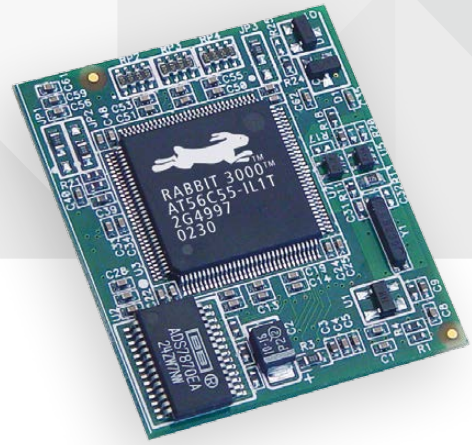




MICROPROCESSOR  
CORE MODULE



# RABBITCORE® RCM3400 SERIES

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

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.

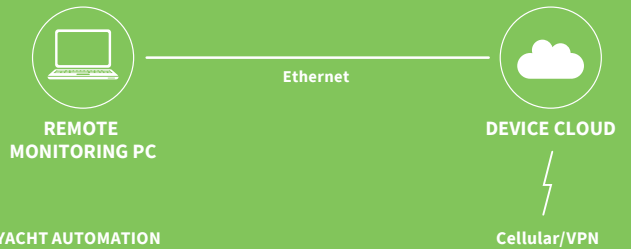
The Ethernet-ready RCM3400 series comes pre-assigned with a MAC ID, along with a development board 10Base-T reference design. Built-in low EMI features, including a clock spectrum spreader, practically eliminate EMI problems, helping to pass CE and RF emissions tests.

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.

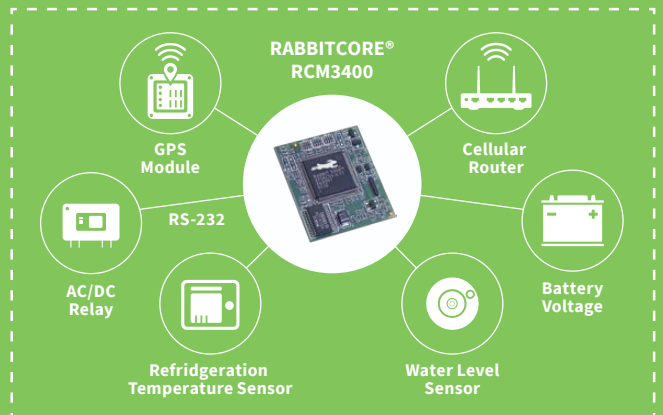
## BENEFITS

- 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

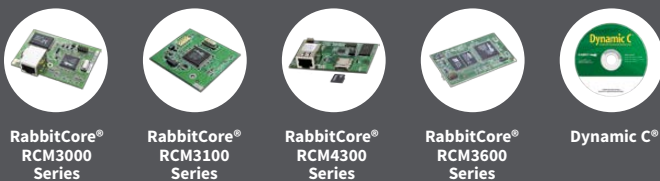
## APPLICATION EXAMPLE



## YACHT AUTOMATION



## RELATED PRODUCTS



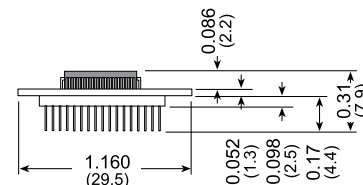
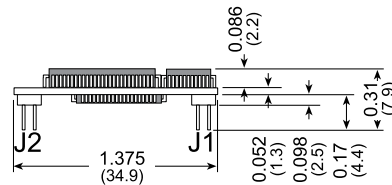
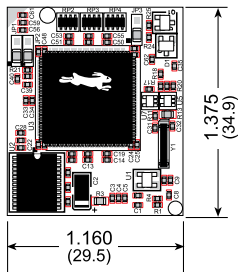
## SPECIFICATIONS

# RCM3400

# | RCM3410

### FEATURE

<b>MICROPROCESSOR</b>	Rabbit® 3000 at 30 MHz
<b>FLASH MEMORY</b>	512K <span style="float: right;">256K</span>
<b>SRAM</b>	512K <span style="float: right;">256K</span>
<b>BACKUP BATTERY</b>	Connection for user-supplied backup battery (to support RTC and SRAM)
<b>ANALOG INPUTS</b>	8 channels single-ended or 4 channels differential Programmable gain 1, 2, 4, 5, 8, 10, 16, and 20 V/V
- A/D CONVERTER RESOLUTION	12 bits (11 bits single-ended)
- A/D CONVERSION TIME (INCLUDING 120 MS RAW COUNT AND DYNAMIC C)	180 μs
<b>GENERAL-PURPOSE I/O</b>	47 parallel digital I/O lines: <ul style="list-style-type: none"> <li>• 41 configurable I/O</li> <li>• 3 fixed inputs</li> <li>• 3 fixed outputs</li> </ul>
<b>ADDITIONAL INPUTS</b>	Startup mode (2), reset in, CONVERT
<b>ADDITIONAL OUTPUTS</b>	Status, reset out, VREF
<b>AUXILIARY I/O BUS</b>	Can be configured for 8 data lines and 6 address lines (shared with parallel I/O lines), plus I/O read/write
<b>SERIAL PORTS</b>	5 shared high-speed, CMOS-compatible ports: <ul style="list-style-type: none"> <li>• All 5 configurable as asynchronous, 3 as clocked serial (SPI), and 2 as SDLC/HDLC</li> <li>• 1 asynchronous serial port dedicated for programming</li> <li>• Support for MIR/SIR IrDA transceiver</li> </ul>
<b>SERIAL RATE</b>	Maximum asynchronous baud rate = CLK/8
<b>SLAVE INTERFACE</b>	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
<b>REAL-TIME CLOCK</b>	Yes
<b>TIMERS</b>	Ten 8-bit timers (6 cascadable), one 10-bit timer with 2 match registers
<b>WATCHDOG/SUPERVISOR</b>	Yes
<b>PULSE-WIDTH MODULATORS</b>	10-bit free-running counter and four pulse-width registers
<b>INPUT CAPTURE</b>	2-channel input capture can be used to time input signals from various port pins
<b>QUADRATURE DECODER</b>	2-channel quadrature decoder accepts inputs from external incremental encoder modules
<b>POWER</b>	3.0–3.45 VDC @ 29.4 MHz, 2.8–3.45VDC @ 14.7 MHz 97 mA @ 3.3V, 29.4 MHz; 57 mA @ 3.0V, 14.7 MHz
<b>OPERATING TEMPERATURE</b>	-40° C to +85° C
<b>HUMIDITY</b>	5% to 95%, non-condensing
<b>CONNECTORS</b>	Two 2 × 17, 1.27 mm pitch
<b>BOARD SIZE</b>	1.160" × 1.375" × 0.31" (29.5 mm × 34.9 mm × 7.9 mm)



## PART NUMBERS

## DESCRIPTION

20-101-0561	RCM3400
20-101-0562	RCM3410
101-0587	RCM3400 RabbitCore Development Kit

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