



Fastrax IT321

OEM GPS Receiver Module

- **Miniature Size**
- **Ultra High Sensitivity with SiRFstarIII**
- **Extremely Fast TTFF**
- **Low Power 90mW**

OEM receiver for many Applications

Fastrax IT321 OEM GPS receiver module enables high performance navigation in the most stringent applications and solid fix even in harsh GPS visibility environments.

The IT321 receiver with miniature size, high sensitivity and low power consumption is ideally suited for both industrial tracking, asset tracking and battery operated consumer products like sports accessories, handheld computers and vehicle navigation devices.

Market Leading Performance

It's miniature size and effective cost structure together with extremely high sensitivity makes IT321 widely used in high volume applications with very demanding GPS requirements.

Extremely fast TTFF enables fast acquisition as well as fast re-acquisitions in harsh urban canyon or blocking environments. It also enables low power consumption in special power management operating modes.

With extensive user configurable power saving modes the power consumption can be even more reduced. With the SiRF Adaptive TricklePower™ mode as well as the SiRF Push-to-Fix™ mode the functionality can be optimized to better match the application requirements.

IT321 Key Features:

- Form factor – 10.4mm x 14.0mm x 2.3mm
- Ultra High Sensitivity, acquisition -146dBm (GSWLT3.5.0)
- Ultra High Sensitivity, navigation -159dBm
- Low power consumption: 90mW @ 3.3V
- NMEA & SiRF binary protocols
- One serial port
- ON/OFF control, 1PPS output
- SiRFstarIII chip GSC3LTf

Cutting component costs

Space and costs are reduced due to the cutting-edge technology in the IT321 receiver. 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 Fastrax IT321 operational.

Miniature hardware design

With a size of only 10,4mm x 14,0mm x 2,3mm the IT321 is extremely well suited for applications that have space restrictions. The size combined with the robustness of SiRFstarIII receivers as well as Fastrax design expertise makes IT321 an unbeatable choice for any GPS application.



IT321 OEM GPS Receiver Module			
Specifications			
General:	L1 frequency, C/A code (SPS) 20 independent channels Separate search and acquisition engine	I/O ports:	24 contact LGA One asynchronous serial port (3) 1PPS output (3) 3 GPIO (3) External clock input (3) Timesync input (3) Input for ON/OFF control (4)
Update rate:	1 fix/s (user configurable)	Protocol:	4800 baud (configurable) (switchable NMEA/binary)
Accuracy:	Position: 1.8m (CEP95) Velocity: <0.1m/s Time: +/-1us	Dimensions:	10.4 x 14.0 x 2.3 mm (2.6 max)
TTFF:	Cold Start (out of the box): 32s typ. Hot start: 1s typ.	Weight:	0.7 g
Sensitivity:	Acquisition (cold): -146dBm Tracking: -159dBm	Antenna Input:	LGA pad, 50ohm
Power Drain (3.3V):	Navigation 1 fix/s: 90mW typ. Hibernate (OFF) state: 65uW typ.	Antenna bias:	+2.7V 15mA max
Operating voltage:	Single Supply VDD: +3.25V... +5.5V	Chip set:	SiRFStar III (GSC3LTI)
Operating temperature:	-30C...+85C (1)	SW Features:	Adaptive TricklePower(TM) (2) Push-to-Fix(TM) (2) Extremely fast TTFF
Storage temperature:	-40C...+85C		

Notes:

- 1) Operation allowed at -40C... -30C but TTFF performance may be degraded
- 2) Trademarks of SiRF Technology, Inc.
- 3) I/O signal levels are CMOS 1.8V compatible
- 4) I/O signal levels are CMOS 1.2V compatible

Dimensions and pin out:

