

RCM4400W RabbitCore®

MODELS | RCM4400W |

Wi-Fi Core Module

Key Features

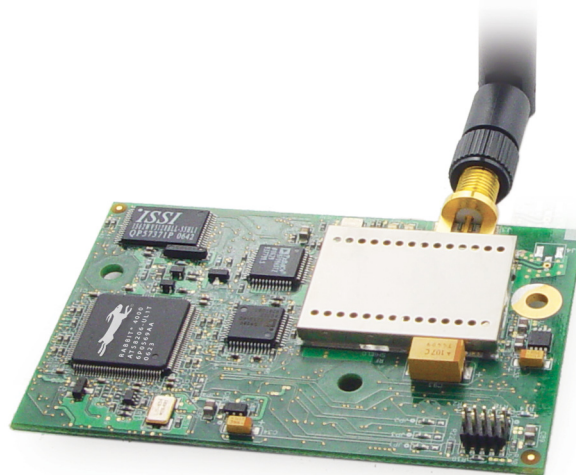
- RabbitCore module running @ 58.98 MHz
- Integrated Wi-Fi/802.11 wireless connectivity
- 512K flash memory, 512K data SRAM, 512K fast program-execution SRAM
- Up to 35 general-purpose I/O lines configurable
- 3.3 V I/O lines
- Low-power modes down to 2 kHz
- Small size: 1.84" × 2.85" × 0.50" (47 mm × 72 mm × 13 mm)

Design Advantages:

- Embedded wireless networking
- Stable, proprietary 802.11 implementation
- Serial to Wi-Fi bridge capability

Applications

- Industrial Control
- Remote Terminal Unit (RTU)
- Building Automation



RCM4400W RabbitCore – The On-Core Wi-Fi Solution

The RCM4400W RabbitCore modules adds Wi-Fi/802.11 functionality to existing Rabbit® 4000 microprocessor features, allowing you to create a low-cost, low-power, Wi-Fi based control and communications solution for your embedded system.

The RCM4400W RabbitCore modules are equipped with on-board Wi-Fi/802.11 wireless connectivity. Features also include 512K flash memory and fast-program execution SRAM, 35 general-purpose I/O, 3.3 V I/O line, and low-power modes.

At the heart of the RCM4400W is the Rabbit 4000 microprocessor which features a clock speed of up to 58.98 MHz. Other features include hardware DMA, auxiliary I/O, quadrature decoder, input capture, GPIO lines shared with up to six serial ports, and four levels of alternate pin functions that include variable phase PWM.

The Rabbit 4000 boasts an additional 500+ new operational code instructions that increases the processing efficiency, from its predecessor the Rabbit 3000.

The RCM4400W RabbitCore modules are easily interchangeable with other RCM4xxx based products due to electrical and functional compatibility. With a small footprint of 1.84"x2.85" (47mm x 72mm), the RCM4400 is compact and can easily be mounted directly onto a user-designed motherboard, along with CMOS-compatible digital devices.

Developing with the RCM4400W

The RCM4400W Development Kit has the essentials that you need to design your own wireless microprocessor-based system. The kit comes complete with a Wi-Fi/802.11 enabled RCM4400W RabbitCore module, a prototyping board, accessory parts and all development tools specifically designed to get you up and running in minutes. Development kits come with our industry-proven Dynamic C integrated development software that includes an editor, compiler, and in-circuit debugger. Programming is easy with hundreds of samples and libraries that can be used as building blocks to your code.

Dynamic C Add-on Modules

Dynamic C Add-on modules provide added functionality and customization to your embedded applications. Software is available via download or CD-ROM.



Secure Socket Layer

Industry standard web security for embedded applications



RabbitWeb

Easily create web interfaces to monitor and control embedded applications



Advanced Encryption Standard

128-bit encryption for transfer of sensitive data



Point-to-Point Protocol

TCP/IP functionality for serial and PPPoE connections



Simple Network Management Protocol (SNMP)

Management software for networked devices

µC/OS-II Real-Time Kernel

Real-time preemptive, prioritized operating system

RCM4400W RabbitCore® Specifications

Features		RCM4400W
Microprocessor		Rabbit®4000 @ 58.98 MHz
Data SRAM		512K
Program Execution Fast SRAM		512K
Flash Memory		512K
Serial Flash Memory		1 MByte
Backup Battery		Connection for user-supplied backup battery (to support RTC and data SRAM)
General Purpose I/O		up to 35 parallel digital I/O lines configurable with four layers of alternate functions
Additional Inputs		Startup mode (2), reset in
Additional Outputs		Status, reset out
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
Wi-Fi		802.11b standard, ISM 2.4 GHz
Serial Ports		6 high-speed, CMOS-compatible ports: • All 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDL/C/HDL/C • 1 asynchronous clocked serial port shared with programming port • 1 clocked serial port shared with serial flash
Serial Rate		Maximum asynchronous baud rate = CLK/8
Slave Interface		Slave port allows the RCM4400W to be used as an intelligent peripheral device slaved to a master processor
Real Time Clock		Yes
Timers		Ten 8-bit timers (6 cascadable from the first), one 10-bit timer with 2 match registers, and one 16-bit timer with 4 outputs and 8 set/reset registers
Watchdog/Supervisor		Yes
Pulse-Width Modulators		4 channels synchronized PWM with 10-bit counter 4 channels variable-phase or synchronized PWM with 16-bit counter
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 (pins unloaded)		3.3 V.DC ±5%
		450 mA @ 3.3 V while transmitting/receiving 80 mA @ 3.3 V while not transmitting/receiving
Operating Temperature		-20°C to +85°C
Humidity		5% to 95%, non-condensing
Connectors		One RP-SMA antenna connector One 2 × 25, 1.27 mm pitch IDC signal header One 2 × 5, 1.27 mm pitch IDC programming header
Board Size		1.84" × 2.85" × 0.50" (47 mm × 72 mm × 13 mm)
Pricing		
Pricing (qty. 1/100)		\$119 / 99
Part Number		20-101-1140
Development Kit Part Number		\$299
		U.S. 101-1173 Int'l. 101-1174