Most compact Ethernet Media Converter
Copper to Fiber Optic

General Description

The µTX2FX is an ultra compact Ethernet media converter that translates transmission signals from a twisted pair 100/1000Base-TX cable to a 100Base- FX or 1000Base-X fiber optic cable. It expands network data transmission distances beyond the 100 meter limitation of copper wire to over 10 kilometers by using single-mode fiber optic cable.

For the fiber optic port, any standard Small Form Factor plugable (SFP) transceiver module complying to the MSA standard and are Ethernet compatible can be used on. These SFP transceivers modules are available with a variety of different transmitter and receiver types, allowing users to select the appropriate transceiver for the required fiber optical interface.

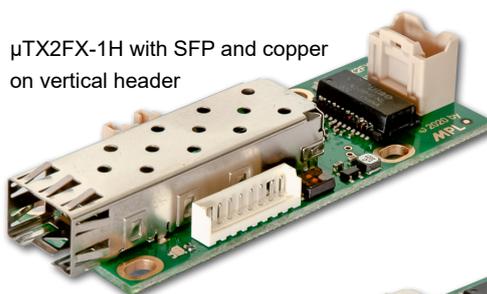Further, the µTX2FX provides automatic detection and initializing of the SFP module.

Since the µTX2FX design is based on a PHY, the latency of the frame is constant and with typically 250nsec (1GBit) relative low. This allows using the µTX2FX in a time sensitive network which needs to support IEEE 1588 PTP or IEEE 802.1AS gPTP traffic.

µTX2FX Highlights

- Supports 100/1000Mbit Copper Ethernet
- Automatic detection & initializing of the SFP
- 5 to 36VDC power input
- Copper port on lockable header
- Extended temp. option -40°C to +85°C
- support of IEEE 1588 PTP and IEEE 802.1AS gPTP
- Jumbo Frame supported
- Extremely compact for easy integration

All MPL products are 100% designed and manufactured in Switzerland.

µTX2FX-1H with SFP and copper on vertical header

µTX2FX-1RH with SFP and copper on right angled header

Technical Features

Board Key Data

Copper Port	On 100/1000Mbit 2mm lockable header supports auto crossover, polarity correction
Fiber Optic Port	Over standard SFP transceivers, supports single- and multi-mode, 100Mbit-FX or 1000Mbit-X

Physical / Power

Size (L x W x H)	73.5 x 28 x 12.5mm (3mm space under PCB required)
Weight	16g
Power	5VDC to 36VDC
Power consumpt.	1.5 W 1Gbit copper & 1Gbit optical link

Environment

Temp. Range	Standard -20°C to +60°C, optional -40°C to +85°C
Humidity	5 - 95% non condensing, optional coating available

SFP (optical transceiver) in stock

SFP-1X	2/1Gbit 850nm, multi mode, up to 500m, -40 to +85°C
SFP-2X	1Gbit 1310nm, single mode, up to 10km, -40 to +85°C
SFP-3X	100Mbit 1300nm, multi mode, up to 4km, -40 to +85°C

Or any other standard SFP* in accordance to MSA & Ethernet compatibility (* no copper SFP support)

If you prefer to RJ45 as copper connection rather than lockable headers, please have a look at our TX2FX which is available in many versions. **www.mpl.ch/t2ba0.html (TX2FX)**

µTX2FX Version

Version	Description
µTX2FX-1H	media converter with vertical header
µTX2FX-1RH	media converter right angled header (optional)

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