



Specifications

Rail-Mounted Sensor Unit (SU)

- Compact, self-contained: no external wiring
- Simple installation: Neodymium magnets (welded strain gage)
- Collects rail temperature and longitudinal strain data
- Automatically sends daily rail status updates to database
- Continually monitors for rail failure and trigger conditions (buckle/break, rail temperature alert (RTA) and thermal load alert (TLA) notifications)



Communications Tower Collector Unit (CU)

- Collects data from nearby sensor units and forwards it to remote database via wireless network (Cellular or WiFi)
- Daily, programmable and on-demand notification in case of alarms (break, buckle alarm, RTA, and TLA)
- Coverage range of up to 2 mi (5,280 ft in either direction)

Configuration/Status Unit (CSU)

- Communications dongle connects to a standard laptop PC or tablet via USB connection
- Communicates with individual SUs for configuration, query status and downloading data



Web-Accessible User Interface

- Houses all sensor data along with GIS information describing the site and other meta-data for installation attributes
- Graphical data analysis to prioritize maintenance and monitor track integrity

Intelligent Rail Integrity System (IRIS)TM

Remote rail monitoring



IRIS™ Remote rail monitoring solution

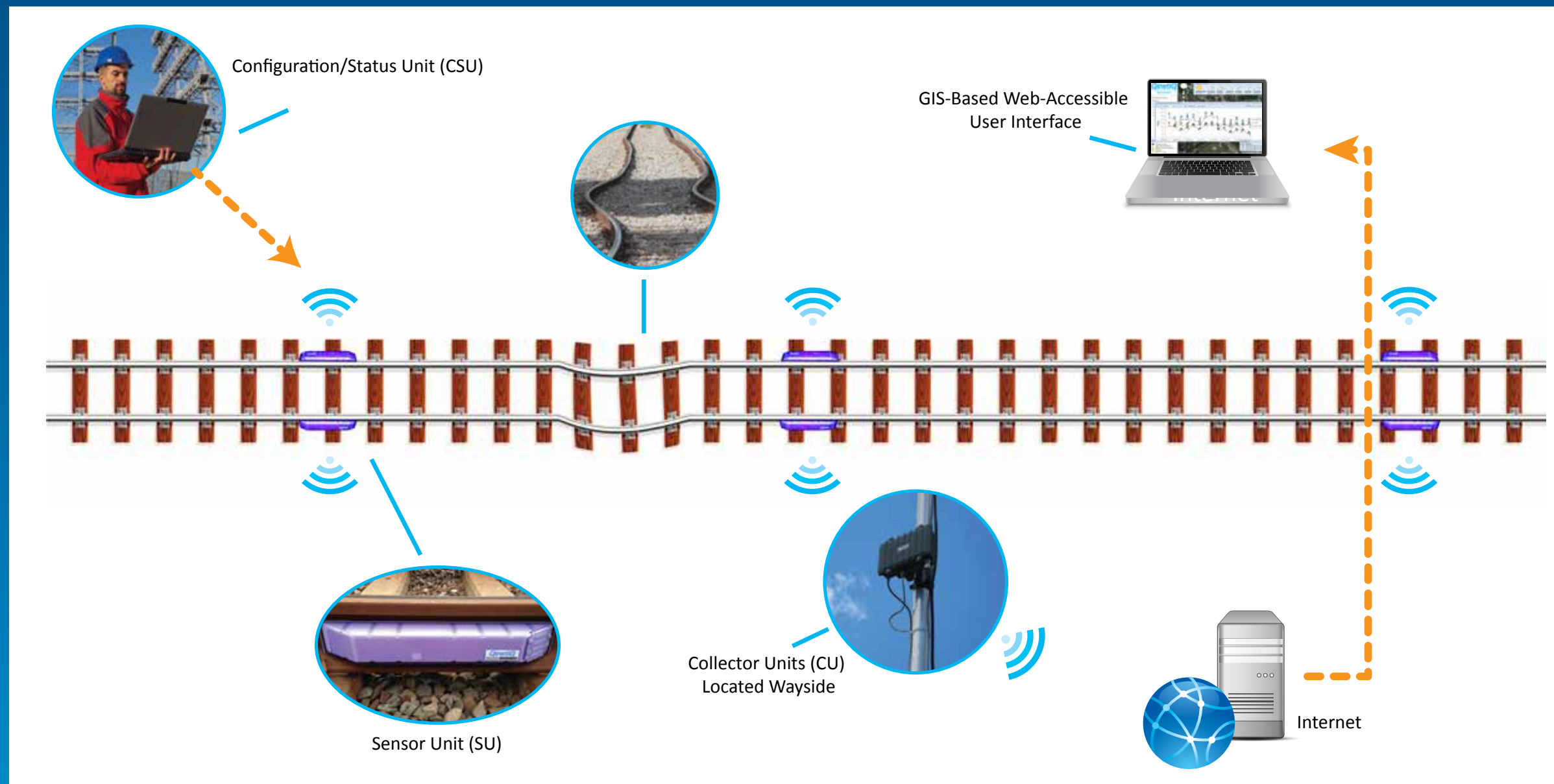
Network of wireless sensors that monitors rail temperature and rail neutral temperature (RNT)

Fully integrated web-accessible system that uses advanced data analysis algorithms to identify hazardous rail conditions

Emergency notification of broken or buckled rail

Rail status alerts via e-mail/text

- Rail Temperature Alerts (RTA) when rail temperature exceeds pre-set thresholds
- Thermal Load Alert (TLA) via when difference between rail temperature and RNT exceeds pre-set thresholds



The IRIS Sensor Unit (SU) is the cornerstone of the rail monitoring system. Installed along CWR, SUs continually track changes in rail temperature and rail neutral temperature to monitor the track's integrity. Collector Units (CUs) mounted on wayside towers collect SU data and broadcast information to a GIS-based web-accessible database. The application sends RTAs and TLAs to maintenance personnel when unsafe rail conditions arise. The intuitive user interface provides maintenance personnel with powerful geospatial overlays and query functions to identify high-risk rail conditions and their locations. The Configuration/Status Unit (CSU), a USB dongle that enables wireless communications with SUs, is used to configure system settings, query SU status, and download data.

Solving Today's Transportation Challenges with Tomorrow's Technology