



## MightyGPS iTrack GPS Module

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The MightyGPS iTrack GPS Module is on the GSM/GPRS, a simple low-profile design and excellent performance makes the unit easy to integrate, into GPS tracking & AVL system applications.

### **MightyGPS iTrack Features**

- GSM 900/1800 or 850/1900
- GSM/GPRS Real-time tracking
- Support 16 GPS channels "all in view" tracking
- Full management of passwords
- Change settings on demand using SMS messaging
- Low profile Aluminum Housing
- Operates in adverse or urban canyon conditions
- Firmware includes built-in TCP/IP protocol and SMS
- GPRS LCP, PAP, ICPC, TCP IP and UDP protocols
- For AVL, fleet management, GPS vehicle navigation & security

### **iTrack Specifications**

- **Physical Characteristics**
- Weight: 300 g
- Unit size: 95 \* 89\* 35mm (height)
- Case: Aluminum
- **Environmental Characteristics**
- Operating Temperature: -35C to +75C (board temperature)
- **Electrical Characteristics**
- Input Voltage: + 12V
- Power Consumption: 12 Volt 200 mA (GPS On Line)
- (Transmitting)
- 0.1A (AVG); 0.13A (Peak) @12V
- Standby: 0.02A (AVG); 0.03A (Peak) @12V
- Backup Power: Nickel Metal Hydride Battery -- 1000mA
- Remote controller frequency: 434Mhz
- Logging flash memory: 1MB (extendable)
- Up to 4000 individual locations can be saved
- Interface: 2 I/Os, 1 Mini USB port, 4 LED lights for GPS, GSM and error status 1 &

**MightyGPS iTrack GPS**  
(Image)



### **GPS Specifications**

Frequency L1, 1575.42 MHz  
C/A code 1.023 MHz chip rate  
12 channel accuracy  
Position 25 meters CEP without SA  
Velocity 0.1 meters/second, without SA  
Time 1 microsecond synchronized to GPS time  
DGPS Accuracy: Position 1 to 5 meters, typical Velocity 0.05 meters/second, typical  
Acquisition Time  
Snap Start <3 sec., average  
Hot start <8 sec., average  
Warm start <38 sec., average  
Cold start <45 sec., average

### **GSM Modem Specification**

E-GSM/GPRS 900/1800 850/900/1800 and 1900  
58.3 x 32.2 x 3 mm [TBC]  
2 Watts EGSM radio section running under 3,6 Volts  
1 Watt GSM1800 radio section running under 3,6 Volts  
Digital section under 2.8 Volts  
3V SIM interface  
Real-time clock with calendar  
Echo cancellation + noise reduction  
Full GSM or GSM/GPRS software stack  
Hardware GPRS class 2 capable  
Complete shielding  
SIM card

### **GPS/GSM Antenna Specification**

General architecture design 2 Stages active LNA  
Dual Filters, [BPF (dielectric) & LPF (lump element)]  
RF protection (10watt), nano-second Spark-Gap  
Low noise, low drop-out, linear regulator  
Short circuit/ auto shutdown (GPS rcv load protection)  
L1 Band (1575MHz)  
Output Impedance 50 ohms  
Polarization: Right Hand Circular (RHC)  
Bandwidth 10dB MHz @ -3dB point  
VSWR 1.5 Typical @ 1575MHz  
Elev. Angle Coverage 5~90 degree  
Az. Bearing Coverage 360 degree  
Filtering Dual (BPF <10 MHz B/W, LPF @1576 MHz)  
Stop-band @ 1585MHz)  
Over-all Gain 28dB (typical including 4dB cable loss & Filters)  
Over-all NF <1.8dB @ fo, 2dB max.  
LNA Characteristic K=>1 Un-conditionally Stable Electrical Power Input +3Vdc to+12Vdc input, Auto Switch  
Power Consumption 5 to 11mA (max)  
Power Input Sensor Reverse Polarity Short Circuit shutdown  
Over-Current Sensor Thermal Over-current shutdown >+150degree C Physical  
Coax Connectors BNC, SMA, SMB, TNC  
Coax Cable RG-174U double shielded 5m, Low Loss 0.7dB/m  
Environmental Operating Temperature -30 to + 85 degree C  
Storage -40 to + 90 degree C Cellular/GSM Antenna  
Architecture Design PCB patch passive  
Operating Frequency 860~960 MHz / DCS-1800/ PCS-1900  
Gain 3dBi typical  
VSWR <1.5; 1

