RCM4000 RabbitCore® Series

MODELS | RCM4000 | RCM4010 | RCM4050 |

Microprocessor Core Module

Key Features

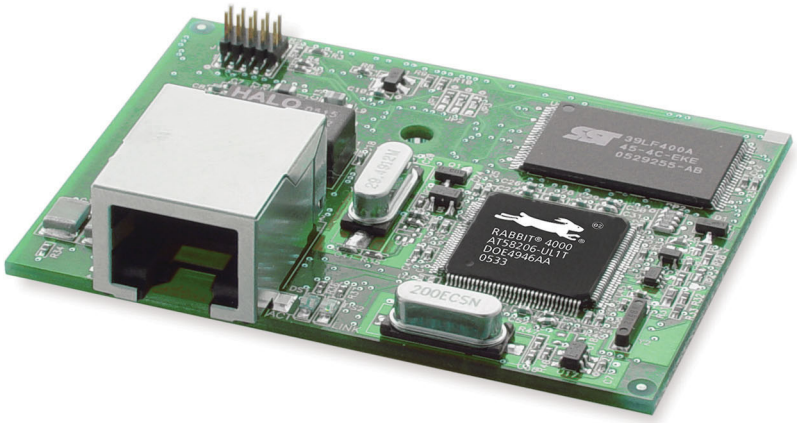
- Rabbit® 4000 microprocessor with integrated Ethernet
- Clock speed @ 58.98 MHz with 16-bit memory
- 8 channel 12-bit A/D converter
- Low-power modes

Design Advantages

- Designed for embedded networking with intelligence and I/O control
- Enables remote control of devices over the Internet
- Security-key feature with "tamper detect" and encryption capabilities adds peace of mind for OEMs and systems integrators
- Reduce development time and risk with known good hardware

Applications

- Serial-to-Ethernet applications
- Remote monitoring and communications
- Web-enabling devices



RCM4000 RabbitCore Series - 10Base-T Ethernet for Remote Monitoring and Control

The RCM4000 microprocessor core module is a powerful embedded Ethernet control device that has the intelligence and internet connectivity that allows your devices to be remotely monitored and controlled from anywhere in the world.

Running at 58.98 MHz, equipped with 16-bit memory and on-chip DMA channels, the RCM4000 can handle both communications and intelligence of your embedded device. The microprocessor also features GPIO lines shared with up to five serial ports, four levels of alternate pin functions that include variable phase PWM, quadrature decoder, and input capture.

The RCM4000 series feature a small footprint of 1.84" × 2.41" × 0.77" (47 mm × 61 mm × 20 mm), complete with the Rabbit 4000 microprocessor, 512K Flash, 512K SRAM, 10Base-T Ethernet, and 32 MB NAND flash and eight channels of 12-bit A/D on the RCM4000 model. The RCM4000 core module is ready for network connectivity and I/O control for true device Internet communication and control.

RabbitCores mount directly onto a user designed motherboard, and can interface with CMOS-compatible digital devices via the user's motherboard. Programs are developed with our industry-proven

Dynamic C integrated development environment that includes an editor, compiler and in-circuit debugger.

Developing with RabbitCores

The RabbitCore line of microprocessor core modules is designed to facilitate rapid development and implementation of embedded systems. Develop programs with our Dynamic C integrated development environment, then debug the program on the target hardware.

Download the program from your PC via USB or serial port, and debug on the RCM4000 core module – no in-circuit emulator 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.

RCM4000 RabbitCore® Specifications			
Features	RCM4000	RCM4010	RCM4050
Microprocessor	Rabbit® 4000 @ 58.98 MHz		
EMI Reduction	Spectrum spreader for reduced EMI (radiated emissions)		
Ethernet Port	10Base-T, RJ-45, 2 LEDs		
Flash Memory (Program)	512K (16-bit)		1 MB (16-bit)
SRAM	512K (16-bit)		1 MB (16-bit)
Flash Memory Data Storage	32 MB	—	32 MB
General Purpose I/O	22 parallel digital I/O lines	28 parallel digital I/O lines	22 parallel digital I/O lines
Analog Inputs	8 channels single-ended or 4 channels differential	—	
Additional Inputs	2 Startup Mode, Reset In, CONVERT	2 Startup Mode, Reset In	
Additional Outputs	Status, Reset Out, Analog VREF	Status, Reset Out	
Auxiliary I/O Bus	8 data and up to 6 address (shared with I/O), plus I/O read/write		
Pulse-Width Modulators	—	2 channels • Synchronized PWM with 10-bit counter • Variable-phase or synchronized PWM with 16-bit	
Serial Ports	4 shared high-speed, CMOS-compatible ports	5 shared high-speed, CMOS-compatible ports	4 shared high-speed, CMOS-compatible ports
Serial Rate	Max. asynchronous baud rate = CLK/8		
Backup-Battery	Connection for user-supplied battery (to support RTC and data SRAM)		
Slave Interface	Slave port allows the RCM4000 to be used as an intelligent peripheral deviceslaved to a master processor		
Real-Time Clock	Yes		
Timers	Ten 8-bit timers one 10-bit timer, one 16-bit timer		
Watchdog/Supervisor	Yes		
Input Capture	—	2-channel input capture can be used to time input signals from various port pins	
Quadrature Decoder	—	2-channel	—
Power	3.3 V		
Operating Temp.	0° C to +70° C		
Humidity	5–95%, non-condensing		
Connectors - Headers	One 2 x 25, 1.27 mm pitch IDC signal header. One 2 x 5, 1.27 mm IDC programming header		
Board Size	1.84″ x 2.42″ x 0.77″ (47 mm × 61 mm × 20 mm)		
Pricing			
Pricing (qty. 1/100) Part Number	$89 / $72 20-101-1094	$69 / $56 20-101-1112	$105 / $99 20-101-1215
Development Kit Part Number	$249 U.S. 101-1145 Int'l 101-1146	$239 U.S. 101-1114 Int'l 101-1115	$249 U.S. 101-1145 Int'l 101-1146

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

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