EV Charging Stations

Smart Mobility in Motion: Improving Energy Management for Electric Vehicle Charging Infrastructure

RM's Solution for EV Charging Station

Electric Vehicle (EV) charging represents a novel form of electric load, distinguished by its distinct usage patterns and variable power and energy demands. Importantly, integrating EV charging into new or existing electrical systems can significantly affect overall power distribution.

Effectively managing the power of EV charging stations is crucial to mitigate impacts on electrical infrastructure. This includes optimizing energy allocation among all connected loads to minimize strain on the system while ensuring efficient distribution.

Testing the thermal resilience and other parameters of components and assessing their functionality across diverse climatic conditions, from the scorching heat of the Sahara to the freezing cold of Siberia, is essential for ensuring battery electric vehicles' global readiness. However, obtaining accurate results depends on the precise and reliable replication of these temperature conditions on test benches. Ensuring dependable and accurate temperature sensing is imperative for various components within electric vehicles.
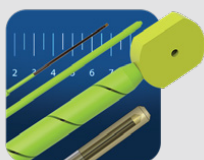
Rugged Monitoring offers cutting-edge solutions, providing secure and high-performance solutions. Our continually growing portfolio caters to applications in e-motors and charging infrastructure, offering flexibility in designing new layouts and materials for power electronics. Trusted globally by numerous customers, our established solutions contribute to elevating the performance, efficiency, and sustainability of electric vehicles.

How it Works:

The electric motor converts electrical power into dynamic motion, emphasizing the pivotal role of protection and safety for prolonged operational durability. Whether designed to be replaceable or integrated to endure the entire operational lifespan, the temperature sensor must demonstrate reliability, resistance to drift even following repeated temperature spikes, and seamless integration into the production process.

At Rugged Monitoring, we offer sensor assemblies founded on durable sensor elements, ensuring extended lifetimes. Paired with innovative and customizable mounting options, our array of possibilities empowers our customers to achieve optimal designs for their specific needs.

Our innovative and most advanced online/offline electrical asset monitoring solution for OEMs

Sensors
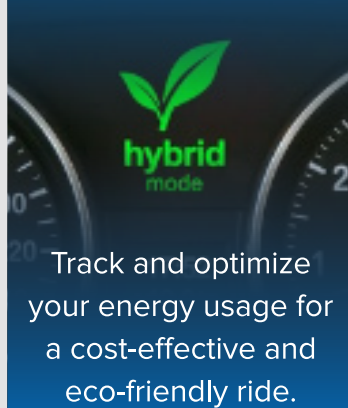

Monitors

Software

What can be monitored

Battery Health Monitoring

Precise insights into your battery's condition, ensuring longevity and reliability.
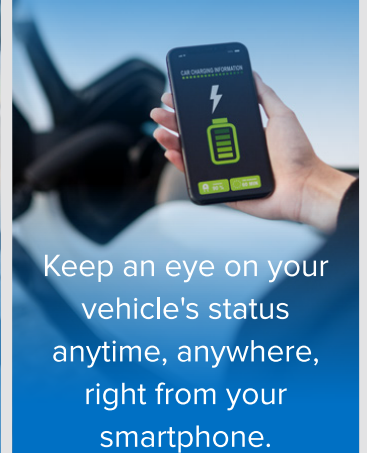
Energy Consumption Analytics

Track and optimize your energy usage for a cost-effective and eco-friendly ride.

Charging Station Compatibility

Seamlessly integrate with various charging stations for a hassle-free charging experience.

Remote Monitoring

Keep an eye on your vehicle's status anytime, anywhere, right from your smartphone.

R501 Rack Mount Comprehensive and Customizable Asset Monitoring Solution

R501, the customizable, rack mount, comprehensive electrical asset condition monitor is designed to monitor multiple electrical assets and its parameters enables a simple and user-friendly interface. R501 provides condition monitoring of electrical assets by focusing on preventing asset failures and reduce downtime. With our comprehensive monitoring solution, the health of assets can be determined, and maintenance activities can be scheduled. The R501, our versatile rack-mounted monitor, with its customizable features allow you to monitor multiple assets simultaneously, providing a user-friendly interface and an extensive range of parameters to track. The R501 focuses on preventing asset failures and minimizing downtime, empowering you to take proactive maintenance actions.

