

# RabbitCore<sup>®</sup> RCM3100 Series

Microprocessor Core Module

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

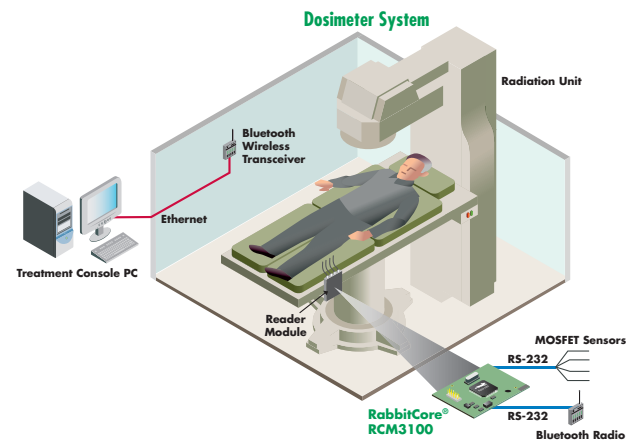


## Overview

Powered by the Rabbit<sup>®</sup> 3000 microprocessor, the compact RCM3100 series 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<sup>®</sup> allow engineers to add device intelligence and I/O control for many of today's embedded applications. The RCM3100 series is ideal for applications requiring M2M connectivity and is pin-compatible with the RCM3000 series 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.

## Application Highlight



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

## Features/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

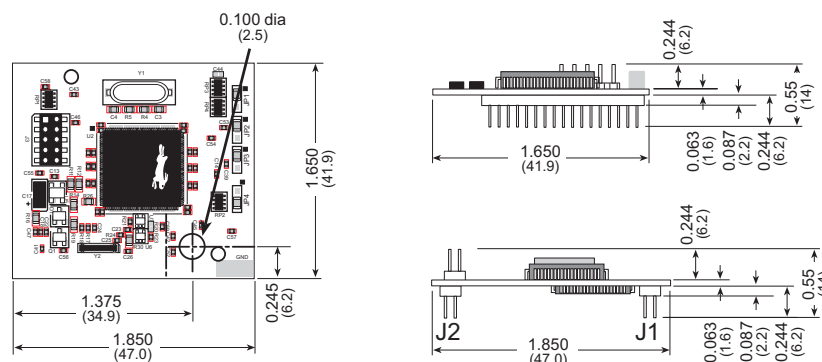


# Specifications

# RCM3100

# RCM3110

Feature		
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: <ul style="list-style-type: none"> <li>• 46 configurable I/O</li> <li>• 4 fixed inputs</li> <li>• 4 fixed outputs</li> </ul>	
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: <ul style="list-style-type: none"> <li>• 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC (with IrDA)</li> <li>• 1 asynchronous clocked serial port dedicated for programming</li> <li>• Support for MIR/SIR IrDA transceiver</li> </ul>	
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 3.45VDC 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 and Part Number	\$65; 20-101-0517	\$45; 20-101-0518
Development Kit and Part Number	\$239; 101-0533	None



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