

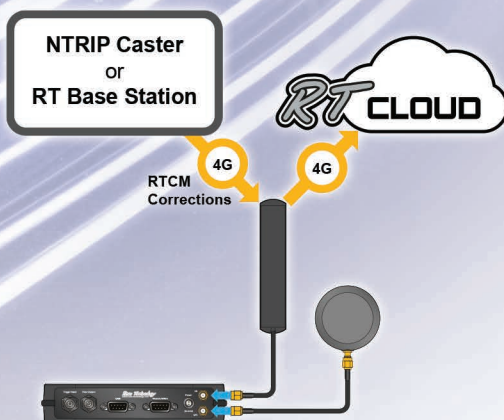
# SPEED100 - 100Hz GNSS Automotive Speed Sensor



- 100Hz low latency CAN and RS232 output
- Built in 4G LTE modem for differential GNSS correction or remote monitoring/logging
- Multi-constellation, dual frequency GNSS
- Compatible with RTK BASE base stations
- LCD for comprehensive status information

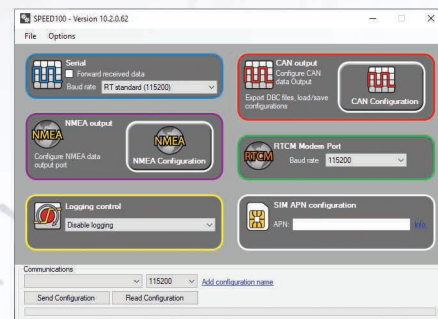
The SPEED100 is a new, high performance, all-constellation, low latency, GNSS receiver. Offering a true 100Hz speed and position output for general automotive testing applications. Suitable for both on-highway and test track speed, bench marking, accelerations etc.

Capable of 0.03m/s speed accuracies and a typical positional accuracy of 1.2m (0.6m with SBAS). The positional accuracy can be improved to around 2cm with the addition of RTK corrections. These corrections can either be from a base station (over 4G LTE or radio) or an NTRIP corrections subscription (using 4G LTE).



The built in 4G LTE modem can also be used to remotely monitor the unit, showing detailed live data in software or limited variables in a web browser. Data can also be logged to the internet cloud storage, allowing office based engineers instant access to the testing files.

The SPEED100 speed sensor outputs configurable CAN, Race Technology serial format, and NMEA high accuracy output, along with a digital time pulse. This precision speed and position output can be logged to an existing data system, input into one of our DL2 data loggers or stored to online cloud storage. An external trigger input allows for marking external events e.g. laser barrier/pedal switch.



SPEED100 configuration software

# SPEED100 - 100Hz GNSS Automotive Speed Sensor

<b>GNSS constellations</b>	GPS, GLONASS, BeiDou, Galileo, all dual frequency
<b>Update rate</b>	100Hz Speed: 0.03m/s
<b>Speed and position accuracy</b>	Position: 1.2m without corrections, 0.02m with RTK corrections  Exact accuracy depends on signals available. Quoted figures are typical averaged figures
<b>Serial (Front)</b>	Race Technology format messages  GPS time, acceleration, speed, gradient, heading, event timer, distance, position, position, GNSS status  115200 or 460800 baud, 100Hz 9 way d-type with dual RS232 ports.
<b>Modem / NMEA</b>	NMEA messages  GPGGA, GPGLL, GPGSA, GPRMC, GPVTG, GPRGS, GPZDA  4800-460800 baud, 1 - 100Hz  Correction messages - RS232 @ 38400 baud. Input RTCM v3.x  GPS #1074, #1077,  GLONASS#1084, #1087, #1230  Galileo#1094, #1097  BeiDou#1124, #1127 Use of RTCM corrections requires the RTK option to be enabled
<b>CAN output</b>	GPS status  GPS time  LLH position  NED velocity  2D & 3D speed  GPS heading & gradient  Cumulative distance  Acceleration  Input trigger timestamp  Selectable baud rate 20Kbit - 1Mbit CAN 2.0b, no termination  Selectable update rates per channel from 1 - 100Hz  Output latency either ASAP or fixed 20ms
<b>USB</b>	Configuration / reflash / Monitor status via RT format messages
<b>Pulse output</b>	0-5V time pulse output aligned to top of second
<b>Trigger input</b>	Timestamped trigger input, 1ms resolution
<b>Remote monitor / data logging</b>	Optional remote data viewing and logging over 4G LTE with logging control to either always log, or log whenever moving
<b>LCD</b>	Multi screen information to show status of 4G LTE connection, GNSS status, CAN and RS232 port status
<b>SIM card format</b>	Micro SIM (3FF)
<b>Power supply requirements</b>	12V nominal input, minimum of 10V, maximum of 15V
<b>Power consumption</b>	3W
<b>Weight</b>	540g
<b>Dimensions</b>	163mm x 118mm x 34mm
<b>Antenna 4G</b>	4G LTE compatible
<b>Antenna (GPS)</b>	Dual frequency multi-constellation antenna suitable for operation from 3.3V

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