

GPS Engine Board

EB-50N6

EB-50N6 is a 16x12.2x2.4 mm GPS engine that is to replace NEO-6M with much improved receiving sensitivity. EB-50N6 provides superior navigation performance under dynamic conditions in areas with limited sky view like urban canyons.



It has high receiving sensitivity up to **-165dBm** for weak signal operation without compromise accuracy. With pin locations compatible to NEO-6M, you can easily upgrade your system to latest high sensitivity GPS receiver available in the industry.

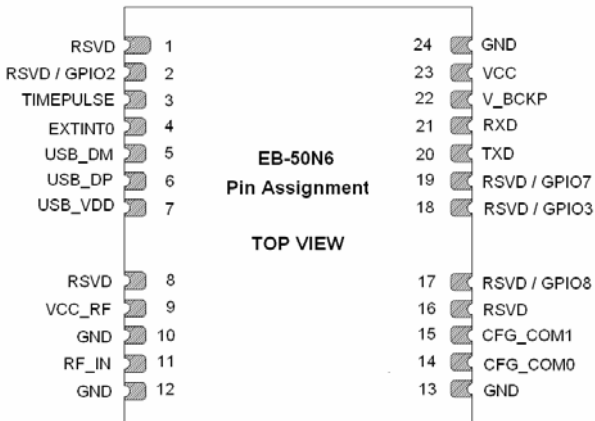
Key Features :

- Small form factor: 16x12.2 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	30mA @ 3.3V / Tracking
Interface	UART, Baud rate : 4800/9600(Default)/.../115200
Mounting	SMT
Dimension	16x12.2x2.4 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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Pin Definition

Pin#	Name	Type	Description
1	Reserved	I	Reserved – leave open if not used
2	Reserved / GPIO2	I/O	GPIO #2 / SCS - leave open if not used
3	TIMEPULSE	O	1PPS output
4	EXTINT0	I	External interrupt pin - leave open if not used
5	USB_DM	I/O	USB data
6	USB_DP	I/O	USB data
7	USB_VDD	P	USB power, 3.3VDC±10%
8	Reserved	I/O	Reserved – leave open if not used
9	VCC_RF	O	VCC-0.5V when draw 50mA
10	GND	P	Ground
11	RF_IN	I	GPS signal input
12	GND	P	Ground
13	GND	P	Ground
14	CFG_COM0	I	Configuration pin - leave open if not used
15	CFG_COM1	I	Configuration pin - leave open if not used
16	Reserved	I/O	Reserved – leave open if not used
17	Reserved / GPIO8	I/O	GPIO #8 / SI - leave open if not used
18	Reserved / GPIO3	I/O	GPIO #3 / SCK - leave open if not used
19	Reserved / GPIO7	I/O	GPIO #7 / SO - leave open if not used
20	TXD	O	Serial port
21	RXD	I	Serial port
22	V_BCKP	P	Backup voltage supply, 2.0~4.3Vdc
23	VCC	P	Supply voltage, 3.0~4.2Vdc
24	GND	P	Ground

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

Configuration Setting

CFG_COM1	CFG_COM0	NMEA	Baud Rate
1	1	GSV, RMC, GSA, GGA, GLL, VTG	9,600
1	0	GSV, RMC, GSA, GGA, GLL, VTG	38,400
0	1	GSV, RMC, GSA, GGA, VTG	4,800



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