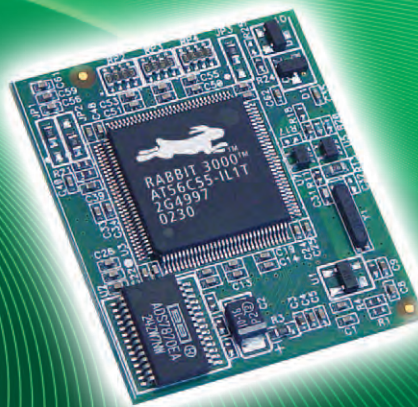


RabbitCore[®] RCM3400 Series

Microprocessor Core Module

The compact, analog-enabled RabbitCore is designed for embedded applications that require analog functionality.

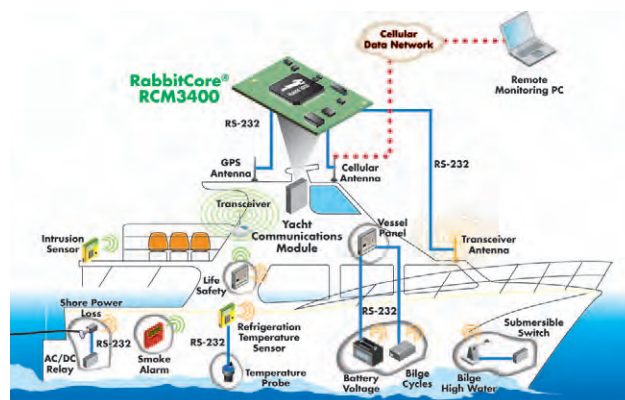


Overview

The RabbitCore RCM3400 series, featuring the Rabbit[®] 3000 microprocessor, is designed for embedded control and monitoring applications requiring analog functionality. Its small size and ease of use when paired with Dynamic C[®] allow engineers to develop a control and monitoring solution for many of today's embedded applications. The Ethernet-ready RCM3400 series comes pre-assigned with a MAC ID, along with a development board 10Base-T reference design. Built-in low EMI features, including a clock spectrum spreader, practically eliminate EMI problems, helping to pass CE and RF emissions tests.

Rabbit hardware and Dynamic C are designed in a complementary fashion for maximum performance and ease of use in embedded systems. The additional software components in Dynamic C allow you to add functionality for embedded application customization.

Application Highlight



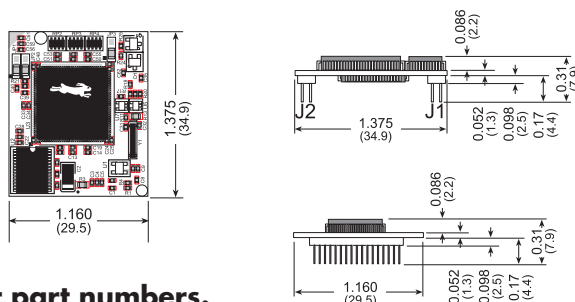
Potential Applications: Device intelligence, embedded control, sensor reading, serial device coordinator, handheld remote devices, and GPS/AVL applications.

Features/Benefits

- Rabbit 3000 microprocessor at 30 MHz
- Up to 512K Flash/512K SRAM
- 8 channel 12-bit A/D with programmable gain
- 47 digital I/O and 5 serial ports (IrDA, HDLC, asynch, SPI)
- MAC ID installed
- Compact size simplifies integration
- Ready-made platform for fast time-to-market, up to 3 months of design integration time savings
- Low-cost embedded microprocessor module



Specifications		RCM3400	RCM3410
Feature			
Microprocessor	Rabbit® 3000 at 30 MHz		
Flash Memory	512K	512K	
SRAM	512K	512K	
Backup Battery	Connection for user-supplied backup battery (to support RTC and SRAM)		
Analog Inputs - A/D Converter Resolution - A/D Conversion Time (including 120 μs raw count and Dynamic C)	8 channels single-ended or 4 channels differential Programmable gain 1, 2, 4, 5, 8, 10, 16, and 20 V/V		
	12 bits (11 bits single-ended)		
	180 μs		
General-Purpose I/O	47 parallel digital I/O lines: 41 configurable I/O 3 fixed inputs 3 fixed outputs		
Additional Inputs	Startup mode (2), reset in, CONVERT		
Additional Outputs	Status, reset out, VREF		
Auxiliary I/O Bus	Can be configured for 8 data lines and 6 address lines (shared with parallel I/O lines), plus I/O read/write		
Serial Ports	5 shared high-speed, CMOS-compatible ports: - All 5 configurable as asynchronous, 3 as clocked serial (SPI), and 2 as SDLC/HDLC 1 asynchronous serial port dedicated for programming - Support for MIR/SIR IrDA transceiver		
Serial Rate	Maximum asynchronous baud rate = CLK/8		
Slave Interface	A slave port allows the RCM3400 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), 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	3.0–3.45VDC @ 29.4 MHz, 2.8–3.45VDC @ 14.7 MHz 97 mA @ 3.3V, 29.4 MHz; 57 mA @ 3.0V, 14.7 MHz		
Operating Temperature	-40° C to +85° C		
Humidity	5% to 95%, non-condensing		
Connectors	Two 2 × 17, 1.27 mm pitch		
Board Size	1.160" × 1.375" × 0.31" (29.5 mm ×34.9 mm × 7.9 mm)		
Pricing			
Price and Part Number	\$69; 20-101-0561	\$59; 20-101-0562	
Development Kit and Part Number	\$399; 101-0587	None	



Visit www.digiembedded.com for part numbers.

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