

INGESYS

TCMS

Control and Monitoring System for rolling-stock in railway sector



INGESYS™ TCMS is Ingeteam's control platform applied to controlling and monitoring (TCMS) rolling stock in the railway sector.

The INGESYS™ TCMS platform includes the main automation functions required in a train: the vehicle control unit (VCU), remote I/O units (RIO), monitoring unit (HMI), remote condition monitoring (RCM) and interconnection and integration elements related to the different communications buses that exist in the train.

Automation systems

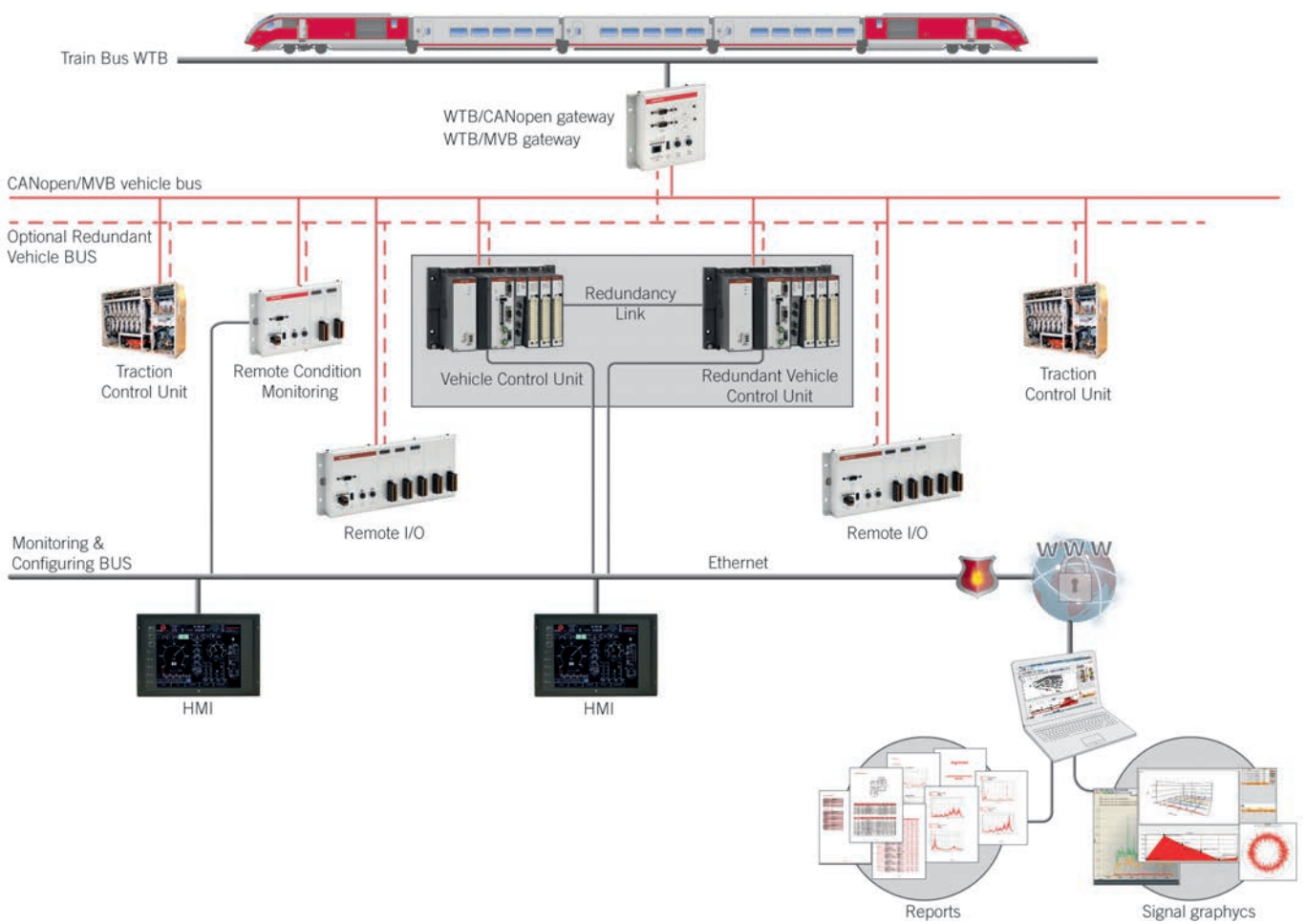
Main Features

- Includes VCU, HMI, RIO, RCM and communication gateway functional features
- Compliance with EN50155 and EN45545-2 standards
- IEC61131, C/C++, MATLAB/SIMULINK programming tools
- Train control application modelling and simulation tool based on MATLAB®/SIMULINK®
- High availability based on solutions with hot standby processor redundancy, communications redundancy and power source redundancy
- The most renowned protocols and communication buses in the railway sector: WTB, MVB, CAN, ETHERNET/IP, TRDP, RS485, etc...
- Advanced maintenance and supervision functions
- 20 years product availability, ensuring repair and maintenance service during 10 additional year

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Ingeteam

	Technical Features
Unit	Wide range of processing units, I/O modules, communications modules, etc. Distributed I/O architecture based on CAN buses, MVB, ETHERNET DIN 41612 F connectors or terminal blocks for I/O modules
Programming	IEC61131-3 standard languages C/C++ MATLAB®/SIMULINK®
Integrated supervision	Events and data log module Active alarms and historical data viewer Events viewer Remote access for parameterising and diagnostics via web services
Centralised supervision	Centralised supervision of the information on all vehicles Architecture in the cloud (centralised diagnostics data) Communication between trains and station using GSM, WLAN, GPRS links
High Availability	Soft and Host Standby redundancy Redundant power supply and I/O topologies Communications redundancy Hotswap modules
Standards	EN 50155:2007 [Class TX (-40°C at +70°C)] EN 45545-2



The technical data in this catalogue is subject to change without prior notice. FY40IPT01_E/0419