



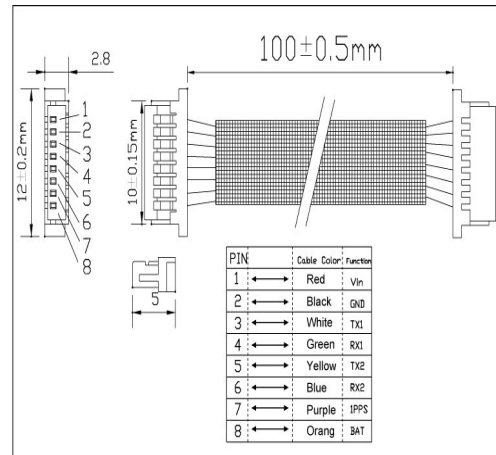
**ETEK NAVIGATION, INC.**

**PROFESSIONAL IN NAVIGATION & COMMUNICATION**

## Smart GPS Receiver

### MODEL: EB-85A

High sensitive GPS receiver and GPS antenna



The main goal of **EB-85A** is to be used as a part of integrated system, which can be a simple PVT (Position-Velocity-Time) system, for instance, G-mouse, PND (Personal Navigation Device), or complex wireless systems, such as a system with GSM function, a system with Bluetooth function, and a system with GPRS function. The module (**EB-85A**) can be the best candidate for users' systems as the users' systems need the careful consideration on the performance, sensitivity, power consumption, and/or size of the module. In the specification of EB-85A at the next page, it is noticeable that in addition to excellent start-up times and position accuracy, the updated rate can be up to 5 Hz and the sensitivity of -158dbm.

The active antenna on board helps the system integrators to do the design-in easily. **EB-85A** is feature with high sensitive GPS receiver and GPS antenna. The perfect match is most suitable for any GPS mobile devices, such as PND, GPS PDA, personal tracker and any portable devices, which need GPS features.

#### Features:

- High sensitive GPS receiver and GPS antenna
- High Sensitivity -158 dBm
- Excellent start-up times and position accuracy
- Power Supply 3.3~5V +- 5%
- Updated rate can be up to 5 Hz
- 30mm(L) x 30mm(W) x 8.6mm(H)

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**Specifications:**

<b>PHYSICAL CONSTRUCTION</b>		
<b>Dimension</b>	30(L)mm x 30 (W) mm x 8.6 (H) mm	
<b>Weight</b>	15 grams	
<b>Receiving frequency</b>	1575.42MHZ; C/A code	
<b>Connector</b>	8pin connector with 1.0mm pitch	
<b>Mounting</b>	Soldering	
<b>Construction</b>	Full EMI Shielding	
<b>ENVIRONMENTAL CONDITIONS</b>		
<b>Temperature</b>	Operating: -30 ~ +80 °C	
	Storage: -40 ~ +85 °C	
<b>COMMUNICATION</b>		
<b>Protocol</b>	NMEA V3.01	
<b>Signal level</b>	UART @ 2.8V * 2	
<b>INTERFACE CAPABILITY</b>		
<b>Standard Output Sentences</b>	Default	RMC, GGA, GSV*5, VTG, GSA*5
	Optional	GLL, ZDA
<b>PERFORMANCE</b>		
<b>Built-in Antenna</b>	Highly-reliable ceramic patch	
<b>Sensitivity</b>	-158dbm	
<b>SBAS</b>	1 channel (Support WAAS, EGNOS, MSAS)	
<b>DGPS</b>	RTCM Protocol	
<b>Receiver architecture</b>	32 parallel channels	
<b>Start-up time</b>	Hot start	1 sec. typical
	Warm start	35 sec. typical
	Cold start	41 sec. typical
<b>Position accuracy</b>	Without aid	3.3 m CEP
	DGPS (RTCM)	2.6 m
<b>Velocity accuracy</b>	0.1 Knot RMS steady state	
<b>Update Rate</b>	1~5 Hz	
<b>Power Supply</b>	3.3~5V +- 5%	
<b>Power Consumption</b>	Acquisition	59mA
	Tracking	59mA (first 5 minutes)
		42mA (after 5 minutes)
		33mA (after 20 minutes)
<b>Baud Rate</b>	4800 bps (default) & 4800/9600/38400/57600/115200 bps are adjustable	

\* This specification is subject to change without prior notice

Data Updated: Nov 28, 2006