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Product Datasheet

Part Code: VHVR-GPS-2-(xx)

DVR In-line GPS Receiver

Key Features

- 65 Channel GPS L1 C/A Code
- Perform 8 million time-frequency hypothesis testing per second
- Open sky hot start 1 sec, cold start 29 sec
- Signal detection better than -161dBm
- Multipath detection and suppression
- Accuracy 2.5m CEP
- Maximum update rate 10Hz
- Tracking current ~23mA
- Provides a 10pin header to easily connect to PCB
- 5m CEP Accuracy
- RoHS compliance
- M12 connector for rolling stock regulation compliant

Specifications

Receiver Specifications
Receiver Type: • 65 Channels • GPS L1 frequency, C/A Code
Time to First Fix: • Hot Start: 1 Sec (Avg) • Warm Start: 5 Sec (Avg) • Cold Start: 29 Sec (Avg)
Sensitivity: • Tracking & Navigation: -161dBm • Reaquisition: -161dBm • Cold Start (Autonomous): -145dBm
Accuracy: • Autonomous 2.5 m CEP • Velocity: 0.1 m/sec • Time: 300 ns • RMS: 30 ns • 99%: <60 ns • Compensated: 15 ns
Max Update Rate: Supports 1 / 2 / 4 / 5 / 8 / 10 Hz update rate (1Hz default)

Product Codes
M12 - 10-230-00-001
Serial - 10-230-00-002

Receiver Specifications...continued
Velocity Accuracy: 0.1 m/s
Heading Accuracy: 0.5 degrees
Dynamics: 4G (39.2 m/sec)
RF Connector: MMCX
Serial Interface: 3.3V LVTTL Level 1, M12 Connector
Datum: DefaultWGS-84 - User definable
Input Voltage: 3.3V ~ 5.5V DC ±10%
Input Current: max 75 mA tracking
Dimensions: (L x W x H) M12 - 100mm x 70mm x 30mm Serial - 65mm x 70mm x 30mm
Weight: 10g

Communication Specifications
Interface: Full duplex serial interface
Bit Rate: 800/9600/38400/115200bps (Optional, Default 9600)
Update Rate: 1Hz
Serial Port Protocol: NMEA
Supported Systems: GPS/GLONASS/Galileo
Antenna Specification: SMA - both passive and active supported (max 50 Ω)

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