

BattTrackIQ™ FOR WAYSIDE BATTERY BANKS

Catch battery failures **weeks** before they catch you.

A predictive battery monitoring application for the KB Signaling WSDMM platform. Continuous polling of Smart Module Chargers, multiple layers of statistical analytics, condition-based maintenance, at the wayside, with no cloud required.

MULTI-LAYER ANALYTICS

15+ detection methods, all running at the wayside.

Thermal, voltage imbalance, float current, life, discharge and sulfation engines convert telemetry into multi-week early warnings.

EDGE-NATIVE

No cloud, no cellular, no third-party data custody.

Self-contained package on the WSDMM. Operates fully at the edge. Analytics run on the WSDMM with no cloud or back-office dependency.

CELL-LEVEL INSIGHT

Replace the failing cell, not the whole bank.

Per-cell voltage and temperature continuously trended. The Bank Inspector pinpoints the cell driving an alarm with backend-computed deviation.

CONDITION-BASED LIFE

Arrhenius aging tells you when each bank is actually done.

Tracks thermal history per bank and reports effective age, not calendar age. Eliminates premature replacements and late-failure surprises.



SITE OVERVIEW · ALL BANKS, ONE SCREEN

LIVE SSE UPDATES · 1 DAY TO 1 YEAR HISTORY

WHY IT MATTERS

Stop replacing batteries on a calendar. **Replace them on evidence.**

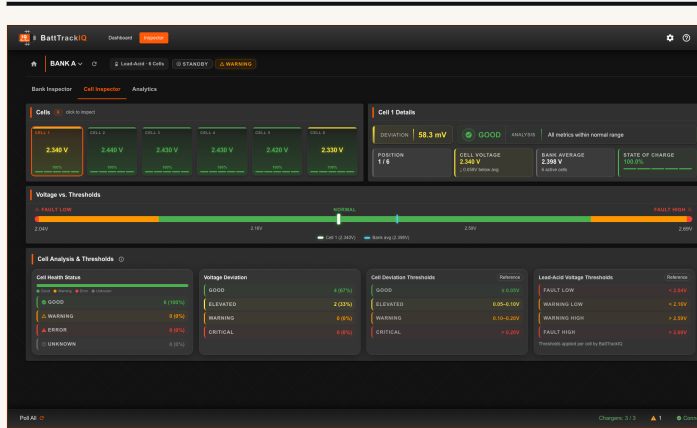
PLATFORM

- KB Signaling WSDMM
- RECO Smart Module Chargers
- Integrated time-series data pipeline

HOW IT WORKS FOR RAILROAD SIGNAL DEPARTMENTS

Raw charger data to **predictive intelligence**, in one appliance.

BattTrackIQ polls each Smart Module Charger on a configurable cadence, ingests dozens of live metrics, and runs multiple analytics engines against the daily trend. It does the math. The dashboard shows the answer.

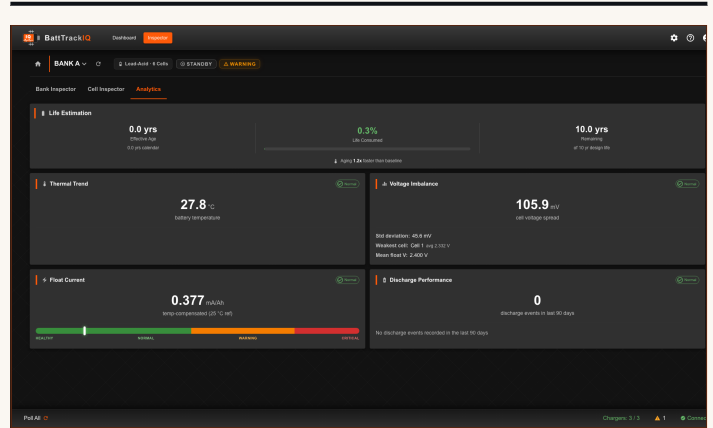


CELL INSPECTOR

Find the weak cell before the bank fails.

Per-cell voltage, temperature, deviation against pack average, and voltage-vs-threshold zones. Replace one cell, not the whole bank.

- ▶ Lead-Acid native
- ▶ NiCd-aware
- ▶ Deviation scored in mV



ANALYTICS TAB

Multiple engines, one verdict per bank.

Life Estimation, Thermal Trend, Voltage Imbalance, Float Current, Discharge Performance. Each engine renders a single bottom line for the maintainer.

- ▶ Daily rollups
- ▶ Hourly evaluators
- ▶ 365-day trend retention

<p>DEPLOYMENT</p> <p>One package. Up to eight chargers supported.</p>	<p>CHARGER POLLING</p> <p>Native RECO Smart Module Charger support. Poll cadence configurable per charger, 10 s to 60 min.</p>	<p>TELEMETRY PIPELINE</p> <p>Built-in pipeline forwards telemetry to your central monitoring stack on demand.</p>	<p>LIVE ALERTING</p> <p>Condition-based event codes surface early warnings in the dashboard and can feed existing alarm systems.</p>
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Replace batteries on **evidence**, not a calendar.

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