GPS receiver

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FEATURES:

- 12 Channels (see description below)
- 1PPS output
- Designed for use in weak signal GPS environments
- Can track satellites below -186 dBW (-156 dBm)
- Rapid Time to Fix: <2 secs Outdoor, <5 secs Indoor
- Conforms to PCI Bus Specification, Revision 2.3
- Available Form Factors: PCIe, PCI, cPCI, PC104-*Plus*

General Standards Corporation
8302A Whitesburg Drive · Huntsville, AL 35802
Phone: (256) 880-8787 or (800) 653-9970 FAX: (256) 880-8788 Email: Solutions@GeneralStandards.com

Overview:

This receiver is based on the CW25 by Navsync. The CW25 GPS receiver (CW25) has been specifically designed for use in weak signal GPS environments, while maintaining all the features of a standard GPS solution, such as high accuracy.

Specification/Performance:

Supply voltages 3V3 (Digital I/O), 3V3 (RF), 1V8 (Core option), 3V (Standby Battery)
Operating Temp -30°C to +85°C 2
Storage Temp -40°C to +85°C 2
Humidity 5% to 95% non-condensing
Max Velocity / Altitude 515ms-1 / 18,000m
Max Acceleration / Jerk 4g / 1gs-1 (sustained for less than 5 seconds)
Sensitivity Acquisition with network assist -185dBW
Tracking -186dBW
Acquisition Stand Alone -173dBW
Acquisition Hot Start with network assist Outdoor: <2s
Time Indoor (-178dBW): <5s
Stand Alone (Outdoor) Cold: <45s
Warm: <38s
Hot: <5s
Re-acquisition: <1s (90% confidence)
Accuracy Position: Outdoor / Indoor <5m rms / <50m rms
Velocity <0.05ms-1
Latency <200ms
Raw Measurement Accuracy Pseudorange <0.3m rms, Carrier phase <5mm rms
Power 1 fix per second 0.6W typically
Coma Mode Current <10mA
Protocols Network Assist, NMEA 0183, Proprietary ASCII and binary message formats
1pps Timing Output 30ns rms accuracy, <5ns resolution, Factory customisable pulse width
Receiver Type 12 parallel channel x 32 taps up to 32 point FFT. Channels, taps

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