

Product Specifications

Managed Media Converter Chassis

MC-1610MR/MC-1610MR48

Version 2.0

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Change History:

| Revision: | Date: | Author: | Change List |
|-------------|------------|-----------|--|
| Version 1.0 | 2009/03/10 | Marc Liao | Initial Release |
| Version 2.0 | 2017/1/20 | Marc Liao | Hardware change <ul style="list-style-type: none"> - Chipset changed Realtek RTL8186V to Realtek RTL8198. - Change RS232 to RS232 console port to RS232 to RJ45 console port. |

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|---------------------|-----------|---------------------|-----------|
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| Reviewed By: | | Approved By: | Kent Kang |

1. PRODUCT DESCRIPTION



Highly-flexible and Remotely-manageable Fiber-optic Networking for FTTx Applications

For powerfully advanced fiber-optic function and cost-effective solution, PLANET Managed Media Converter Chassis series, MC-1610MR/MC-1610MR48, provides 16 media converter slots and one management system in a 19-inch rack chassis. The MC-1610MR series is designed for FTTx applications for ISPs, telecoms, campuses and enterprises.

The MC-1610MR series can easily build an FTTx infrastructure that perfectly meets your demands. The 16 slots of PLANET Fast/Gigabit Ethernet Smart Media Converter (FST-80x/GST-80x series) can flexibly deliver an FTTH (Fiber to the Home), FTTB (Fiber to the Building) or FTTC (Fiber to the Curb) network solution for ISPs, enterprises and campuses. The MC-1610MR series is a reliable and efficient solution for network application where distance and installation budget are highly concerned.

Diversified Central Management

The management function provided by the MC-1610MR series enables network administrators to monitor Media Converter connection status and configure the Converter remotely via Web browser or locally via an RS232 to RJ45 console port. Through the management interface, the entire status of the converters such as link on/off or statistics of the port will be clearly demonstrated and monitored. The MC-1610MR series is ideal for telecom and corporate applications where a number of fiber links need to be managed and controlled from a central location.

Extremely Reliable Design to Ensure Continuous Operation

The MC-1610MR series supports the optional hot-swappable **Redundant Power System (RPS) to ensure continuous operation**. Both the MC-1610MR and MC-1610MR48 are equipped with one 100~240V AC power supply unit and one -48V DC power supply unit, which come in the package, respectively. To enhance the reliability, they each have one spare power supply slot for that optional purpose. The continuous power systems are specifically designed to meet the demands for high-tech facilities requiring the highest power integrity available. Also, 48V DC power supply offered makes the MC-1610MR series as a telecom level device that can be located in the electronic room.

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 rapidly recover automatically, such as ISPs, telecoms, hospitals, banks and enterprises. If the master converter link is down, it forwards the packet to the slave converter's port of the backup pair.

Monitoring of Temperature and Fan Status

The Managed Media Converter Chassis is equipped with temperature sensor and cooling fans to ensure reliable operation. Whenever the abnormal temperature is detected or cooling fan stops service, the Managed Media Converter Chassis would display related information on the Web management interface. Therefore, it helps the administrator to efficiently manage the media conversion operation.

Flexibility and Extension

The MC-1610MR series allows the connection of up to 16 PLANET Smart Fast/Gigabit Ethernet Converters in one chassis. With an independent power supply on each slot of the MC-1610MR series, any converter is hot-swappable without causing an interruption to other converters. Each bay of the Media Converter Chassis can be populated with PLANET's Smart Media Converters. PLANET FST-80x and GST-80x Smart Media Converter series provides media conversion between copper and FX, SX and LX optical models for distance from 220m and to 120km. The flexibility allows the MC-1610MR series to provide space with an efficient and cost-effective scalable solution even when the network scale grows.

2. PRODUCT FEATURES

Hardware

- High-quality 19" rack-mountable chassis installation
- Supports up to 16-slot hot-swappable slide-in modular Media Converter
- Supports PLANET Fast Ethernet and Gigabit Ethernet Smart Media Converter series -- FST-80x and GST-80x
- Two power slots on rear panel for redundant power support with options of 100~240V AC or -48V DC supplies
- Bay power isolation ensures each bay is electrically isolated from each other
- Up to two fans provided for better air-flow for system cooling
- One 10/100/1000Mbps Gigabit Ethernet port and one RS232 to RJ45 console port for management
- Supports auto-MDI/MDI-X for 10/100/1000BASE-T port
- LED indicators for system, power and fan status

System Management

- Configurable through console, Web and SNMP
- Provides SNMP status of converters with trap functions for any chassis and connectivity event
- Simple Network Management Protocol
 - SNMP v1, v2c
 - SNMP Trap
 - Public MIB
 - Private MIB
- NTP client (Time Zone Setting)
- Remote syslog and local system log
- DHCP client and DNS client
- Temperature detects display and alarm
- Web firmware upgrade
- Management account login session control
- PLANET Smart Discovery Utility for deployment management

Converter Management

- Provides media Link/Connection speed duplex status for each module
- Redundant backup (Media Converter Link Redundancy)
- Reduces the effort of converter's maintenance and management

