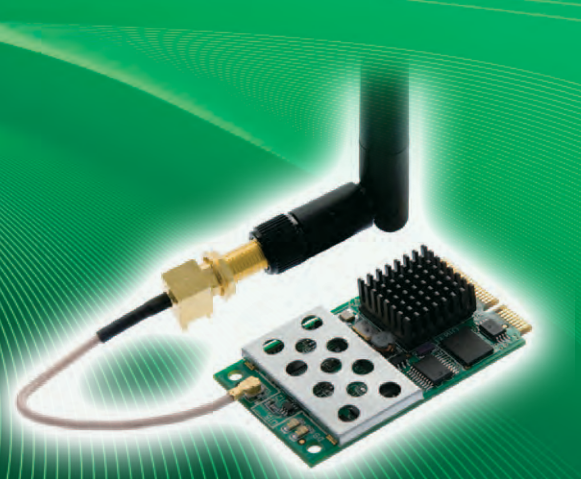
MiniCore™ RCM5600W Series

Ultra-Compact Wi-Fi Module

An ultra-compact 802.11b/g Wi-Fi control and communications solution for cost-sensitive embedded applications.



Overview

The MiniCore RCM5600W series is Rabbit's most compact Wi-Fi embedded solution, ideal for cost-sensitive applications. With their long-term firmware support and low-risk design features, the RCM5600W and RCM5650W offer an easy path to add reliable wireless network connectivity to any system you design.

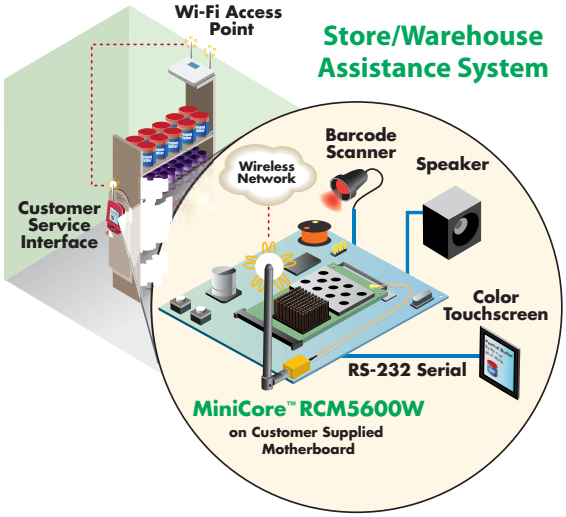
Both wireless MiniCores offers 802.11b/g connectivity supporting WPA2 Enterprise security, as well as encryption standards such as SSL and AES. Embedded web server capability allows for monitoring and control of devices from remote locations. Both the RCM5600W and RCM5650W can use the firmware update feature which allows for remote firmware updates from virtually anywhere in the world. The RCM5600W Wi-Fi modules are fully compatible with the RCM5700 Ethernet enabled MiniCores, providing greater network deployment and design flexibility.

Development Kit

This affordable development kit includes everything you need to begin development.

$149

Application Highlight



Potential Applications: Building automation, remote energy management, security and surveillance

Features/Benefits

- Rabbit® 5000 running at 74 MHz
- On-board single-chip 802.11b/g transceiver
- Up to 32 GPIO lines and 6 serial ports
- 1 MB of SRAM and up to 4 MB of serial Flash
- Update firmware wirelessly
- Embedded web server

Software

The Dynamic C® integrated development environment reduces the time and effort to write real-time software for embedded systems that use a Rabbit microprocessor, enabling easy development of a wide range of applications.

Rabbit products and Dynamic C integrate editing, compiling, linking, loading and debugging into a single development environment as one function. There are no compatibility issues when moving from one stage to another. Once the design is complete, you can debug it on the target hardware and see how your code works. Because it is a dialect of C, the Dynamic C language has all the statements and constructions of traditional C, plus extensions that make it easier to write reliable, real-time multi-tasking software. The Dynamic C integrated development environment allows for easy hardware migration, moving from a single-board computer to chip level production.

Dynamic C also includes highly useful software components that can add functionality and value to your applications. This functionality includes web server capability, filing system, remote firmware updates, and wired and wireless security. Compatible software components are listed below.

