



# zentrak AUTOMATIC VEHICLE IDENTIFICATION

## Allocation of Measurement Data

### Description

The function Automatic Vehicle Identification (AVI) enables the allocation of measurement data to the correct train set, vehicle and/or wheelset by using Radio Frequency Identification (RFID) technology. The AVI reliably detects UHF transponders holding key information used in various railway applications. This for example allows railway operating companies to efficiently manage and locate their rolling stock assets and optimize maintenance processes. The AVI function integrates seamlessly with other zentrak functions and is tailored to railway specific applications and standards. Transponder data can be automatically filtered based on the information received so that only the desired information will be processed, assigned to other monitoring data, or forwarded to the user.



**AVI**  
Automatic  
Vehicle  
Identification

### System advantages

- » Identification of trainsets, vehicles and components
- » Vehicle specific alarm thresholds
- » Allocation of measurement data to the correct wheelset and/or vehicle
- » Combination with other zentrak wayside monitoring functions
- » GS-1 for rail compatible identification and decoding of tags
- » Country specific frequency ranges
- » Calibrated radiant power
- » Plug-and-play for easy installation and maintenance
- » Configurable filter functions
- » Readers for various kind of tags
- » Tested and certified for railway environments around the world



## READER APPROVED FOR RAILWAY ENVIRONMENTS

The AVI identifies transponders using a compact UHF reader with integrated antenna. It is mounted along the track and emits radio waves. When a UHF transponder is within the reading lobe, it is automatically powered up and sends back its stored information. This information can be used for identifying vehicles or other components, to provide precise maintenance data from other measurement functions like the Wheel Defect Detection (WDD) or the Acoustic Monitoring Sensor (AMS) to the customer.

The rugged housing of the AVI withstands harsh climates as well as the rough mechanical conditions around the track. It can flexibly be placed in the track area.

Thanks to the user-friendly installation and configuration of the system, the time in track can be minimized. Easily visible LEDs and an integrated beeper indicate positive identification results to the user that come in handy for service and maintenance purposes.

Technical Specification	
Train speed	0 to 300km/h (tag dependent)
Antenna	Integrated
Beam angle	90°
Polarization	Circular
Reading/write distance	up to 7m / 3.5m (tag dependent)
Frequencies	EU: 865 to 868MHz, US: 902 to 928MHz (others upon request)
Air interface protocol	EPC Class1 Gen2
IP class reader	IP65
Environment	-20 to +50°C 5% to 95% RH

### Options and variants



Wall



Pole



Rail