

15 years
in Railways

eWings

RF &
Wireless
Solutions

eWings

Bright ideas make life easier
Railways

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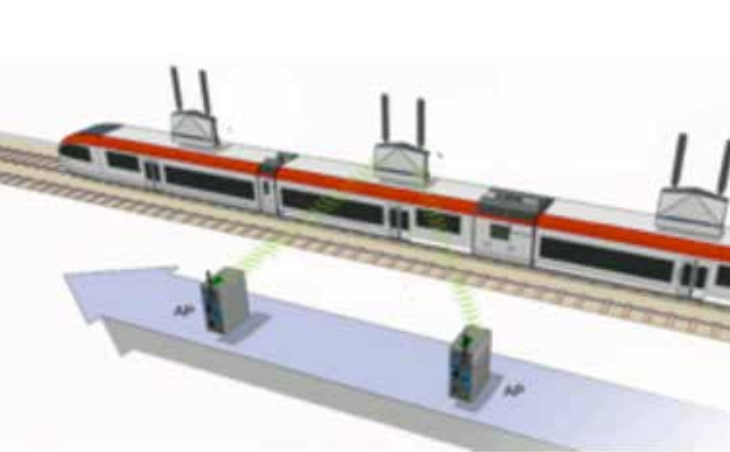
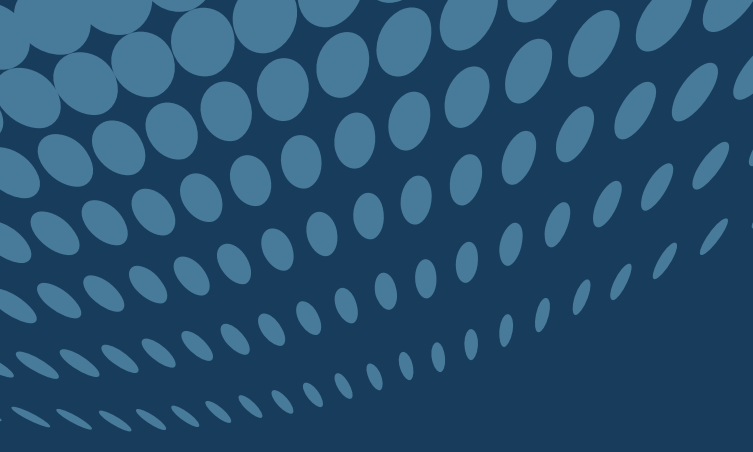
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eWings has been active for almost 15 years in the Railways environment.

Its work has been mainly focused on signalling with the aim to develop new solutions and technologies for safe railway transportations and reliable infrastructures.

Our product portfolio includes automatic train protection systems (both metro and railways) and trackside equipment.

eWings developed also verification tools to be used directly along the railway lines for maintenance staff or for technicians in laboratories.

ERTMS

The European Railway Traffic Management System (ERTMS) replaces the different national train control and command systems in Europe. Major benefits of ERTMS include interoperability and cross-border operations, higher line speed and increased line capacity at lower life cycle costs.

eWings is a leader in design, verification and production of ERTMS sub-systems including both wayside equipment (Eurobalises and Encoders) and on-board equipment.

eWings products have been developed for the lowest possible life cycle costs, using components designed for minimum maintenance.

SSC SYSTEM

SSC (Driver Support System) is an ATP system developed by RFI, Italy and installed on secondary and regional lines not equipped with other expensive systems.

SSC is intended to be complementary to ERTMS. The system consists of trackside and trainborne sub-systems (SST and SSB) that communicate by a 6 GHz microwave radio using a secure

protocol. The trackside equipment transfers information to the train about the characteristics of the infrastructure and the aspects of the signals.

eWings conceived the first SSC system from specifications to design and development till production. This system has been installed on Italian lines from 2007. eWings is a leading provider of SSB and SST sub-systems with high level of customization to follow customer needs.

VERIFICATION TOOLS

Due to its in-depth knowledge of railway systems eWings developed also verification tools to be used directly along the railway lines from maintenance staff. These systems are portable, lightweight, battery based and also wireless controlled.

- PI SCMT Tool main features are telegram programming and performance verification of balises of different manufacturers (compliant to Eurobalise standard). It is able to verify on-field performances of fixed and controlled balises with their connections to the encoder and to program the internal telegram.
- SSC Tool is intended for

verification of performance and antenna installation of trackside SST system.

- BACC Code generator is a generator for signal repeaters and CDB verification. It allows verification of the RSC detector installed on rolling stocks.
- Eurobalise Simulator is a lightweight battery device that can be used in lab or directly on-field to verify performances of rolling stock on-board devices.

WiFi SYSTEMS AND MONITORING TOOL

The eWiFi rugged module provides a flexible and highly reliable solution for Railways and industrial wireless networks. With two internal independent RF modules, it supports a greater variety of wireless configurations and the redundant wireless connections increase the reliability of the entire wireless network. Compliant to IEEE 802.11a/b/g/n/h, EN50155, EN50121-3-2/-4, EN50124.

Wireless LANS owners need an easy and cost-effective method to manage, control and monitor large wireless networks.

Therefore a complete, automatic and reliable monitoring of devices

failures becomes essential. It ensures 365 days radio network monitoring, for 100% continuous availability. The tool is fully operating on Metro Milano since 2010.

RAILWAY CROSSING PROTECTION

eWings designed and developed a new system for active protection of public railway crossings.

The system automatically detects obstacles over the level crossing area and alerts the railways control system. eWings developed also a system to monitor and safely manage the private rail crossings along the railway lines.

TRACKS OCCUPATION AND AXEL COUNTERS

eWings developed a new cost-effective system to safely detect tracks occupation and the state of the track.

This innovative system transmits UWB-like signals through the railroad tracks avoiding the use of insulated joints and inductive connections.