



MICROPROCESSOR  
CORE MODULE



# RABBITCORE<sup>®</sup> RCM3209 SERIES

Ideal for engineers who want to rapidly develop and implement embedded systems with optional 10/100Base-T Ethernet connectivity

Based on the Rabbit<sup>®</sup> 3000, the RabbitCore RCM3209 series provides the capability to integrate real-time control and Ethernet connectivity into your design. Engineers are freed from the limitations of serial port communications, allowing worldwide connectivity using low-cost networking hardware. The RCM3209 series replaces the previous RCM3200 versions as it adds the full industrial temperature spec.

The RCM3209 series and Dynamic C<sup>®</sup> are designed in a complementary fashion for maximum performance and ease-of-use. 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. An extensive library of drivers, sample programs and royalty-free TCP/IP stack with source code is included.

## BENEFITS

- Rabbit 3000 microprocessor at 44 MHz
- Optional 10/100Base-T Ethernet
- 512K Flash / 256K SRAM / 512K Program Execution SRAM
- 52 digital I/O and 6 serial ports for multiple device connectivity options
- Software debugging directly on target hardware

## RELATED PRODUCTS



RabbitCore<sup>®</sup>  
RCM3000  
Series



RabbitCore<sup>®</sup>  
RCM3700  
Series



RabbitCore<sup>®</sup>  
RCM4300  
Series



Dynamic C<sup>®</sup>



ConnectCore<sup>®</sup>  
9P 9215

## APPLICATION EXAMPLE



HEALTHCARE  
FACILITY

Ethernet

COSMETIC SURGERY CONTROLLER

RABBITCORE<sup>®</sup>  
RCM3209  
Inside Cosmetic  
Medical Laser Machine



Touch Screen



Laser Device

RS-232

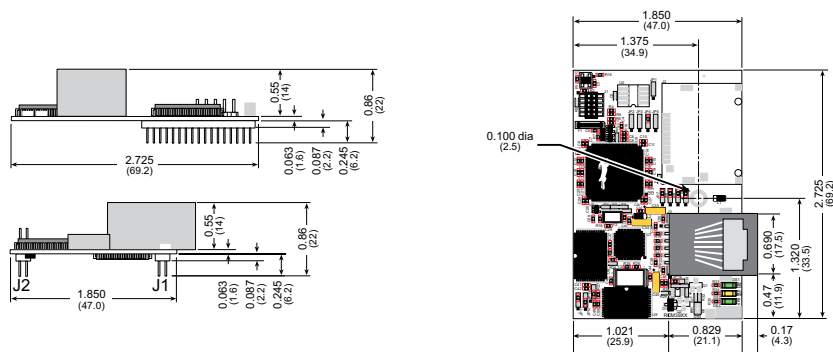
# SPECIFICATIONS

# RCM3209

# RCM3229

## FEATURE

<b>MICROPROCESSOR</b>	Rabbit® 3000 at 44 MHz	
<b>EMI REDUCTION</b>	Spectrum spreader for reduced EMI (radiated emissions)	
<b>ETHERNET PORT</b>	10/100Base-T, RJ-45, 3 LEDs	N/A
<b>FLASH MEMORY</b>	512K	
<b>DATA SRAM</b>	256K	
<b>PROGRAM EXECUTION SRAM</b>	512K	
<b>BACKUP BATTERY</b>	Connection for user-supplied backup battery (to support RTC and data SRAM)	
<b>GENERAL-PURPOSE I/O</b>	52 parallel digital I/O lines: <ul style="list-style-type: none"> <li>• 44 configurable I/O</li> <li>• 4 fixed inputs</li> <li>• 4 fixed outputs</li> </ul>	
<b>ADDITIONAL INPUTS</b>	Startup mode (2), reset in	
<b>ADDITIONAL OUTPUTS</b>	Status, reset out	
<b>EXTERNAL 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>	6 shared high-speed, CMOS-compatible ports: <ul style="list-style-type: none"> <li>• All 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC (with IrDA)</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 RCM3209/RCM3229 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>POWER</b>	3.15V to 3.45 VDC 325 mA @ 3.3V	3.15V to 3.45VDC 190 mA @ 3.3V
<b>QUADRATURE DECODER</b>	Edge connectors for interface with 52-pin mini PCI Express socket	
<b>OPERATING TEMPERATURE</b>	-40° C to +85° C	
<b>HUMIDITY</b>	5% to 95%, non-condensing	
<b>CONNECTORS</b>	Two 2 × 17, 2 mm pitch	
<b>BOARD SIZE</b>	1.850" × 2.725" × 0.86" (47 mm × 69 mm × 22 mm)	



# PART NUMBERS

# DESCRIPTION

20-101-1179	RCM3209
101-0552	RCM3209 Development Kit Universal

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