

Multipurpose Mobile Gateway

MMGW7000

MMGW7000 is an on-board railway device that allows data exchange function (gateway) between on-board devices and groundside sites via radio link.

The unit is based on the state of the art technology for embedded systems; it is equipped with a highly integrated "System-on-Chip" electronic device that blends the software flexibility of an ARM®-based processor with the powerful hardware programmability of a FPGA.

The equipment can be used for implementing:

- Board to ground communication gateways;
- On-board data recorders;
- On-board logging & analysis equipment to feed Condition Based Maintenance or Predictive Maintenance systems;
- Assets localization and tracking functions.

On board, the MMGW7000 manages TCN standard protocols on field buses (CAN, MVB, and Ethernet) and custom protocols can be developed and integrated on request.

To ground, the MMGW7000 manages standard communication protocols via LTE radio link. Public and private APN can be addressed and different security approaches are available including channel encryption, secure protocols, VPN and ID certificates.



MAIN STANDARDS COMPLIANCE

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

ENVIRONMENTAL

- Nominal Power supply: 24 Vdc, 37.5 Vdc, 72 Vdc, 110 Vdc or wide range model available
- Power consumption: 10W typical, 15W 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)

INTERFACES

- 2x Ethernet 10/100 Mbps with M12 D-Code connector
- 1x MVB bus full redundant EMD or ESD class up to 4
- 1x isolated CAN bus, with D-Sub 9 connector
- 1x LTE Class 4 communication module with 2 SMA connectors (MIMO)
- 1x GPS/GNSS receiver module with SMA connector
- 1x isolated RS485/422 with D-Sub 9 connector
- 2x USB 2.0 service interfaces
- 4x Digital opto-coupled Inputs
- 4x Digital Outputs (Solid State Relay)
- 3x Analogue Inputs Isolated

OPTIONAL INTERFACES

- 1x Base2 Legacy Ethernet
- 1x WIFI IEEE 802.11 a/b/g/m (AP - Client - Direct)
- 1x Bluetooth v4.0
- 1x ZigBee compliant with IEEE 802.15.4

MECHANICAL

- Dimensions (w x h x d): 261 x 65 x 111 mm. including fixing brackets
- IP20 enclosure, Wall mounting, Weight: 1 Kg. approx