

# MVB/ETH Protocol Converter

MMET7010

The MMET7010 is an on-board railway device that implements data exchange function (gateway) between MVB bus and the Ethernet network.

The unit is based on state of the art technology for embedded systems and it is equipped with a highly integrated “System On a Chip” electronic device which integrates the software flexibility of an ARM®-based processor with the hardware programmability of an FPGA.

The equipment runs a software developed by MIOS Elettronica implementing the TCN protocol over IP to easily exchanging Process Data and Message Data between the MVB bus and the Ethernet network. Process Data are encapsulated in UDP datagram while Message Data are managed using TCP protocol and Remote Procedure Call inter-process communication system where the MMET7010 device acts as Server.

Protocols such us: TRDP and IPTDcom are available on request. In addition, other protocols can be developed under customer request.

MMET7010 can act also as MVB protocol analyzer, forwarding any frame from both MVB lines to UDP Ethernet frame. A companion analysis software, running on a Personal Computer, is available on request to analyze the MVB traffic.



## MAIN STANDARDS COMPLIANCE

- EN 50155 - IEC 60571 - IEC 61375 - EN 45545

## ENVIRONMENTAL

- Nominal Power supply: 24 Vdc (additional power supply values are available)
- Power consumption: 6W typical, 10W max.
- Operating Temperature: class TX according to EN50155 and IEC 60571

## SYSTEM FEATURES

- Microprocessor Xilinx Zynq® dual core ARM Cortex A9 + internal FPGA
- 256 MB DDR3 (512 MB optional)
- eMMC Up to 16 GB (optional)

## STANDARD CONNECTIVITY

- 1 Ethernet 10/100 Base-T, with M12 D-Code connector
- 1 MVB bus full redundant EMD (ESD and OGF available on request) class up to 4, with 2 x D-Sub 9 connector

## OPTIONAL CONNECTIVITY

- 2<sup>nd</sup> Ethernet 10/100Base-T, with M12 D-Code connector
- Gigabit Ethernet interfaces, with M12 X-Code connector
- 1 isolated RS232/485/422, with D-Sub 9 connector
- 1 isolated can bus, with D-Sub 9 connector
- 1 GSM 3G communication module, with SMA connector
- 1 GNSS receiver module, with SMA connector

## MECHANICAL

- Dimensions (w x h x d): 250 x 40 x 110 mm. including fixing brackets
- Metallic enclosure with protection rate IP20
- Weight: 1 Kg. approx.
- Wall mounting with 4 x Ø 4 mm. hole