

Bluetooth®

MODELS | eb506-SER | RCM3100 |

Application and Add-on Kits

Key Features

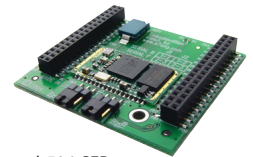
- Bluetooth radio modules plug directly into supported RabbitCore® modules (RCMs) and Single-board Computers (SBCs)
- Simple serial UART communications and control
- Seamless connectivity with any Bluetooth device
- 2.4 GHz FHSS (Frequency Hopping Spread Spectrum) technology ensures high reliability and is robust to interference
- Low current consumption for long battery life
- Complete with sample applications and source code
- Internal Surface-mount antenna

Design Advantages:

- Get up and running fast with Rabbit's complete development platform based upon proven Dynamic C® integrated development environment
- Complete Bluetooth stack implemented on-board to minimize development effort
- No need for special wireless protocol knowledge

Applications

- Short range wireless networking
- Replace cables connecting either portable or fixed devices
- Supports development of voice, data, or voice and data connections



eb506-SER
Module



RCM3100
RabbitCore

Rabbit-based applications now have even more ways to communicate. Rabbit has added Bluetooth support for selected core modules, the BL2500 and the BL2600 single-board computers. Based on the EmbeddedBlue™ eb506-SER Bluetooth Radio Module from A7 Engineering, Bluetooth capability is available in a complete application kit or as an add-on kit.

All components of the Bluetooth stack are implemented on-board so 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. UART communication facilitates the interface between the host processor and the radio module. This UART interface may be used to discover, connect, and communicate with other Bluetooth

devices. An LED indicator for connection status is provided as a standard feature.

Bluetooth Application Kit

The Bluetooth Application Kit provides all of the hardware and software necessary to develop a Bluetooth application. The application kit includes an RCM3100, EmbeddedBlue eb506-SER Bluetooth Radio Module, prototyping board, and miscellaneous cables and hardware. The application kit also includes the



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Dynamic C integrated development environment, Bluetooth drivers, libraries, sample programs, and manuals.

Bluetooth Add-on Kit

Bluetooth Add-on Kits include only the EmbeddedBlue eb506-SER Bluetooth Radio Module, Bluetooth drivers, sample programs, and radio module manual. Bluetooth Add-on Kits are available for the following product families:

- RCM3000
- RCM3100
- RCM3200
- RCM3300
- RCM3360
- BL2500
- BL2600

A7 Engineering

A7 Engineering is an engineering and design firm specializing in connectivity and interoperability solutions for the embedded marketplace. A7 provides services ranging from engineering assistance to custom features and complete designs. A7's EmbeddedBlue line of products provides industry leading simplicity in an affordable, standardized, and easy to integrate wireless solution across 8, 16, and 32 bit systems.



Bluetooth Add-on Kit

EmbeddedBlue™ eb506-SER Bluetooth Radio Module

Features		EmbeddedBlue eb506-SER
Transmit Power		+6 dBm (max) Class 2 operation
Open Field Range		More than 10 meters (32 feet)
Receiver Sensitivity		-85 dBm
Operating Temperature		0° to 70° C
Supply Power		3.3 V DC
Current Consumption		115.2 kbps data transfer: 35 mA Shutdown mode: 1.5 µA
Interfaces		3.3 V logic level UART Baud rate: 9.6 k – 230.4 k
Connectors		Two 17-pin 2 mm headers
Antenna		Internal surface mount
Bluetooth Support		Version 1.2 compliant with profiles L2CAP, RFCOMM, SDP, SPP
Firmware		Upgradeable via PC application
		Pricing
Application Kit Part Numbers		\$339 U.S. 101-1040 Int'l 101-1041
Add-on Kit Part Numbers		\$99 101-1042

RabbitCore® RCM3100 Specifications

FEATURE	RCM3100
Microprocessor	Rabbit 3000 @ 29.4 MHz
EMI Reduction	Spectrum spreader for reduced EMI (radiated emissions)
Flash	512K (2 x 256K)
SRAM	512K
Backup Battery	Connection for user-supplied battery (to support RTC and SRAM)
General-Purpose I/O	54 digital I/O
Serial Ports	6 CMOS-compatible
Serial Rate	Max. asynchronous baud rate = CLK/8
Slave Interface	Slave port permits use as master or intelligent peripheral with Rabbit-based or other master controller
Real-Time Clock	Yes
Timers	Ten 8-bit timers and one 10-bit timer
Watchdog/Supervisor	Yes
Pulse-Width Modulators	10-bit free-running counter and four pulse-width registers
Input Capture	2-channel input capture can be used to time input signals from various port pins
Quadrature Decoder	2-channel quadrature decoder accepts inputs from external incremental encoder modules
Power	75 mA @ 3.3 V
Operating Temp.	-40° C to +85° C
Humidity	5-95%, non-condensing
Connectors	Two 2 x 17 (2 mm pitch)
Board Size	1.85" x 1.65" x 0.55" (47 x 42 x 14 mm)
Part Number	101-0517



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