

Overview

The VB2SX20SPS is a high end vehicle speed sensor which uses a powerful GPS engine to calculate vehicle speed 20 times a second using the Doppler effect. The output is not interpolated, and represents a true 20Hz update of the vehicle's speed. The VB2SX20SPS also features a built-in graphic display allowing the user to set up and configure the unit without using a laptop PC.

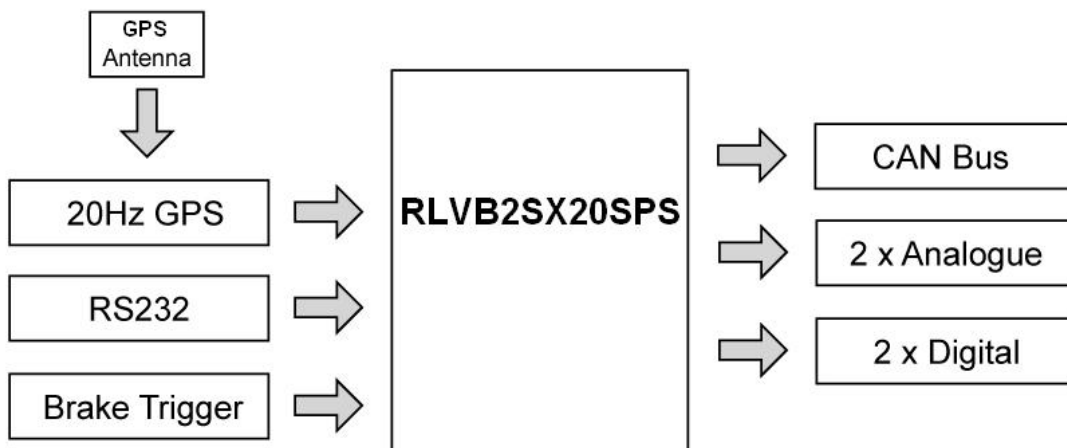


The VB2SX20SPS can be used in conjunction with any VBOX GPS data logger, as well as most third-party data loggers.

Features

- Non-contact 20Hz speed and distance measurement using GPS
- 2 x 16 bit User configurable analogue outputs
- 2 x 24 bit digital outputs
- Brake / Event trigger input
- CAN bus interface for data output
- RS232 serial interface (for setup and LED display only)
- USB interface (for setup and upgrade only)

VB3SPS Inputs and outputs



Channels

- Satellites in view
- UTC time
- Latitude
- Longitude
- Velocity
- Heading
- Altitude
- Vertical Velocity
- Distance
- Longitudinal Acceleration
- Distance from Trigger
- Trigger time
- Trigger Velocity



GPS

Velocity

Accuracy	0.1 Km/h (averaged over 4 samples)
Units	Km/h or Mph
Update rate	20 Hz
Maximum velocity	1000 Mph
Minimum velocity	0.1 Km/h
Resolution	0.01 Km/h

Absolute Positioning

Accuracy	3m 95% CEP**
Accuracy with DGPS	1.8m 95% CEP**
Update rate	20 Hz
Resolution	1 cm

Heading

Resolution	0.01°
Accuracy	0.1°

Acceleration

Accuracy	0.5%
Maximum	20 G
Resolution	0.01 G
Update rate	20Hz

Distance

Accuracy	0.05% (<50cm per Km)
Units	Metres / Feet
Update rate	20Hz
Resolution	1cm
Height accuracy	6 Metres 95% CEP**
Height accuracy with DGPS	2 Metres 95% CEP**

Time

Resolution	0.01 s
Accuracy	0.01 s

Power

Input Voltage range	6v-30v DC
Power	Max 4.5 watts

Environmental and physical

Weight	Approx 600 grammes
Size	170mm x 121mm x 41mm
Operating temperature	-10°C to +60°C
Storage temperature	-30°C to +80°C

Definitions

** CEP = Circle of Error Probable
95% CEP (Circle Error Probable) means 95% of the time the position readings will fall within a circle of the stated diameter

Outputs

CAN Bus

Bit rate	User selectable baud rate
Identifier type	11bit or 29bit
Data available	Satellites in View, Time, Latitude, Longitude, Velocity, Heading, Altitude, Vertical velocity, Distance, Longitudinal acceleration & lateral acceleration, Distance from trigger, Trigger time, trigger Velocity

Analogue

Voltage range	-5V to +5Volts DC
Default setting *	Velocity 0.0125Volts per Km/h (0 to 400Km/h)
Accuracy	0.1 Km/h @ 100Km/h
Update rate	20Hz

Digital

Frequency range	DC to 44.4Khz
Default setting *	25Hz per Km/h (0 to 400Km/h) 90 pulses per metre
Accuracy	0.01Km/h @ 100Km/h
Update rate	20Hz

* The range settings can be adjusted by the user in software

Inputs

Brake/Event Trigger

Polarity	User selectable
Timer	16bit
Resolution	12µs

Hardware/Software Support

One Year Hardware/Lifetime Software Support Contract.

Lifetime Software Support Contract is valid for a minimum of 5 years from the date of purchase and limited to original purchaser. Contract includes telephone/email technical support provided by local VBOX distributor and firmware/software upgrades where applicable.