

EmbeddedBlue™ eb100-SER

Bluetooth® RADIO MODULE

Features and Benefits

- Simple serial UART communications and control
- Seamless connectivity with any Bluetooth device
- Provides a low cost solution for small to medium volume applications
- 2.4GHz FHSS (Frequency Hopping Spread Spectrum) technology ensures high reliability and is robust to interference
- Features a unique surface mount pad design that can be either flow soldered for automated manufacturing or hand soldered for building prototypes.
- Low current consumption for long battery life
- Small overall size of 14.5mm x 25mm x 2.1mm

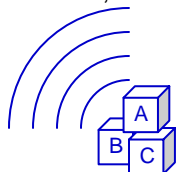
Applications

The EmbeddedBlue Series eb100-SER Bluetooth Radio Module is ideal for enabling cost sensitive designs with a widely supported industry standard wireless protocol. Monitoring and control applications will benefit from an integrated implementation of the serial port profile for seamless connectivity with desktop computers, PDAs, and cellular phones. A focus on low current consumption makes the eb100-SER ideal for use in standalone battery powered devices common to robotics and remote data capture.

Description

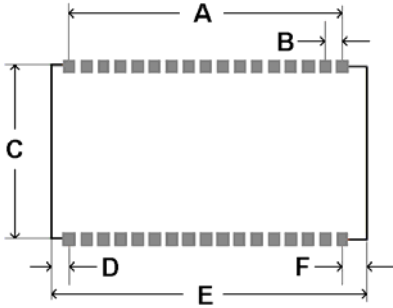
The eb100-SER implements all components of the Bluetooth stack on board so that additional host processor code is not required. Once a connection to another Bluetooth device has been established, the link has the appearance of a cabled serial connection eliminating the need for special wireless protocol knowledge.

Simple UART communication facilitates the interface between the host processor and the Series eb100-SER radio. This UART interface may be used to discover, connect, and communicate with other Bluetooth devices.



Specifications and Ordering Information

Footprint Dimensions



	inches	mm
A	0.80	20.32
B	0.05	1.27
C	0.57	14.50
D	0.09	2.28
E	0.98	25.00
F	0.09	2.40

Pad Dimensions: 1.1mm x 0.9mm

Pinout

Pin 1	GND	Pin 22	GND
Pin 3	GND	Pin 23	GND
Pin 4	DIO6	Pin 24	DIO5
Pin 5	DIO7	Pin 25	DIO4
Pin 6	RESET	Pin 26	Status
Pin 11	CTS	Pin 27	Mode
Pin 12	TX	Pin 28	DIO3
Pin 13	RTS	Pin 29	DIO2
Pin 14	RX	Pin 30	DIO1
Pin 15	1.8V	Pin 31	DIO0
Pin 16	3.3V	Pin 32	GND
Pin 17	GND	Pin 33	RF
		Pin 34	GND

All other pins are reserved for future enhancements.

A7 Engineering™
wireless building blocks

Bulletin 05/03 eb100-SER
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Specifications

Transmit Power	4dBm (max) class 2 operation
Receiver Sensitivity	-85dBm
Operating Temperature	-15° to 70°C
Supply Power	3.3 VDC
Current Consumption	115.2kbps data transfer: 15mA 38.4kbps data transfer: 8mA no connection: 0.5mA reset: < 0.1mA
Interfaces	3.3V TTL level UART Baud rate 9.6k – 230.4k
Connectors	34 pin surface mount
Antenna	None – module certified for an antenna with a gain of up to 1.6dBi
Bluetooth Support	Version 1.2 compliant with profiles L2CAP, RFCOMM, SDP, SPP
Firmware	Upgradeable with A7 Engineering utility software.
Size	14.5mm x 25mm x 2.1mm

Ordering Information

Part Number	Description	Price
eb100-SER-KIT	eb100 development kit	\$199
eb100-SER-10	ten pack of modules	\$300
eb100-SER-100	one-hundred pack of modules	\$2500

Manufactured and Distributed by:

A7 Engineering Incorporated

12860 C Danielson Court
Poway, CA 92064
Tel: (858) 679-7708
Fax: (858) 391-5616
Web: www.a7eng.com
E-mail: sales@a7eng.com

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