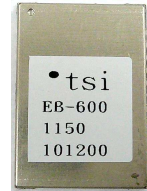


## GPS Engine Board

### EB-600

EB-600 is a **18.4x13x2.2 mm** GPS engine that is capable of receiving both **GPS and Glonass** signal with single RF input and high receiving sensitivity. EB-600 provides superior navigation performance under dynamic conditions in areas with limited sky view like urban canyons. With up to **-162dBm** tracking sensitivity the GPS + Glonass dual system EB-600 enables better satellite coverage and superior position accuracy for your navigation need.



Pin locations backward compatible with TSI's EB-500, you can easily upgrade your system to latest high sensitivity GPS + Glonass receiver available in the industry.

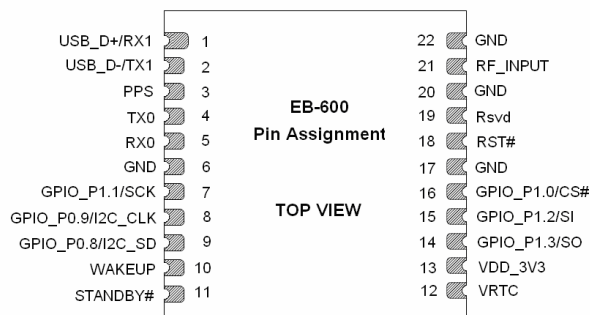
#### Key Features :

- Small form factor: 18.4 x13 x 2.2 mm
- Support GPS + Glonass dual system
- Lead-Free – RoHS/WEEE compliant
- High sensitivity -162dBm / Tracking
- Tracks 32-Channel of satellites
- Fast Position Fix
- Low power consumption
- USB & UART interface
- Backward compatible with EB-500

#### Applications :

- Automotive and Marine Navigation / Tracking
- Emergency Locator
- Geographic Surveying
- Personal Positioning
- Sporting and Recreation

#### PIN Assignment :



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## Specifications

<i>Item</i>	<i>Description</i>
<b>General</b>	L1 frequency, C/A code (SPS) 32 independent tracking channels
<b>Sensitivity*</b>	-162dBm /Tracking; -146dBm /Acquisition
<b>Update Rate</b>	1~10Hz
<b>Accuracy</b>	Position : 1.5m CEP 50% without SA(horizontal) Velocity : <0.1m/s Time : +/-1us
<b>Acquisition (open sky)</b>	Cold Start: 35sec Hot Start: 1sec typical
<b>Reacquisition</b>	< 1sec
<b>Dynamics</b>	Altitude: 18000m (max.) Velocity: 515m/sec (max.) Vibration: 4G (max.)
<b>NMEA</b>	NMEA0183 v3.1 GGA, GSA, GSV, RMC ( Default ) / GLL, VTG (Optional )
<b>Datum</b>	Default WGS-84
<b>Antenna</b>	External active or passive antenna
<b>Power Supply</b>	DC 2.7V ~ 4.2V
<b>Current</b>	42 mA @ 3.3V / Tracking
<b>Interface</b>	UART, Baud rate : 4800/9600( Default )/.../11520 USB 2.0 / 12Mbps
<b>Mounting</b>	SMT
<b>Dimension</b>	18.4 x 13 x 2.2 mm
<b>Operating Temp.</b>	-40°C to 85°C
<b>Storage Temp.</b>	-40°C to 85°C
<b>Operating Humidity</b>	≤ 95%, non condensing

\* Refer to chip specification.

\*\* Specifications subject to change without prior notice.

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## Pin Definition

Pin#	Signal Name	Type	Description
1	USB_D+ / RX1	I	USB Data Plus ; UART port 1 input, leave open if not used
2	USB_D- / TX1	O	USB Data Minus ; UART port 1 output, leave open if not used
3	GPIO_P0.0 / PPS	O	Pulse per second output
4	TX0	O	UART port 0 output for NMEA
5	RX0	I	UART port 0 input
6	GND	P	Ground
7	GPIO_P1.1 / SP_SCK	I/O*	General input/ output ; SPI clock, leave open if not used
8	GPIO_P0.9 / GNSS Status / I2C_CLK	O	General input/ output ; GNSS status indication ; I2C clock
9	GPIO_P0.8 / I2C_SD	I/O*	General input/ output ; I2C serial data
10	WAKEUP	I	Wakeup from standby mode
11	STANDBY#	I	Active low to put module into standby mode, leave open if not used.
12	VRTC	P	RTC power 1.62~3.6VDC
13	VDD_3V3	P	Power supply 2.7~4.2VDC
14	GPIO_P1.3 / SSP_SO	I/O*	General input/ output ; SPI data output, leave open if not used
15	GPIO_P1.2 / SSP_SI	I/O*	General input/ output ; SPI data input, leave open if not used
16	GPIO_P1.0 / SP_CS#	I/O*	General input/ output ; SPI chip select, leave open if not used
17	GND	P	Ground
18	RST#	I	Reset input, active low with Schmitt-Trigger, leave open if not used.
19	Rsvd	I/O*	Reserve for future use, leave open if not used
20	GND	P	Ground
21	RF_Input	I	RF input port, L1 band, 50 ohm Active antenna power feed, same as VDD_3V3
22	GND	P	Ground

P: Power I: Input O: Output I/O\*: Input or Output, leave open if not used



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