MICROPROCESSOR
CORE MODULE



DIGI RABBITCORE RCM3100 SERIES

A cost-effective solution that allows embedded engineers to add intelligence and I/O control to a wide variety of peripheral devices

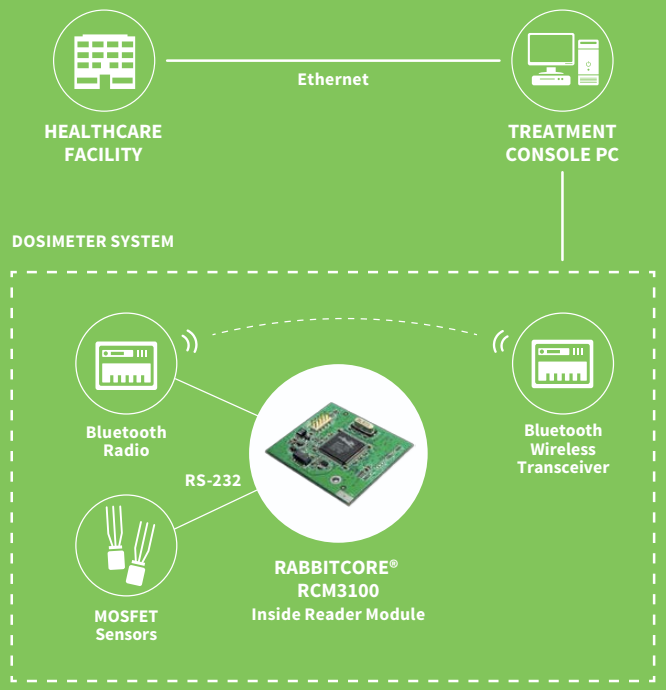
Powered by the Rabbit® 3000 microprocessor, the compact RCM3100 series boasts powerful features and a small footprint (47 mm × 42 mm) to simplify integration. Its small size and ease of use when paired with Dynamic C® allow engineers to add device intelligence and I/O control for many of today's embedded applications. The RCM3100 series is ideal for applications requiring M2M connectivity and is pin-compatible with the RCM3000 series for cost-effective Ethernet and non-Ethernet systems.

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
- 54 digital I/O and 6 serial ports (IrDA, HDLC, asynch, SPI)
- 3.3V operation, low power "sleepy" modes (< 2mA)
- 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
- Easily links to multiple serial devices

APPLICATION EXAMPLE

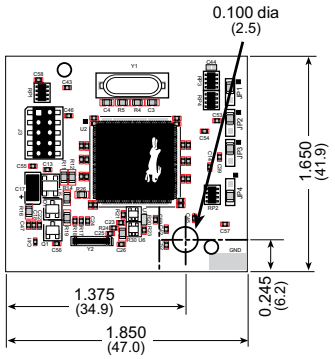


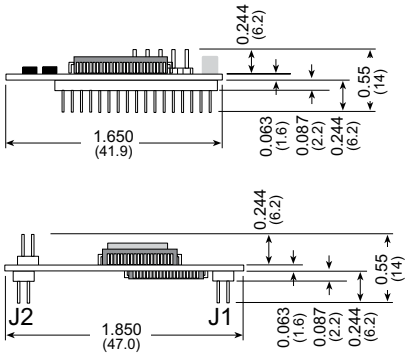
RELATED PRODUCTS



RabbitCore® RCM3000 Series | RabbitCore® RCM3400 Series | RabbitCore® RCM3600 Series | RabbitCore® RCM4100 Series | Dynamic C®

SPECIFICATIONS	RCM3100	RCM3110
FEATURE		
MICROPROCESSOR	Rabbit 3000® at 30 MHz	
EMI REDUCTION	Spectrum spreader for reduced EMI (radiated emissions)	
FLASH MEMORY	512K (2 × 256K)	256K
SRAM	512K	128K
BACKUP BATTERY	Connection for user-supplied backup battery to support RTC and SRAM	
GENERAL-PURPOSE I/O	54 parallel digital I/0 lines: • 46 configurable I/O • 4 fixed inputs • 4 fixed outputs	
ADDITIONAL DIGITAL INPUTS	2 startup mode, reset in	
ADDITIONAL DIGITAL OUTPUTS	Status, reset out	
AUXILIARY I/O BUS	8 data lines and 6 address lines (shared with I/O) plus I/O read/write	
SERIAL PORTS	6 shared high-speed, CMOS-compatible ports: • 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC (with IrDA) • 1 asynchronous clocked serial port dedicated for programming • Support for MIR/SIR IrDA transceiver	
SERIAL RATE	Max. asynchronous baud rate = CLK/8	
SLAVE INTERFACE	A slave port allows the RCM3100 to be used as a master or as an intelligent peripheral device with Rabbit-based or any other type of processor	
REAL-TIME CLOCK	Yes	
TIMERS	Ten 8-bit timers (6 cascadable from the first), 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	3.15V to 3.45 VDC 75 mA @ 3.3V	
OPERATING TEMPERATURE	-40° C to +85° C	
HUMIDITY	5% to 95%, non-condensing	
BOARD SIZE	1.850" × 1.650" × 0.55" (47 mm × 42 mm × 14 mm)	
PRODUCT WARRANTY	1 year	





PART NUMBERS	DESCRIPTION
20-101-0517	RCM3100. 512K Flash, 512K SRAM
20-101-0518	RCM3110. 256K Flash, 128K SRAM

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DIGI INTERNATIONAL WORLDWIDE HQ
877-912-3444 / 952-912-3444 / www.digi.com

DIGI INTERNATIONAL GERMANY
+49-89-540-428-0

DIGI INTERNATIONAL JAPAN
+81-3-5428-0261 / www.digi-intl.co.jp

DIGI INTERNATIONAL SINGAPORE
+65-6213-5380

DIGI INTERNATIONAL CHINA
+86-21-50492199 / www.digi.com.cn