Quick Start Guide

Managed Gigabit Ethernet Media Converter

MMC-1F1T/MMC-1SC1T-SM

1. Introduction

Thank you for choosing FS Managed Gigabit Ethernet Media Converters. This guide is designed to familiarize you with the layout of the Managed Gigabit Ethernet Media Converters and describes how to deploy them in your network. In the following sections, the term "Managed Media Converter" indicates the product family MMC-1F1T and MMC-1SC1T-SM.

1.1 Package Contents

Open the box of the Managed Media Converter and carefully unpack it. The box should contain the following items:

- Managed Gigabit Ethernet Media Converter x 1
- Power Adapter x 1
- Quick Start Guide x 1

If any of these are missing or damaged, please contact your sales representative immediately; if possible, retain the box including the original packing material, and use them again to repack the product in case there is a need to return it to us for repair.

1.2 Product Specifications

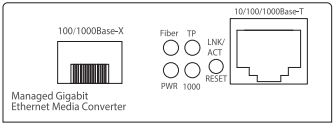
Product	MMC-1F1T	MMC-1SC1T-SM
Interface		
Copper Interface	1x 10/100/1000Base-T RJ45 Auto-MDI/MDI-X, auto-negotiation	
Fiber Optic Interface	1x 100/1000Base-X SFP	1x 1000Base-X SC
Hardware Specifications		
Speed	**Twisted-pair:** 10/100Mbps for half/full duplex 1000Mbps for full duplex **Fiber Optic:** MMC-1F1T: 100/1000Mbps for full duplex MMC-1SC1T-SM: 1000Mbps for full duplex	
Duplex Mode	Full or half duplex mode by auto-negotiation (TP)	
Flow Control	Back pressure for half duplex mode IEEE 802.3x pause frame for full duplex mode	
OAM	TS-1000, IEEE 802.3ah terminal mode	
Jumbo Frame	16K	
LED	PWR Fiber LNK/ACT TP LNK / ACT 1000	
Dimensions (Hx Wx D)	1.02"x 2.76"x 3.66" (26x70x93 mm)	
Input Voltage	5V DC, 2A max.	
Power Consumption	3.8 watts	

Enclosure	Metal case
Cables	**Twisted-pair:** Cat 5/5e/6 Ethernet cable **Fiber Optic:** MM: 50/125µm or 62.5/125µm fiber optic cable SM: 9/125µm fiber optic cable
Standards Conformance	
Standards and Protocols	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3ab 1000Base-T IEEE 802.3z 1000Base-SX/LX
Environment	
Temperature	Operating: 0°C to 50°C Storage: -40°C to 70°C
Relative Humidity	Operating: 5 to 90%, non-condensing Storage: 5 to 90%, non-condensing

2. Hardware Overview

2.1 Front Panel Ports

MMC-1F1T



MMC-1SC1T-SM

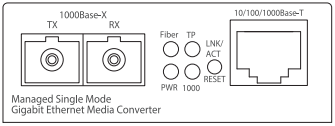


Figure 1: Front Panel

P/N	Ports	Description
MMC-1F1T	RJ45	10/100/1000Base-T port for Ethernet connection
	SFP	Hot swappable SFP port for 100/1000Base fiber connection
MMC-1SC1T-SM	RJ45	10/100/1000Base-T port for Ethernet connection
	SC	SC port for duplex SC single mode fiber connection

2.2 Front Panel LEDs

LED	Color	Description
PWR	Green	Lit: To indicate the device is powered on.
Fiber LNK/ACT	Green	Lit: To indicate the link through fiber port is successfully established.
		Blinks: To indicate the fiber port is actively sending or receiving data.
		Off: To indicate that the fiber port is linked down.
TP LNK/ACT	Green	Lit: To indicate the link through TP port is successfully established.
		Blinks: To indicate the TP port is actively sending or receiving data.
		Off: To indicate that the TP port is linked down.
1000	Green	Lit: To indicate that the TP port is operating at 1000Mbps.
		Off: To indicate that the TP port is operating at 10/100Mbps.

2.3 Front Panel Button

Button	Description
RESET	Restore to Factory Default Setting: Press and hold the RESET button for more than 10 seconds.

2.4 Rear Panel

The rear panel indicates one DC jack, which accepts input power with 5V DC 2A.

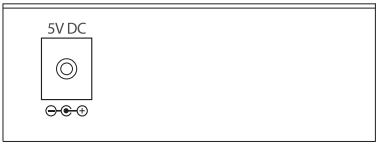


Figure 2: Rear Panel

2.5 Power Information

The central pole of the Managed Media Converter's power jacks measures 2.5mm wide that require +5VDC power input. It conforms to the bundled AC-DC adapter.

2.5mm

Width of DC Receptacle: 2.5mm

+5V for each slot

DC receptacle is 2.5mm wide that matches the central pole; the width of the Managed Media Converter's DC jack also measures 2.5mm.

Warning: Do not install any improper unit.

The Managed Media Converter is a power-required device, meaning it will not work till it is powered. If the networks should be active all the time, please consider using UPS (Uninterrupted Power Supply) for the device. It will prevent you from network data loss or network downtime.

3. Installing

This section describes the functionalities of the Managed Media Converter's components and instructs you to install it. Please read this chapter completely before installing.

3.1 Stand-alone Installing

Step 1: Connect the power adapter to the Managed Media Converter and verify that the Power LED lights up.
(Please refer to the **2.4 Power Information** section for power input.)

