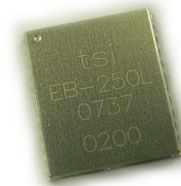


GPS Engine Board

EB-250/ EB-250L

EB-250 is an ultra miniature 13 x 15 mm² GPS engine board. 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-250 series are your best choice for embedded applications.



Key Features :

- Small form factor: 13 x 15 x 2.2 mm
- Lead-Free – RoHS/WEEE compliant
- High sensitivity -158dBm
- Tracks 51-Channel of satellites
- Fast Position Fix
- Low power consumption
- Max. GPS signal input level :
EB-250 -120dBm
EB-250L -117dBm

Applications :

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

PIN Definition :

1	RX1	GND	22
	TX1	RF_INPUT	
	PPS	GND	
	TX0	V285A	
	RX0	NC	
	GND	GND	
	GPIO[8]	GPIO[5]	
	GPIO[0]	GPIO[7]	
	GPIO[4]	GPIO[6]	
	V285D	VIN_3V3	
11	ON/OFF	V_RTC_3V3	12

PIN Coordinates Unit:mm

Pin #	X	Y	Pin #	X	Y
1	0.00	0.00	12	13.0	12.7
2	0.00	1.27	13	13.0	11.43
3	0.00	2.54	14	13.0	10.16
4	0.00	3.81	15	13.0	8.89
5	0.00	5.08	16	13.0	7.62
6	0.00	6.35	17	13.0	6.35
7	0.00	7.62	18	13.0	5.08
8	0.00	8.89	19	13.0	3.81
9	0.00	10.16	20	13.0	2.54
10	0.00	11.43	21	13.0	1.27
11	0.00	12.7	22	13.0	0.00



TRANSYSTEM INC.

An A+ supplier of RF microwave & GPS products

Ultimate

EB

Ver 1.0

EB-250 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: 36 sec Warm Start: 33 sec Hot Start: 1 sec
Reacquisition	< 1sec
Dynamics	Altitude: 18000m (max.) Velocity: 515m/sec (max.) Vibration: 4G (max.)
Supply Voltage	DC 3.0~6 V
Power Consumption	EB-250: < 30mA @ 2.85V (w/o Active ANT) / Tracking EB-250L: < 27.5mA @ 2.85V (w/o Active ANT) / Tracking
Backup Battery	DC 1.5~6V (RTC Vcc)
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 (total 219 Datum)
Antenna	External Antenna / External Active Antenna Output Voltage: 2.85 VDC
Serial Interface	TTL
Operating Temperature	-30°C to 85°C
Storage Temperature	-40°C to 125°C
Operating Humidity	≤95%, non condensing
Mounting	SMT Type, 22 Pin
Dimension	13 x 15 x 2.2(H) mm

*Specifications subject to change without prior notice.
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