

# MMC10G Series

## 10 Gigabit Mini Media Converters



Mini media converters offer a smaller size and smaller carbon footprint to help the environment and save space in the office.

### Overview

The Allied Telesis MMC10G Series of mini media converters leverage their smaller size to not only help the environment with a small carbon footprint, but also to save space in the office. Despite its compact size, the MMC10G Series delivers all the power and functionality of standard size media converters.

### Extend Networks

The MMC10G Series are available in 10G BASE-T to SFP+, and SFP+ to SFP+ configurations. The SFP+ connectors are capable of multi-mode or single-mode fiber connectivity. As well as 1G or 10G SFP's, the twisted-pair copper port has a 1G/10G RJ45 connector with a maximum operating distance of 100 meters (328 ft) using Cat6a/7 cabling.

### VLAN Support

Many new backbone switch products now support the industry-standard IEEE 802.1Q specification for Virtual LANs (VLANs) that send extra-long data packets on the network. The MMC10G Series are fully compatible with these long packets, enabling them to be used in modern networks.

Media converters not supporting this feature discard these extra long packets, making them unsuitable for modern networks.

### Small and Flexible

The smaller size and external power supply of the MMC10G Series allows them to be used almost anywhere.

### MissingLink (ML)

The MissingLink™ (ML) feature monitors network connections allowing network managers to quickly identify the source and location of failed segments and minimize downtime.

### Smart Link Restoration

Smart Link restoration allows the devices, in cases of power failure, link loss or other interrupted service, to automatically restore the link without the need to restart/reset them.

### Power Saving

The MMC10G Series continues Allied Telesis commitment to the environment. Using only 4W of power, the MMC10G Series media converters are some of the most efficient in the market today.

### Loopback/Traffic Generator

The MMC10G Series has a loopback function and Traffic Generator to help diagnose network connections.

### 1G/10G support

The MMC10G supports both 1Gbps and 10Gbps media conversion. The speed must match on both ports – either 1Gbps copper to fiber, or 10Gbps copper to fiber, conversion.

### Key Features

- 1G/10G SFP+ fiber port
- 1G/10G RJ-45 copper port
- Low latency
- Transparent to IEEE 802.1Q packets
- 10KB Jumbo packets
- Link, Speed and Activity LEDs
- MissingLink
- SFP+ and RJ45 options available
- 12VDC power supply
- Wall-mountable using MMCWLMT kit
- Locking power supply jack to prevent accidental power disconnects
- Trade Agreement Act (TAA) Compliant

# SPECIFICATIONS

## Status LEDs

- Power
  - ON Power
  - OFF No power
- SYS
  - ON System operating normally
  - OFF System not operating normally
  - Blinking Fault condition
- LAN fiber port (Left)
  - OFF No link is established
  - ON Link is established
  - Blinking Activity is detected
- Fiber LED (left):
  - Green Fiber link
- Fiber LED (right):
  - Green 10G SFP installed
  - Yellow 1G SFP installed
- LAN copper port (Right)
  - OFF No link is established
  - ON Link is established
  - Blinking Activity is detected

- Copper LED (left):
  - Green 10G link established
  - Yellow 1G link established
- Copper LED (right):
  - Blinking Activity is detected

## Operational Characteristics

- SW1 (left):
  - LOW MissingLink off
  - HIGH MissingLink on
- SW2 (right):
  - LOW Normal operation
  - HIGH Loopback/traffic generator enabled

## Physical Specifications

- Dimensions (W × D × H)
  - 5.6 cm × 10.16 cm × 2.18 cm
  - 2.16 in × 4 in × 0.86 in
- Weight 6 oz

## Power Characteristics

- Power consumption 500mA@12V typical

## Environmental Specifications

- Operating temperature
  - 0°C to 50°C (32°F to 122°F)
- Operating humidity
  - 5% to 95% relative humidity (non-condensing)
- Storage temperature
  - 30°C to 70°C (-22°F to 158°F)
- Storage humidity
  - 5% to 95% relative humidity (non-condensing)
- Altitude Up to 3048 m (10000 ft)

## Electrical and Mechanical Approvals

- Safety
  - UL60950-1
  - EN60950-1
- Emissions (EMI)
  - FCC Class A
  - EN55022 Class A
  - CISPR 22 Class A
  - C-TICK
  - VCCI

## MMC10G Maximum Number Formula

The maximum number of MMC10G supported in one MMCR18 Chassis is 12 (with no other Media Converters installed). Use the chart below to determine how many Media Converters can be supported if MMC10G are Installed.

