GPS Engine Board

EB-5084

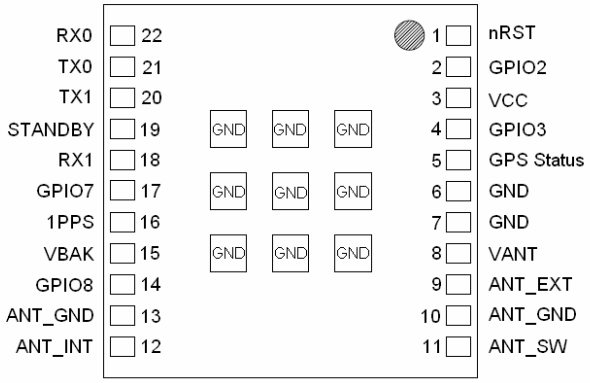
EB-5084 is a **15.24x15.24 mm** (0.6”x0.6”) GPS engine that is to replace A1084 with much improved receiving sensitivity.
EB-5084 provides superior navigation performance under dynamic conditions in areas with limited sky view like urban canyons.

Its high receiving sensitivity up to **-165dBm** for weak signal operation without compromising accuracy. With pin locations compatible to A1084, there is nearly no extra effort for your system to upgrade to latest high sensitivity GPS receiver available in the industry.

Key Features :
- Small form factor: 15.24x15.24x 2.4 mm
- Lead-Free – RoHS/WEEE compliant
- High sensitivity -165dBm
- Tracks 66-Channel of satellites
- Fast Position Fix
- Low power consumption

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

PIN Assignment :



EB-5084 Pin Assignment

RoHS Compilant

ELECTROSTATIC SENSITIVE DEVICES

Ultimate EB

TRANSYSTEM INC.

An A+ supplier of RF microwave & GPS products

Specifications

Item	*Description*
General	L1 frequency, C/A code (SPS) 66 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 v3.1 GGA, GSA, GSV, RMC (Default) / GLL, VTG (Optional)
Datum	Default WGS-84
Antenna	External active or passive antenna
Power Supply	DC 3.0V ~ 4.2V
Current	35mA @ 3.3V / Tracking
Interface	UART, Baud rate : 4800/9600(Default)/…/115200
Mounting	SMT
Dimension	15.24x15.24x2.4 mm (0.6”x0.6”x0.095”)
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.

Pin Definition

Pin#	Name	Type	Description
1	nRST	I	Input, active low to reset module
2	GPIO 2	I/O*	Reserved – leave open if not used
3	Vcc	P	3.0~4.2 VDC
4	GPIO 3	I/O*	Reserved – leave open if not used
5	GPS Status	O	Output, blinking when GPS has position fix
6	GND	P	Power ground
7	GND	P	Power ground
8	VANT	P	Antenna power supply, 0~5V
9	ANT_EXT	I	Active antenna input / Z=50 Ohm
10	ANT_GND	P	Antenna Ground, connect to antenna shield
11	ANT_SW	I	Antenna switch input, LOW (<0.5V) or Open = passive antenna, pin12 (ANT_INT) input HIGH (>2.2V) = active antenna, pin 9 (ANT_EXT)
12	ANT_INT	I	Passive antenna input / Z=50 Ohm
13	ANT_GND	P	Antenna Ground, connect to antenna shield
14	GPIO 8	I/O*	Reserved – leave open if not used
15	VBAK	P	Back-up power with "super cap" or battery, 2.0~4.3VDC
16	1PPS	O	1PPS output
17	GPIO 7	I/O*	Reserved – leave open if not used
18	RX1	I	Serial input 1
19	STANDBY	I	Input, falling edge to put GPS to standby mode, leave open if not used
20	TX1	O	Serial output 1
21	TX0	O	Serial output 0, default NMEA out
22	RX0	I	Serial input 0, default NMEA in

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

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