Step 2: 2-1: Prepare a twisted-pair, straight-through Cat 5/5e/6 Ethernet cable for Ethernet connection.
2-2: Prepare a fiber cable for fiber connection to the SFP slot and make sure both sides of the SFP transceivers are the same type.
(Please refer to the **3.3 Cable Connection** section for the type of connection.)

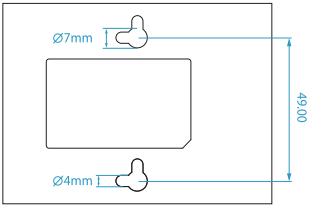
Step 3: 3-1: Connect the Ethernet cable. Insert one side of the Cat 5/5e/6 Ethernet cable into the Managed Media Converter's RJ45 Ethernet port while the other side into the network devices' RJ45 Ethernet port, like a Swicth, PC or Server .
The TP port (RJ45) LED on the Managed Media Converter will light up when the cable is connected with the network device.
(Please refer to the **2.2 Front Panel LEDs** section for the functions of LED lights.)
3-2: Connect the fiber cable. Attach one side of the fiber cable to the SFP transceiver in the Managed Media Converter while the other side to the fiber network.

Step 4: When all the connections are all set and the LED lights all show normally, the installation is complete.

3.2 Optional Wall-mount Installing

There are two wall-mount holes on the bottom of the Managed Media Converter that allows to be easily mounted to the wall. Refer to the following steps for the wall-mount installation of the Managed Media Converter:

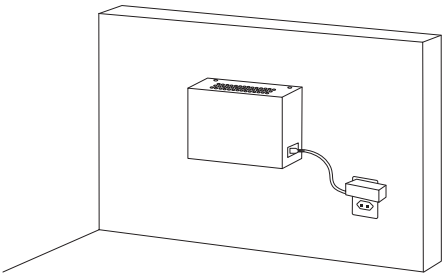
Step 1: Screw two M4 screws (not included in the package) on the wall.



Bottom Side

Step 2: Hang the Managed Media Converter on the screws from the wall.

Step 3: Refer to Chapter **2.4 Power Information** on power supply to the Managed Media Converter.



3.3 Cable Connection

- **Installing the SFP Transceiver**

This section describes how to insert an SFP transceiver into the SFP slot on MMC-1F1T (For MMC-1SC1T-SM, please directly refer to the next two sections "**Connecting the Fber Cable**" and "**Connecting the Ethernet Cable**", as it is installed with an SC port transceiver as default). The SFP transceiver can be plugged into the SFP port without having to power down the MMC-1F1T.

Before connecting to other switches, workstation or Media Converters, please make sure both sides of the SFP transceivers are the same type, for example, 1000Base-SX to 1000Base-SX, 1000Base-LX to 1000Base-LX.

- **Connecting the Fiber Cable**

1. Connect one end of a fiber optic cable to the SFP transceivers.
2. Connect the other end of the cable to a Switch, fiber NIC or a Media Converter.

- **Connecting the Ethernet Cable**

1. Connect an Ethernet cable to the 10/100/1000Base-T RJ45 port on the Managed Media Converter.
2. Connect the other end of the Ethernet cable to a Switch, fiber NIC or a Media Converter.

 Note	Be sure the connected network devices support MDI/MDI-X. If it does not support, then use the crossover Cat 5/5e/6 cable.

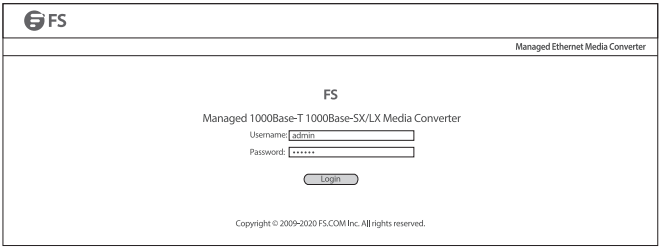
4. Configuring the Media Converter

Step 1: Connect your computer to the Ethernet port of the Managed Media Converter using Ethernet cable.

Step 2: Set up the IP configuration on your computer. The IP address of the computer should be set in the same subnet addresses of the Managed Media Converter. The IP address is 192.168.0.x ("x" is any number from 1 to 254, except 100), and the default subnet mask is 255.255.255.0.

Step 3: Open Internet Explorer 8.0 or above Web browser to enter the default IP address http://192.168.0.100 to access the Web interface.

Step 4: Enter the default username "admin" and password "admin" (or the password you have changed before). Press "Login" to enter the main screen of the Managed Media Converter.



You are now ready to configure the Managed Media Converter. Refer to the **Managed Gigabit Ethernet Media Converter Configuration Guide** online for further information.

Note	1. For security reason, please change and memorize the new password after this first setup. 2. Only accept command in lowercase letters under web interface.

5. Troubleshooting

This chapter contains information to help you solve issues. If the Managed Media Converter is not functioning properly, make sure it is set up according to instructions in this Quick Start Guide.

- **The per port LED is not lit**

Solution: Check the cable connection of the Managed Media Converter.

- **Performance is bad**

Solution: Check the speed duplex mode of the partner device. The Managed Media Converter usually runs in auto-negotiation mode. If the partner is set to half duplex, the performance will be poor.

- **Per port LED is lit, but the traffic is irregular**

Solution: Check that the attached device is not set to dedicate full duplex. Some devices use a physical or software switch to change duplex modes.
Auto-negotiation may not recognize this type of full duplex setting.

- **The Managed Media Converter doesn't connect to the network**

Solution: Check per port LED on the Managed Media Converter. Make sure the cable is installed properly. Make sure the cable is the right type. Turn off the power. After a while, turn on the power again.