The 10GE-M-SFPP-SAC Media Converter is a versatile solution catering to a broad range of high-speed environments. Designed for simplicity, it supports a single, cost-effective fiber link, accommodating any copper speed from 1Gbps to 10Gbps. The plug-and-play functionality ensures ease of use, with the UTP port automatically detecting cabling type, pin polarity, port speed, and mode without user intervention. The converter's fiber port, utilizing SFP or SFP+ modules, offers flexibility in network design and future upgrades. With a DIP switch for Bypass or Adaptive mode, it facilitates flexible conversion technology for 1Gbps to 10Gbps RJ-45 port to a pluggable 1G/10GBase-X fiber SFP/SFP+ port.
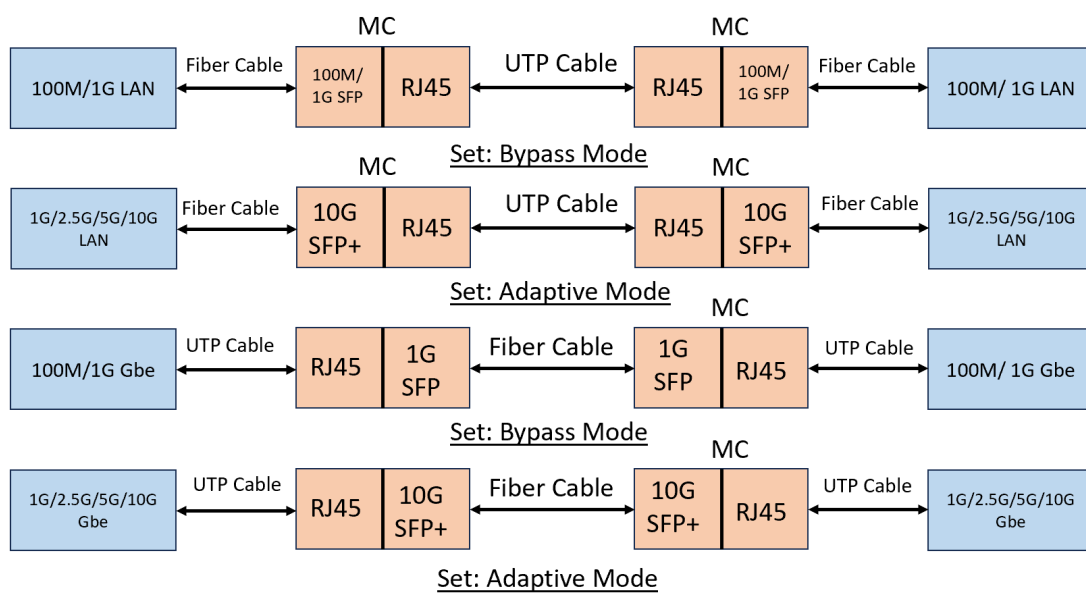

Features

- Provide one 10 Gigabit optical port and one 10 Gigabit adaptive electrical port.
- The copper port supports 1000Base-T, 2.5/5/10GBase-T auto-negotiation.
- IEEE802.3x flow control supports full duplex.
- Support half-duplex backpressure flow control.
- Working wavelengths are 850nm, 1310nm, and 1550nm (optional).
- Provide multiple fiber transmission modes such as dual-fiber multimode, dual-fiber single mode, and single-fiber single mode.
- Adaptive mode with one-click code dialing LFP link detection function.
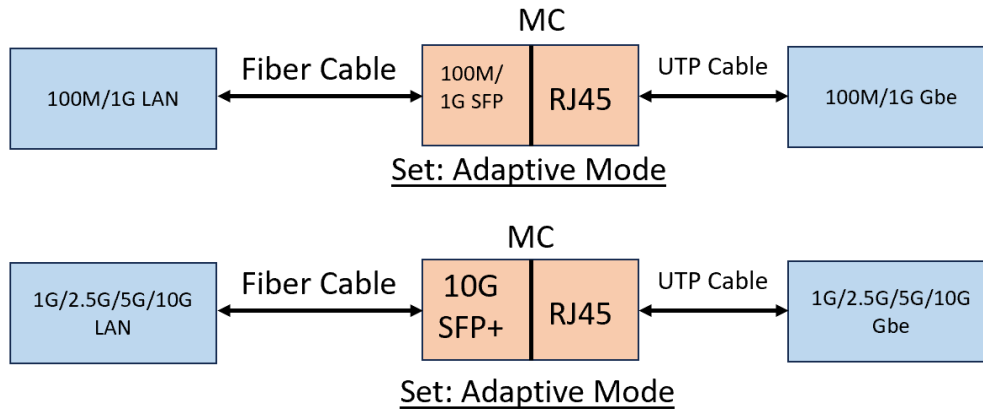- Adaptive mode and straight-through mode are controlled by the Dip switch.

