

# RCM2300 RabbitCore™

MODELS | RCM2300 |

Microprocessor Core Module

## Key Features

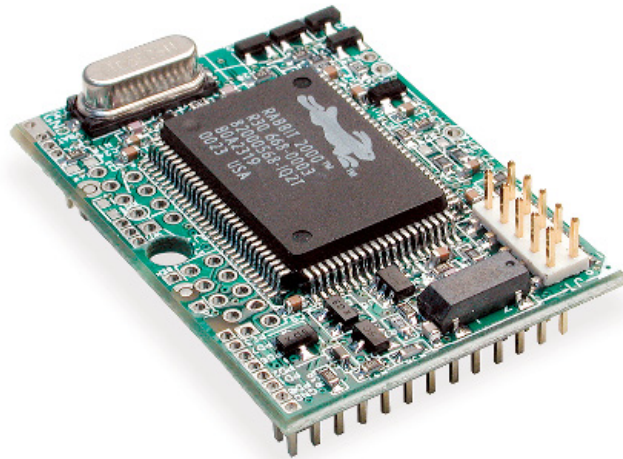
- Rabbit® 2000 microprocessor at 22.1 MHz
- Compact size: 1.60" x 1.15" x 0.55"
- 256K Flash, 128K SRAM
- 29 general-purpose I/O (17 configurable)
- 4 address lines, 8 data lines available on header pins
- Four serial ports available

## Design Advantages:

- Compact size for simple daughterboard interfacing
- Low-cost embedded I/O control
- Industry proven integrated development environment
- Hundreds of samples and libraries
- Easily links to other serial devices

## Applications

- Device intelligence
- Embedded control
- Sensor reading
- Serial device coordinator



## RCM2300 – Intelligence in a small package

The ultra-compact RCM2300 RabbitCore microprocessor core module measures a mere 1.60 x 1.15 inches (41 x 29 mm), simplifying integration and opening up a world of new design options for economical control products.

The RCM2300 includes 22.1 MHz clock, 256K of Flash, 128K of SRAM, real-time clock, 29 general-purpose I/O, and 4 serial ports. The RCM2300 is also pin-compatible with the RCM2200 Ethernet core module for future Ethernet implementation of user designs.

### Developing with RabbitCores

The RabbitCore family of microprocessor core modules is designed to facilitate rapid development and implementation of embedded systems. RabbitCores are powered by high-performance 8-bit Rabbit

microprocessors with extensive integrated features and a C-friendly instruction set designed for use with the Dynamic C® development system. The RabbitCore mounts on a user-designed motherboard and acts as the controlling microprocessor for the user's system. Small in size, but packed with powerful features, these core modules give designers a complete package for control and communication.

### Programming RCM2300

Programs are developed using Rabbit Semiconductor's industry-proven

Dynamic C<sup>®</sup> software development system. An extensive library of drivers and sample programs is provided

## Dynamic C Add-on Modules

Dynamic C Add-on software modules provide added functionality and customization to your embedded applications. Software is available via download or CD-ROM.



### Point-to-Point Protocol

TCP/IP functionality for serial and PPPoE connections



### Library Encryption Executable

Program to encrypt Dynamic C library source files



### Advanced Encryption Standard

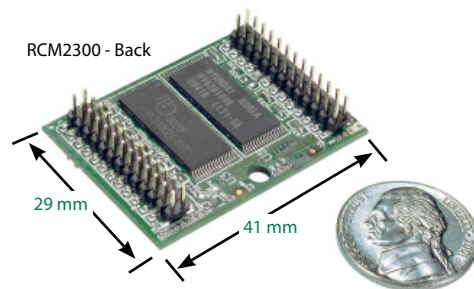
128-bit encryption for transfer of sensitive data

## Rabbit Field Utility (RFU)

Source code for the Rabbit Field Utility

## µC/OS-II Real-Time Kernel

Real-time preemptive, prioritized operating system



RCM2300 RabbitCore Specifications	
Features	RCM2300
Microprocessor	Rabbit <sup>®</sup> 2000 at 22.1 MHz
Flash Memory	256K
SRAM	128K
Backup Battery	Connection for user-supplied backup battery (to support RTC and SRAM)
General-Purpose I/O	29 parallel I/O lines grouped in five 8-bit ports (shared with serial ports): <ul style="list-style-type: none"> <li>• 17 configurable I/O</li> <li>• 8 fixed inputs</li> <li>• 4 fixed outputs</li> </ul>
Additional Digital Inputs	2 startup mode, reset
Additional Digital Outputs	Status, reset
Memory I/O Interface	8 data lines and 6 address lines (shared with I/O) plus I/O read/write
Serial Ports	Four 5 V CMOS-compatible ports. <ul style="list-style-type: none"> <li>• 2 ports are configurable as clocked ports,</li> <li>• 1 is a dedicated RS-232 programming port.</li> </ul>
Serial Rate	Max. burst rate = CLK/32 , Max. sustained rate = CLK/64
Slave Interface	A slave port allows the RCM2300 to be used as an intelligent peripheral device slaved to a master processor, which may either be another Rabbit 2000 or any other type of processor
Real-Time Clock	Yes
Timers	Five 8-bit timers cascadable in pairs, one 10-bit timer with 2 match registers that each have an interrupt
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
Power	4.75 V to 5.25 V DC, 108 mA
Operating Temperature	-40°C to +85°C
Humidity	5% to 95%, non-condensing
Connectors	Two IDC headers 2 × 13, 2 mm pitch
Board Size	1.15" × 1.60" × 0.55" (29 mm × 41 mm × 14 mm)
Pricing	
Pricing (qty. 1/100)	\$42 / 33
Part Number	20-101-0453
Development Kit	\$199
Part Number	U.S. 101-0480 Int'l 101-0481

## RCM2300 Development Kit comes complete with:

- RCM2300 RabbitCore
- Development Board with prototyping area
- AC Adapter (U.S./Canada Only)
- Dynamic C Development System
- Complete Documentation on CD-ROM
- Serial cable for programming and debugging
- Getting Started Manual

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