

## EmbeddedBlue™ eb100-SER OEM Bluetooth® Serial Module

### Features and Benefits

- Low power 3.3V operation
- Easy to use command set for communications and control
- Seamless connectivity with other Bluetooth devices
- EasyConnect™ enabled for simple cable replacement
- Fully embedded solution with no Bluetooth host stack required
- Up to 250kbps of continuous data throughput
- Reference designs available at no additional cost
- Low current consumption for long battery life
- Small overall size of 14.5mm x 25mm x 2.1mm
- Firmware upgradeable

### Description

The A7 Engineering eb100-SER surface mount module is a highly integrated and easy to use Bluetooth solution designed for low cost and reliability. All components of the Bluetooth stack are implemented 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 eb100-SER radio. This UART interface may be used to discover, connect, and communicate with other Bluetooth devices through simple ASCII commands.

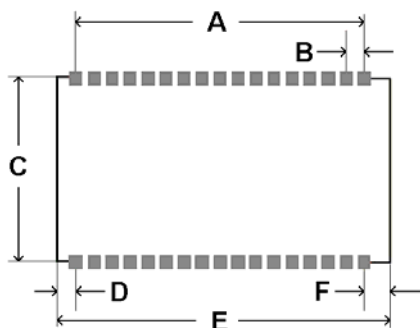
EasyConnect provides the option for a drop-in cable replacement solution without having to issue commands. The addition of a simple push button and LED provides all the control necessary to establish and maintain a wireless connection.

### Applications

- Medical Equipment
- POS Systems
- Telemetry Systems
- Industrial Automation
- Barcode and RFID scanners
- Lighting Control
- Robotics

# Specifications and Ordering Information

## Dimensions



Note: controlling measurement is mm

	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 18	NC
Pin 2	NC	Pin 19	NC
Pin 3	GND	Pin 20	NC
Pin 4	NC	Pin 21	NC
Pin 5	NC	Pin 22	GND
Pin 6	RESET	Pin 23	GND
Pin 7	NC	Pin 24	NC
Pin 8	NC	Pin 25	NC
Pin 9	NC	Pin 26	STATUS
Pin 10	NC	Pin 27	BREAK
Pin 11	CTS	Pin 28	EasyCON
Pin 12	TX	Pin 29	IND_LED
Pin 13	RTS	Pin 30	NC
Pin 14	RX	Pin 31	NC
Pin 15	NC	Pin 32	GND
Pin 16	3.3V	Pin 33	RF
Pin 17	GND	Pin 34	GND

## Specifications

Transmit Power	+6dBm (max)
Receiver Sensitivity	-85dBm
Operating Temperature	-15° to 70°C
Supply Power	3.0 to 3.6VDC
Current Consumption	115.2kbps data transfer: 25mA no connection: 3mA reset < 1mA
Interfaces	UART with baud rates of 1.2k – 460.8k, optional hardware flow control
Connectors	34 pin surface mount
Antenna Connection	RF pad for connection with a 50Ω Bluetooth ISM band antenna
Bluetooth Support	Version 1.2 compliant with profiles GAP, SDP, SPP, and DUN
Firmware	Upgradeable with A7 Engineering utility software
Size	14.5mm x 25mm x 2.1mm

## Ordering Information

Part Number	Description
eb100-SER	eb100-SER module
eb100-SER-KT1	eb100-SER prototyping kit
eb100-SER-KT2	eb100-SER evaluation kit

### Manufactured and Distributed by:

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A7-PB-eb100-SER  
Revised March 26, 2007

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