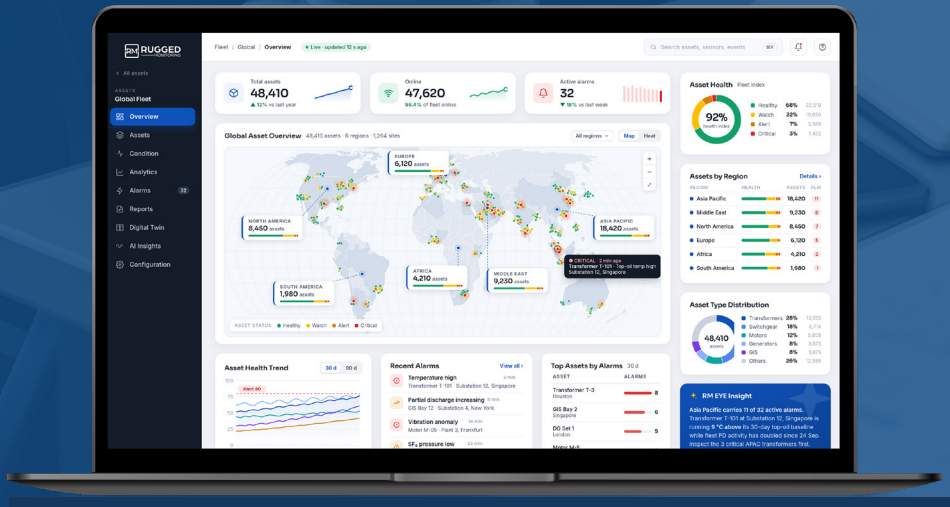
RUGGED MONITORING

MONITORING SIMPLIFIED

RM EYE

Enterprise Asset Performance Management (APM) Suite



RUGGED | ROBUST | RELIABLE



1. Advanced Asset Performance Management System
2. One solution for all electrical assets
3. Remote monitoring of network assets
4. Avoid unplanned outages
5. Reduces cost of planned outages
6. Extend the life of your electrical asset
7. Minimize asset replacement costs
8. Most advanced OEM agnostic solution
9. On-prem or cloud based monitoring
10. Machine Learning and Digital Twin Capability
11. ISO 55000 implementation

» How does RM EYE help users ?

For companies seeking multi-asset, multi-site condition monitoring within a single system, RM EYE offers an industry-leading Asset Performance Management (APM) System. With emphasis on technological research, domain expertise, and innovation, RM EYE empowers condition monitoring systems with real-time data-driven insights into electrical asset performance and health.



RM EYE provides a 360° all-encompassing platform delivering accurate, reliable, and comprehensive data across multiple assets, including transformers, power cables, AIS, GIS, MV Panels, motors, generators, VFDs, batteries, UPS, and relays, ensuring predictive maintenance while optimizing asset performance. Engineered with data intelligence at its core, our APM system provides actionable, real-time insights into electrical asset utilization, building a future towards asset digitization and predictive maintenance.

RM EYE system is a web-based application, which is multi-browser compatible, and is also available on mobile as a PWA, enabling 24/7 remote access to the assets. It offers comprehensive health analytics for the entire fleet across multiple locations, including the Health Index, Risk Index, and Remaining Lifetime Index, to help customers plan maintenance and replacement in a more informed manner. The advanced analytics and health indexes reduce unnecessary maintenance and replacement, improving the ROI.

But RM EYE goes beyond simple data collection. This intelligent system boasts a user-friendly interface designed to make you feel at ease and in control. It adheres to advanced industry standards, and its scalable solution facilitates the digital transformation of asset condition monitoring, enabling customers with asset longevity and maximized profits.

Industry Solution for


Utilities


Power Plants


Solar Farms


Wind Farms


Battery Storage Stations


Refineries


Metals and Mining


Data Centers


Oil and Gas


Charging Station


Steel Plant


Industrial Plant


Marine

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 system 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

Benefits

Company

- Single monitoring solutions for multiple assets
- Avoid unscheduled outages and increase asset utilization
- Extended asset life, with proper maintenance
- Reduce insurance premium with most advanced monitoring
- 24/7 remote monitoring, accessible from anywhere

Manager

- Decision support system for short term and long term planning
- Company, region, substation analysis on your fingertips
- Effective management and tracking of monitoring KPIs
- Identify problem areas with interactive dashboards
- Advanced and automatic management / reg--ulatory reports

Asset Experts

- Deep analysis of diagnosed faults with advanced analytical tools
- Complete asset data at one location
- Customise and generate automatic reports for subscribed assets
- Ready access to historical data for root cause analysis

