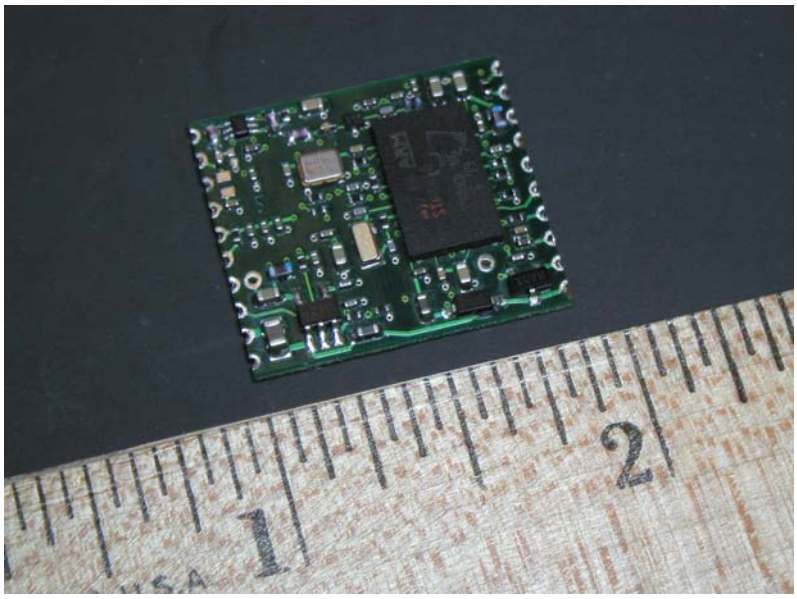
BS8058

GPS Receiver Module



FEATURES

- High Performance GPS Receiver based on ST Microelectronics Teseo SOC (single chip)
- +3.0 to +3.6V VCC Operation (higher voltages on request)
- Low Current Consumption During High Accuracy Continuous Tracking Operation (less than 75 mA)
- Optional Powering of external GPS antennas
- Supports WAAS/EGNOS operation for increased altitude accuracy
- Two separate UART ports (1 for flash programming and NMEA messages, 1 for Debug and Diagnostics)
- User Configurable NMEA Message Strings
- Pulsed Output for 1 PPS or other user-configurable rates during GPS satellite reception
- Small Rectangular Form Factor (20.3x22.9mm, 0.8x0.9") -- less than 1 square inch of board area
- Solder Pins on edge of pc board for easy hand assembly and removal
- Common Reference Design Inventory available for embedded solutions on customer's own pc boards

GENERAL INFO

The BS8058 is a standalone GPS Receiver Module in a compact rectangular footprint suitable for integration into existing products with minimal changes in printed circuit board artwork. The standard 9600 BPS NMEA serial output from the BS8058 is compatible with most existing GPS software packages as-is without modifications to firmware. This rate can be changed at the factory or by the OEM customer using development hardware and software tools available from BrightSky.

Advantages of the BS8058 over other commercially available GPS modules include the relatively high fix-to-fix mobile positional accuracy in urban areas of the Teseo IC and relatively OEM-friendly design support (including the option to quickly embed this design directly into an application using BrightSky's own contract development services). A full featured development board (EV-BS8058) is available for rapid evaluation of the BS8058 for any given application.

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SPECIFICATIONS

GPS Sensitivity:	Acquisition: -146 dBm Tracking: -159 dBm
Channels:	16 Channel Correlator
Frequency:	GPS L1 Band (1575.42 MHz)
Positional Accuracy:	2 m CEP (autonomous)
Time To First Fix (TTFF, unobstructed sky):	
Reacquisition	1 sec. max.
Hot Start	2.5 sec. max.
Warm Start	34 sec. max.
Cold Start	39 sec. max.
Power Requirements:	+3.0 to +3.6 VDC at 70mA nom. (Continuous Operation)

Figure 1 Mechanical Outline of BS8058 Module (Top View)

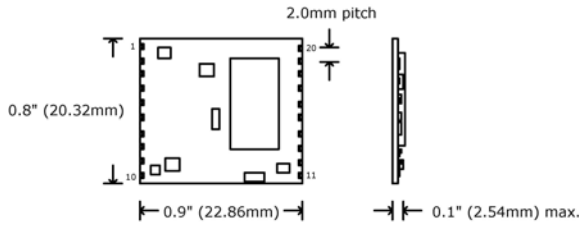

Table 1 BS8058 Module Pinout

PIN	FUNCTION	FUNCTION	PIN
1	Ground	Ground	20
2	RF_IN	Boot Enable	19
3	Ground	RX_A (input)	18
4	VANT	TX_A (output)	17
5	VCC_RF	TX_B (output)	16
6	VBAT	RX_B (input)	15
7	BOOT.0	PPS	14
8	NRESET	LP_OUT	13
9	BOOT.1	Ground	12
10	Ground	+VCC	11

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