

GPS Engine Board

EB-845A

EB-845A is a complete GPS and GLONASS dual system engine board of 28x26.3mm in size. It has integrated patch antenna and 6 pin wafer connector interface or 6 pin through holes.

It provides superior navigation performance under dynamic conditions in areas with limited sky view like urban canyons.

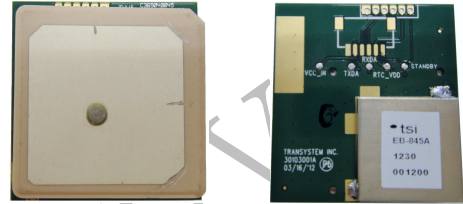
EB-845A has high receiving sensitivity up to **-165dBm** for weak signal operation without compromising accuracy.

Key Features :

- Small form factor: 28x26.3x8.2 mm
- Integrated 25x25x4 mm patch antenna
- 6 pin wafer connector or 6 pin through holes for UART port
- Lead-Free – RoHS/WEEE compliant
- High sensitivity -165dBm
- Tracks 99 Channel of satellites
- Support multi-GNSS including. QZSS, SBAS
- WAAS/EGNOS/MSAS/GAGAN supported
- RTCM ready
- AlwaysLocate™ location awareness technology
- EPO™ / HotStill™ orbit prediction
- EASY™ self-generated orbit prediction
- Fast Position Fix
- Ultra low power consumption
- Optional backup battery
- FCC E911 compliance and A-GPS support

Applications :

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



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Specifications

<i>Item</i>	<i>Description</i>
General	L1 frequency, C/A code (SPS) 99 independent tracking channels
Sensitivity*	-165dBm /Tracking; -148dBm /Acquisition
Update Rate	Up to 10Hz
Accuracy	<3m CEP (50%) without SA 2.5m DGPS (WAAS, EGNOS, MSAS, RTCM)
Acquisition (open sky)	Cold Start: 35sec Warm Start: 34sec Hot Start: 1.5sec
Reacquisition	< 1sec
Dynamics	Altitude: 18000m (max.) Velocity: 515m/sec (max.) Vibration: 4G (max.)
NMEA	NMEA0183 v4.1 GGA, GSA, GSV, RMC (Default) / GLL, VTG (Optional)
Datum	Default WGS-84
Antenna	Integrated 25x25x4 mm patch antenna (Optional 25x25x2mm patch antenna)
Power Supply	DC 3.0V ~ 4.2V
Current	<25mA @ 3.3V / Tracking
Interface	UART, Baud rate : 4800/9600(Default)/.../115200
Connector	6 pin wafer – female, pitch 1mm 6 pin through holes, pitch 1.27mm
Dimension	28x26.3x8.2 (max) mm / Optional 28x26.3x6.2 (max) mm
Operating Temp.	-40°C to 85°C
Storage Temp.	-40°C to 85°C
Operating Humidity	≤ 95%, non condensing

* Refer to chip specification.

** Specifications subject to change without prior notice.

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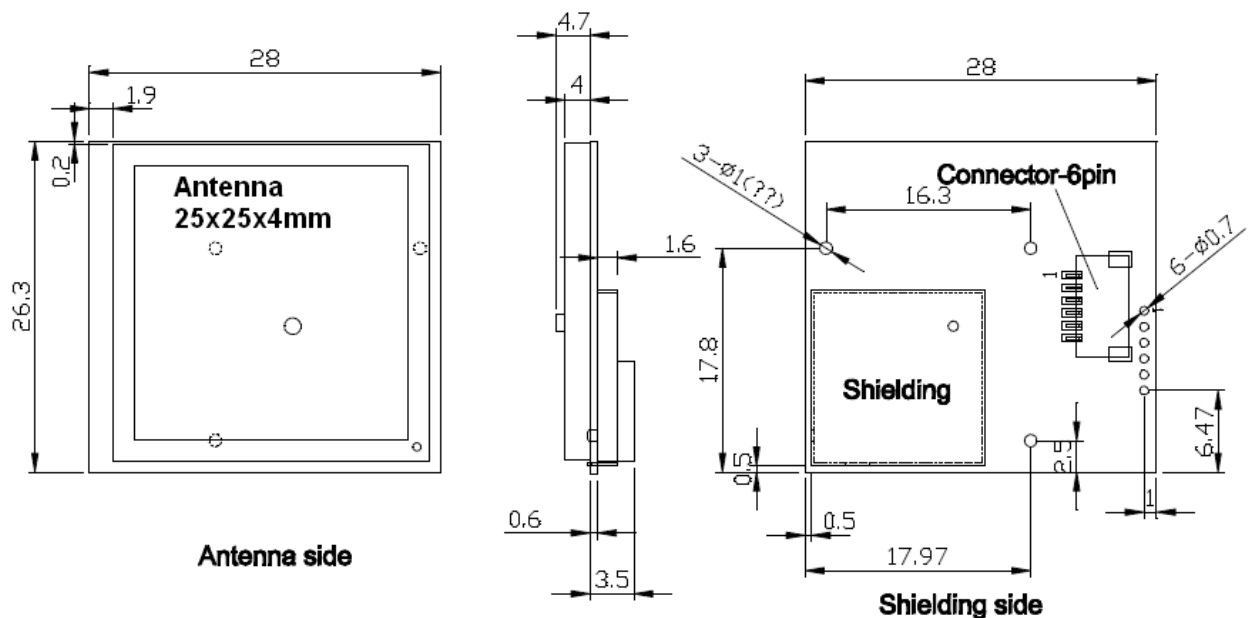
EB-845A Catalog

Pin Definition

Pin # Wafer	Pin # Holes	Name	Type	Description
1	1	GND	P	GND
2	4	VCC_3V3	P	VCC 3.0V~4.2Vdc
3	2	TX	O	UART output from EB-845A
4	3	RX	I	UART input to EB-845A
5	5	VBAK_3V3	P	Backup power 2.0~4.3Vdc, leave open for EB-845AG
6	6	STANDBY#	I	Standby control, falling edge trigger

P: Power I: Input O: Output I/O*: Input or Output, Open if not used

Mechanical Dimensions



Selection Guide

Model No.	Interface	Backup Battery	Note
EB-845A	6 pin through holes	No	
EB-845AW	6 pin wafer connector	No	
EB-845AG	6 pin wafer connector	Yes	



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