



Fastrax IT MP Family

GPS Modules

- **Pin compatible receivers**
- **Common form factor**
- **Programmability**
- **High performance**

OEM receivers for many Applications

Fastrax IT MP (Multiplatform) Family receivers are pin compatible with each other offering the same form factor and main functionality. IT MP receivers include IT500, IT300 and IT03-S. The user can select the optimum receiver to meet the specific needs for each application and each customer. Faster Time To Market can be achieved with lower cost by sharing the development, testing and documentation efforts between several designs.

Market Leading Performance

All IT MP receivers offer high sensitivity and good navigation performance even in urban canyons. User configurable power management allows IT MP receivers to be used in battery operated systems requiring low power and small Sleep state current drain. All receivers provide also fast TTFF that enables low energy consumption per navigation fix.

Choose IT500 for:

- ✓ **Highest sensitivity on market**
- ✓ **10Hz fix rate**
- ✓ **Low power consumption**
- ✓ **AGPS (Q4/2009)**
- ✓ **USB connectivity**

Choose IT300 for:

- ✓ **Lowest power consumption**
- ✓ **High sensitivity**
- ✓ **Advanced power saving features**

Choose IT03-S for:

- ✓ **PPS accuracy and configurability**
- ✓ **Custom protocols**
- ✓ **Data logging**
- ✓ **Embedded applications**

IT MP Family Key Features:

- IT500, IT300 and IT03-S modules with common connectivity
- Tiny form factor – 16.2mm x 18.8mm x 2.3mm
- High sensitivity
- Low power
- NMEA & binary protocols
- Two serial ports
- 1PPS output
- GPIO available for custom purposes
- Other peripherals include SPI bus, MMC bus, Capture Timer input, Pulse Measurement input, active antenna status output depending on the module

Cutting component costs

Space and costs are reduced due to the common pin out and functionality with the IT MP 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 supplies is all that is required to make the IT MP receivers operational. These OEM GPS modules also support 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.





Specifications

		IT500	IT300	IT03-S
General:	L1, C/A Code, SPS	22 + 66 channels	20 channels	12 channels
Update rate:		1 fix/s (user configurable)	1 fix/s	1 fix/s (user configurable)
Accuracy:	Position:	1.8m (CEP)	1.8m (CEP)	3m (CEP), 8m (2dRMS)
	Velocity:	0.1m/s	0.1 m/s	0.2m/s RMS
	Time:	+/- 50ns RMS	+/-1us	+/-20ns RMS
TTFF:	Cold Start:	34s typ.	32s typ.	35s typ.
	Warm Start	33s typ.	32s typ.	34s typ.
	Hot start:	1s typ.	1s typ.	4s typ.
Sensitivity:	Acquisition (cold):	-148dBm	-146dBm	-142dBm
	Navigation:	-165dBm	-159dBm	-156dBm
	Re-acquisition	-160dBm	-157dBm	-149dBm
Power Drain:	Navigating 1 fix/s:	75mW typ.	75mW typ.	95mW typ.
	Stand-by state:	1.5mW typ.	3mW typ.	15mW typ.
	Back Up/Sleep state:	15uW typ.	18uW typ.	20uW typ.
Operating voltage:	Main Supply:	+3.0V...4.2V	+3.0V...3.3V	+2.7V...3.3V
	Back up Supply:	+2.0V...4.2V	+1.5V...3.3V	-
	RF Supply:	-	-	+2.7V...3.3V
Other:	Operating temperature:	-40C...+85C	-40C...+85C	-40C...+85C
	Height	2.3mm (2.5mm max)	2.3mm (2.5mm max)	2.3mm (2.5mm max)
	Serial ports:	2	2	2
	GPIO, number of:	5	7 free, 1 dedicated	17 (shared functionality)
	Peripherals:	Antenna detector	-	SPI, MMC, Timer, PM
	SBAS	WAAS/Egnos/MSAS	WAAS/Egnos	WAAS/Egnos
	Chip set	MediaTek MT3329	SiRFstarIII GSC3e/LPx	uNav uN8021+uN2110
	Firmware	AXN 1.3	SiRF GSW3	Fastrax iSuite 3
	Memory	4Mbit Flash	8Mbit flash	8Mbit flash

