< 10 sec.: System reboot > 10 sec.: Factory default
ESD Protection	6KV DC
Enclosure	Compact-sized metal case
Installation	Wall mountable Media convert Chassis installation Optional DIN-rail kit
Dimensions (W x D x H)	94 x 70.3 x 26.2mm
Weight	201g (device only)
Power Input	DC 5V, 2A
Power Consumption	3.4 watts/11.6 BTU (maximum)
LED Indicator	PWR, (**Green**) TP LINK/ACT, 1000 (**Green**) Fiber LINK/ACT (**Green**)
Network Cables	**10/100/1000BASE-T:** 10BASE-T: 2-pair UTP Cat. 3,4,5, up to 100 m 100BASE-TX: 2-pair UTP Cat. 5, up to 100 m 1000BASE-T: 4-pair STP Cat 5 up to 100m **100/1000GBASE-SX/LX:** 50/125µm or 62.5/125µm multi-mode fiber cable, up to 220/550m. 9/125µm single-mode cable, extending long distance to 10/20/40/60/80/120km (vary on fiber transceiver or SFP module)
Switching Specifications	
Switch Processing Scheme	Store and Forward
Fabric	4Gbps
Throughput (packet per second)	2.98Mpps@64bytes
Address Table	1K entries, automatic source address learning and aging
Flow Control	Back pressure for half duplex IEEE 802.3x pause frame for full duplex
Jumbo Frame	16K
Shared Buffer	512Kb
Layer 2 Function	
Port Configuration	Port disable/enable Auto-negotiation 10/100/1000Mbps full and half duplex mode selection Flow control disable/enable
Port Status	Display each port's speed duplex mode, link status, flow control status, auto negotiation status
VLAN	IEEE 802.1Q tag-based VLAN IEEE 802.1ad Q-in-Q tunneling Up to 16 VLAN groups, out of 4094 VLAN IDs Management VLAN
Bandwidth Control	Per port bandwidth control Ingress: 1~1000,000Kbps Egress: 1~1000,000Kbps
QoS	Traffic classification based, strict priority and WRR 8-level priority for switching Traffic classification: - 802.1p priority - IP DSCP - IP Address
Security Function	
Access Control list	IPv4/IPv6 IP-based ACL/MAC-based ACL IPv4/IPv6 IP-based ACE/MAC-based ACE Max. 32 ACL entries
Access Security	Remote management protocols control by SSH, Telnet, HTTP ans HTTPs
System Management	
Basic Management Interfaces	Telnet; Web browser; SNMP v1, v2c
Secure Management Interfaces	SSHv2, TLS v1.2, SNMP v3

System Management	Firmware upgrade by HTTP protocol through Ethernet network Configuration upload/download through HTTP LLDP protocol NTP PLANET Smart Discovery Utility PLANET CloudViewerPro app
Event Management	Remote syslog Local system log SNMP trap
SNMP MIBS	RFC-1213 MIB-II RFC-1213 EGP-MIB IF-MIB RFC-2863 Interface Group MIB RFC-3418 SNMPv2-MIB RFC-4022 TCP-MIB RFC-4113 UDP-MIB RFC-4292 IP-Forward-MIB RFC-4293 IP-MIB RFC-4293 ICMP-MIB RFC-4836 LLDP-MIB

Standards Conformance	
Regulatory Compliance	FCC Class A, CE Class A
Standards Compliance	IEEE 802.3, 10BASE-T IEEE 802.3u, 100BASE-TX/FX IEEE 802.3ab, 1000BASE-T IEEE 802.3z, 1000BASE-SX/LX IEEE 802.3x full-duplex flow control IEEE 802.1p Class of Service IEEE 802.1Q VLAN tagging IEEE 802.1ad Q-in-Q VLAN stacking IEEE 802.1ab LLDP IEEE 802.3ah OAM RFC 768 UDP RFC 793 TFTP RFC 791 IP RFC 792 ICMP RFC 2068 HTTP

Standards Conformance	
Operating	Temperature: 0 ~ 50 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -10 ~ 70 degrees C Relative Humidity: 5 ~ 95% (non-condensing)

Ordering Information

GT-915A	10/100/1000BASE-T to 100/1000BASE-X SFP Managed Media Converter

Related Products

MC-700	7-Slot Media Converter Chassis
MC-1500	15-Slot Media Converter Chassis
MC-1500R	15-Slot Media Converter Chassis (AC Power)
MC-1500R48	15-Slot Media Converter Chassis (DC Power)

Available 1000Mbps Modules for GT-915A

Gigabit Ethernet Transceiver (1000BASE-X SFP)

Model	DDM	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-GT	--	1000	Copper	--	100m	--	0 ~ 60 degrees C
MGB-SX(V2)	YES	1000	LC	Multi Mode	550m	850nm	0 ~ 60 degrees C
MGB-SX2(V2)	YES	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MGB-LX(V2)	YES	1000	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C
MGB-L40	YES	1000	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C
MGB-L80	YES	1000	LC	Single Mode	80km	1550nm	0 ~ 60 degrees C
MGB-L120(V2)	YES	1000	LC	Single Mode	120km	1550nm	0 ~ 60 degrees C

Gigabit Ethernet Transceiver (1000BASE-BX, Single Fiber Bi-directional SFP)

Model	DDM	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MGB-LA10(V2)	YES	1000	WDM(LC)	Single Mode	10km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB10(V2)		1000	WDM(LC)	Single Mode	10km	1550nm	1310nm	0 ~ 60 degrees C
MGB-LA20(V2)	YES	1000	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB20(V2)		1000	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60 degrees C
MGB-LA40(V2)	YES	1000	WDM(LC)	Single Mode	40km	1310nm	1550nm	0 ~ 60 degrees C
MGB-LB40(V2)		1000	WDM(LC)	Single Mode	40km	1550nm	1310nm	0 ~ 60 degrees C
MGB-LA80	YES	1000	WDM(LC)	Single Mode	80km	1490nm	1550nm	0 ~ 60 degrees C
MGB-LB80		1000	WDM(LC)	Single Mode	80km	1550nm	1490nm	0 ~ 60 degrees C

Available 100Mbps Modules for GT-915A

Fast Ethernet Transceiver (100BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.	Operating Temp.
MFB-FX	100	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C	0 ~ 60 degrees C
MFB-F20	100	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C	0 ~ 60 degrees C
MFB-F40	100	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C	0 ~ 60 degrees C
MFB-F60	100	LC	Single Mode	60km	1310nm	0 ~ 60 degrees C	0 ~ 60 degrees C
MFB-F120	100	LC	Single Mode	120km	1310nm	0 ~ 60 degrees C	0 ~ 60 degrees C

Fast Ethernet Transceiver (100BASE-BX, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MFB-FA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
MFB-FB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60 degrees C