RCM3700 RabbitCore® Series

MODELS | RCM3700 | RCM3710 | RCM3720 |

Microprocessor Core Module

Key Features

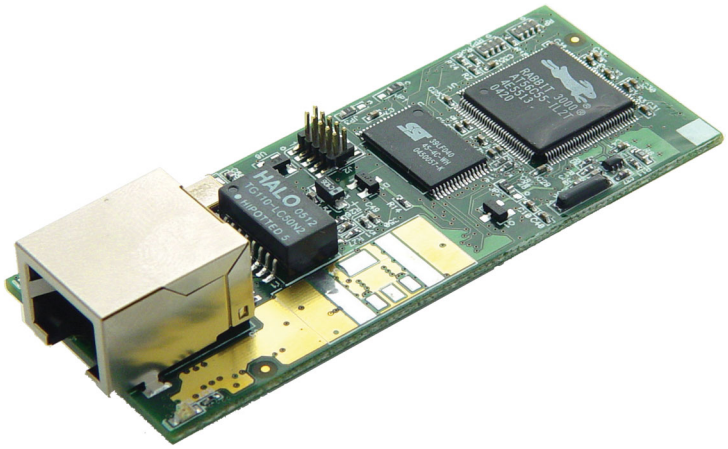
- Powerful Rabbit® 3000 microprocessor at 22.1 MHz
- On board RJ-45 10Base-T Ethernet
- Small footprint: half the size of a credit card
- Up to 512K Flash/512K SRAM, 1 MB Serial Flash
- 33 digital I/O, auxiliary I/O bus
- 4 serial ports capable of (IrDA, HDLC, asynch, sync, SPI)

Design Advantages:

- Low-cost Ethernet connectivity
- Ready-made platform for fast time-to-market, up to 3 months design integration time savings
- Royalty-free TCP/IP stack in source code
- Integrated development environment with abundant samples and libraries
- Ethernet security software add on modules available
- Embedded Ethernet in tight spaces

Applications

- Serial to Ethernet conversion
- Device monitoring and data logging
- POS systems
- Handheld devices
- Commercial and industrial control applications



RCM3700 – Low-cost Ethernet Module

The RCM3700 RabbitCore Family is a low-cost Rabbit 3000 microprocessor based core module designed for Ethernet/Internet applications. The RCM3700 features 512K Flash/512K SRAM or 256K Flash/256K SRAM, 4 serial ports, and an extremely small footprint.

Three versions offer varying memory sizes to provide customers the most effective solution. Extensive demo programs and software application templates make it easy to get the RCM3700 up and running in no time. Software bundles added to the development kit enable rapid development of secure web browser interfaces for embedded system control.

This RabbitCore mounts directly on a user-designed motherboard with a single 0.1" (2.54 mm) 2x20 dual-row IDC header and can interface with all types of CMOS-compatible digital devices. 33 digital I/O (shared with serial ports), power, and other signals are routed directly to the motherboard. Built-in low-EMI features, including a clock spectrum spreader, practically eliminate EMI problems, helping OEMs pass European CE and other regulatory RF emissions tests.

The RCM3700, programmed with Rabbit Semiconductor's Dynamic C, executes math, logic, and I/O quickly. The Rabbit 3000 microprocessor, RCM3700, and Dynamic C were designed in a complementary fashion for maximum performance and ease of use in embedded systems. Rabbit Semiconductor's

industry-proven Dynamic C development system is a C-language environment that includes an editor, compiler, and in-circuit debugger. User programs can be compiled executed and debugged using Dynamic C and a programming cable—no in-circuit emulator is required. An extensive library of drivers and sample programs is provided, including royalty-free TCP/IP stack with source code. The optional software modules expands the functionality of the RCM3700, providing you with greater control over your embedded solution.

Dynamic C Add-on Modules

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



RabbitWeb
Easily create web interfaces to monitor and control embedded applications



Secure Socket Layer
Industry standard web security for embedded applications



Fat File System
Popular, network-accessible file system for flash memories

RCM3700 and RCM3720 Development Kit comes complete with:

- RCM3700 or RCM3720 RabbitCore
- Development board with prototyping area
- AC adapter (U.S./Canada only)
- Dynamic C development system (not a trial version)
- Complete documentation on CD-ROM
- Serial cable for programming and debugging
- Getting Started manual

RCM3700 RabbitCore Specifications			
Features	RCM3700	RCM3710	RCM3720
Microprocessor	Low-EMI Rabbit 3000®at 22.1 MHz		
Ethernet Port	10Base-T interface, RJ-45, 2 LEDs		
Flash Memory	512K	256K	512K
SRAM	512K	128K	256K
Serial Flash Memory	1 MB		
Backup Battery	Connection for user-supplied backup battery (to support RTC and SRAM)		
General-Purpose I/O	33 parallel digital I/0 lines: • 31 configurable I/O • 2 fixed outputs		
Additional I/O	Reset		
Auxiliary I/O Bus	Can be configured for 8 data lines and 5 address lines (shared with parallel I/O lines), plus I/O read/write		
Serial Ports	Four 3.3 V CMOS-compatible ports configurable as: • 4 asynchronous serial ports (with IrDA) or • 3 clocked serial ports (SPI) plus 1 HDLC (with IrDA) or • 1 clocked serial port (SPI) plus 2 HDLC serial ports (with IrDA)		
Serial Rate	Maximum asynchronous baud rate = CLK/8		
Slave Interface	A slave port allows the RCM3700 to be used as an intelligent peripheral device slaved to a master processor, which may be a Rabbit 3000 or another type of processor		
Real-Time Clock	Yes		
Timers	Ten 8-bit timers (6 cascadable, 3 reserved for internal peripherals), one 10-bit timer with 2 match registers		
Watchdog/Supervisor	Yes		
Pulse-Width Modulators	4 PWM output channels with 10-bit free-running counter and priority interrupts		
Input Capture/ Quadrature Decoder	2-channel input capture can be used to time input signals from various port pins • 1 quadrature decoder unit accepts inputs from external incremental encoder modules or • 1 quadrature decoder unit shared with 2 PWM channels		
Power	4.75–5.25 V DC 100 mA @ 22.1 MHz, 5 V; 78 mA @ 11.05 MHz, 5 V		
Operating Temperature	–40° C to +70° C		
Humidity	5% to 95%, non-condensing		
Connectors	One 2 x 20, 0.1" pitch		
Board Size	1.20" × 2.95" × 0.89" (30 mm × 75 mm × 23 mm)		
Pricing			
Pricing (qty 1/100) Part Number	$59 / 49 20-101-0674	$57 / 47 20-101-0675	$55 / 45 20-101-0961
Development Kit Part Number	$299 U.S. 101-0680 Int'l. 101-0681		$199 U.S. 101-0963 Int'l.101-0964
Secure Embedded Web Kit Part Number	$699 U.S. 101-0897 Int'l. 101-0898		
RabbitWeb Module Part Number	$159 Shipped CD 101-0900		$149 Download 101-0910
FAT FILE System Module Part Number	$159 Shipped CD 101-0905		$149 Download 101-0916
SSL Module Part Module	$299 Shipped CD 101-0896		$289 Download 101-0895

Secure Embedded Web Application Kit comes complete with:

- RCM3720 Development Kit Contents
- RabbitWeb Software Module
- Secure Socket Layer (SSL) Software Module
- FAT File System Software Module

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