RCM3305 RabbitCore™

MODELS | 3305 | 3315 |

Microprocessor Core Module

Key Features

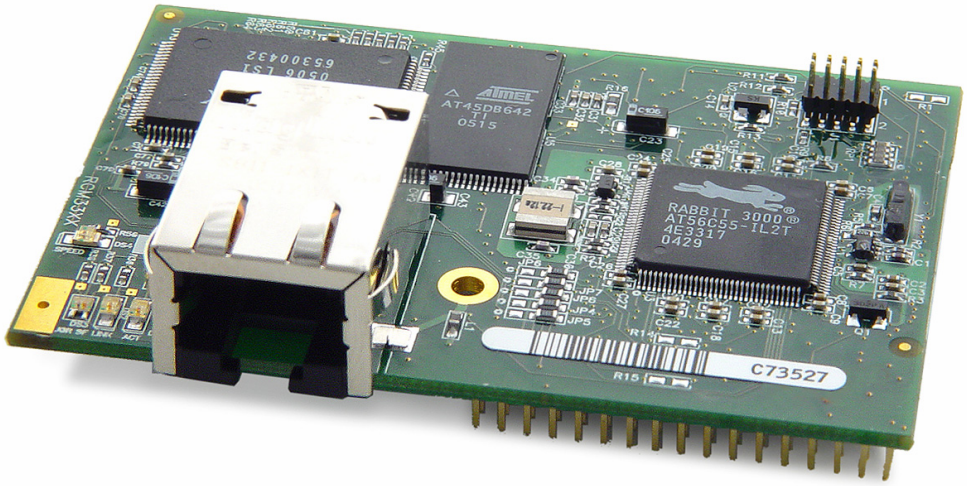
- Rabbit® 3000 @ 44.2 MHz
- 10/100Base-T Ethernet, RJ-45
- 4 MByte – 8 MByte Serial Flash
- 512K SRAM (Program)
  512K SRAM (Data)
- Up to 512K Flash
- 3.3 V Operation
- Low EMI
- 49 digital I/O
- 6 CMOS-compatible serial ports

Design Advantages

- Ideal for network-enabling security & access systems, remote automation, data logging, and industrial controls when coupled with RabbitWeb™, FAT File System and SSL software modules
- Compact size simplifies integration
- Plenty of storage with safe secure firmware and data transfers
- Complete microprocessor, on-board memory, royalty-free TCP/IP stack, and hundreds of sample programs reduces time-to-market by months

Applications

- Network Based Embedded Systems
- Access Systems
- Home Automation
- HVAC Systems
- Industrial Controls
- Other Key Applications



RCM3305 RabbitCore – Smarter, Faster, Stronger

The RCM3305 and RCM3315 microprocessor core modules are an ideal solution for designers who want to rapidly develop serial Flash and 10/100Base-T Ethernet into their embedded application. The RCM3305/3315 offer 4 – 8 MByte of serial Flash.

The RCM3305 and RCM3315 come fully loaded: Rabbit 3000 @ 44.2 MHz clock, 10/100Base-T Ethernet connectivity, 512K Flash, 512K program execution SRAM, 512K data SRAM and up to 49 digital I/O shared with up to 6 serial ports operating at 3.3 V (with 5 V tolerant I/O). Derived from industrial client feedback and combining traditional RabbitCore product strengths into one device, the RCM3305 series takes microprocessor core modules to the next level. Software bundles can also be added (see back) to this RabbitCore to enable rapid development of secure Web browser interfaces and a hierarchical file system.

RabbitCores mount directly on a user-designed motherboard and act as the controlling microprocessor for the user's system. RabbitCores can interface with all manner of CMOS-compatible digital devices through the user's motherboard. Programs are developed with our industry-proven Dynamic C® development system, a C language environment that includes an editor, compiler, and in-circuit debugger (Dynamic C is included in low-cost development kits). Efficient hardware and software integration facilitates rapid design and development. 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, along with royalty-free TCP/IP stack with source.

Available Software Modules:

RabbitWeb

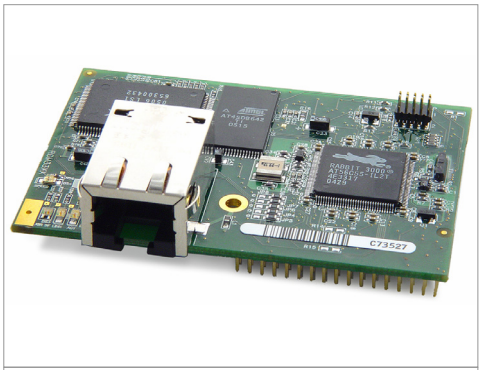
- Allows for HTML page development for Rabbit based embedded devices.

