



ABB RailManager

The Optimal Solution for Railway Traffic Management

Traffic Control Center



ABB RailManager controls 728 kms of rail traffic in Norway. The center has been built up as an auditorium with a large screen in the background. Gradually, more sections on the screen will be built and taken in use, following the needs of the Norwegian Railway Administration.

ABB RailManager is highly scalable and suitable both as local operator workplace at a single station or as Centralized Traffic Control for entire railway networks.

Experience

ABB has a long experience from the railway industry, supplying components and subsystems for both onboard and wayside applications. Today, ABB maintains a central position in developing network management solutions. ABB's standard solutions are used not just by this industry but by a wide range of other sectors around the globe.

ABB RailManager - The brain of the railway network

ABB RailManager is a highly scalable computer-based traffic control and supervision system, suitable as a local operator workplace at a single station or as a Centralized Traffic Control System (CTC) for entire complex railway networks. The system is based on PCs and standard ABB products giving the customer substantial value in terms of flexibility, functionality and cost-effectiveness.

Vital functions of ABB RailManager include: train number handling, automatic train management and timetable editing, control and diagnosis, advanced recording of events with replay functionality and exchange of information with supervision equipment.

ABB RailManager provides open communications features based on standard high speed Ethernet network which can be easily connected to a variety of other systems, including GSM-R (ERTMS). Various protocols are available for external communication, i.e. timetable transfer, passenger information, power control centres, other traffic control centres etc.



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1 Controlling and supervising complex signalling systems | 2 Ergonomic screens give operators the functions that matter most to them
3 Overview of ABB RailManager workplaces | 4 With ABB RailManager safety, and efficiency are raised to new levels

Adaptable to customer needs

ABB RailManager is a modular and scalable system, in which a number of individual workstations can be connected to the system. It can easily be adapted to different types of interlocking systems, expanded and over time upgraded according to individual customer's requirements.

A high degree of software flexibility and quality is achieved by using an object oriented approach to programming and graphics. This enables predefined levels of detail in presented information, functions, graphics and libraries.

User friendly

A single workstation can control either a dedicated line section or the total network, depending on complexity and access given. It can also be used for engineering or maintenance. Individual workstations can be configured with multiple screens in order to increase displayed level of details.

A large-scale monitor for traffic overview makes everyday life easier for operators. It consists of a contoured high-resolution screen with an ergonomic design that gives an outstanding interactive display. The information is very easy to read and gives a full overview. This facilitates a quicker reaction from operators in case of abnormal circumstances. Even the white background color makes ABB RailManager more user-friendly, compared to the usual black backgrounds.

Window techniques allow the operator to create online windows with overview and detailed information. This zoom allows organizing and viewing information in various levels of detail. Online documentation regarding operation, maintenance and other system manuals can be shown on screen.

High availability

ABB RailManager supports redundant configuration of hardware, software and communication. The system is designed to minimize service and maintenance needs. Faults are rapidly identified by remote online diagnosis and self-testing functions, which are carried out during operation. Errors are handled by a "track & trace" database. If necessary, service and maintenance activities can normally be executed without disturbing traffic management operations.

“The traffic controllers at the Marienborg Center in Norway have gotten a system the rest of the European rail network can envy. The center can track individual lines on enormous, wall-mounted screens.”
The Norwegian Railway Administration

Lifecycle management

To improve our customers' return on investment, ABB offers a lifecycle management program. ABB has well established routines to prevent maintenance, such as risk and diagnosis analysis, advisory, training and worldwide support. Installation lifetime extension is possible through ABB's continuous system improvement, "ever-green" agreements, regular upgrading and add-ons.

Reference ABB RailManager

The Norwegian Railway Administration selected ABB to modernise its traffic control and supervision center in the country's mid and northern region. The delivered ABB RailManager system (located in Trondheim) currently controls 1/3 of the Norwegian Railway Network. Gradually, new lines and interlocking systems will be connected to ABB RailManager.

ABB's delivery comprises:

- Centralized Traffic Control with 7 Workstations
- Control of a large scale monitor
- Remote control for 100 interlocking stations
- Logging and replay system
- Timetable planning and automatic route management
- All hardware, design, programming, testing, installation, commissioning, documentation and training.

The Norwegian Railway administration has been very satisfied with ABB RailManager. Its scalability and almost faultless operation since deployment have been some of the major benefits for this customer. The center's increased running efficiency has resulted in reduction of train delays, something that even passengers have noticed.

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