

# RCM3200 RabbitCore® Series

MODELS | RCM3200 | RCM3220 | RCM3209 | RCM3229 |

Microprocessor Core Module

## Key Features

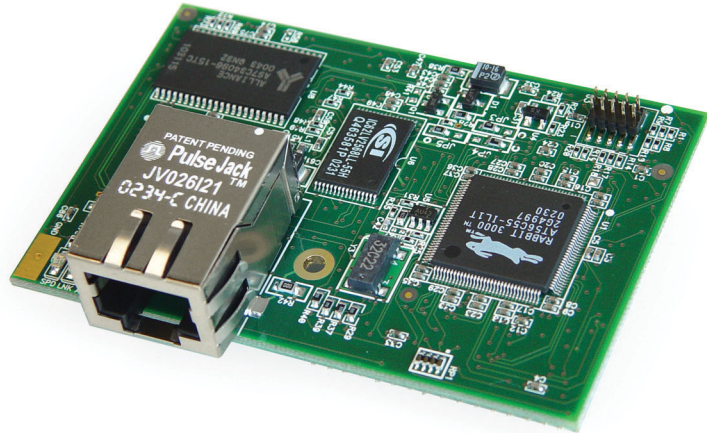
- Rabbit® 3000 microprocessor running @ 44.2 MHz
- Optional Industrial temperature range
- Optional 10/100Base-T Ethernet
- Battery-backed real-time clock
- Low-power “sleepy” modes
- Easily interfaces with another processor-based board for distributed embedded systems

## Design Advantages

- Known-good hardware to reduce design effort
- Mounts directly on a user-designed motherboard
- Dynamic C® integrated development environment for real-time embedded design projects
- Debug software directly on the target hardware

## Applications

- Serial-to-Ethernet bridge
- Tank monitoring
- Automatic meter reading
- Remote monitoring and communications
- Remote energy management
- Security and surveillance



## RCM3200 — Ethernet Connectivity and Control

The RCM3200 series of RabbitCore microprocessor core modules is ideal for designers who want to rapidly develop and implement embedded systems with optional 10/100Base-T Ethernet connectivity.

The RCM3200 core modules are designed to be a controlling microprocessor for an embedded system by mounting on a user-designed motherboard. Measuring only 2.73" × 1.85" (69 mm × 47 mm), the Rabbit 3000 microprocessor-based RCM3200 series delivers the capability to integrate real-time control and Ethernet connectivity to your design. In addition, the RCM3200 modules offer built-in low-EMI features, including a clock spectrum spreader to reduce EMI problems, helping OEMs pass CE and regulatory RF emissions tests.

The integrated Ethernet port frees designers from the limitations of serial port communications and permits worldwide connectivity using low-cost networking hardware. The Ethernet device used on the RCM3200 series is able to detect automatically whether a crossover cable or a straight-through cable is being used in a particular setup, and will configure the signals on the Ethernet jack interface accordingly.

A fully-enabled slave port permits easy master-slave interfacing with another processor-based system. The Rabbit 3000



[www.rabbit.com](http://www.rabbit.com)

processor's compact, C-friendly instruction set and high clock speeds produce exceptionally fast results for math, logic and I/O.

## Developing with RabbitCores

The RabbitCore family of microprocessor core modules is designed to facilitate rapid development and implementation of embedded systems. Design real-time embedded software with our industry-proven Dynamic C integrated development environment that includes an editor, compiler and in-circuit emulator.

Download the program from your PC via a USB or serial port, and debug right on the target hardware – no in-circuit emulation is required. This environment reduces effort and speeds hardware and software integration. Rabbit provides an extensive library of drivers and sample programs, along with royalty-free TCP/IP stack with source.

RCM3200 RabbitCore® Series Specifications				
Feature	RCM3200	RCM3220	RCM3209	RCM3229
Microprocessor	Rabbit® 3000 @ 44.2 MHz			
EMI Reduction	Spectrum spreader for reduced EMI (radiated emissions)			
Ethernet Port	10/100 Base-T, RJ-45, 3 LEDs	None	10/100 Base-T, RJ-45, 3 LEDs	None
Flash Memory	512K			
Data SRAM	256K			
Program Execution SRAM	512K			
Backup Battery	Connection for user-supplied backup battery (to support RTC and data SRAM)			
General-Purpose I/O	52 parallel digital I/O lines: <ul style="list-style-type: none"> <li>• 44 configurable I/O</li> <li>• 4 fixed inputs</li> <li>• 4 fixed outputs</li> </ul>			
Additional Inputs	Startup mode (2), reset in			
Additional Outputs	Status, reset out			
Auxiliary I/O Bus	Can be configured for 8 data lines and 6 address lines (shared with parallel I/O lines), 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)</li> <li>• 4 as clocked serial (SPI)</li> <li>• 2 as SDLC/HDLC (with IrDA)</li> <li>• 1 asynchronous serial port dedicated for programming support for MIR/SIR IrDA transceiver</li> </ul>			
Serial Rate	Maximum asynchronous baud rate = CLK/8			
Slave Interface	A slave port allows the core module to be used as an intelligent peripheral device slaved to a master processor, which may either be another Rabbit 3000 or any other type of processor			
Real-Time Clock	Yes			
Timers	Ten 8-bit timers (6 cascadable), 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	3.15 V – 3.45 V DC 255 mA @ 3.3 V DC			
Operating Temperature	0° C to +70° C		-40° C to +85° C	
Humidity	5% to 95%, non-condensing			
Connectors	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)	\$89 / 72	\$79 / 65	\$89 / 72	\$79 / 65
Part Number	20-101-0520	20-101-0522	20-101-1179	20-101-1217
Development Kit	\$349			
Part Number	U.S. 101-0552		Int'l 101-0553	



Rabbit® 2900 Spafford Street Davis, CA 95618 USA Tel 1.888.411.7228 Tel 530.757.8400 Fax 530.757.8402

Copyright© 2008, Rabbit. All rights reserved. Rabbit is a Digi International brand. Rabbit, RabbitCore and Dynamic C are trademarks or registered trademarks of Digi International Inc. in the United States and other countries worldwide. All other trademarks are the property of their respective owners.