

TagMaster

North America, Inc.

High Performance RFID for **Railway Solutions**



Automatic identification and positioning for the rail industry.
TagMaster delivers accurate information for maintenance and quality control,
traffic and passenger information and onboard management systems.

Identification - Two basic configurations

The ID-tag is mounted on the moving object and the Reader is stationary

In this configuration, the ID-tag is mounted directly on to the locomotive or wagon, where as the reader is fixed on the side of the track or on the sleepers. This configuration is suitable for applications requiring identity or position of a passing train.

Typical applications:

- Traffic and passenger information

The TagMaster system provides accurate and reliable information of a train's location. This real-time information is forwarded to IT systems and used to update for example passenger information displays at stations and terminals.

- Operation and maintenance

Information about the configuration of wagons within a train set can be provided automatically with the TagMaster system. The system can for example be integrated with track-side wheel quality systems, for automatic matching of wagon or wheel axle with a measured value.

The Reader is mounted on the moving object and the ID-tag is stationary

In this configuration, the reader is mounted directly on to the train and the ID-tag is fixed on the sleepers. This configuration is suitable for applications where trains with onboard systems need to know the position of the train.

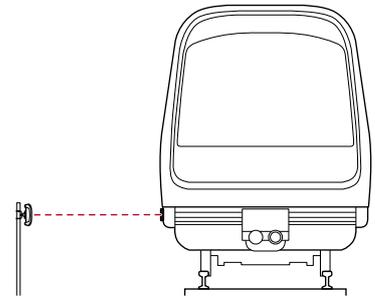
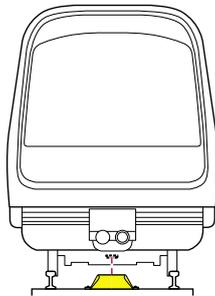
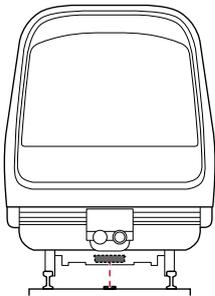
Typical applications:

- Train location

The reader, mounted underneath the locomotive, determines the location of the train by identifying the ID-tag as the train passes over. This positioning data is transferred to the onboard system and can be used for "neutral zone" handling, automatic change of radio channel or for updating passenger information.

- Accurate positioning

The TagMaster reader accurately reports the train's position when the train passes over the ID-tag. The accurate positioning feature is required for onboard systems controlling precise train stopping.



Positioning



Passenger information



Maintenance

Products for demanding applications

TagMaster is a leading supplier of RFID equipment to the rail industry. Our range of heavy-duty readers and ID-tags are specifically designed for demanding environments. This advanced RFID technology delivers information to both onboard and track-side systems in rail applications such as traffic control, CBTC, passenger information, maintenance and quality control. TagMaster's RFID (Radio Frequency IDentification) system operates in the 2.45 GHz frequency band. These products are used worldwide in railway applications that require identification and positioning at high speed, with high precision.



1. Heavy Duty ID-tag

The Heavy Duty ID-tags are mounted on the front, side, top or underneath each individual vehicle. They can also be mounted on the sleepers in special ID-tag fixings. The ID-tag is extremely resistant, totally encapsulated and maintenance free. It has a predictable life of 6, 8 or 10 years, depending on model.

2. LR-6^{HD} Reader

The LR-6HD readers are suitable for track-side installations. The readers can be installed at key locations such as stations, terminal entrances or maintenance centres. The reader identifies ID-tags at a range of up to 6 metres and at passage speeds of up to 400km/h.

3. S1566 Heavy Duty Reader

TagMaster Heavy Duty readers are designed to withstand environmental factors such as temperature, moisture, shock and vibration. This allows them to be mounted directly on the outside of vehicles. This reader can be used to provide positioning information for onboard systems on a train.

4. S1569 Heavy Duty Track Reader

The HD Track Reader is specially designed to withstand the tough requirements of being directly mounted on the sleeper. The unique built-in doppler radar can be used to determine the direction of a passing train, even in cases where the train is not equipped with an ID-tag.

5. S1510 Handheld Reader

The S1510 Handheld is reader with an integrated industrial PDA. The versatility of the PDA together with the flexibility of RFID technology makes the Handheld reader an ideal supplement to stationary readers in applications such as train maintenance. The S1510 allows for quick and reliable on-the-spot identification and verification of objects such as wagons.

Reference examples



Traffic and passenger information

Hamburg Metro - To improve the service for passengers and optimise the control processes in the Hamburg metro, Vossloh IT is providing a system for total operations monitoring and control. One central part in the system is the identification of the trains. TagMaster has in close cooperation with Vossloh IT and HOCHBAHN, developed a sleeper mounted reader with the ability to also detect the direction of the train. The project includes 800 ID-tags mounted under the railcars and track mounted readers installed at 190 different locations.

Positioning for onboard management

London Underground - Enabling an onboard train radio to automatically change talk group when entering new areas in the underground network. The reader is positioned under the train cab and the ID-tag is fitted to a bracket, mounted on the sleepers between the rails. This so called "Beacon system" formed part of requirements for a new Motorola TETRA radio system for London Underground. The Heavy Duty enclosure ensures that the demanding environmental requirements for this train-mounted RFID solution are fulfilled.



Maintenance and quality control

Dutch Railway - To increase the quality of the wheels and to reduce the maintenance and infrastructure cost due to wheel defects, NedTrain Consulting and Baas R&D have installed the Gotcha system. Both wheel quality and axle loads are measured at high speed in 17 locations, and the installation has been extended with another 24 stations for measuring the axle load. The integrated TagMaster RFID system ensures that the actual measurements are matched with the correct wheel pairs. Thanks to the TagMaster system the workshop maintenance schedule of a specific wagon is automatically updated when required.

Company overview

TagMaster is Swedish manufacturer of long-range identification systems based on a technique known as RFID (Radio Frequency Identification). The system automatically identifies large moving vehicles at long-range and at high speed. TagMaster has pioneered the development of long-range RFID and has introduced the technology into a wide range of areas, including

the rail industry. TagMaster is represented worldwide through a large network of distributors, system integrators and OEM partners.

For more information, please visit our website www.tagmasterna.com or contact us at sales@tagmasterna.com