



Fastrax IT300

OEM GPS Receiver Module

- **Ultra High Sensitivity with SiRFstarIII**
- **75mW power with SiRF GSC3e/LPx chip**
- **Improved cold start sensitivity with GSW3.5**

OEM receiver for many Applications

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..

The IT300 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.

The IT300 receiver is pin compatible with IT03-S and size to ensure optimized solution for various needs.

Market Leading Performance

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

User configurable power management makes IT300 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.

IT300 Key Features:

- SiRFstarIII chip set GSC3e/LPx
- Small form factor – 16.2mm x 18.8mm x 2.3mm
- Fastrax IT03-S compatible connectivity
- 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
- GPIO available for custom purposes

Cutting component costs

Space and costs are reduced due to the cutting-edge technology in the IT300 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 IT300 operational. The module supports also dedicated control inputs for external control for the operating state. The Fastrax Engineering Services team can provide antenna design application notes to aid in further refinement of the antenna design for specific applications.



IT300

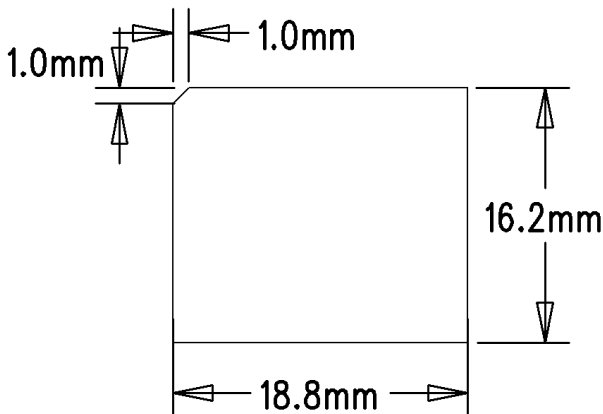
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Specifications			
General:	L1 frequency, C/A code (SPS) 20 independent tracking/search channels Separate search and acquisition engine		I/O ports: 30 contact LGA Two asynchronous serial ports 1PPS output 7xGPIO (one interrupt capable)
Update rate:	1 fix/s (user configurable)		
Accuracy:	Position:	1.8m (CEP95)	Protocol: NMEA 0183
	Velocity:	<0.1m/s	SiRF Binary Protocol
	Time:	+/-1us	
TTFF:	Cold Start (out of the box):	33s typ.	Dimensions: 16.2mm x 18.8mm x 2.3mm (2.5 max)
	Hot start:	1s typ.	Weight: 3g
Sensitivity:	Acquisition (cold):	-146dBm (1)	Antenna Input: LGA pad, 50ohm (1)
	Tracking:	-159dBm (1)	Antenna bias: same as Main Supply VDD
			Chip set: SiRFstar III (GSC3e/LPx)
Power Drain (3.0V):	Navigating 1 fix/s:	75mW typ.	
	Back up state:	18uW typ.	SW Features: Adaptive TricklePower(TM) Push-to-Fix(TM) Antenna bias supervisor
Operating voltage:	Main Supply VDD:	+3.0V..3.6V	
	Back up Supply VDD_B:	+1.5V..3.6V	
Operating temperature:	-30C..+85C (2)		
Storage temperature:	-40C..+85C		

Notes:

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

Dimensions (top view):



Pin numbering (bottom view):

