GNSS2 - Precision multi-constellation GNSS receiver

- Precision multi-constellation dual frequency 10Hz GNSS receiver
- 2cm position accuracy
- Modem correction input/output for multiple receivers
- LCD for comprehensive status information
- RS232 RT format or NMEA messages
- Fixed latency CAN output
- Time pulse output for data synchronisation

The GNSS2 is a multi-constellation GNSS receiver with built in 4G LTE radio modem, capable of giving 2cm precision position when connected to either a web or radio modem based correction source.

The main applications for the GNSS2 are wherever a CAN or NMEA high accuracy precision output are required, primarily as an input to existing data logging systems. The GNSS2 can also be used as a high accuracy position input with a Race Technology logger such as the DL2. It is not intended for vehicle dynamics performance testing.

There are two main modes of operation:

GPS + GLONASS + Galileo + Beidou 5Hz

GPS + GLONASS + Galileo 10Hz

The GNSS2 is intended for standalone operation with either a Race Technology data logger such as a DL2, or with third party data loggers based using CAN data.

Corrections can be sourced either from a Race Technology base station, or from an NTRIP subscription. In addition to the web based corrections, RTCM corrections can be provided in to the unit via a radio modem if desired.

Full status information for the connection and satellite information is shown on the LCD.

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Correction format	RTCM v3.x
Update rate	Selectable 5Hz or 10Hz (5Hz with BeiDou)
Serial I/O	2 x RS232 ports
Serial 1 (Rear)	NMEA messages at selectable baud rate GPGGA, GPGLL, GPGSA, GPGSV, GPRMC, GPVTG, GPGRS, GPZDA RT format messages at 115200 or 460800 baud
Serial 2 (Rear)	RS232 @ 38400 baud. Input or output RTCM v3.x GPS #1074, #1077 GLONASS #1084, #1087, #1230 Galileo #1094, #1097 BeiDou #1124, #1127 CTS flow control for transmission
CAN output	GPS status, GPS time, LLH Position, NED velocity, 2D & 3D speed, GPS heading & gradient. 5Hz or 10Hz. Output latency either ASAP or fixed 150ms.
USB	Configuration / reflash
LCD	Multi-screen information to show: Screen 1. Connection status, turn around time, correction age Screen 2. GPS and Galileo status Screen 3. Galileo and BeiDou status Screen 4. Operating mode and correction age Screen 5. RS232 port 1 baud rate and mode Screen 6. RS232 port 2 baud rate and mode Screen 7. CAN bit rate and bus loading / status Screen 8. Error messages
SIM card format	Micro-SIM (3FF)
Voltage	12V nominal input, minimum of 10V, maximum of 15V
Power consumption	3W (average)
Weight	540g
Dimensions	163mm x 118mm x 34mm
Antenna (4G main and Aux)	4G LTE compatible
Antenna (GPS)	Dual frequency multi-constellation antenna suitable for operation from 3.3v

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