Software Components

	Component	Description
 RabbitWeb	**RabbitWeb**	System of HTML tags used to easily create web interfaces to monitor and control embedded applications
 RPU	**Remote Program Update (RPU)**	Allows for remote firmware updates from anywhere in the world using an Internet connection
 FAT	**File Allocation Table (FAT)**	Popular network-accessible file system for flashed based memories
 SSL	**Secure Sockets Layer (SSL) / Transport Layer Security (TLS)**	The industry standard for web security in embedded applications
 AES	**Advanced Encryption Standard (AES)**	128-bit encryption for transferring sensitive data
 W-FA	**Wi-Fi Authentication**	Provides strongest Wi-Fi security available via WPA-2 and 802.11i

MiniCore™ RCM5600W Development Kits

Standard Development Kit	Deluxe Development Kit

The Standard and Deluxe Development Kits provide the essential tools needed to design your own microprocessor-based system.

The Standard Kit includes:

- RCM5600W module
- Antenna kit
- Interface board with standoffs/connectors
- Prototyping board with standoffs/connectors
- USB cable to program RCM5600W via interface board
- Dynamic C CD-ROM, including product documentation on disk
- Getting Started instructions
- Registration card

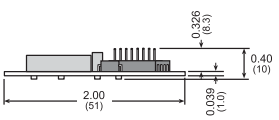
The Deluxe Development Kit includes everything in the Standard Development Kit, plus the following items:

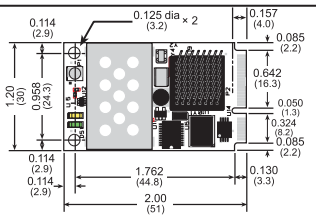
- Universal AC adapter, 5VDC, 2 A (includes Canada/Japan/U.S., Australia/N.Z., U.K., and European style plugs). Development Kits sold in North America may contain an AC adapter with only a North American style plug.
- Digital I/O and serial communication accessory boards for use with certain sample programs
- Rabbit 5000 Processor Easy Reference poster

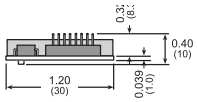
Specifications	RCM5600W	RCM5650W
Features		
Microprocessor	Rabbit® 5000 at 74 MHz	
EMI Reduction	Spectrum spreader for reduced EMI (radiated emissions)	
Serial Flash Memory (program)	1 MB	4 MB
SRAM	1 MB	
Backup Battery	Connection for user-supplied backup battery (to support RTC)	
General Purpose I/O	Up to 32 parallel digital I/O lines configurable with four layers of alternate functions	
Additional Inputs	Reset in	
Additional Outputs	Status, reset out	
External I/O Bus	Can be configured for 8 data lines and 8 address lines (shared with parallel I/O lines), plus I/O read/write	
Serial Ports	6 high-speed, CMOS-compatible ports: • All 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDL • 1 clocked serial port shared with programming port	
Serial Rate	Maximum asynchronous baud rate = CLK/8	
Slave Interface	Slave port allows the RCM5600W 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 or 4 channels variable-phase or synchronized PWM with16-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	3.15VDC (min.) - 3.45VDC (max.) 625 mA @ 3.3V while transmitting/receiving 85 mA @ 3.3V while not transmitting/receiving	
Operating Temperature	–30° C to +55° C	
Humidity	5% to 95%, noncondensing	
Connectors	Edge connectors for interface with 52-pin mini PCI Express socket	
Board Size	1.20" × 2.00" × 0.40" (30 mm × 51 mm × 10 mm)	

Wi-Fi Specifications	Region	802.11b	802.11g
Typical Average Antenna Output Power	Americas, Japan	19 dBm	15 dBm
	Other Regions	18 dBm	
Compliance	802.11b/g, 2.4 GHz		

Pricing		
Pricing (qty 1/100); Part Number	$69 / $65; 20-101-1265	$75 / $71; 20-101-1309
Development Kit; Part Number	Standard Development Kit - $149; 101-1284	Deluxe Development Kit - $249; 101-1285







Visit www.digi.com for part numbers.

DIGI SERVICE AND SUPPORT - **You can purchase with confidence knowing that Digi is here to support you with expert technical support and a strong one-year warranty. www.digi.com/support**

Digi International
877-912-3444
952-912-3444
info@digi.com

Digi International France
+33-1-55-61-98-98
www.digi.fr

Digi International KK
+81-3-5428-0261
www.digi-intl.co.jp

Digi International (HK) Limited
+852-2833-1008
www.digi.cn

MAKING Wireless M2M EASY™

91001508
C1/1210

BUY ONLINE • www.digi.com

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Rabbit Semiconductor:

20-101-1309 20-101-1265