Monitor - Datasheet

Overview

The GH Eye Monitor is a flexible and scalable platform for remote condition monitoring of a wide variety of assets. Combining a rugged, rail-compliant construction, flexible data acquisition capabilities and secure communication, it is ideal for retrofit or new installations. It enables real-time monitoring of equipment performance and condition using a wide range of sensors, onboard processing, and ethernet and cellular connectivity.

Built for harsh railway environments, the device supports predictive maintenance strategies by delivering actionable insights through the GH Eye ecosystem.

Key Features

- Up to 28 analogue inputs
- RS485 interface (Digital Sensors or MODBUS)
- Internal 3-axis accelerometer (vibration & shock monitoring)
- Onboard data processing
- LTE (4G Cellular) and Dual Ethernet (one with PoE)
- Integrated GNSS for location tracking
- Ultra-wide range power supply (12-110VDC)
- Designed to rail standards (EN 50155)

Typical Applications

- HVAC systems
- Door mechanisms
- Air compressors
- Generators & motors
- Rotating equipment
- General rail asset monitoring

Sensor, Gateway & Processing Capabilities

- Analogue and digital sensor inputs
- Edge computing:
  - Local data processing reduces bandwidth usage and cloud loading
- Asset location tracking using GNSS
- Dual ethernet interfaces for integration with onboard train systems
- LTE connectivity for connectivity in standalone applications

Monitor - Datasheet

Remote Condition Monitoring

When used with:

- **GH Eye Cloud**
- **GH Eye Analytics**

...the system provides:

- Real-time asset monitoring
- Predictive maintenance insights
- Reduced downtime and failure rates
- Lower lifecycle maintenance costs

Scan here for more details

The system can be used stand-alone or can integrate with third-party condition monitoring platforms.

Functional Specifications

Parameter	Specification
Analogue Inputs	7 × 6-pin M8 connectors (up to 28 inputs)
Analogue Range	0-5V standard, (0-10V, 4–20 mA optional)
Internal Sensor	3-axis accelerometer (shock and vibration up to 16g, 2kHz)
Digital Interfaces	RS485 (MODBUS Capable), USB (Internal Expansion)
Sampling	Configurable (typical: 10 s interval / 1 s duration)
Connectivity	LTE, GNSS, 2x Ethernet, RS485
Power Supply	12-110VDC (<10 W) EN50155 Compliant (RIA12 option), or 48V Power over Ethernet (PoE)

Physical Specifications

Parameter	Specification
Dimensions	255 x 170 x 57mm
Ingress Protection	IP67
Compliance	EN 50155, EN61373, EN50121-1