3. PRODUCT SPECIFICATIONS

3.1 MAIN COMPONENTS

CPU: Realtek RTL8198 x1

PHY: IC+ IP101A

SDRAM: 128MB Synchronous DRAM

FLASH Memory: 32Mbit FLASH Memory x 1

3.2 FUNCTION SPECIFICATIONS

| Model | MC-1610MR | MC-1610MR48 |
|--------------------------------|--|---|
| Hardware Specifications | | |
| Hardware Version | 2 | |
| Slot | 16 open slots (15 x 80 x 26mm, W x D x H) 2 power slots (one fixed, one vacant) | |
| Power Requirements | MC-1610MR 100-240V AC, 1A, 50-60Hz | MC-1610MR48 -48V DC, 2A, Range: -40V ~ -60V |
| Power Output | 5V DC per slot, 2A maximum | |
| Power Consumption | MC-1610MR 10 watts/34BTU (1 x power supply; converters not included) 46.9 watts/160 BTU (full loading) | MC-1610MR48 5.3 watts/18BTU (1 x power supply; converters not included) 96 watts/327 BTU (full loading) |
| Management Interface | | |
| Standards | IEEE 802.3 10BASE-T Ethernet IEEE 802.3u 100BASE-TX Fast Ethernet IEEE 802.3ab 1000BASE-T Gigabit Ethernet IEEE 802.3x flow control | |
| Fixed Interface | 10/100/1000BASE-T port x 1, RS232 to RJ45 console port x 1, reset button x 1 | |
| Speed | Ethernet: 10/20Mbps for half/full-duplex, Fast Ethernet: 100/200Mbps for half-/full-duplex Gigabit Ethernet: 1000/2000Mbps for half/full-duplex | |
| LED Indicator | System: MGM, Console, LNK/ACT, PWR ON x 2, PWR FAIL x 2, FAN FAIL x 2 | |
| Management | Console, Web, SNMP v1/v2c | |
| SNMP Trap | Cold Start, MC copper link up/down, MC fiber link up/down. | |

3.3 PHYSICAL SPECIFICATIONS:

Dimensions:

440 x 350 x 88mm (W x D x H), 2U height

Weight:

7kg

Front Panel:



Figure 1: MC-1610MR / MC-1610MR48 front panel

Rear Panel:

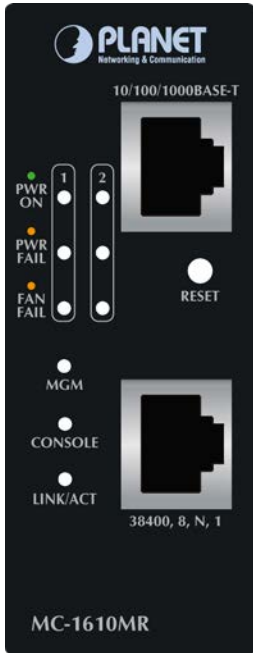


Figure 2: MC-1610MR rear panel



Figure 3: MC-1610MR48 rear panel

LED definition



| LED | Color | LED Status | Function |
|----------|-------|-----------------|---|
| PWR ON | Green | Lights On | Indicates that the device has power. |
| | | Lights Off | Indicates that the device not receive power. |
| PWR FAIL | Amber | Lights On | Indicates that power is inserted and failed to work. |
| | | Lights Off | Indicates that power is inserted and work normal. |
| FAN FAIL | Amber | Lights On | Indicates that fan is failed to work. |
| | | Lights Off | Indicates that fan is work normally. |
| MGM | Green | Lights blink | Indicates that CPU is working. |
| | | Light Off | Indicates that CPU is not working. |
| CONSOLE | Green | Lights blinking | Indicates that console port is working. |
| | | Lights Off | Indicates that console port is not working. |
| LNK/ACT | Green | Lights On | The link through that port is successfully established. |
| | | Lights Off | The link through that port is not established or run at 10Mbps half / full duplex mode. |

3.4 ENVIRONMENTAL SPECIFICATIONS

Operating:

Temperature: 0°C ~ 50 degree C

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

Storage:

Temperature: -10°C ~ 70 degree C

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

3.5 ELECTRICAL SPECIFICATION

Input Voltage: 100~240V AC, 1A, 50/60Hz (MC-1610MR)
DC -48V, 2A (MC-1610MR48)

Power Consumption:

- With MC-RPS-130
 - 10 watts / 34 BTU (1 x power supply , not including converters)
 - 46.9 watts / 160 BTU (Full loading)
- With MC-RPS-48
 - 5.3 watts / 18 BTU (1 x power supply, not including converters)
 - 96 watts / 327 BTU (Full loading)

3.6 REGULATORY COMPLIANCE

FCC Class A, CE.

3.7 RELIABILITY

MTBF > 50,000 hrs @ 25 degree C

3.8 BASIC PACKAGING

- Managed Media Converter Chassis with one power supply installed x 1
- Quick Installation Guide x 1
- RS-232 to RJ45 Console Cable x 1
- AC Power Cord x 1
- Two Rack-Mounting Brackets with Attachment Screws x 1

3.9 PACKING DIMENSIONS

Dimensions: 545 (W) x 475 (D) x 210 mm (H)

Weight: 8.58 KG (gross weight)