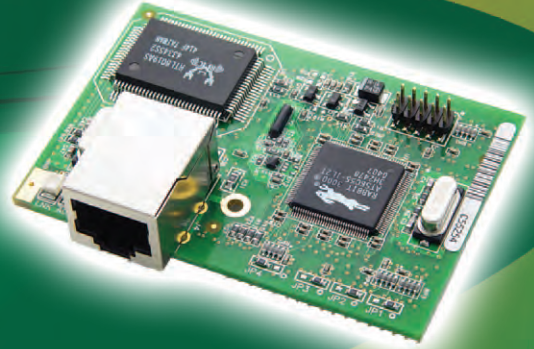# RabbitCore® RCM3000

Microprocessor Core Module

The RabbitCore RCM3000 is ideal for designers who want to rapidly develop and implement embedded systems with fully integrated Ethernet connectivity.

Overview

The RabbitCore RCM3000, featuring the Rabbit® 3000 microprocessor, boasts powerful features and integrated 10Base-T Ethernet to simplify integration. When paired with Dynamic C®, the RCM3000 allows engineers to add device intelligence and I/O control for many of today's embedded designs. Its small form factor and low power modes make the RCM3000 perfect for remote device applications. The RCM3000 is pin-compatible with the RCM3100, facilitating cost-effective implementation of both 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 RCM3000, please visit www.rabbit.com/products/rcm3000/.
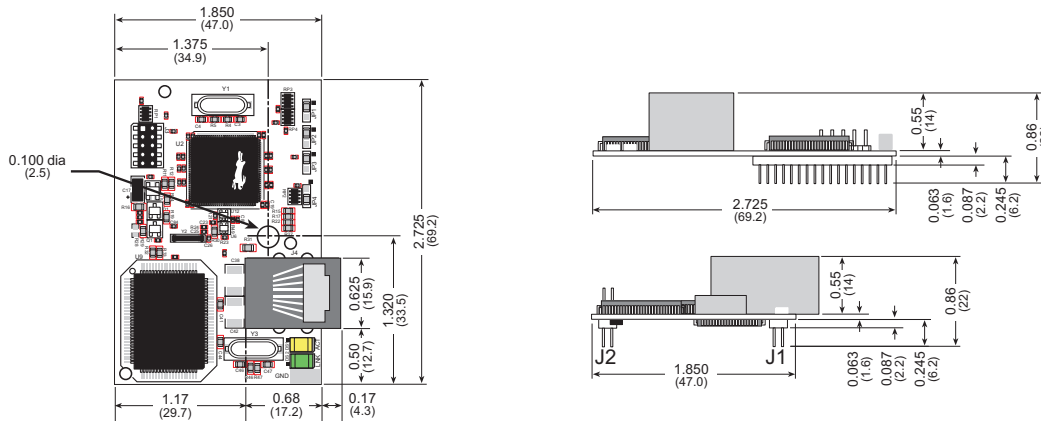
Application Highlight
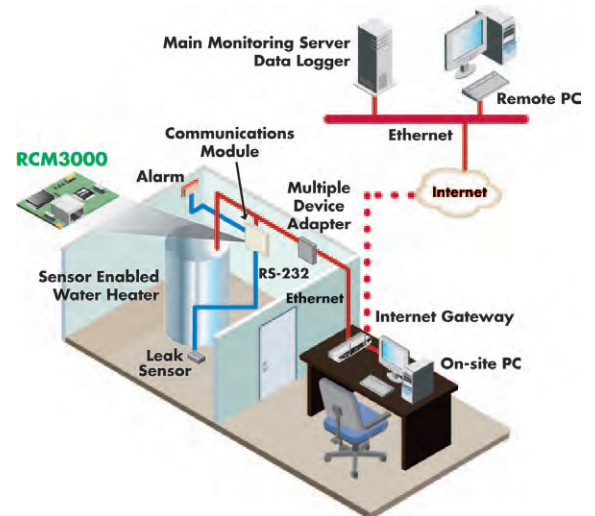
Potential Applications: Serial to Ethernet conversion, device web server applications, Ethernet connectivity with I/O and intelligence, device monitoring and data logging.

Features and Benefits

- **Rabbit 3000 microprocessor at 30 MHz**
- **Up to 512K Flash/512K SRAM**
- **52 digital I/O and 6 serial ports (IrDA, HDLC, asynch, SPI)**
- **3.3V operation, low power "sleepy" modes (< 2mA)**
- **Small form factor**
- **Royalty-free TCP/IP stack in source code**
- **Low-cost embedded microprocessor module**
- **Security software add-on modules available**

RABBIT™

RabbitCore® RCM3000 Specifications

Feature	RCM3000	RCM3010
Microprocessor	Rabbit® 3000 at 30 MHz	
EMI Reduction	Spectrum spreader for reduced EMI (radiated emissions)	
Ethernet Port	10Base-T interface, RJ-45, 2 LEDs	
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	52 parallel digital I/0 lines: • 44 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 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 RCM3000 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 150 mA @ 3.3V	
Operating Temperature	–40° C to +70° C	
Humidity	5% to 95%, non-condensing	
Connectors (for connection to headers J4 and J5)	Two 2 × 17, 2 mm pitch	
Board Size	1.850″ × 2.725″ × 0.86″ (47 mm × 69 mm × 22 mm)	
Pricing		
Price (qty. 1/100) Part Number	$79 / $64 20-101-0507	$59 / $49 20-101-0508
Development Kit Part Number	$299 101-0523	None