No. Of MMC10G Installed	No. of MMC200/2000 you can add to MMCR18 chassis
12	0
11	2
10	4
9	6
8	8
7	10
6	12
5	13
4	14
3	15
2	16
1	17
0	18

# ORDERING INFORMATION

<b>AT-MMC10GT/SP-960</b>	10GT to SFP+ Mini Media Converter, Universal PSU, TAA <sup>1</sup> compliant
<b>AT-MMC10GSP/SP-960</b>	SFP+ to SFP+ Mini Media Converter, Universal PSU, TAA <sup>1</sup> compliant

<sup>1</sup> TAA = Trade Act Agreement Compliant

## Associated Components

<b>AT-MMCR18</b>	18-slot chassis for MMC Series media converters (Refer to the table on page 2 for the number of units in a chassis)
<b>AT-MMCWLMT-005</b>	Wall mount for MMC Series media converters (5 pack)
<b>AT-MMCTRAY6</b>	1RU rack-mount tray for up to 6 MMC Series media converters
<b>SFP Modules</b>	
<b>AT-SP10SR</b>	10GBASE-SR, 850 nm, MMF, TAA <sup>1</sup>
<b>AT-SP10SR/I</b>	10GBASE-SR, 850 nm, MMF, I-Temp, TAA <sup>1</sup>
<b>AT-SP10LRa/I</b>	10GBASE-LR, 1310 nm, 10 km with SMF, I-Temp, TAA <sup>1</sup>
<b>AT-SP10ER40a/I</b>	10GBASE-ER, 1550 nm, 40 km with SMF, I-Temp, TAA <sup>1</sup>
<b>AT-SP10ZR80/I</b>	10GBASE-ZR, 1550 nm, 80 km with SMF, I-Temp
<b>AT-SP10TM</b>	10/100/1G/2.5G/5G/10G, 30m/100m, TAA <sup>1</sup>
<b>AT-SP10TW1</b>	Twinax direct attach cable (1 m)
<b>AT-SP10TW3<sup>2</sup></b>	Twinax direct attach cable (3 m)

<b>AT-SP10TW2<sup>2</sup></b>	Twinax direct attach cable (7 m)
<b>AT-SPSX</b>	1000SX SFP, LC, MMF, 850 nm
<b>AT-SPSX-90</b>	1000SX SFP, LC, MMF, 850 nm, TAA <sup>1</sup>
<b>AT-SPSX/I-90</b>	1000SX SFP, LC, I-Temp, 550m, TAA <sup>1</sup>
<b>AT-SPLX10a</b>	1000LX SFP, LC, 10km, TAA <sup>1</sup>
<b>AT-SPTXc</b>	1000T SFP, RJ45, TAA <sup>1</sup>
<b>AT-SPBD10</b>	1000LX (LC) 1310/1490 BiDi, 10 km
<b>AT-SPBD20LC/I</b>	1000LX (LC) 1310/1490 BiDi I-Temp, 20km, TAA <sup>1</sup>
<b>AT-SP10BD10/I</b>	10G (LC) 1270/1330 BiDi, I-Temp, 10km, TAA <sup>1</sup>
<b>AT-SP10BD40/I</b>	10G (LC) 1270/1330 BiDi, I-Temp, 40km, TAA <sup>1</sup>
<b>AT-SP10BD80/I</b>	10G (LC) 1490/1550 BiDi, I-Temp, 80km, TAA <sup>1</sup>

<sup>1</sup> TAA = Trade Act Agreement Compliant

<sup>2</sup> MMC10GSP/SP only