

RailGuard – Where Rail Meets AI

Who are we?

Harvest Rail are a division of the edilonXsedra Group collaborating with Synap IoT a data analytics company specialising in combining meaningful data with Artificial Intelligence to enable informed decision.

Combined we bring decades of Rail experience together with unparalleled knowledge of data analytics, Artificial Intelligence, and sensing technology. The resulting technology, RailGuard, sees the world of Rail meet AI in a sophisticated yet simple to use and understand package.



RailGuard – Out of the Box Condition Monitoring

No Pomp, No Fuss, No Drama – Instant Results!

RailGuard installs in less than 5 minutes and will deliver data within seconds, a truly turnkey solution to the modern needs of the Railway where time is the King!

Delivering meaningful data delivered to our customers within these timeframes enables the value payback is immediate, the speed and simplicity of the install and data capture realises the quickest Return in Investment available to the industry. RailGuard delivers real value, you are 5 minutes from a safer, more efficient and lower cost Railway.

Artificial Intelligence
Delivering Meaningful Data

Critical Rail Temperature
Monitor & Much More

Measuring Tilt, Angle & Cant / Superelevation

Worksite Monitoring – Safety and Track Condition

Key Specifications:

- No wayside requirement – Fit & Forget
- Turnkey install and operation
- GPS – RailGuard informs exact Location
- Operating temperature -10° to 60° Celsius
- Battery Lifetime 12 Months
- Weight 5.5kg
- IP Rating – IP68
- Immediate AI Processing
- Expansion Port – Future Proof & Additional Modules Planned

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Critical Rail Temperature & Much More!

- Measure the Rail and Ambient Temperature at Ground Level in Real Time!
- Establish trend lines based on real-time and historic data allied to external inputs such as weather forecasts.
- Monitor Rail Temperature increases under traffic along with cooling times between traffic passes.
- Be accurate to within 0.5°

Superelevation, Tilt & Angle

- Accurate, remote monitoring of Superelevation, Tilt and Angle in real-time.
- Establish trendlines, set and send alerts according to customer defined thresholds.
- Manage and protect worksites & vulnerable infrastructures.



RailGuard – Step Changes for the Railway



Reduce the impact and cost of speed restrictions.

- AI trending will reduce unnecessary restrictions assist in removing blanket bans where practicable.
- Minimize derailments through improved Critical Rail Temperature control and prediction.
- Heat Management – Understand the effect of traffic on the rail and when temperatures will be in tolerance after traffic has passed.



Safer & More Efficient use of Resource

- Vastly Reduce number of foot patrols, people in track
- Make decisions possible earlier in the day – better planning of resource & making valuable skills available elsewhere on the network.



Helping to ensure regulatory compliance through better informed decision making and avoidance of rail condition related operational fines.



Quick return on investment – A safer, more efficient railway with less restrictions and impact to revenue allied to happier travelling customers.