R501
ADVANCED MULTI ASSET MONITOR

Features of R501

- Expandable with daisy chain & Field Upgradable to add different monitoring modules.
- Highly secure, web server-based visualization and configuration software
- Simple visualization & easy to configure.
- Equipped with most accurate & advance health assessment analytics.
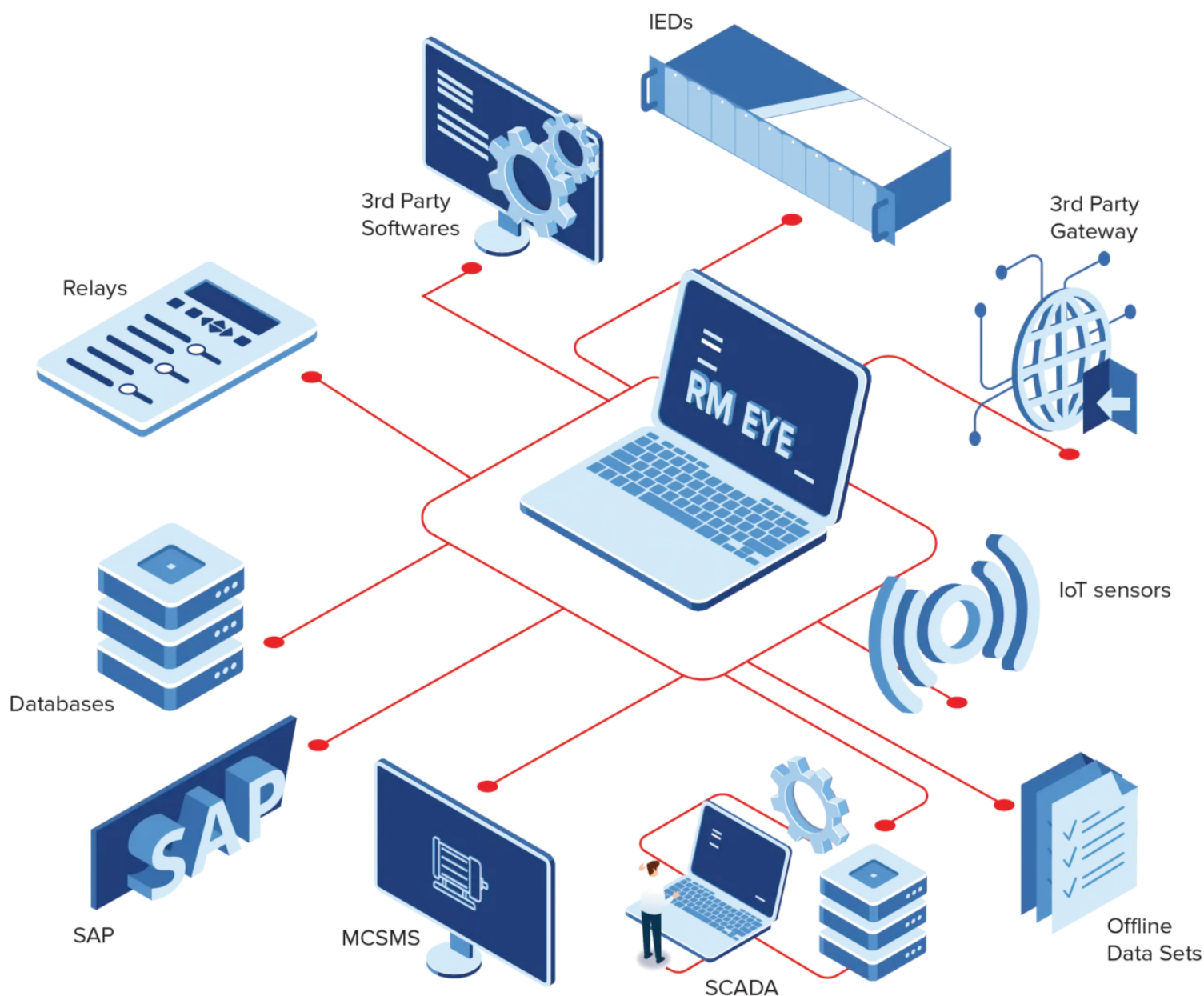- Range of communication options and protocol support; ethernet redundancy (PRP)

