

## RET3000 Series

### Rugged Vehicle Sensor Data Processing Solution with isolated Bus Interfaces and Real-Time Measurement Triggers



The ALGOL RET (Realtime Event Triggered) range of products allow distributed time-and position-accurate data sampling and processing. RET3000 units include different kinds of bus interfaces for connection to control systems and sensors alike. Measurement processes can be triggered via local or remote signals. The ALGOL solution includes mobile measurement technology, wireless communication and Edge / Cloud functionality to configure and supervise measurement clusters and measurement tasks, as well as to download and process data.

#### GENERIC FEATURES

- Fully supervised EN50155 compliant hardware
- Power Supply 12/24/36/48/110V (Variants)
- Fanless Design, power consumption nom. 8W
- Operating Temperature -40 - 70°C
- Ignition pin for low power functionality
- Voltages/Current/Power monitoring
- Quad Arm Cortex™-A35 1.2GHz
- LTE Class 4 modem (RX MIMO/Dual SIM/eSIM)
- Integrated 3 \* concurrent GPS/GNSS
- WiFi / WiFi Mesh networking (Time synchronized)
- Optional: local LoRaWAN Gateway
- Linux Operating System
- Software Container Architecture for Applications
- Security Hardened and configurable Firewall
- Supercap backed Real Time Clock

#### APPLICATIONS

- Railway / Infrastructure Monitoring
- Energy Optimization
- Driver Supervision
- Predictive Maintenance
- Electric Compartment and Screen monitoring
- Temperature and Fan Supervision
- Alarming (Visual or Audio)
- Issue Identification
- KPI Supervision

#### DATA INTERFACES

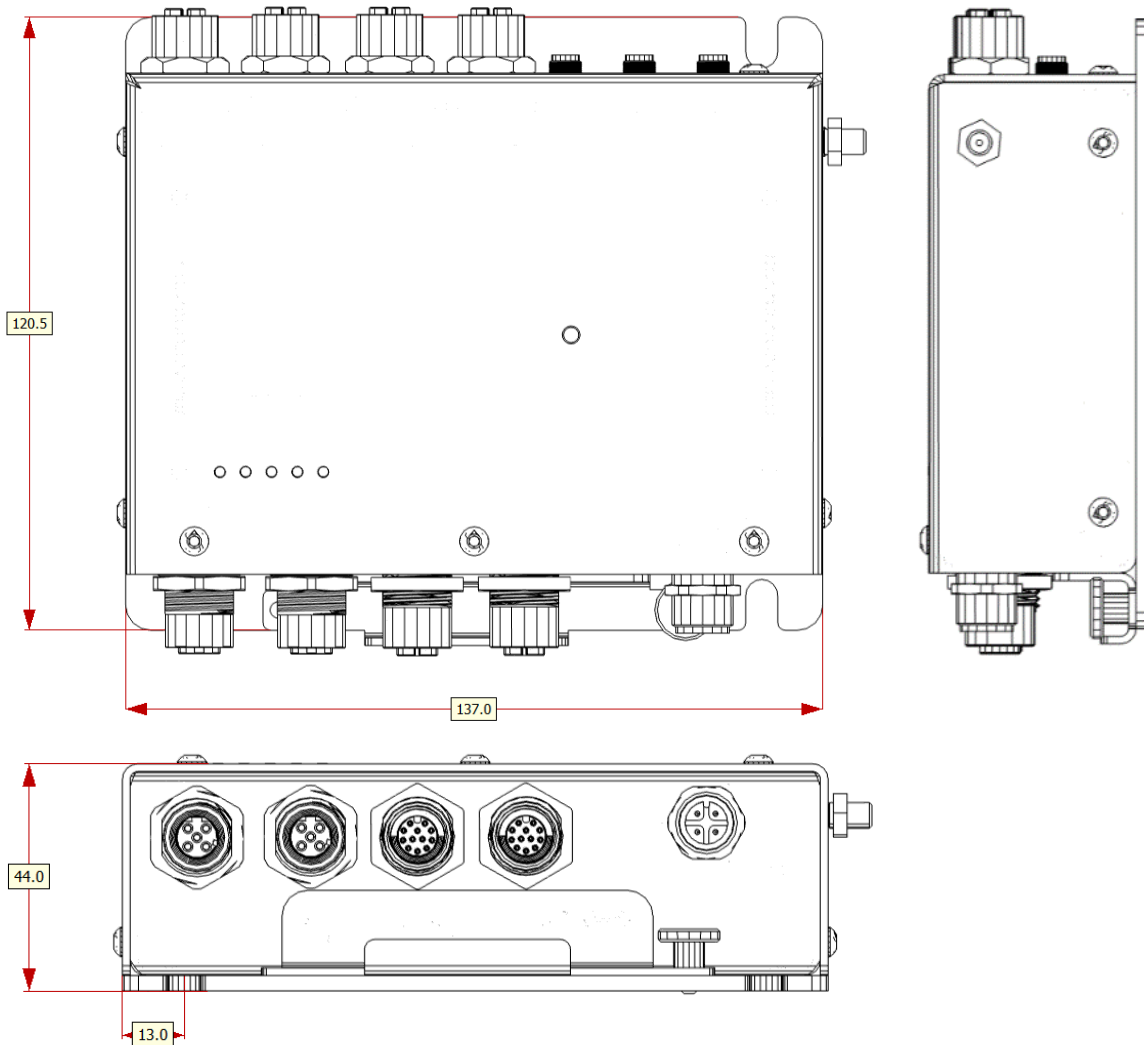
- 1 Ethernet 100Mbit WAN Interface (M12 4 Pin D-Coded)
- 2 Gigabit Ethernet LAN Interfaces M12 8 Pin X-Coded
- 1 USB 2.0 Host on M12 5 Pin A-Coded
- 1 Single Pair Ethernet (SPE) Master
- 1 CAN 2.0B Master
- 1 RS485 Master (Option)
- 1 MVB Bus Module (Option)
- 2 channel-isolated digital inputs
- 2 isolated digital/PWM outputs capable of driving relay coils
- Mobile and GNSS Antenna Connectors (SMA/FAKRA)
- 2 SIM Card Slots for Main Modem
- Vibration proof SD-Card Slot
- MiniPCIe Slot for Modem (separate SIM Card Slot)
- USB-C serial console with protection

#### MEASUREMENT DATA

- GPS accurate Timestamps, Position, Speed, Heading
- Digital Input State
- Data from Communication Interfaces
- Mobile RSSI/RSRP/Cell Info
- Internal and External Triggers
- Additional Data from Software Application
- CPU Supervision Data and memory usage
- Mesh Network Status (if available)
- GPS/GNSS Status

This measurement node is designed to work in a time synchronized distributed RET measurement setup. For information about other measurement nodes and our RET system visit [www.parametric-sds.com](http://www.parametric-sds.com)

## PHYSICAL DIMENSIONS



## DISCLAIMER

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