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
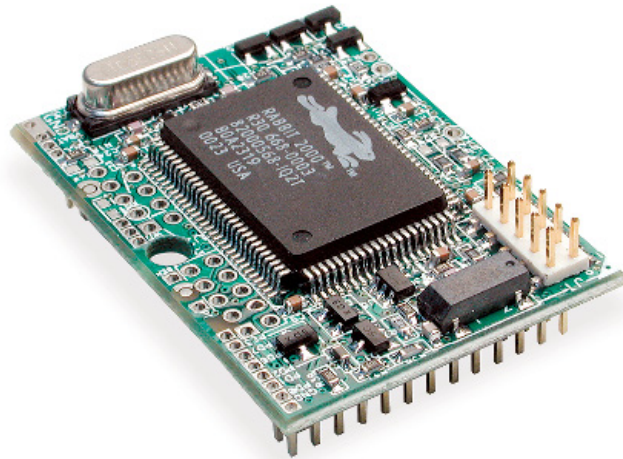
RCM2300 – Intelligence in a small package

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® 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
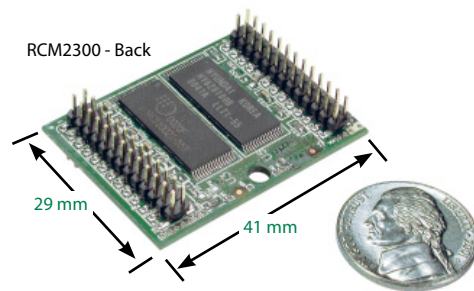
Advanced Encryption Standard
128-bit encryption for transfer of sensitive data

Rabbit Field Utility (RFU)
Source code for the Rabbit Field Utility

µC/OS-II Real-Time Kernel
Real-time preemptive, prioritized operating system

RCM2300 - Back

29 mm
41 mm

RCM2300 RabbitCore Specifications	
Features	RCM2300
Microprocessor	Rabbit® 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/0 lines grouped in five 8-bit ports (shared with serial ports): • 17 configurable I/O • 8 fixed inputs • 4 fixed outputs
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. • 2 ports are configurable as clocked ports, • 1 is a dedicated RS-232 programming port.
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) Part Number	$42 / 33 20-101-0453
Development Kit Part Number	$199 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 Develpment System
- Complete Documentation on CD-ROM
- Serial cable for programming and debugging
- Getting Started Manual

RABBIT Semiconductor