## Features:

SiRF starⅢ high performance GPS Chip Set

Very high sensitivity (Tracking Sensitivity: -159 dBm)

Extremely fast TTFF (Time To First Fix) at low signal level

Compact size (30mm * 28 mm * 4.6mm) suitable for space-sensitive application

Support NMEA 0183 and SiRF binary protocol

## Specification:

### General

| | |
|---|---|
| Chipset | SiRF StarⅢ |
| Frequency | L1, 1575.42 MHz |
| C/A code | 1.023 MHz chip rate |
| Channels | 20 channel all-in-view tracking |
| Sensitivity | -159 dBm |

### Accuracy

| | |
|---|---|
| Position | 10 meters, 2D RMS |
| | 5 meters, 2D RMS, WAAS enabled |
| Velocity | 0.1 m/s |
| Time | 1us synchronized to GPS time |

### Datum

| | |
|---|---|
| Default | WGS-84 |

### Acquisition Time

| | |
|---|---|
| Reacquisition | 0.1 sec., average |
| Hot start | 1 sec., average |
| Warm start | 38 sec., average |
| Cold start | 42 sec., average |

### Dynamic Conditions

| | |
|---|---|
| Altitude | 18,000 meters (60,000 feet) max |
| Velocity | 515 meters /second (1000 knots) max |
| Acceleration | Less than 4g |
| Jerk | 20m/sec **3 |

### Power

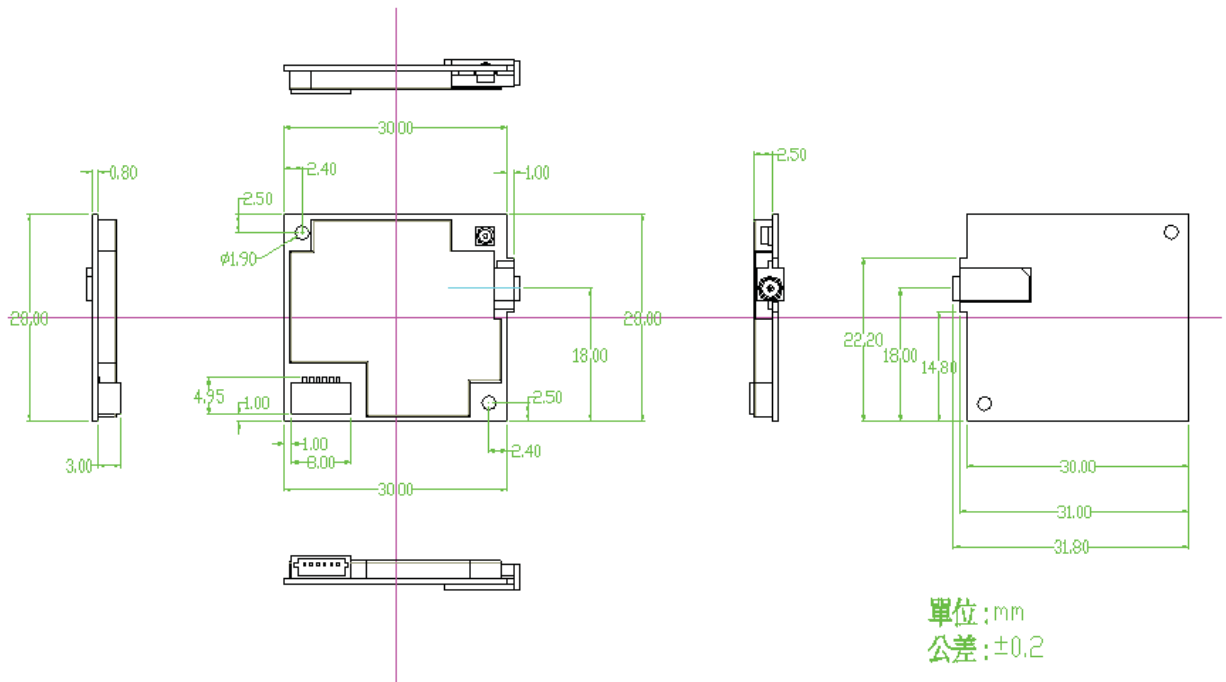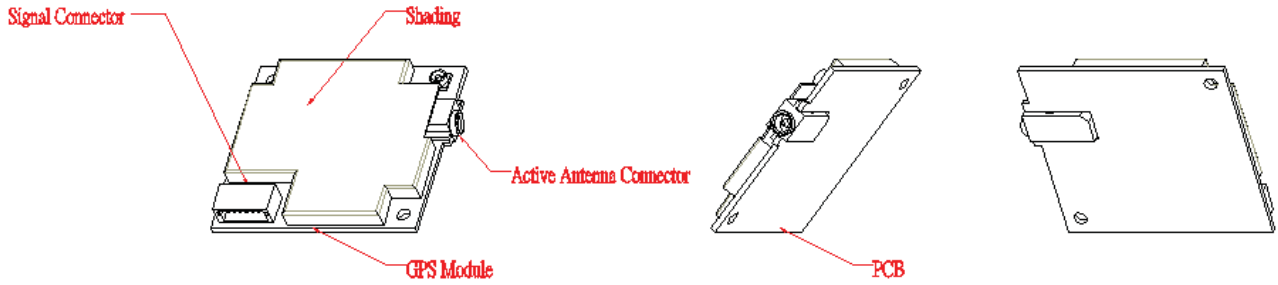| | |
|---|---|
| Main power input | 3.3V +- 5% DC input |
| Power consumption | 25mA (Continuous mode) |

