

Orcam GPS25 Series Advanced OEM GPS receiver based on the SiRF GSC2x chipset

The Orcam GPS25 Series is a compact, low-power OEM GPS receiver module which allows you to drop-in complete GPS functionality into your product. Its wide input voltage (3.0V – 5.5V) and low power consumption makes it easy to use. Integration is simple and supported by the tools and techniques of hundreds of designs based on the SiRF family of products.

Applications include:

- Fleet Management
- Car and Marine Navigation
- Automatic Vehicle Location (AVL)
- Location-based Services (LBS)
- PDA and Pocket PC applications
- Pet and Child Tracking

Designed without an RF connector, the GPS25 is a true SMT module that can be used in pick-and-place assembly for high-volume manufacturing.



Designed for
High Performance *and*
Reduced Time-to-Market.



Powered by SiRF

The SiRF GSC2x architecture sets a new industry standard for high-volume, low power GPS performance. The GPS25 supports signal detection to -152 dBm (SiRFXTrac) using an external active antenna to meet the challenges of multi-path and urban canyon environments. SiRF SingleSat™, SnapLock™, and FoliageLock™ features further enhance performance and are available on a small power budget

Low Power

Efficient power management is critical to the success of portable devices. SiRFTricklePower™ and Advanced Power Management extends battery life by reducing average current to a few mA.

Fast Time-to-Market

The GPS25 receiver is optimized for high-volume applications where compact size, low cost and rapid development are required. Modular software from an industry leader lets you efficiently integrate the receiver into your design and means that your product can have GPS functionality today, not tomorrow.

q 12 Channel L1 receiver operating on 1575.42 MHz

q WAAS, EGNOS and D- GPS enabled

q 1 PPS signal

q 4 Mbit Flash memory standard, expandable

q NMEA and SiRF binary protocol enabled

q 3 to 5.5 V operation, < 30 mA peak

q 25.4 x 22.86 x 3mm

q Pick-and-place, reflow solder assembly ready

q RoHS Compliant

q Pin to pin compatible with Orcam GPS20

Acquisition Performance

§ 45 s cold start

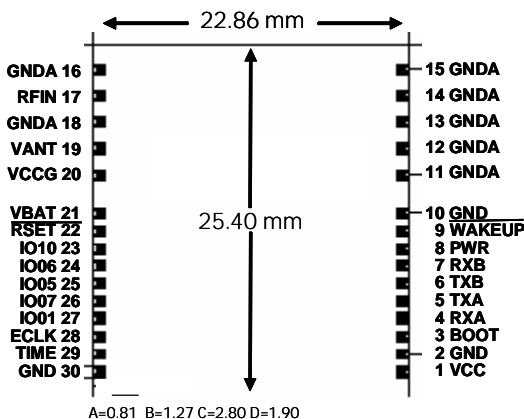
§ 38 s warm start

§ 2 to 8 s Snap start

§ 0.1 s reacquisition

§ 5 meter 95%

General Characteristics	Receiver Architecture	12 Channel 1 satellite/channel simultaneous L1, 1575.42 MHz C/A Code 1.023 MHz chip rate	
	Performance Characteristics	Position Accuracy	approx. 5 meters, 95% of the time <2m, D-GPS on
		Acquisition Rate	45 s cold start, typical 38 s warm start, typical 2-8 s Snap start, typical 0.1 s reacquisition, typical
Communications	Antenna	External active antenna	
	Processor	ARM7 / TDMI	
	Serial Protocol	NMEA 4800, NMEA 9600 or SiRF Binary	
	Serial Port		
	Electrical interface Protocol message D-GPS protocol	Two TTL level serial ports NMEA-0183 and SiRF binary RTCM SC-104	
Electrical	Main power input	3,0 - 5,5 V	
	Supply current	30 mA (peak power) 10 uA (stand by)	
Environmental	Operating temperature	-40 to +85 °C	
	Storage temperature	-55 to +100 °C	
	Altitude	18 000 meters (60 000 feet) max.	
	Velocity	545 meters/second (1000 knots) max.	
	Acceleration	4g max.	
Physical	Dimensions	25.4 x 22.86 x 3mm - shielded module	
	Connectors	30 pad land grid array	



GPS25 Series	GPS25	x	x	x
Standard		S		
SiRFxtrac		X		
			A	
			B	
			J	
NMEA 4800				
NMEA 9600				
SiRF Binary 38400				
Revision				

Ordering Configuration

Crystal version:

- GPS25SAx Receiver with NMEA 4800
- GPS25SBx Receiver with NMEA 9600
- GPS25SJx Receiver with SiRF Binary

TCXO version:

- GPS25XAx Xtrac™ with NMEA 4800
- GPS25XBx Xtrac™ with NMEA 9600
- GPS25XJx Xtrac™ with SiRF binary

For further information visit www.orkam-gps.com or contact your local Acal representative in:
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