



RIO GRANDE PACIFIC
TECHNOLOGY

RMD

A RIoT™ Device

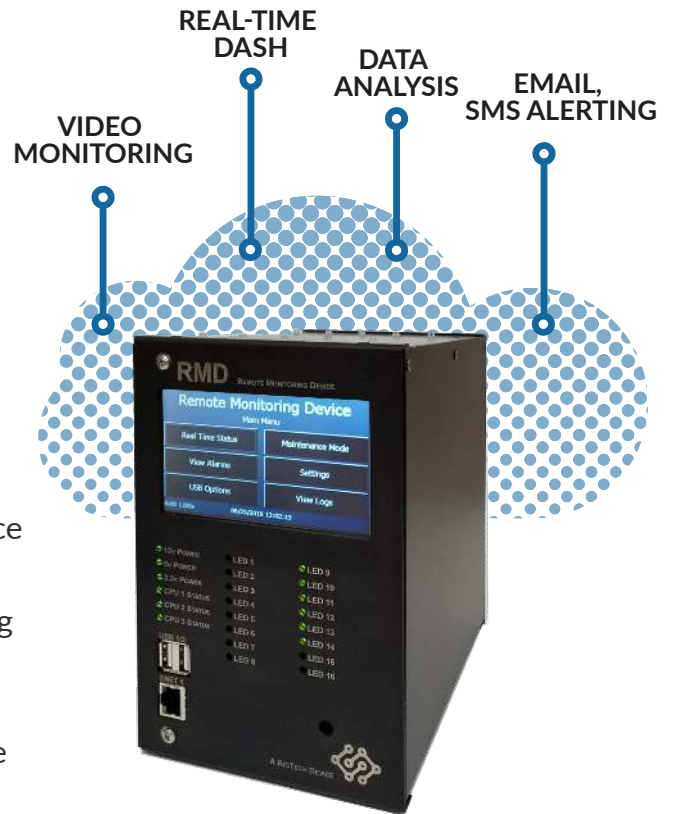
REMOTE MONITORING DEVICE

The Remote Monitoring Device (RMD) is a wayside interfacing node. RMD is part of the Railway Internet of Things (RIoT™) system. The RMD is installed inside railroad equipment enclosures to provide targeted alerts, enable maintenance personnel to confirm a malfunction, and reduce time to trouble-resolution.

The RMD platform meets the American Railway Engineering and Maintenance-of-Way Association (AREMA) and traffic industry compliance standards.

The RMD and all other Railway Internet of Things™ gear are compatible with Windows or Linux operating systems.

The RMD includes 4 expansion bays, which allow additional modules to be added for custom needs and applications.



APPLICATIONS

- ✓ Trespasser detection systems
- ✓ Vehicle turned on tracks detection
- ✓ Remote monitoring systems
- ✓ Grade crossing recorder with video
- ✓ Thermal Imaging Detection
- ✓ Alerting | Alarming | Analytics

FEATURES

- ✓ Remote access
- ✓ Built-in storage—up to 128GB
- ✓ Built-in email, MMS, and SMS alerting system
- ✓ Integrated GPS with autoswitching internal / external antenna support
- ✓ WiFi support
- ✓ Built-in internal speaker with expansion audio support
- ✓ Built-in bungalow / case temperature monitoring
- ✓ B-2 relay mounting package
- ✓ 16 programmable LEDs for quick and easy status viewing
- ✓ Backlit color touchscreen
- ✓ AREMA compliant

TECHNICAL SPECIFICATIONS

The RMD integrates the following functions:

- Remote monitoring relayed by Railway Internet of Things (RIoT™) cloud communications
- Camera snapshots and video recording
- I/O logging
- Programmable alarming

Data obtained from the RMD is relayed to a cloud-based operating system and processed, providing critical information to the user via:

- Still-photo and video hosting
- Email, MMS, and SMS alerts
- Data analysis reports
- Real-time dashboard

Connectivity

- 2x 10/100 Ethernet ports
- 2x USB 2.0 ports
- 5kV dc isolated RS-485 serial port
- GPS SMA antenna connector

Power

- Internal 3kV dc isolated power supply
- Input Voltage - 9 to 36 V dc
- Nominal Current ~800 mA @ 12V dc
- Fuse -10.0 amps maximum; blade type (fast blow) located on top of unit

Dimensions

- Shelf and relay rack options
- Width: 4.937 in. (125.39 mm)
- Height: 7.42 in. (188.47 mm) | 9.375 in. (relay mount) (238.13 mm)
- Depth: 8.75 in. (222.25 mm)
- Weight: 3.5 lb (1.58 kg)

I/O Modules

Accommodates up to 4 Modules

I/O Protection

- Transformer coupled outputs
- Optically isolated
- Surge protected
- Poly-fused

Inputs

8 Vital Class Digital Inputs

- Voltage: 0 to 30 V dc
- Impedance: 1,100 ohm input resistance
- Hysteresis: 1.2 V

4 Analog Inputs

- Voltage: 0 to 36 V dc
- Impedance: 2,400 ohm input resistance
- Digital input capability

Outputs

8 Vital Class Outputs

- Voltage: 12 V dc nominal
- Current: Sources up to 200mA

Temperature

- -40° to 180° F (-40° to 82° C)

User interface

- Color touchscreen
- 16 programmable LEDs
- Keyboard and mouse support