RabbitCore®
RCM3309 Series

Microprocessor Core Module

Ideal for engineers who want to rapidly develop and implement serial Flash with 10/100Base-T Ethernet connectivity into their embedded application.
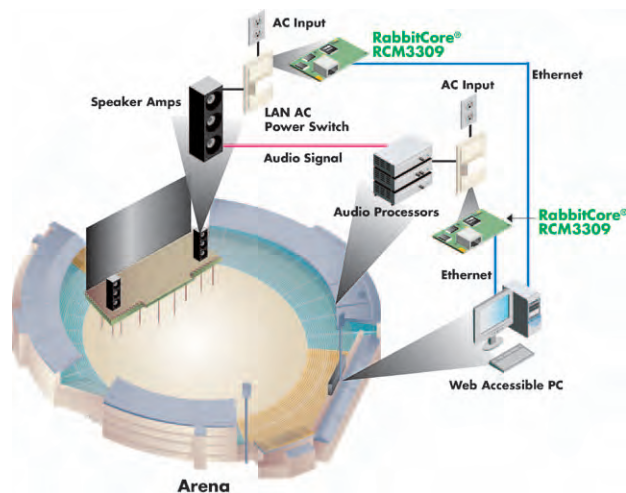
Overview

The RCM3309 core module series is powered by the Rabbit 3000 processor and is fully loaded with 4 MB or 8 MB of serial Flash and 10/100Base-T network connectivity. The on-board mass storage and fast network connectivity makes the RCM3309 series ideal for industrial level applications.

The RCM3309 series and Dynamic C® are an integrated hardware and software solution which allows for an extremely quick time to market. Rabbit's industry-proven Dynamic C is a C language environment that includes an editor, compiler and in-circuit debugger; no in-circuit emulator is required. With the additional software components such as RabbitWeb™, FAT File System and SSL, the RCM3309 series becomes a perfect fit for applications requiring data logging, industrial control, remote access and security. An extensive library of drivers, sample programs and royalty-free TCP/IP stack with source code is included.
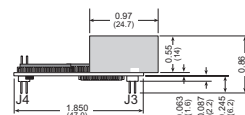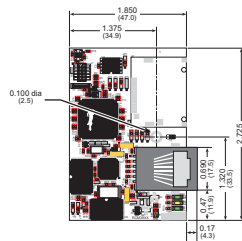
Application Highlight

Potential Applications: Network based embedded systems, access systems, home automation, HVAC systems and industrial controls.

Features/Benefits

- **Rabbit® 3000 microprocessor at 44 MHz**
- **10/100Base-T Ethernet, RJ-45**
- **512K Flash/512K SRAM/512K program execution SRAM**
- **4 MB or 8 MB serial Flash**
- **49 digital I/O and 5 serial ports**
- **Plenty of storage with safe and secure firmware and data transfers**
- **Debug software directly on target hardware**

Specifications	RCM3309	RCM3319
Feature		
Microprocessor	Rabbit® 3000 at 44 MHz	
EMI Reduction	Spectrum spreader for reduced EMI (radiated emissions)	
Ethernet Port	10/100Base-T, RJ-45, 3 LEDs	
SRAM	512K program (fast SRAM) + 512K data	
Flash Memory (program)	512K	
Memory (data storage)	8 MB (serial Flash)	4 MB (serial Flash)
LED Indicators	LINK/ACT (link/activity); FDX/COL (full-duplex/collisions); SPEED (on for 100Base-T Ethernet connection); CE/BSY (serial flash enabled/user-programmable)	
Backup Battery	Connection for user-supplied backup battery (to support RTC and data SRAM)	
General-Purpose I/O	49 parallel digital I/O lines: • 43 configurable I/O • 3 fixed inputs • 3 fixed outputs	
Additional Inputs	Startup mode (2), reset in	
Additional Outputs	Status, reset out	
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	Five 3.3V, CMOS-compatible ports (shared with I/O) • All 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	Maximum asynchronous baud rate = CLK/8	
Slave Interface	A slave port allows the RCM3309/RCM3319 to be used as an intelligent peripheral device slaved to a master processor, which may either be another Rabbit 3000 or any other 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 registers with 10-bit free-running counter and priority interrupts	
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	3.15–3.45VDC 325 mA @ 44.2 MHz, 3.3V	
Operating Temperature	-40° C to +85° C	
Humidity	5% to 95%, non-condensing	
Connectors	Two 2 × 17, 2 mm pitch; One 2 × 5 for programming with 1.27 mm pitch	
Board Size	1.850" × 2.725" × 0.86" (47 mm × 69 mm × 22 mm)	
Pricing		
Price and Part Number	$119; 20-101-1194	$99; 20-101-1195
Development Kit and Part Number	$399; 101-1069	None

Visit www.digiembedded.com for part numbers.

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