

GPS Engine Board

EB-5080

EB-5080 is a **19x16.2 mm** (0.75"x0.64") GPS engine that is to replace A1080 with much improved receiving sensitivity. EB-5080 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 A1080, there is nearly no extra effort for your system to upgrade to latest high sensitivity GPS receiver available in the industry.

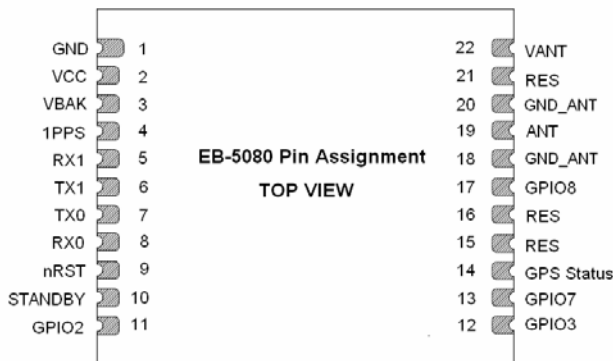
Key Features :

- Small form factor: 19x16.2 x 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 :



TRANSYSTEM INC.

An A+ supplier of RF microwave & GPS products

Ultimate

EB

Specifications

<i>Item</i>	<i>Description</i>
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	19x16.2x2.4 mm (0.75"x0.64"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.

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Pin Definition

Pin#	Name	Type	Description
1	GND	P	Power ground
2	VCC	P	3.0~4.2 VDC
3	VBAK	P	Back-up power with "super cap" or battery, 2.0~4.3VDC
4	1PPS	O	1PPS output
5	RX1	I	Serial input 1
6	TX1	O	Serial output 1
7	TX0	O	Serial output 0, default NMEA output
8	RX0	I	Serial input 0, default NMEA input
9	nRST	I	Input, active low to reset module
10	STANDBY	I	Input, falling edge to put GPS to standby mode, leave open if not used
11	GPIO 2	I/O*	Reserved – leave open if not used
12	GPIO 3	I/O*	Reserved – leave open if not used
13	GPIO 7	I/O*	Reserved – leave open if not used
14	GPS Status	O	Output, blinking when GPS has position fix
15	Res.	N/A	Reserved – leave open
16	Res.	N/A	Reserved – leave open
17	GPIO 8	I/O*	Reserved – leave open if not used
18	GND_ANT	P	Antenna Ground, connect to antenna shield
19	ANT	I	Antenna signal / Z=50 Ohm
20	GND_ANT	P	Antenna Ground, connect to antenna shield
21	Res.	N/A	Reserved – leave open
22	VANT	P	Antenna power supply, 0~5V

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



No. 1-2, Li-Hsin Road I,
Hsinchu 300, Taiwan, R.O.C.
t: +886-3-5780393 / f: +886-3-5784111
sales@transystem.com.tw
www.transystem.com.tw