



Fastrax IT310

OEM GPS Receiver Module

- **Ultra High Sensitivity with SiRFstarIII**
- **75mW power with SiRF GSC3f/LPx chip**
- **Improved cold start sensitivity**

IT310 Key Features:

- SiRFstarIII chip GSC3f/LPx
- Tiny size – 13.1mm x 15.9mm x 2.3mm
- Low power consumption: 75mW @ 3.0V
- Ultra High Sensitivity –159 dBm (Tracking)
- Cold start sensitivity -146dBm (GSW3.5 firmware)
- NMEA & SiRF binary protocols
- Two serial ports
- 1PPS output

OEM receiver for many Applications

Fastrax IT310 OEM GPS receiver module enables high performance navigation in the most stringent applications and solid fix even in harsh GPS visibility environments.

The IT310 receiver is ideally suited for both industrial tracking and navigation systems and battery operated consumer products like sports accessories, handheld computers, asset tracking devices, vehicle navigation devices and mobile phones.

Market Leading Performance

State-of-the-art cold start sensitivity enables fast TTFF and rapid re-acquisitions in harsh urban canyon or blocking environments. Upgraded -3LPx chip also enables lower power consumption and supports also TricklePower and Push-to-Fix low power management operating modes.

User configurable power management makes IT310 one of the lowest power consuming, complete 20-channel OEM GPS receivers on the market. E.g. the SiRF Adaptive TricklePower™ mode enables low power consumption but which adapts itself to weak signal conditions with full power acquisition and tracking.

The SiRF Push-to-Fix™ mode keeps the GPS time and satellite data valid allowing fast navigation fix on demand.

Cutting component costs

Space and costs are reduced due to the cutting-edge technology in the IT310 receivers. The surface mount SMD design eliminates need for expensive and labor intensive system and RF connectors. Very few additional components are required.

Quick Start with Easy-To-Deploy Solution

The addition of an antenna and power supply is all that is required to make the IT310 operational. The module supports also dedicated control inputs for optional host control for the operating state.



IT310 OEM GPS Receiver Module

Specifications			
General:	L1 frequency, C/A code (SPS) 20 independent tracking channels Separate search and acquisition engine	I/O ports:	36 contact LGA Two asynchronous serial ports 1PPS output 2x GPIO
Update rate:	1 fix/s (user configurable)		External clock input Timesync input Wakeup interrupt input
Accuracy:	Position: 1.8m (CEP95) Velocity: <0.1m/s Time: +/-1us	Protocol:	NMEA 0183, default SiRF Binary Protocol
TTFB:	Cold Start (out of the box): 33s typ. Hot start: 1s typ.	Dimensions:	13.1mm x 15.9mm x 2.3mm (2.6 max)
Sensitivity:	Acquisition (cold): -146dBm (1) Tracking: -159dBm (1)	Weight:	3g
Power Drain (3.0V):	Navigating 1 fix/s: 75mW typ. Back up state: 18uW typ.	Antenna Input:	LGA pad, 50ohm (1)
Operating voltage:	Main Supply VCC: +3.0V... 3.6V Back up Supply: +1.5V... 3.6V	Antenna bias:	same as Main Supply VCC
Operating temperature:	-30C...+85C (2)	Chip set:	SiRFstar III (GSC3f/LPx)
Storage temperature:	-40C...+85C	SW Features:	Adaptive TricklePower(TM) Push-to-Fix(TM) Extremely fast TTFB

Notes:

- 1) GPS simulator usage: external LNA usage is suggested
- 2) Operation accepted also -40°C... -30°C but TTFB may increased

Dimensions and pin out:

