



MICROPROCESSOR  
CORE MODULE



# RABBITCORE<sup>®</sup> RCM3100 SERIES

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

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.

## 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

## RELATED PRODUCTS



RabbitCore<sup>®</sup>  
RCM3000  
Series



RabbitCore<sup>®</sup>  
RCM3400  
Series



RabbitCore<sup>®</sup>  
RCM3600  
Series

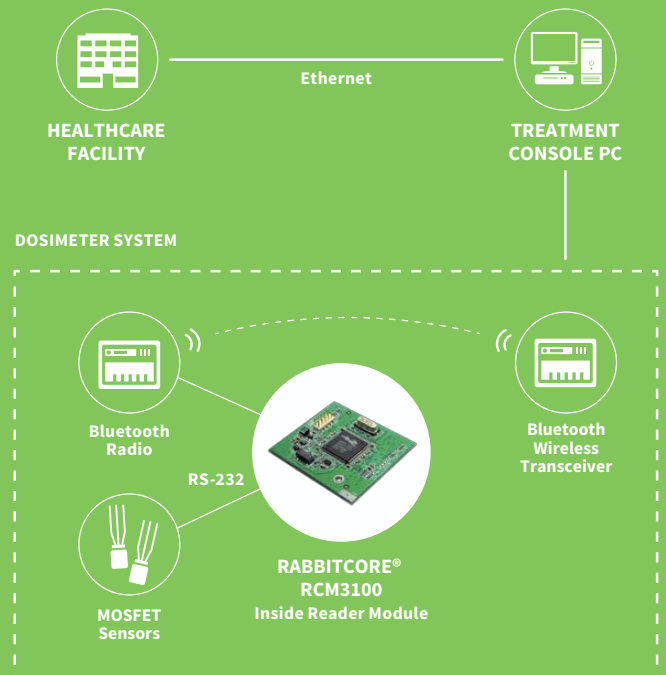


RabbitCore<sup>®</sup>  
RCM4100  
Series



Dynamic C<sup>®</sup>

## APPLICATION EXAMPLE



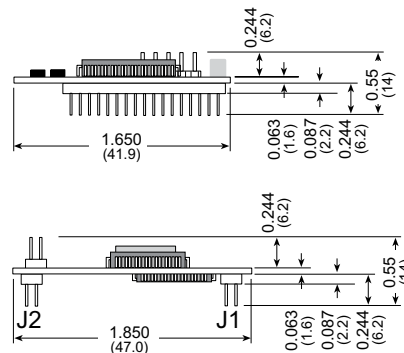
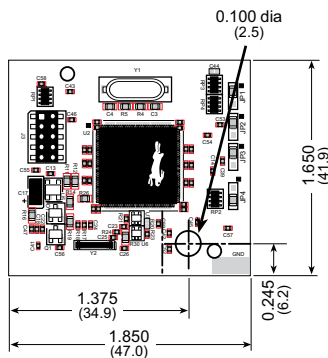
## SPECIFICATIONS

# RCM3100

# RCM3110

### FEATURE

<b>MICROPROCESSOR</b>	Rabbit 3000® at 30 MHz	
<b>EMI REDUCTION</b>	Spectrum spreader for reduced EMI (radiated emissions)	
<b>FLASH MEMORY</b>	512K (2 × 256K)	256K
<b>SRAM</b>	512K	128K
<b>BACKUP BATTERY</b>	Connection for user-supplied backup battery to support RTC and SRAM	
<b>GENERAL-PURPOSE I/O</b>	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>	
<b>ADDITIONAL DIGITAL INPUTS</b>	2 startup mode, reset in	
<b>ADDITIONAL DIGITAL OUTPUTS</b>	Status, reset out	
<b>AUXILIARY I/O BUS</b>	8 data lines and 6 address lines (shared with I/O) plus I/O read/write	
<b>SERIAL PORTS</b>	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>	
<b>SERIAL RATE</b>	Max. asynchronous baud rate = CLK/8	
<b>SLAVE INTERFACE</b>	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	
<b>REAL-TIME CLOCK</b>	Yes	
<b>TIMERS</b>	Ten 8-bit timers (6 cascadable from the first), one 10-bit timer with 2 match registers	
<b>WATCHDOG/SUPERVISOR</b>	Yes	
<b>PULSE-WIDTH MODULATORS</b>	10-bit free-running counter and four pulse-width registers	
<b>INPUT CAPTURE</b>	2-channel input capture can be used to time input signals from various port pins	
<b>QUADRATURE DECODER</b>	2-channel quadrature decoder accepts inputs from external incremental encoder modules	
<b>POWER</b>	3.15V to 3.45 VDC 75 mA @ 3.3V	
<b>OPERATING TEMPERATURE</b>	-40° C to +85° C	
<b>HUMIDITY</b>	5% to 95%, non-condensing	
<b>BOARD SIZE</b>	1.850" × 1.650" × 0.55" (47 mm × 42 mm × 14 mm)	



## PART NUMBERS

## DESCRIPTION

20-101-0517	RCM3100. 512K Flash, 512K SRAM
20-101-0518	RCM3110. 256K Flash, 128K SRAM

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