Benefits of R501

- Improved asset reliability
- Accurate predictive analysis
- Access asset data from anywhere
- One monitoring solution for multiple assets
- Increased asset lifetime
- Highest return on investment
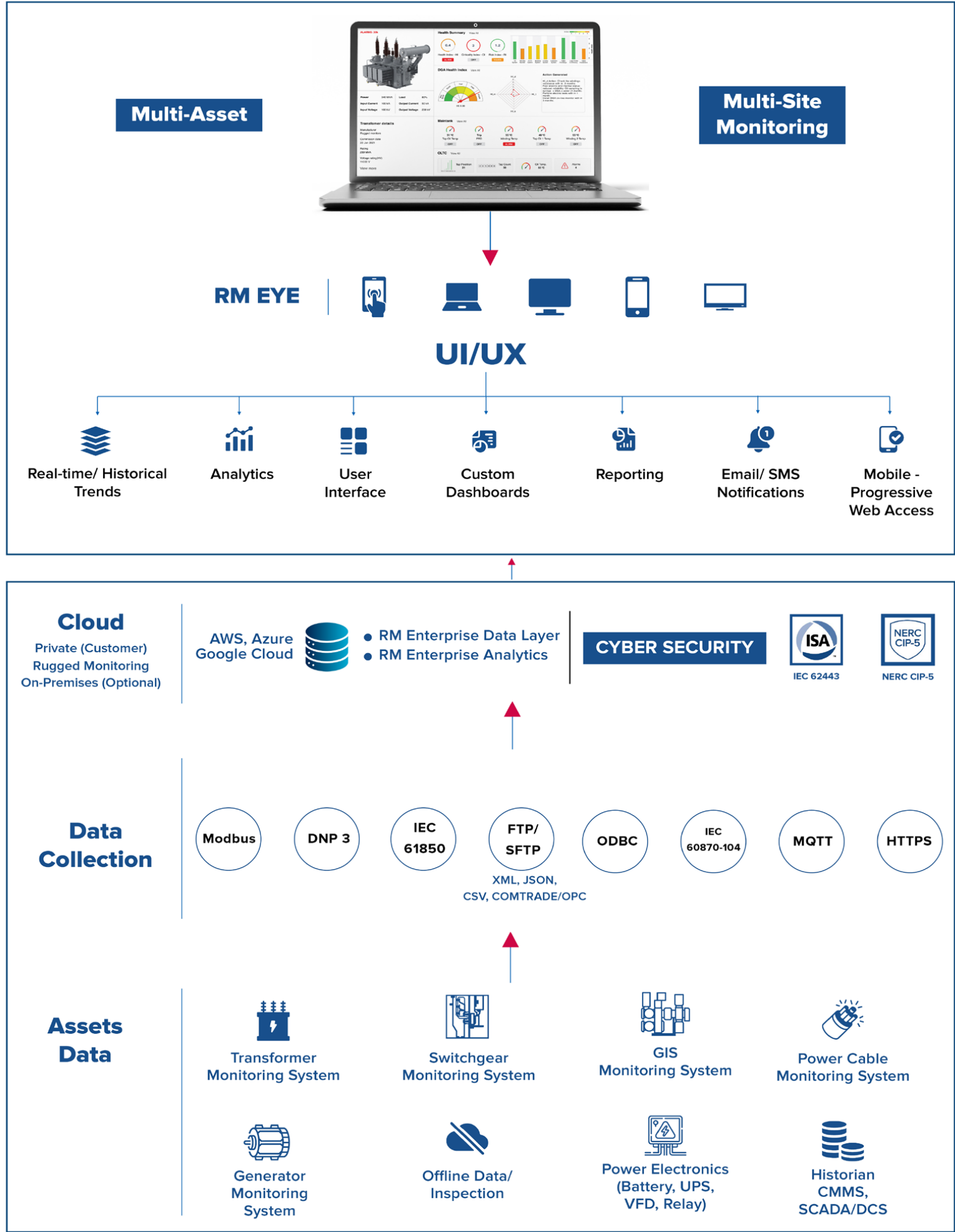- Field upgradable with no device downtime