Technical Parameters

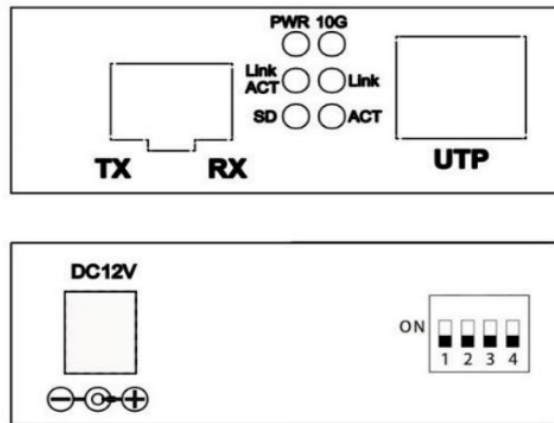| Item	Description
Standard	1000Base-T, 2.5GBase-T, 5Gbase-T, 10Gbase-T, 10GBase-R
Support	1000Base-T: Cat5 UTP/STP. MAX 100m; 2.5GBase-T: Cat5e UTP/STP. MAX 50m; 5GBase-T: Cat5e UTP/STP. MAX 50m; 10G Base-T: Cat6a UTP/STP. MAX 50m;
Electrical interface	Interface type: RJ45 Transmission rate: 100/1000Base-T, 2.5/5/10GBase-T auto-negotiation Cable type: UTP-6 or higher; Transmission distance: 100m
Optical port	Interface type: SFP+ Transmission rate: 10Gbps Fiber type: Multimode: 50/125um; Single mode: 9/125um

	Transmission distance: 300m~80Km
Operation wavelengths	850nm, 1310nm, 1550nm optional
Dimensions	94mm x 70mm x 26mm (L x W x H)
Weight	0.32kg
Standalone Power Supply Adapter	External AC/DC power supply, Universal AC input
	Output Voltage: 12V DC @ 1A
	Power Consumption: 5 Watts maximum
Operating Temperature	0 to 60°C
Operating Humidity	10% to 95% (non-condensing)
Storage Temperature	-15 to 65°C

Use case Scenarios

MC   MC

100M/1G LAN — Fiber Cable — [100M/1G SFP | RJ45] — UTP Cable — [RJ45 | 100M/1G SFP] — Fiber Cable — 100M/ 1G LAN

Set: Bypass Mode

MC   MC

1G/2.5G/5G/10G LAN — Fiber Cable — [10G SFP+ | RJ45] — UTP Cable — [RJ45 | 10G SFP+] — Fiber Cable — 1G/2.5G/5G/10G LAN

Set: Adaptive Mode

MC   MC

100M/1G Gbe — UTP Cable — [RJ45 | 1G SFP] — Fiber Cable — [1G SFP | RJ45] — UTP Cable — 100M/ 1G Gbe

Set: Bypass Mode

MC   MC

1G/2.5G/5G/10G Gbe — UTP Cable — [RJ45 | 10G SFP+] — Fiber Cable — [10G SFP+ | RJ45] — UTP Cable — 1G/2.5G/5G/10G Gbe

Set: Adaptive Mode

MC

100M/1G LAN — Fiber Cable → | 100M/1G SFP | RJ45 | ← UTP Cable → 100M/1G Gbe

Set: Adaptive Mode

MC

1G/2.5G/5G/10G LAN — Fiber Cable → | 10G SFP+ | RJ45 | ← UTP Cable → 1G/2.5G/5G/10G Gbe

Set: Adaptive Mode

Front and Back Panel

LED Status

LED	Status	Status	Description
PWR	Power	ON	Power is turned ON
		OFF	Power is turned OFF
Link/ACT (FX)	Fiber Port Link/ Active	ON	Fiber Port is Linked
		OFF	Fiber Port is not Linked
		Blink	Fiber Port is active
SD	Fiber Signal	ON	Fiber Signal is detected
		OFF	Fiber Singal is not detected
10G	UTP Speed	ON	2.5Gbps to 10Gbps
		OFF	10/100/1000Mbps
Link	UTP Link	ON	UTP is Linked
		OFF	UTP is not Linked

ACT	UTP Active	Blink	UTP is active

Optical Specifications

	10GBaseFX	
	Multimode	Single mode
wavelength	850 nm	1310nm
	50/125um, 800 MHz*km	9/125 um
Maximum transmit	1 dBm	0 dBm
Minimum transmit	-6 dBm	-6 dBm
Receiving sensitivity	-12 dBm	-13 dBm
Link budget	6 dBm	7 dBm
Typical distance	300m	10 km
Saturation	-3 dBm	-3 dBm

DIP Switch Settings

DIP Switch No	Switch Status	Description
1 or 3	ON	LFP Function is enabled
	OFF	LFP Function is disabled
1 and 3	ON	Bypass mode
	OFF	Adaptive mode
4	Not used	Not used

Note 1:

1. When all the dip-switches are off, the converter will be Adaptive mode. The SFP+ slot can support only 10G SFP+ module, and the RJ45 UTP port can support 1G/ 2.5G/ 5G / 10Gbps.

2. When DIP switches 2 and 4 are set to Off, and DIP switches 1 and 3 are set to On, the converter will operate in Bypass mode. The SFP+ slot can use any module with 1G/ 2.5G/ 5G / 10Gbps speed, and the RJ45 UTP will be set to the same as the fiber speed.

Note 2: The LFP (Link Fault Pass Through) means the link fault of media converter on one side (local side) will be passed to the media converter on the other side (remote side). It is used for monitoring the copper links connected to the media converters from the local device. When one copper link fails, the media converter will pass the "fail-state" on throughout the link taking down the middle fiber link and the copper link on the opposite end. The LFP function on media converter can immediately alarm the network administrators the problem of the link and offer an efficient solution to monitor the network, which can minimize the loss caused by the link problem.