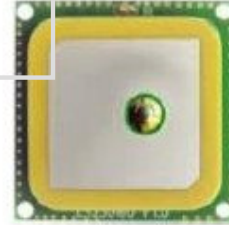


## GPS Engine Board



### EB-24X

EB-24X is a complete GPS sub-system with 30 x 30 mm<sup>2</sup>. Equipped with antenna, back up battery and GPS engine, it provides superior navigation performance under dynamic conditions in areas with limited sky view like urban canyons. High sensitivity up to **-158dBm** for weak signal operation without compromising accuracy. EB-24X is your best choice for embedded applications.



#### Key Features :

- Compact form factor: 30 x 30 x 8.5 mm
- Lead-Free – RoHS/WEEE compliant
- Tracks 51-Channel of satellites
- Fast Position Fix
- Low power consumption
- 3.3Vdc supply voltage
- 6 pin UART port
- Build-in re-chargeable backup battery

#### Applications :

- Handheld devices
- Automotive and Marine Navigation
- Automotive Navigator Tracking
- Emergency Locator
- Geographic Surveying
- Personal Positioning
- Sporting and Recreation
- Embedded applications : PDA, AVL, UMPC, PND, MP4

#### PIN Definition :

Pin assignment **Low Voltage TTL version**

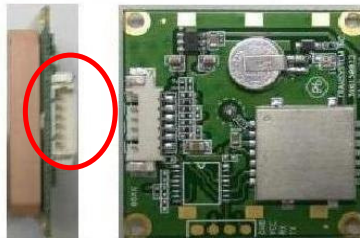
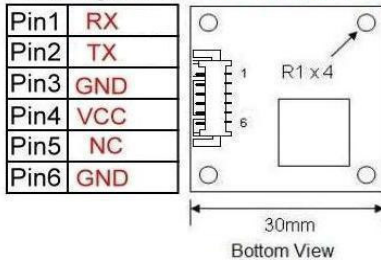


Fig1. Wafer connector

Pin assignment **RS232 version**

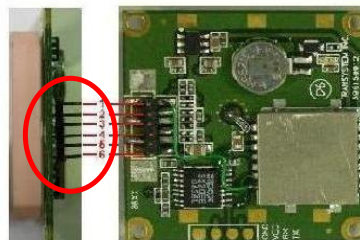
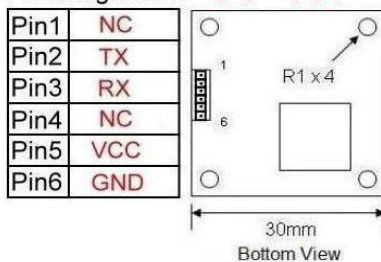


Fig2. PIN Header

## Specifications

Specification	Description
General	L1 frequency, C/A code (SPS) 51 independent tracking channels
Sensitivity	-158dBm /Tracking; -146dBm /Acquisition
Update Rate	Up to 5Hz
Accuracy	Without aid: 3.0m 2D-RMS <3m CEP (50%) without SA (horizontal) DGPS (WAAS, EGNOS, MSAS, RTCM): 2.5m
Acquisition (open sky)	Cold Start: 36sec Warm Start: 33sec Hot Start: 1sec
Reacquisition	< 1sec
Dynamics	Altitude: 18000m (max.) Velocity: 515m/sec (max.) Vibration: 4G (max.)
Supply Voltage	DC 3.0~6 V
Power Consumption	30mA @ 3.30V / Tracking
Backup Battery	Build-in
NMEA Message	NMEA0183 v3.1 baud rate 4800/9600/.../57600, default 9600 Selectable Output: GGA, GLL, GSA, GSV, RMC, and VTG
Datum	Default WGS-84
Antenna	Build-in 25*25*(4 or 2)mm patch antenna, right hand circular polarization, 50ohm
Signal Level	Low Voltage TTL or RS-232
Connector	DIP or Wafer connector, pitch 1.0mm directional wire to board connector. See ordering information
Operating Temperature	-30°C to 85°C
Storage Temperature	-40°C to 85°C
Operating Humidity	≤ 95%, non condensing
Dimension	30 x 30 x 8.5(H) mm max, see ordering information

\*Specifications subject to change without prior notice.

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## Order information

Product	Antenna	Signal Level	Connector	Dimension
EB-240 TD	2mm	Low Voltage TTL	PIN Header	30 x 30 x 6.5(H) mm
EB-240 TW	2mm	Low Voltage TTL	Wafer	30 x 30 x 6.5(H) mm
EB-240 RD	2mm	RS-232	PIN Header	30 x 30 x 6.5(H) mm
EB-240 RW	2mm	RS-232	Wafer	30 x 30 x 6.5(H) mm
EB-241 TD	4mm	Low Voltage TTL	PIN Header	30 x 30 x 8.5(H) mm
EB-241 TW	4mm	Low Voltage TTL	Wafer	30 x 30 x 8.5(H) mm
EB-241 RD	4mm	RS-232	PIN Header	30 x 30 x 8.5(H) mm
EB-241 RW	4mm	RS-232	Wafer	30 x 30 x 8.5(H) mm