Enterprise APM Suite: RM EYE

RM EYE represents a paradigm shift in enterprise asset performance management through the condition monitoring of electrical assets. It uses an AI-driven approach to assess the health and performance of diverse assets, delivering transformative and sustainable outcomes related to their health, performance, energy efficiency, and integrity.

Rugged Monitoring's RM EYE transforms traditional time-based maintenance into a proactive approach, equipping businesses with real-time insights into the health of their electrical assets. By detecting potential issues early on it helps create a dependable and efficient predictive maintenance system.

RM EYE Architecture

Multi-Asset

Multi-Site Monitoring

RM EYE | UI/UX

| Real-time/ Historical Trends | Analytics | User Interface | Custom Dashboards | Reporting | Email/ SMS Notifications | Mobile - Progressive Web Access |

Cloud

Private (Customer)
Rugged Monitoring
On-Premises (Optional)

AWS, Azure
Google Cloud

- RM Enterprise Data Layer
- RM Enterprise Analytics

CYBER SECURITY

ISA
IEC 62443

NERC CIP-5
NERC CIP-5

Data Collection

Modbus · DNP 3 · IEC 61850 · FTP/SFTP · ODBC · IEC 60870-104 · MQTT · HTTPS

XML, JSON,
CSV, COMTRADE/OPC

Assets Data

Transformer Monitoring System

Switchgear Monitoring System

GIS Monitoring System

Power Cable Monitoring System

Generator Monitoring System

Offline Data/ Inspection

Power Electronics (Battery, UPS, VFD, Relay)

Historian CMMS, SCADA/DCS

One Solution for Multi-Site
Multi Asset Monitoring

RM Eye - Unified platform to monitor entire network of electrical assets

Features

- **Advanced asset health monitoring** with analysis and recommendations to increase asset effectiveness in addition to maximizing equipment uptime

- **Modern remote monitoring solutions** provide valuable insights to Multiple Assets at Multiple Sites from time to time

- **Establish a real time and consistent monitoring** by getting the right information into right hands

- **Simple and user-friendly interface** providing easy and fast access to all the features

- **Everything about the asset at one place** The raw data, analysis and recommendations

- **Advanced asset algorithms** for electrical assets to evaluate asset health

- **Advanced reporting technology with automated alerts**

- **An efficient, reliable partial discharge monitoring for all the assets**

- **A detailed comprehensive DGA analysis**

- **Built on well-established remote and cloud-based monitoring technology**

- **Quick configuration** so that you are not required to configure separately.

- **Protocols: IEC 61850, MODBUS, MQTT**

- **Robust integration with 3rd party systems and devices** with industry standard protocols

- **Bulk configuration imports for fast deployment**

- **Encompasses a secure access to data and configuration**

- **QR code scanner on mobile devices**

- **Accessible on web browser and mobile app**

- **Historical data storage and on demand access** via export feature

- **Extended multilingual support** to handle product inquires or troubleshoot problems proactively

- **Systematic fleet management analysis**

- **Offline test data integration and analysis**

Why Customers Choose Us ?

Expertise You can Trust

Backed by 100+ years of experience. we understand the unique demands of critical asset management across diverse industries.

Focus on Sustainability

Our Solutions are designed to help you reduce energy consumption, minimize waste, and align with your sustainability goals.

Money Matters

We offer competitive and transparent market pricing to protect you from currency fluctuations.

Customer Centric Approach

From consultation to deployment and beyond, we are committed to delivering exceptional support, personalized service, and timely project completion.