Operators

- Quick identification of problematic assets in the network
- Get real time alarm/alert notifications
- Realtime updates about the assets on mobile desktop and emails
- Quick access to assets with QR code scan on handheld devices

» Parameters Monitored

for different Asset Types

Transformer



- Temperature monitoring
- NEI & DP analysis
- Complete health indexing
- DGA analysis
- Partial discharge monitoring and analysis
- Thermography
- OLTC monitoring
- Bushing monitoring
- Cooling system monitoring
- Humidity in insulation
- Bubbling temperature

Switchgear

- Breaker Analytics
- Bearker Monitoring
- Motor Monitoring
- SF6 Monitoring
- Contact wear
- Partial Discharge monitoring
- Temperature monitoring



Rotating Machines



- Temperature monitoring
- Power monitoring
- Current signature analysis
- Vibration monitoring
- Flux monitoring
- Realtime Process parameters monitoring

Power Electronics



- Relay monitoring
- Battery Monitoring
- UPS Monitoring
- VFD Monitoring

Power Cables



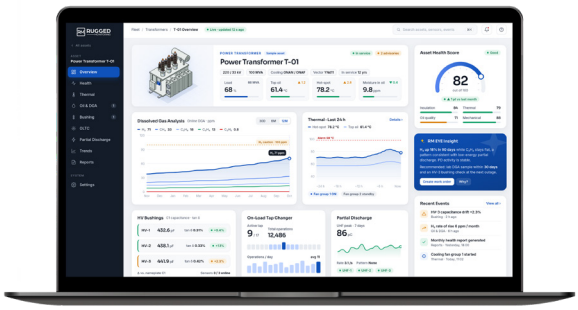
- Partial Discharge monitoring
- DTS
- Fault localization
- Sheath Current Monitoring
- Cable Termination and Joint Temperature Monitoring
- Busduct monitoring



RM EYE

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

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

Technical Specifications

Asset Types Monitored	- All types of Transformers - Switchgears (AIS, GIS, MV Switchgear Panels) - Power Cables - Generators and Motors - Surge Arrestors - Capacitor Banks - Battery Banks - Protection Relays - Variable Frequency Drives (VFDs) - Towers and Overhead lines
Number of Asset Monitored	- Depends on hardware platform - Software can support monitoring of Less than 10 Assets to 1 Million+ Assets
Scalability	- Scalable to add additional assets at later stage - Will require licences to add more number of assets in future
Modularity	- Modular to add more features (Dashboards, Reports, users etc.) - Modular to add new assets and asset types on existing installation - Supports SaaS model, easy to integrate third party analytics
Hosting / Installation Options	- On-Prem (into Customer Data Center) - Customer Cloud Hosting - Rugged Monitoring Hosted Cloud (Subscription based)
Analytical Models	- Asset health Assessment Analytics for Fault Identification and Categorization - Advance Health Index, Risk Index and Criticality Index Analytics for Fleet of Assets - Asset Aging Analytics and Remaining Life Assessment
Alarm / Alert Notification	- Real-Time Alarm and Alert Notification using Traffic Light Indications - Alarms related to issues with Assets, Communication Failure, Power Failure, System Fault, Sensor Failure etc. - Alarm summarization for Substation, Region and Company Level - SMS / Email Notification (Optional)
Visualization and Dashboards	- User configurable visualization for different roles, Company, Region, Substation and Asset Level - Advance Analytical Visualization for all Assets - Easy to navigate to the problematic Asset
Reporting	- Advance reporting engine with flexibility to configure different Reports - Automatic Report Generation on User defined criterion / time period - Automatic Email feature for Reports
User / Role Management	- Easy Integration with Customer Active Directory Control - Functionality to create roles and users for limiting access to the system - Provides flexibility to limit data access and screen level access - Latest Password Protection Practices
Data Input Protocol Supported (for Third Party Monitoring System Integration)	- Modbus, DNP3.0 - IEC60870-101, IEC60870-104, IEC60870-105 - IEC61850 - OPC-DA, OPC-UA - MQTT
Data Input File Supported	FTP/SFTP of following file formats: CSV / Excel, JSON, XML, and PDF
Data Export Protocol Supported	Modbus, DNP3.0, IEC60870-104, IEC61850, OPC-DA, OPC-UA, MQTT
Data Export File Supported	FTP/SFTP of following file formats: CSV / Excel, JSON, XML, and PDF

DS0054R18_RM EYE_EN_A4

CERTIFICATIONS

ISO 9001:2015 ISO 14001:2015 ISO 45001:2018

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