TracBox

GPS Tracking and Telemetry Device

Version 8
Information Sheet

Real-time ADC and GPS data

TracBox has an integrated 4 channel ADC and GPS to provide GPS location and input voltage tracking and visualisation via an integrated RESTful API. The API permits data from the device to be integrated into a 3rd party data monitoring system. Legacy IMS compatibility is included out of the box and over time will come to include all data fields from the TracBox API.

ADC Sensor Data

TracBox has 3 configurable 12-bit ADC channels (channels 1-3), capable of reading DC voltages up to 100V. Channel 0 will always display the voltage on the TracBox's positive voltage input pin and is not configurable. The onboard ADC allows for the TracBox to be interfaced with many different analog sensors and systems that provide a linear DC output, such as:

- Flow Rates
- Pressure
- Voltage

- Temperature
- Level
- Current

Mounting and Connection Options

The small form factor of the TracBox allows it to be installed in spaces where traditional GPS tracking/hardware sensor devices can't be installed. TracBox is designed to be mounted on the common hardware DIN rail and removeable screw down tabs are also provided. The unit measures a tiny 90x75x25mm. A minimum of a two-wire connection of common ground, and a DC positive voltage source between 5V and 100V. **Damage may occur if the input voltage is exceeded!**

Standard Inclusions

Standard inclusions:

- 33 channel Quectel L96 GPS receiver
- 4 ADC inputs, 3 configurable 0-100V
- 100Mb Ethernet
- DHCP or static IPv4 addressing
- DIN mountable case
- Removable screw-down tabs
- System voltage support is 5-100V DC
- Status LEDs for 5V and 3.3v and GPS ANT
- IMS support
- Internal GPS antenna
- External active 3.3V SMA GPS antenna
- Restful API
- Webserver
- Web UI for firmware updates

Optional inclusions:

- TBA

Support for 3rd party Integrators

TracBox has an inbuilt API that allows other systems to access TracBox data such as ADC voltages and GPS/location information.

Package Contents

Technical Specifications

Name:	TracBox v8
Mounting:	DIN and screw tabs
Operational Temperature:	-20–80 degrees C
Input Voltage:	5–100V DC
Fuse:	External 500mA fuse required
Current Draw:	~100mA @ 24v DC (~2.4w)
Real Time Clock:	No (GPS Time Sync)
Enabled Interfaces from Factory:	Ethernet, GPS, 3 + 1 x ADC.
Management IP:	192.168.137.137/24
ADC Resolution:	12bit
ADC Channels:	4, 3 configurable
GPS Chipset:	Quectel L96
GPS Channels:	99 search, 33 continuous
GPS Bands	GPS, GLONASS, BeiDou, Galileo and QZSS
GPS Accuracy:	2.5m, standard
GPS Rx Sensitivity:	-165dBm tracking, -148dBm acquisition
GPS Update Rate:	10s
External GPS Antenna:	SMA Female, active 3.3v
Dimensions:	W:90mm L:75mm H:25mm, 125g

The GPS module information can be found here: https://www.quectel.com/wp-content/uploads/pdfupload/Quectel_L96_GNSS_Specification_V1.1.pdf

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