



INGESYS RC3 is Ingeteam's control platform applied to the control and monitoring (TCMS) of rolling stock in the railway sector.

The INGESYS RC3 integrates the main automation functions required in a train: Vehicle Control Unit (VCU), remote I/O units (RIO), web application (HMI), remote monitoring unit (RCM) and interconnection and integration elements of the different communication buses in the train.

TCMS

Main characteristics

- It Incorporates the VCU, HMI, RIO, RCM and communications gateways functionalities
- Compliance with EN50155 and EN45545-2 standards
- IEC61131, C/C++, MATLAB/SIMULINK programming tools
- Modelling and simulation tool of the train control application based on MATLAB®/SIMULINK® BASED MODELLING AND SIMULATION TOOL
- 19' rack mounting
- High availability based solutions with HotStandby processor redundancy, redundant communication networks and power supply redundancy
- Most common communication buses and protocols in the railway sector: WTB, MVB, CAN, ETHERNET/IP, TRDP, RS485, etc.
- Designed in accordance with cybersecurity standards (IEC 62443)
- Advanced maintenance and monitoring functions
- 30 years of product availability, guaranteeing repair and maintenance service for an additional 10 years

Characteristics	Technical Features
	- Linux on ARM dual-core processor - Wide range of power supplies - IO modules (digital, analogue, temperature, fast inputs) - Communication modules - Rolling stock communication protocols (CAN, Ethernet IP, TRDP, MVB, WTB,...) - Distributed I/O architecture - Cybersecurity module
Programming	- IEC61131-3 standard languages - C/C++ - MATLAB®/SIMULINK®
Advanced diagnostics	- Event and data logging module - Viewer of historical data and active alarms - Event viewer - Remote access for parameterisation and diagnostics via secure web services
Remote management	- Remote management of vehicles - Cloud or On Premises centralised management - Train-to-Ground communication
High availability	- Soft and Hot Standby Redundancy - Redundant power supply and I/O topologies - Communications redundancy - Hot swappable modules (HotSwap)
Standards	- EN 50155 Standards [Class OT4 (-40°C to +70°C)]. - EN 45545-2

