RabbitCore® RCM3100

Microprocessor Core Module

The RabbitCore RCM3100 is a cost-effective solution that allows embedded engineers to add intelligence and I/O control to a wide variety of peripheral devices.

Overview

Powered by the Rabbit® 3000 microprocessor, the compact RCM3100 boasts powerful features and a small footprint (47 mm × 42 mm) to simplify integration. Its small size and ease of use when paired with Dynamic C® allow engineers to add device intelligence and I/O control for many of today's embedded applications. The RCM3100 is ideal for applications requiring M2M connectivity and is pin-compatible with the RCM3000 for cost-effective Ethernet and non-Ethernet systems.

Rabbit hardware and Dynamic C are designed in a complementary fashion for maximum performance and ease of use in embedded systems. The additional software components in Dynamic C allow you to add functionality for embedded application customization.

To evaluate and learn more about the RCM3100, please visit www.rabbit.com/products/rcm3100/.
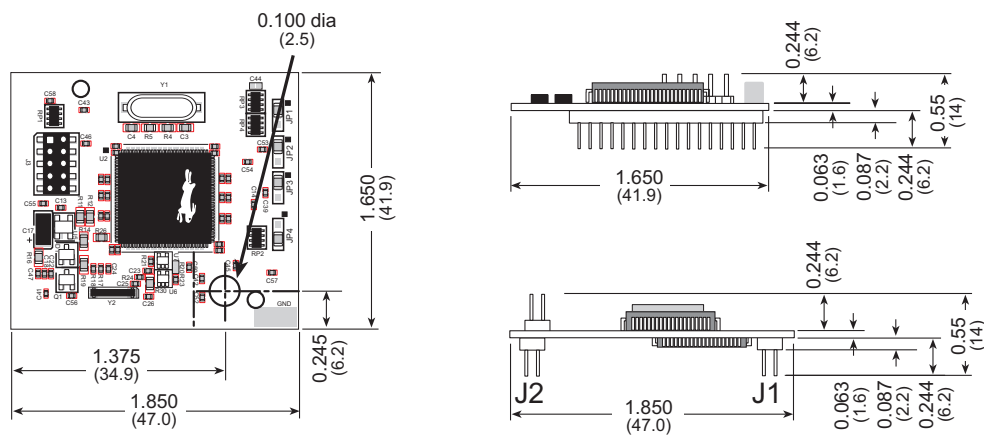
Application Highlight

Dosimeter System
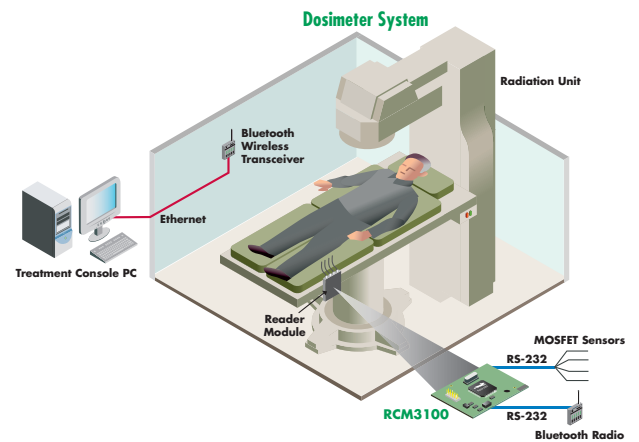
Potential Applications: Device intelligence, embedded control, sensor reading, serial device coordinator and GPS/AVL applications.

Features and Benefits

- **Rabbit 3000 microprocessor at 30 MHz**
- **Up to 512K Flash/512K SRAM**
- **54 digital I/O and 6 serial ports (IrDA, HDLC, asynch, SPI)**
- **3.3V operation, low power "sleepy" modes (< 2mA)**
- **Compact size simplifies integration**
- **Ready-made platform for fast time-to-market, up to 3 months of design integration time savings**
- **Low-cost embedded microprocessor module**
- **Easily links to multiple serial devices**

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RabbitCore® RCM3100 Specifications

Feature	RCM3100	RCM3110
Microprocessor	Rabbit 3000® at 30 MHz	
EMI Reduction	Spectrum spreader for reduced EMI (radiated emissions)	
Flash Memory	512K (2 × 256K)	256K
SRAM	512K	128K
Backup Battery	Connection for user-supplied backup battery to support RTC and SRAM	
General-Purpose I/O	54 parallel digital I/O lines: • 46 configurable I/O • 4 fixed inputs • 4 fixed outputs	
Additional Digital Inputs	2 startup mode, reset in	
Additional Digital Outputs	Status, reset out	
Auxiliary I/O Bus	8 data lines and 6 address lines (shared with I/O) plus I/O read/write	
Serial Ports	6 shared high-speed, CMOS-compatible ports: • 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC (with IrDA) • 1 asynchronous clocked serial port dedicated for programming • Support for MIR/SIR IrDA transceiver	
Serial Rate	Max. asynchronous baud rate = CLK/8	
Slave Interface	A slave port allows the RCM3100 to be used as a master or as an intelligent peripheral device with Rabbit-based or any other type of processor	
Real-Time Clock	Yes	
Timers	Ten 8-bit timers (6 cascadable from the first), one 10-bit timer with 2 match registers	
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	3.15V to 3.45V DC 75 mA @ 3.3V	
Operating Temperature	-40° C to +85° C	
Humidity	5% to 95%, non-condensing	
Board Size	1.850" × 1.650" × 0.55" (47 mm × 42 mm × 14 mm)	
Pricing		
Price (qty. 1/100) Part Number	$65 / $50 20-101-0517	$45 / $35 20-101-0518
Development Kit Part Number	$239 101-0533	None

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