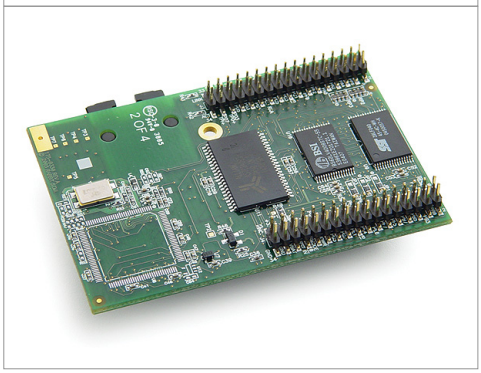
FAT File System

- For serial Flash based Rabbit devices. Enables devices to easily access and modify files.

Secure Socket Layer (SSL)

- Provides security on web-enabled Rabbit Devices.





RCM3305 Shown

RabbitWeb: HTTP/HTML Rapid Web Development Extension for Embedded Devices

- Read and write program variables remotely, while eliminating complex CGI programming
- Easily create controls such as pull-down menus or control buttons
- Ensure valid input values and proper user authorization
- Elegantly indicate input errors for easy correction
- 10X reduction in CGI programming and debugging time

File Allocation Table (FAT) File System: Ready to Run Flash Based File System

- Works with Dynamic C® HTTP server to reliably update content
- Reliable storage: data bases and web pages
- Supports battery backed wear-reducing cache system to protect file system during power loss

Secure Socket Layer (SSL): HTTPS Security for 8-Bit Embedded Devices

- Fast processing of complex encryption algorithms: up to 120 Kbits/sec
- Supports HTTPS with SSL version 3 and Transport Layer Security (TLS) vs. 1
- Royalty and license free with digital certificate creation utility
- Secure existing web application in minutes with < 10 lines of code

RabbitCore RCM3305 – RCM3315 Specifications		
Features	**RCM3305**	**RCM3315**
Microprocessor	Rabbit 3000 @ 44.2 MHz	
Ethernet Port	10/100Base-T, RJ-45, 3 LEDs	
Flash	512K	
SRAM	512K program + 512K data	
Extended Memory	8 MByte Serial Flash (chip)	4 MByte Serial Flash (chip)
Backup-Battery	Connection for user-supplied battery (to support RTC and data SRAM)	
LED Indicators	Five ACT (activity), LINK (link), SPEED (speed), SF (Serial Flash) 3305/3315, USR (user-programmable)	
General-Purpose I/O	49 digital I/O: 43 configurable / 3 fixed inputs / 3 fixed outputs	
Additional Inputs	2 Startup Mode, Reset In	
Additional Outputs	Status, Reset Out	
Auxiliary I/O Bus	8 data and 6 address (shared with I/O), plus I/O read-write	
Serial Ports	Five 3.3 V CMOS-compatible: ▪ 5 configurable as asynchronous (with IrDA), ▪ 3 configurable as clocked serial (SPI) ▪ 2 configurable as SDLC/HDLC ▪ 1 asynchronous serial port dedicated for programming	
Serial Rate	Max. asynchronous baud rate = CLK/8	
Slave Interface	Slave port permits use as master or intelligent peripheral with master controller	
Real-Time Clock	Yes	
Timers	Ten 8-bit timers (6 cascadable from the first) and 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	3.15–3.45 V DC, 275 mA @ 3.3 V	
Operating Temp.	-40°C to +70°C	
Humidity	5–95%, noncondensing	
Connectors - Headers	Two 2 x 17 (2 mm pitch), One 2 x 5, 1.27 mm programming	
Board Size	1.850" × 2.725" × 0.86" (47 × 69 × 22 mm)	
RabbitCore RCM3305 Pricing		
Pricing (qty. 1/100) Part Number	$119/98 101-1067	$99/81 101-1068
RCM3305 Development Kit * Part Number	$399 U.S. 101-1069	Int'l 101-1070
Software Module Pricing		
RabbitWeb Software Module Part Number	$159 Shipped CD 101-0900	$149 Download 101-0910
SSL Software Module	$299 Shipped CD 101-0896	$289 Download 101-0895
FAT File System Module Part Number	$159 Shipped CD 101-0979	$149 Download 101-0984

RCM3305 Development Kit comes complete with:

- RCM3305 RabbitCore
- Prototyping Board
- Serial cable for programming and debugging
- Complete product documentation on CD
- Dynamic C® with royalty-free TCP/IP stack and source
- Getting Started Instructions
- AC adapter (U.S. only)

Rabbit Semiconductor Inc. 2900 Spafford Street Davis, CA 95616 USA Tel: 530.757.8400 Fax: 530.757.8402