

# Vehicle Control Unit

The VCU is a vehicle control unit equipped with MVB and Ethernet interfaces fully designed for railway systems application. The 3U rack VCU handles the I/O MVB and/or Ethernet information according to the application software. The application software can be designed using C language or IEC 61131-3 programming languages.

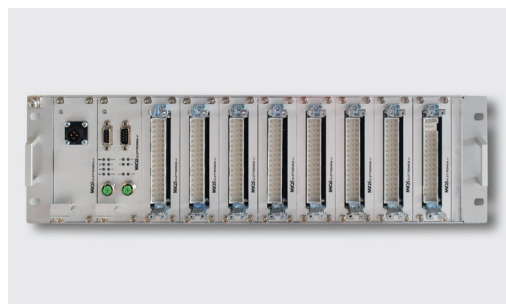
It consists of:

- a power supply;
- a Xilinx Zynq® SoC CPU core with MVB and Ethernet interfaces;
- a modular set of I/O boards.

VCU main tasks are

- To read physical inputs;
- To validate inputs data;
- Excerpt data on MVB/ETH;
- Elaborate functions on data;
- To write physical outputs;
- To verify physical outputs;
- Execute diagnostics.

Other special function can be implemented in internal FPGA.



## MAIN STANDARDS COMPLIANCE

- EN 50155 - IEC 60571 - IEC 61375

## ENVIRONMENTAL

- Nominal Power supply: 24 Vdc (37,5 Vdc, 72 Vdc and 110 Vdc are available)
- Power consumption: 20W typical depending by I/O configuration
- Operating Temperature: according to class TX EN 50155 and IEC 60571
- Protection: IP20

## SYSTEM FEATURES

- Microprocessor Xilinx Zynq® dual core ARM Cortex A9 + internal FPGA
- 512 MB DDR3
- 32 MB NOR Flash
- SD Card Up to 16 Gb (optional)

## STANDARD CONNECTIVITY

- 1 Ethernet 1000/100/10 Base-T (2nd optional)
- 1 MVB bus full redundant EMD class up to 4
- 1 isolated CAN bus (optional)
- I/O slots (up to 8) configurable with:
  - 24 Isolated digital inputs board
  - 16 Fully isolated digital inputs board
  - 8 Isolated digital inputs & 8 isolated digital outputs board
  - 16 Isolated digital output & 2 PWM inputs board
  - 2 frequency inputs + 4 Analogue inputs + 2 Relays board
  - Different I/O configuration available on request