### Interface

| | |
|---|---|
| Dimension | 30mm * 28mm * 4.6mm |
| Baud rate | 4,800 to 57,600 bps adjustable |
| Output message | SiRF binary or |
| | NMEA 0183 GGA, GSA, GSV, RMC, VTG, GLL |

## Environmental

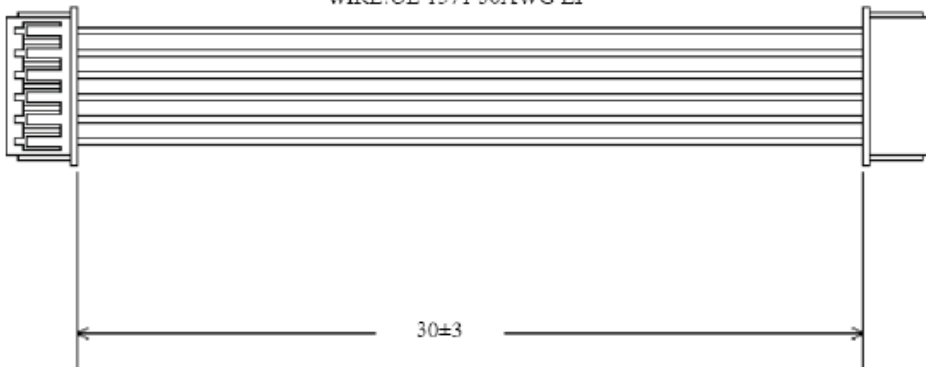Operating Temp          -40℃  to +85℃

## Pin Assignment & Dimension





HOUING:TH1001HN0-06

TERMINAL:TH1001TPO-A

WIRE:UL 1571 30AWG LF

30±3

Unit: mm

# Pin description

**wer input):**

This is the main DC supply for a 3.3V +- 5% DC input power module board.

**\* GPS-VBAT (Backup battery):**

This is the battery backup input that powers the SRAM and RTC when main power is removed. Typical current draw is 15uA. Without an external backup battery, the module/engine board will execute a cold star after every turn on. To achieve the faster start-up offered by a hot or warm start, a battery backup must be connected.    The battery voltage should be between 2.0v and 5.0v.

**\* GPS-LED:**

User can use this I/O pin for special function.

For example, on/off LED

**\* GPS-TX:**

This is the main transmits channel for outputting navigation and measurement data to user's navigation software or user written software.
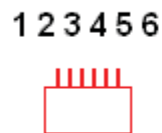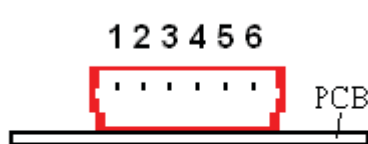
Output TTL level, 0V ~ 2.85V

**\* GPS-RX:**

This is the main receive channel for receiving software commands to the engine board from SiRFdemo software or from user written software.

**\* GND:**

GND provides the ground for the engine board. Connect all grounds.

| PIN | NAME |
|-----|----------|
| PIN 1 | VDD |
| PIN 2 | GND |
| PIN 3 | GPS-TX |
| PIN 4 | GPS-RX |
| PIN 5 | GPS-LED |
| PIN 6 | GPS-VBAT |