



smart  
positioning



## iTrax310

### OEM GPS Receiver Module

- Ultra High Sensitivity with SiRFstarIII
- Low power with SiRF GSC3f/LP chip
- Tiny size
- Extremely Fast TTFF

#### ***OEM receiver for many Applications***

Fastrax iTrax310 OEM GPS receiver module enables high performance navigation in the most stringent applications and solid fix even in harsh GPS visibility environments.

The iTrax310 receiver is ideally suited for both navigation systems and battery operated consumer products like mobile phones, personal navigation devices, handheld computers and sports accessories.

#### ***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 iTrax310 one of the lowest power consuming, complete 12-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.

#### **iTrax310 Key Features:**

- SiRFstarIII chip GSC3f/LP
- Tiny size – 13.1mm x 15.9mm x 2.3mm
- Low power consumption: 110mW @ 3.0V
- Ultra High Sensitivity –158 dBm (Navigating)
- NMEA & SiRF binary protocols
- Two serial ports
- 1PPS output
- GPIO available for custom purposes
- External clock input
- Timesync input
- Wakeup interrupt input

#### ***Cutting component costs***

Space and costs are reduced due to the cutting-edge technology in the iTrax310 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 iTrax310 operational. The module supports also dedicated control inputs for external control for the operating state.



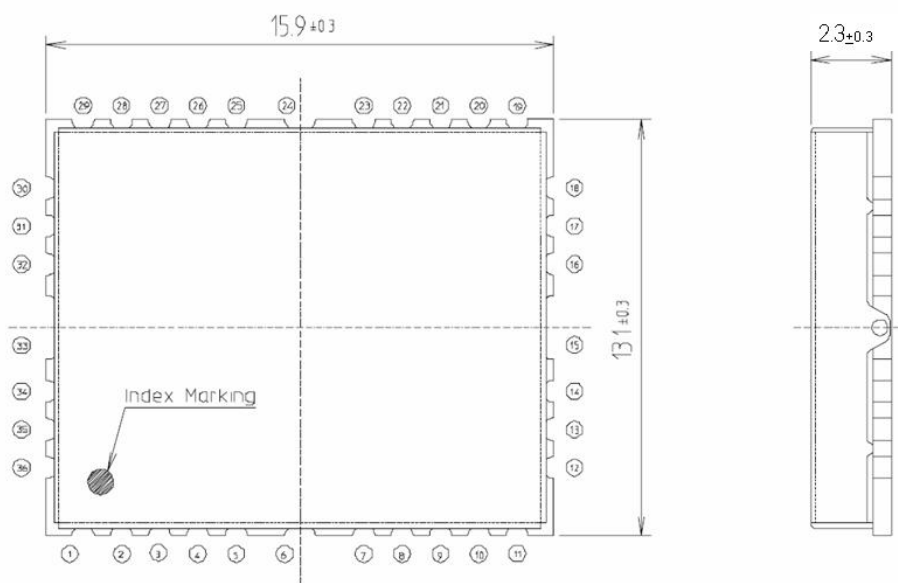
# iTrax310

<b>iTrax310 OEM GPS Receiver Module</b>			
<b>Specifications</b>			
General:	L1 frequency, C/A code (SPS)	I/O ports:	36 contact LGA
	12 independent tracking channels		Two asynchronous serial ports
	Separate search and acquisition engine		1PPS output
Update rate:	1 fix/s (user configurable)		2x GPIO
Accuracy:	Position: 1.8m (CEP95)		External clock input
	Velocity: 0.1m/s		Timesync input
	Time: +/-1us		Wakeup interrupt input
TTFF:	Cold Start (out of the box): 40s typ.	Protocol:	NMEA 0183
	Warm Start: 30s typ.		SiRF Binary Protocol
	Hot start: 2s typ.	Dimensions:	13.1mm x 15.9mm x 2.3mm (2.6 max)
Sensitivity:	Acquisition (cold): -143dBm (1)	Weight:	3 gr
	Navigation: -158dBm (1)	Antenna Input:	LGA pad, 50ohm (1)
	Tracking: -158dBm (1)	Antenna bias:	same as Main Supply VCC
Power Drain (3.0V):	Navigating 1 fix/s: 110mW typ.	Chip set:	SiRFstar III (GSC3f/LP)
	Stand-by state: 3mW typ.		
	Back up state: 45uW typ.	SW Features:	Adaptive TricklePower(TM)
Operating voltage:	Main Supply VDD: +3.0V..3.6V		Push-to-Fix(TM)
	Back up Supply: +2.5V..3.6V		Extremely fast TTFF
Operating temperature:			
Storage temperature:	-40C..+85C (2)		
	-40C..+85C		

**Notes:**

- 1) For Passive antenna & GPS simulator use external LNA usage is suggested
- 2) Increased TTFF times may occur when operating temperature is between -40C...-30C

## Dimensions and pin out (top view):



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