

- ▶ Railway sub-system control and monitoring
- ▶ Products and engineering services



oem technology solutions

overview

OEM Technology Solutions is in the business of providing solutions for railway sub-system control and monitoring. OEM Technology Solutions has 20 years experience in HVAC, doors, fire protection, lighting and toilet sub-systems and has systems installed in over 40 countries.

Specialising in the design and development of high technology products since 1993, OEM Technology Solutions combines technology, and innovative engineering and design services to provide turnkey solutions for our clients.

OEM Technology Solutions services include user requirements analysis, product specification, electronic hardware and software development, mechanical design and manufacture, production and testing, documentation and long term support.

capabilities

- Design and development to railway and transportation standards
 - Electronics (EN50155)
 - Software (EN50128)
 - Mechanical
- Integration/verification/validation
- Manufacturing and production
- Custom designs

products

Control and monitoring systems for:

- HVAC
- Doors
- Fire protection
- Lighting
- Toilets

proTESO PCI and PC3 Series Programmable Controllers

comTESO Communications Gateways

ioTESO I/O Expansion Modules

iecTESO Programming Software

webTESO Web-based Maintenance Software



train HVAC controls



The Heating, Ventilation and Air Conditioning (HVAC) control system within an onboard railway application needs to be reliable, accurate and resistant to shock and vibration. Rail passengers demand comfort whether the temperature is extremely hot or cold outside the vehicle. The train saloon should be a place of comfort and relaxation. The engineers at OEM Technology Solutions are experts at understanding the requirements of rail HVAC control systems and have applied innovative techniques in the design of our electronic hardware and associated firmware for the controller. The result is a complete range of HVAC controllers suitable for the railways industry. All controllers have been designed to comply with the strict railway standard EN50155 for electronic equipment used on rolling stock.

train location server



Our customer required an EN50155 compliant train location server to integrate into their existing tram fleet. The requirement was for a high reliability controller to provide a GPS location, to extract data from the existing ticketing machine and the existing odometer and to communicate position and passenger data to and from a shore based computer using 3G cellular communications. Our proTESO range of programmable controllers was the perfect choice for this application as all the electronic building blocks were available off-the-shelf. The product development involved software development of the low level drivers and design and manufacture of a custom 19" enclosure.

train door controls



The proTESO range of Programmable Controllers was selected for an external train door control and safety override solution. Our customer required a railway compliant and certified product and the support of a company with railway industry experience for the provision of software development services to the EN50128 standard. OEM Technology Solutions was chosen for this train door control project as we complied with all of our customer's requirements. The door controller system provides the necessary dual communications system architecture via the combination of Ethernet and RS485.

train toilet controls



Train toilet systems are essential for intercity and high speed trains for passenger comfort. As a result, the train toilet control system must be highly efficient and reliable to ensure minimal water usage and water recycling wherever possible. The toilet control system is responsible for delivering high pressure water to clean the toilet and removal of waste via a vacuum system. The proTESO Programmable Controller has been chosen by a train toilet sub-system supplier because of its ease of programming, its modular nature, and because of its extensive suite of TCMS interfaces – including Ethernet, MVB, CANopen and LONWorks. This allows the base proTESO controller to be used for all of our customer's toilet control system applications and additional I/O or TCMS interfaces added on a project by project basis as needed.

key customers

- Bombardier Transportation
- Alstom Transport
- Siemens Mobility
- Hyundai Rotem
- Kawasaki Heavy Industries
- Downer EDI Rail
- United Group Limited Rail
- Stadler Rail
- Thales Australia
- Lockheed Martin
- Knorr Bremse
- Faiveley Transport
- Noske Kaeser
- Vossloh Kiepe
- EVAC
- Tyco Traffic and Transportation
- Yarra Trams
- Transdev
- Railcorp
- Pacific National
- Australian Railroad Group

awards

- Australian Technology Showcase, NSW Patrons Award for Export Achievement – 2011
- Engineers Australia – Control Systems and Communications 2008
- Engineers Australia – Software and Embedded Systems 2008



quality approvals

- QMS ISO9001:2008
- EMS ISO14001:2004
- OHS AS18001:2007



industry references

- Shanghai Metro Line 12, Line 16, China
- Rio Metro, Rio Supervia, Brazil
- Bangalore Metro, India
- Macau LRT, Macau
- Wuhan Line 2, China
- Waratah Trains, Downer EDI Rail, Sydney, Australia
- MTRC West Island, Hong Kong
- School Zone Signs, Sigtec/ RMS, NSW, Australia
- Turbostar, Bombardier Transportation, UK
- Onboard Bus Computer, Tyco/RMS, NSW, Australia
- TTY, Taipei, Kawasaki Heavy Industries, Taiwan
- MBTA, Hyundai ROTEM, Boston, USA
- Electronic Speed Limit Sign, Dept Transport / Tyco Traffic, VIC, Australia
- KL Kelena Jaya, Bombardier Transportation, Kuala Lumpur, Malaysia
- Tango Variobahn, Stadler, Germany
- Desiro DMU, Siemens Transportation Systems, UK
- Tangara Upgrade, Railcorp, Sydney, Australia



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