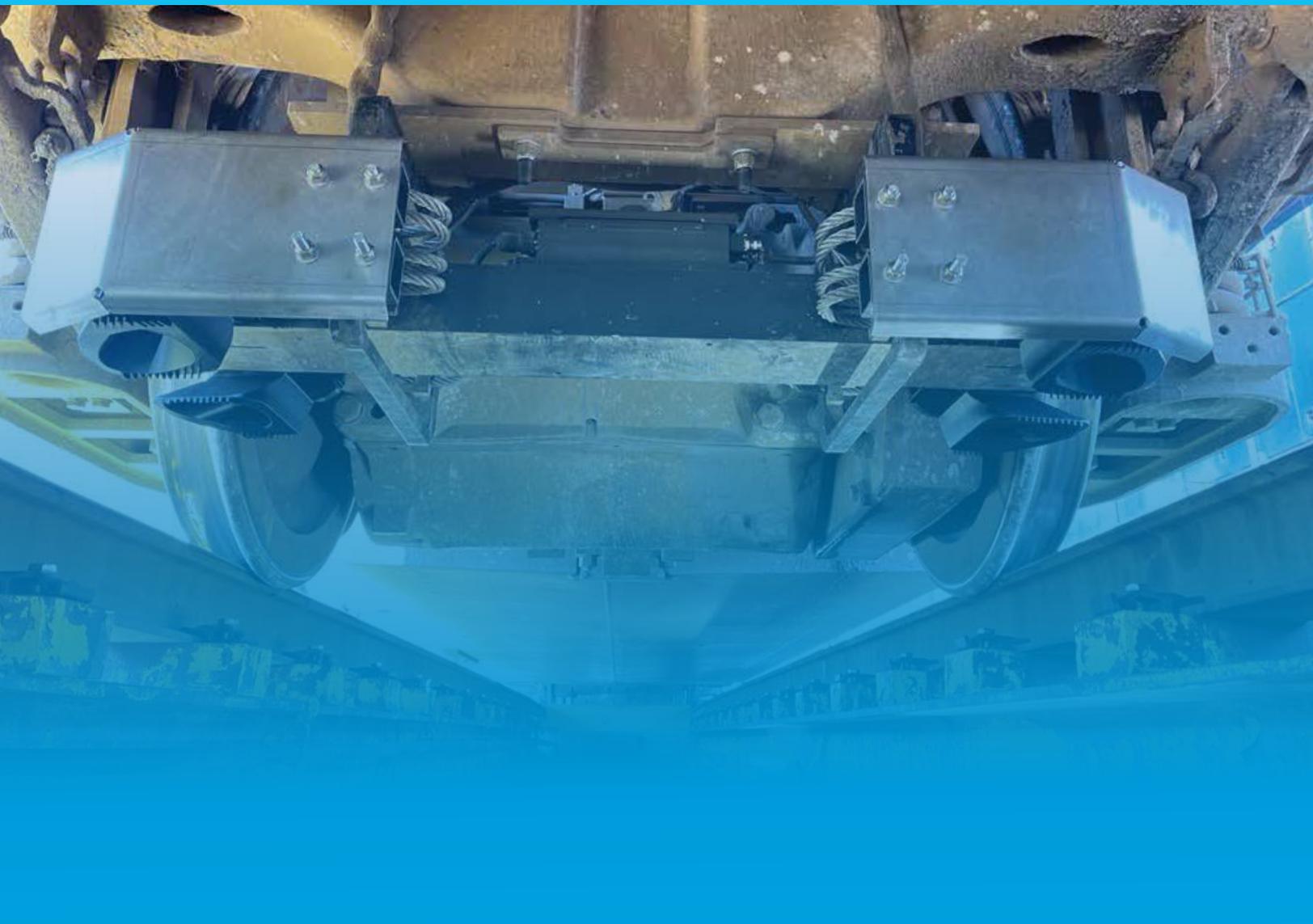




LOCOMOTIVE MOUNTED
UGMS



The track measurement platform you select impacts the data you receive and, ultimately, the decisions made that keep you running safely and efficiently.

Holland's Argus® Track Measurement Technology Suite offers the flexibility to deploy in a variety of attended and unattended configurations. The newest addition to the Argus suite is Locomotive UGMS – a locomotive-based autonomous track geometry and rail profile measurement system. Taking advantage of existing train routes, Locomotive UGMS provides continuous testing along critical network corridors while being integrated into revenue service.

LOCOMOTIVE MOUNTED UGMS



Key Features of Holland's Locomotive UGMS include:

- Most stringent loaded track measurement (FRA 213 geometry channels, rail profile and cant) provided with measurements taken nearby the locomotive truck center
- Load severity and mounting location identify geometry exceptions not visible to other systems (autonomous freight, inspection cars, hi-rails)
- Maximum rail profile coverage is provided at sharp curves since truck-mounted system follows the track centerline

- Unique mounting design requires no welding or drilling
- Cost-effective autonomous track measurement system utilizes locomotive power, GPS, non-contact distance measurement, and tachometer without compromising quality
- Most economical per mile loaded track measurement due to high utilization of locomotives (>100,000 miles/year)
- Proven one-year maintenance-free performance in North American heavy haul environment, including extreme weather conditions
- On-board defect generation allows for critical exception delivery within hours based on cellular connectivity
- Machine learning algorithms augment defect vetting

- Conventional bundle reports (executive summary, curve reports, defect summary, strip/brush charts), defect list, movement report, and movement map files are provided to the customers daily
- Historical geometry measurements such as TrackSTAR GRMS can be overlaid with the latest locomotive UGMS measurements

