

i n v e n s i s TM
Rail

SystematICS®
Integrated control centre solutions





Who we are

Invensys Rail, a division of the global technology group Invensys plc, is a multinational leader, delivering state of the art railway control and communication solutions.

We enable the world's railways to meet the ever increasing demand for rail services by providing a range of solutions that safely increase the capacity of their networks by increasing frequency and maximising operational effectiveness.

Employing over 3,250 employees worldwide, Invensys Rail operates through a network of regional offices and delivers products and solutions from some of the most famous names in the rail industry, Westinghouse Rail Systems, Dimetronic Signals and Safetran Systems.

We design, manufacture, supply, install, commission and maintain a range of safety related rail automation and control systems and equipment. Our broad offering ranges from highly complex integrated control centre solutions that supervise and control complete railways, sophisticated train based systems that automate train operation and protection, interlocking systems that ensure safe running across a network and a complete range of trackside products.



SystematICS

SystematICS brings rail network information and control into one convenient interface. With real-time display and simple controls it enhances safety, improves efficiency and delivers complete operational flexibility.

Environmental controls combine with station management to significantly enhance passenger safety and comfort

In the past, making sure trains ran safely and on time was complicated and expensive. Different equipment from different manufacturers was controlled by isolated operators, with minimal integration or communication.

SystematICS brings these disparate elements together, helping you to:

- Manage separate functions all in one place
- Improve efficiency and reduce costs
- Enhance operational capability

A single system, with ultimate control

SystematICS is modular, scaleable, future-proofed, and proven in service. It offers complete integration and network visibility through a single operator interface. Designed specifically for the rail industry, the system is inherently flexible and efficient, delivering levels of reliability previously unachievable in the mainline and mass transit rail industry.

Improved safety

SystematICS simplifies and prioritises communications between subsystems, providing operators with a clear overview of the network.

This allows easier control over developing situations, while reducing response times and operator stress. As a result, operators make more effective and informed decisions. SystematICS provides a higher standard of safety than non-integrated solutions and is certified to SIL 2.

Scaleable and future-proof

As your network grows, SystematICS grows with it. The system is specially designed so you can build a platform to suit your evolving needs. For example, you may start with traction power and train control, before adding station and environmental management functionality as the needs of the rail network grow.

SystematICS can be distributed across multiple servers and by using WAN communication, also across a number of sites, giving the ability to control a network of any size.

Through its open, modular architecture SystematICS easily embodies emerging technologies and re-configuration ensuring that your investment is secure.



Widely proven and fully supported

The benefits of SystematICS are already being appreciated by a number of rail networks. The Kowloon Canton Railway Corporation has achieved a reputation for 100% reliability for its million daily passengers since the system was commissioned in 1998. Meanwhile, Sydney's Metro Light Rail system and the Canada Line in Vancouver are also enjoying increases in safety, efficiency and reliability.

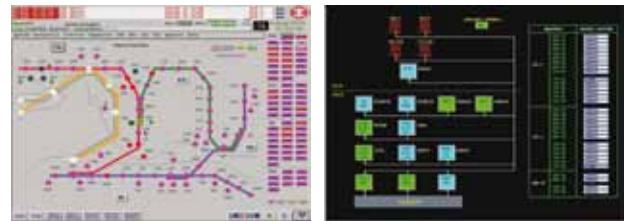
In the UK, Network Rail manage traction power for both the West Coast Mainline and Southern Regional Power Supply Upgrade Project. These and other users know they can rely on the continual support and development provided by Invensys Rail.

Canada line rapid transit system

Safer. Faster. More efficient. That's the new Canada Line Rapid Transit System Vancouver residents now enjoy thanks to Invensys Rail.

Primary contractors SNC Lavalin appointed Invensys Rail not only for the effectiveness of its SystematICS solution, but for its successful history in supplying and installing complex integrated control solutions.

In fact, Invensys Rail has been tasked with the turnkey design and supply of a completely new integrated communications and control system (ICCS) for this new unmanned railway - all in time for the Winter Olympics in 2010.



Invensys Rail have successfully commissioned CCTV, public address, radio and telephone systems, passenger information displays, a SCADA system to cover power traction and tunnel ventilation, a fibre optic transmission system, even video walls and a passenger counting system. We have also assumed responsibility for subcontractor management.

A substantial and exciting project, Vancouver's Canada Line was commissioned well ahead of schedule - amazing when you consider that we've implemented the system across a newly-constructed, 19km, underground and at-grade network, which incorporates 16 stations.

Real-time display for real savings

Operators can prioritise and reassign control tasks during peak demand periods, taking greater control of developing situations to deliver safer, more efficient services. Furthermore, significant savings can be made: initial investment is up to 40% lower than comparable alternatives; maintenance and operation costs are also reduced and the superb fault-finding functionality makes savings of up to 30% possible; while simpler incident management allows for greater staffing flexibility. Finally, as entire operations can be managed from under one roof, facilities costs are substantially reduced.

"Safer services,
improved network
visibilty, more efficient
control of power and
outages – all this and
more is possible with
Systemat**ICS**"

The features

All operators enjoy real-time, flexible control and monitoring, and - under appropriate access management - can also view sub systems including:

- Traction power
- Tunnel ventilation
- Radio and voice communication
- CCTV
- Passenger information systems
- Guideway instruction systems

Other benefits include access to vital operational information from performance monitoring and passenger counting systems. Furthermore, Systemat**ICS** is a great platform for improvement as it has been specifically designed to interface with both new and legacy systems.

Kowloon Canton Railway Corporation

Invensys Rail Systems created the world's first fully integrated Systemat**ICS** control centre for the Kowloon Canton Rail Corporation (KCRC) East Rail in Hong Kong. The KCRC has been delighted with the results - 100% on-time running while carrying over one million passengers each day.

The system was integrated with existing infrastructure without disruption, and designed with future expansion in mind. It has proved highly reliable with no downtime since its commissioning in 1998. Meanwhile, maintenance and operation costs have been reduced, and safety standards improved.





i n v e n s y sTM

Rail

Tel: +44 (0)1249 441 441

Fax: +44 (0)1249 441 442

Email: marketing@invensysrail.com

www.invensysrail.com

Invensys Rail | PO Box 79 | Pew Hill | Chippenham | Wiltshire | SN15 1JD

Invensys Rail is a trading division of Invensys plc, a company registered in England and Wales.

Every effort had been made to ensure that the information contained in this brochure was correct at the time of going to press. However, the Company retains the right to change any specification without notice.

SystematICS[®] is a Registered Trade Mark of Westinghouse Brake and Signal Holdings Limited.

Registered Office: Portland House, Bressenden Place, London, SW1E 5BF
Registered in England and Wales No. 1641421.

80% These text pages are printed on 9 lives paper made from 80% recycled fibres sourced entirely from post consumer waste.

© Invensys Rail 2009. All rights reserved.
Specification subject to change.