

# MEDIA CONVERTER MULTIGIGABIT

CONVERSION BETWEEN AUTOMOTIVE MULTIGIGABIT  
ETHERNET AND COMMERCIAL ETHERNET SOLUTIONS

## DESCRIPTION

The **MediaConverter MultiGigabit** from Technica Engineering establishes a direct point-to-point conversion between automotive ECUs using any of the 2.5/5/10GBASE-T1 multigigabit standards and an SFP+ module compatible with any multigigabit ethernet interface. In the conversion, no packets are stored or modified, the conversion takes place on the physical layer with the highest proven reliability.

We ensure a trustworthy and effective tool to our customers that are looking for a cost-efficient, quick, and manageable solution for their testing requirements, with no latency and no packet loss.

The device features bi-directional conversion between automotive multigigabit Ethernet standards (2.5/5/10GBASE-T1) to any other ethernet standard through the SFP+ module and the rate matching feature enables possibility to interface between different line speeds. No customized driver is needed to interact with this MediaConverter.

A convenient housing made of galvanized sheet steel, coupled with DIP switches for ease of configuration, enables the user to interact with the converter effortlessly. Its design makes it portable and easy to install in test racks. The metal housing makes it robust with IP20 protection. The devices can also be accessed using the USB connector to read PHY register values as well as information regarding link quality and SQI. With the in-built status LEDs, the operation of the device is transparent and aids the tester to detect link-up and data transmission visually.

Thus, the MediaConverter MultiGigabit is the ideal solution for working quickly and efficiently with the new 2.5/5/10GBASE-T1 technology without the hustle of extra-wiring, customized connectors, and vendor specific tools.

## FACTS

- 4x DIP switches for easy configuration
  - Master/Slave
  - 10GBASE-T1/other
  - 2.5GBASE-T1/5GBASE-T1
  - Frame generator on/off
- 4 x Status LEDs
- 1x SFP+ port compatible with any standard SFP+ module
- 1x H-MTD port for 2.5/5/10GBASE-T1 Automotive Ethernet
- Included in scope of delivery:
  - 1x TE MQS socket for power connection
  - 1x Automotive H-MTD harness
  - 1x 10GBASE-T SFP+ module
- Extended voltage range: 12-to-24-volt automotive battery voltage systems compatible
- Extended operating temperature range: -40°C to +85°C (using direct attach cables)
- Stainless steel housing

## FEATURES

- Allows easy connectivity to ECUs with 2.5/5/10GBASE-T1 multigigabit Automotive Ethernet ports
- Supports line speed rate matching to be able to adapt to different bandwidths between the 2.5/5/10GBASE-T1 interface T1 line speed and the one negotiated on SFP+ module side.
- Supports different SFP+ modules (10GBASE-T, Optical, Direct attach Cables) to adapt to any customer use case
- In the future hardware versions will allow to perform EMC testing of other ECUs with 2.5/5/10GBASE-T1 interfaces due to the support of optical SFP+ modules
- I/O signals to easily interface to automated systems
  - Input signals enabling “force slave mode” and “force link down”
  - Output signal to notify “link status up/down”