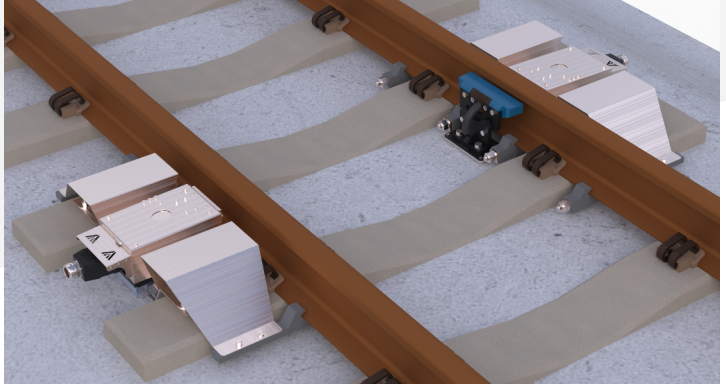
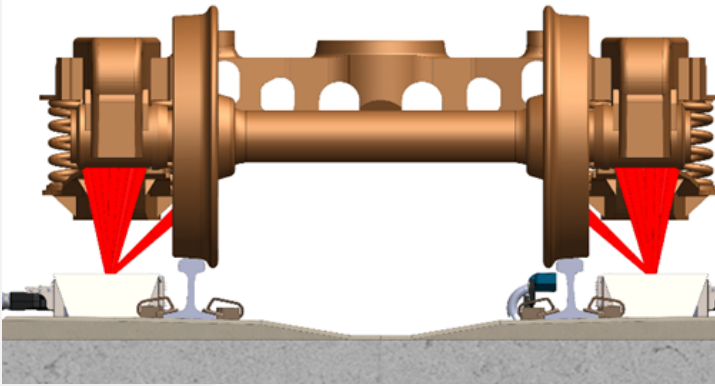


INFRAVIS

Robust Monitoring Made Simple



HeatMAP™

**All-in-One: Hot Bearing Detector (HBD) and
Hot Wheel Detector (HWD) System**

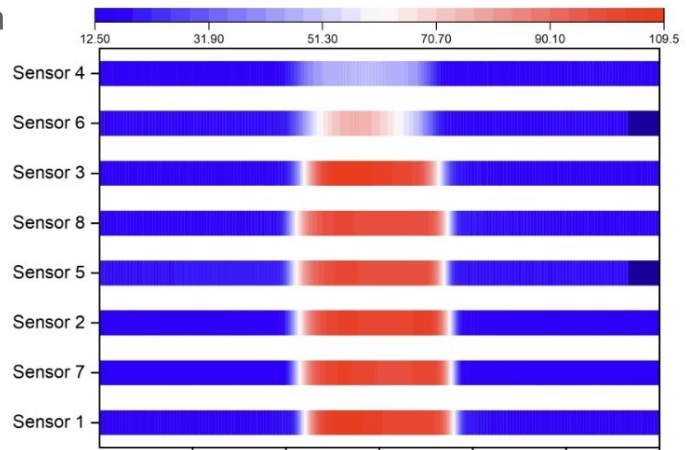
Keeping Railroads Safe with Infrared Precision
Detect. Alert. Prevent.

The INFRAVIS HeatMAP All-in-One HBD / HWD is a rugged, wayside thermal detection system engineered for harsh rail environments and rapid deployment. Installing quickly between existing ties (sleepers) with minimal site preparation, the system combines hot bearing and hot wheel detection in a single platform.

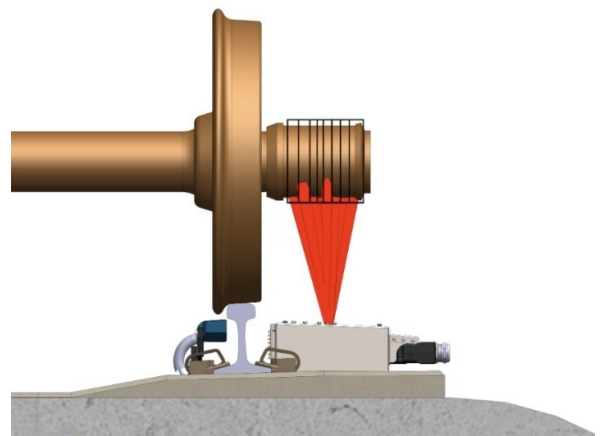
Its multibeam thermal sensors deliver consistent, high-accuracy temperature measurements across all train speeds. Measurement data is securely managed in the INFRAVIS cloud and enables data-based alerting while its built-in self-diagnostics and a low-maintenance design minimize servicing requirements.

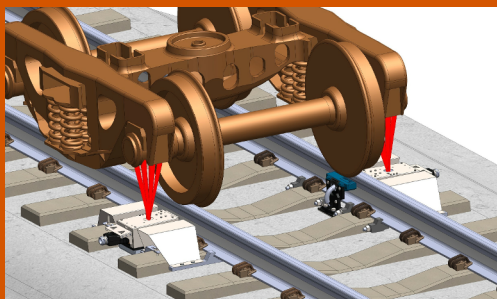
With clear insights into bearing, wheel and brake system health, railroads and fleet managers can apply condition-based asset management strategies that have been proven to improve fleet availability and reliability while optimizing maintenance intervals that help to lower the total cost of asset ownership.

Typical HBD Multibeam Visualization



Configurable Multibeam Aiming





Product Overview:

The INFRAVIS HeatMAP All-in-One HBD / HWD is engineered for harsh rail environments, delivering high performance with a minimum of site preparation or setup. Designed for deployment by customer teams, the system quickly installs by clamping to the rail with its control electronics housed in a small track-side enclosure, enabling rapid deployment.

On-track, a rugged stainless-steel housing protects its multibeam thermal sensing array that delivers precise temperature measurements of journal bearings and wheels simultaneously.

Requiring only standard power and a data connection, the system integrates easily with existing communications networks, whether Ethernet, GSM, or other supported interfaces.

The **INFRAVIS HeatMAP All-in-One HBD / HWD** offers a comprehensive thermal monitoring solution with the following advanced, unique features:

System Highlights:

- **Minimal infrastructure requirements;**
 - No equipment bungalow needed
 - Fast installation between existing ties with minimal civil work
- **Multibeam sensor architecture** ensuring complete bearing coverage
- **Flexible data output** formats for straightforward integration
- **Consistent, high-accuracy measurement** at all train speeds
- **Built-in self-diagnostics and calibration verification** for long-term reliability

System Benefits:

- **High-accuracy thermal measurement of both bearings and wheels** enabling early-stage defect identification
- **Real-time radio 'talker' alerts** for immediate fault notification
- **Secure cloud-based data management** for centralized fleet visibility
- **Low-maintenance design** featuring a keep-clean air-purge system to extend service intervals

Technical Specifications:

Parameter	Metric	Imperial
Train Speed	0 – 200 km/h	0 – 125 mph
Bearing Temperature	0 – 350 °C	32 – 662 °F
Wheel Temperature	0 – 815 °C	32 – 1,500 °F
Sensor Resolution	1 °C	~1.8 °F
Operating Temperature	–40 – 70 °C	–40 – 158 °F
Bearing Measurement Beams	8	
Wheel Measurement Beams	2	

Data Management & Diagnostics:

Integrate all INFRAVIS products with the comprehensive DataMAP application to leverage its robust data analytics, rules engine capabilities and intuitive system health monitoring.

INFRAVIS

Experience that drives safer, smarter rail operations.

At INFRAVIS we're building on decades of engineering innovation in rail equipment monitoring to provide the latest in wayside detection systems.

Specifications are subject to change without notice

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