FS

Unmanaged 100M/1G/2.5G/5G/10GBase-T to 10GBase-X SFP+ Ethernet Media Converter

▶ UMC-1S1T

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UMC-1S1T

Quick Start Guide

1. Introduction

Thank you for choosing FS Unmanaged 10G Ethernet Media Converter. This guide is designed to familiarize you with the layout of the Unmanaged 10G Ethernet Media Converter and describes how to deploy it in your network. In the following sections, "UMC-1S1T" indicates the Unmanaged 10G Ethernet Media Converter.

1.1 Package Contents

Open the box of the UMC-1S1T and carefully unpack it. The box should contain the following items:

● Unmanaged 10G 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

Interface	
Copper Interface	1x 100M/1G/2.5G/5G/10GBase-T RJ45 Auto-MDI/MDI-X, auto-negotiation
Fiber Optic Interface	1x 10GBase-X SFP+
Hardware Specifications	
Speed	**Twisted-pair:** 100Mbps for half/full duplex 1/2.5/5/10G for full duplex **Fiber Optic:** 10G 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
Fabric	20Gbps
Address Table	9K entries, automatic source address learning and aging
Jumbo Frame	16K
Switch Processing Scheme	Store and forward
ESD Protection	6KV DC
Enclosure	Compact-sized metal case
Power Consumption	3.75 watts
LED	PWR 2.5G LNK 10G/1G LNK 5G/100M LNK
Dimensions (Hx Wx D)	1.02"x 2.76"x 3.7" (26x70x94 mm)

| Input Voltage	5V DC, 2A max.
Cables	**Twisted-pair:** 100M: Cat5/5e/6/6a/7 Ethernet cable 1G/2G: Cat5e/6/6a/7 Ethernet cable 5G: Cat6/6a/7 Ethernet cable 10G: Cat6a/7 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 802.3u 100Base-TX IEEE 802.3ab 1000Base-T IEEE 802.3bz 2.5G/5GBase-T IEEE 802.3an 10GBase-T IEEE 802.3ae 10Gbps Ethernet IEEE 802.3x full duplex flow control
Environment	
Temperature	Operating: 0°C to 50°C Storage: -10°C to 70°C
Relative Humidity	Operating: 5 to 95%, non-condensing Storage: 5 to 95%, non-condensing

2. Hardware Overview

2.1 Front Panel Ports
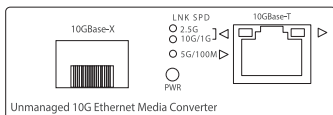
Figure 1: Front Panel

Ports	Description
RJ45	100M/1G/2.5G/5G/10GBase-T port for Ethernet connection
SFP+	Hot swappable SFP+ ports for 10G fiber connection

2.2 Front Panel LEDs

LED	Color	Description
PWR	Green	Lit: To indicate the device is powered on.
2.5G	Green	Lit: To indicate that the port is operating at 2.5Gbps.
10/1G	Orange	Lit: To indicate that the port is operating at 10/1Gbps.
5G/100M	Green	Lit: To indicate that the port is operating at 5Gbps/100Mbps.

2.3 Rear Panel

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

Figure 2: Rear Panel

2.4 Power Information

The central pole of UMC-1S1T's power jacks measures 2.5mm wide that require +5V DC 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 UMC-1S1T's DC jack also measures 2.5mm.

Warning: Do not install any improper unit.

UMC-1S1T 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 UMC-1S1T'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 UMC-1S1T 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 5e/6/6a/7 Ethernet cable for Ethernet connection.
2-2: Prepare a fiber cable for 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 5e/6/6a/7 cable into the UMC-1S1T's RJ45 Ethernet port while the other side into the network devices' RJ45 Ethernet port, like a Switch, PC or Server.

The TP port (RJ45) LED on the UMC-1S1T 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 UMC-1S1T 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 UMC-1S1T that allows to be easily mounted to the wall. Refer to the following steps for the wall-mount Installation of UMC-1S1T:
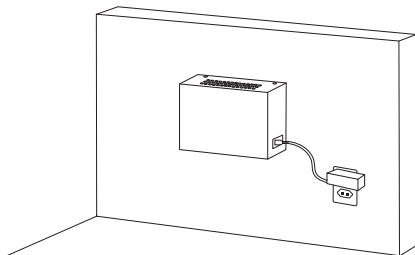
Step 1: Screw two M4 screws (not included in the package) on the wall.

Bottom Side
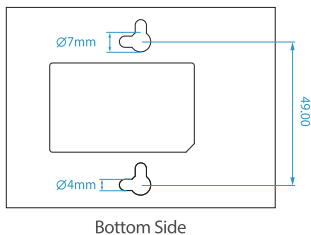
Step 2: Hang the UMC-1S1T on the screws from the wall.
Step 3: Refer to Chapter **2.4 Power Information** on power supply to the
UMC-1S1T.

3.3 Cable Connection

● **Installing the SFP+ Transceiver**

This section describes how to insert an SFP+ transceiver into the SFP+ slot. The SFP+ transceiver can be plugged into the SFP+ port without having to power down the UMC-1S1T.

Before connecting to other switches, workstation or Media Converters, please make sure both sides of the SFP+ transceivers are the same type, for example, 10GBase-SR to 10GBase-SR, 10GBase-LR to 10GBase-LR.

● **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 Network Cable**

1. Connect an Ethernet cable to the 100M/1G/2.5G/5G/10GBase-T RJ45 port on the UMC-1S1T.
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 5e/6/6a/7 cable.

4. Troubleshooting

This chapter contains information to help you solve issues. If the UMC-1S1T 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 UMC-1S1T.

● **Performance is bad**

Solution: Check the speed duplex mode of the partner device. The UMC-1S1T 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 UMC-1S1T doesn't connect to the network

Solution: Check per port LED on the UMC-1S1T. 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.