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PEB-615

High Sensitivity
GPS Engine Board

PEB-615 is a high performance, low power consumption, small size, and very easy integrated GPS engine board designed for a broad spectrum of OEM system applications. The GPS engine board receiver will track up to 20 satellites at a time while providing fast time-to-first-fix and one second navigation updates. The highly integrated digital receiver uses the SiRFstarIII single chipset.
PEB-615 uses highly advanced GPS technology and is capable of acquisition and tracking in very low signal-strength environments. This enables effective and reliable operation in all scenarios. Unique algorithms and multi-path mitigation provide an accurate fix in the most challenging GPS environments, such as urban "canyons" and other areas where GPS signals are weak or deflected off of surrounding buildings.
This hardware capability combined with software intelligence makes the board easy to be integrated and used in all kinds of navigation applications or products.

High acquisition and tracking sensitivity

- High sensitivity for indoor fixes
- Low power consumption
- Real-time navigation for location-based services
- Extremely fast TTFF at low signal levels

Highly integrated component

- Automatic pick and place assembly
- Maximum flexibility
- Extensively configurable
- EMI shielded
- 200,000+ effective correlators for fast TTFF
- Supports 20-channel GPS receiver
- Digital, RF and 4Mb Flash in a single package (GSC3f IC)
- GSC3f IC with ARM7TDMI inside
- 6 GPIO ports
- Integrated TCXO (±0.5 ppm)
- SBAS (WAAS and EGNOS) and DGPS support
- Small size 15mm X 13mm X 3 mm

SPECIFICATIONS

PEB-615		
General	Frequency	L1, 1575.42MHz
	C/ACode	1.023MHz chip rate
	Channel	20
Accuracy	Position	10meters CEP without SA 2DRMS approximately 5M, WAAS support
	Velocity	0.1 meters/secondwithout SA
	Time	1 microsecond synchronized to GPS time
DGPS Accuracy	Position	1 to 5 meters, typical
	Velocity	0.05 meters/second, typical
Acquisition Time	Hot start	1 sec, average
	Warm start	8 sec, average
	Cold start	42 sec, average
Sensitivity	Acquisition	-144 dBm
	Tracking	-159 dBm
Dynamic condition	Altitude	18,000 meters max.
	Velocity	515 m/sec max.
	Acceleration	4g, max
	Jerk	20meters/second3 max.
Protocol Message		SiRF binary and NMEA-0183
DGPS Protocol		RTCM SC-104, WAAS/EGNOS
Datum		WGS-84
Power supply	DC input	3.3 V +/- 10%
	Battery backup	3.3 V
	UART output level	CMOS
Power consumption		60mA @3.3V DC
Storage temperature		-40 ℃ ~ +85 ℃
Operating temperature		-30 ℃ ~ +85 ℃
Dimension		15mm x 13mm x 3mm