



Fastrax IT500

OEM GPS Receiver Module

- **Ultra High Sensitivity**
- **Fastrax MultiPlatform compatible**
- **Low Power**
- **Market leading performance**

GPS receiver for many Applications

Fastrax IT500 GPS module enables high performance navigation in the most demanding applications and solid fix even in harsh GPS environments. Market leading cold start sensitivity of -148dBm makes it possible to acquire satellite signals and start navigating in places where competing modules do not get even the first fix.

The Fastrax IT500 receiver is suited for asset tracking devices with covert installations (weak signal environment) and battery operated consumer products like personal navigation devices, handheld computers, cameras, and sports accessories.

Highest Performance

The Fastrax IT500 has a market leading navigation sensitivity of -165dBm. This makes it possible to continue navigation in extremely difficult environments, such as indoors or urban canyons, where competing receivers have to give up.

IT500 Key Features:

- Ultra High Sensitivity:
 - 148dBm (Cold Start Acquisition)
 - 165 dBm (Navigation)
- Fastrax IT MP compatible formfactor
- Low power consumption: 75mW @ 3.0V
- Configurable fix rate, up to 10Hz (default: 1Hz)
- NMEA protocol (default speed: 9600bps)
- 1PPS output
- WAAS/EGNOS support
- AGPS
- MediaTek MT3329 receiver

IT500 fix rate is configurable up to 10Hz by user command. This makes the IT500 ideal for extremely high dynamics applications.

Very high sensitivity also compensates the possible negative effect of host system EMI, enabling post-installations in multiple applications.

On-board high efficiency regulator

The Fastrax IT500 has internal high-efficiency switching regulator which makes it possible to use Li-Ion battery supply directly and efficiently without any external regulators.

IT MultiPlatform compatible footprint

The power supply and serial data is all that is required to make the IT500 operational. The IT500 has IT MultiPlatform (IT MP) compatible form factor, which makes it easy to design only one PCB and select best fit module from Fastrax IT MP offering in order to meet different customer requirements.



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IT500 GPS Receiver Module			
Specifications			
General:	L1 frequency, C/A code (SPS)		
	22 tracking + 66 acquisition channels		I/O ports:
Update rate:	1 fix/s (user configurable, up to 10 fix/s)		30 contact LGA
Accuracy (unaided):	Position:	1.8m (CEP95)	Two asynchronous serial ports
	Velocity:	0.1m/s	1PPS output
	Time:	50ns RMS	Antenna detector status pins
TTFF:	Cold Start (out of the box):	34s typ.	
	Warm Start	33s typ.	Protocol:
	Hot start:	1s typ.	NMEA 0183, 9600 baud
Sensitivity:	Acquisition (cold):	-148dBm	Chip set:
	Re-Acquisition:	-160dBm	MediaTek MT3329
	Navigating/Tracking:	-165dBm	Dimensions:
Power Drain (3.0V):	Navigating 1 fix/s:	75mW typ.	16.2mm x 18.8mm x 2.3mm (2.5 max)
	Backup state:	15uW typ.	Weight:
			3g
Operating voltage:	Main Supply:	+3.0V...4.2V	Operating temperature:
	Backup Supply:	+2.0V...4.2V	-40C...+85C
			Storage temperature:
			-40C...+85C
			HW Options:

Dimensions and pin out:

