MiniCore™ RCM5700 Series

Ultra-Compact Wi-Fi Module

A low-cost, ultra-compact, pin-compatible Ethernet control and communications solution for your embedded design.

Overview

The MiniCore RCM5700 series offers an integrated software and hardware platform that can shorten your design cycle from years to months. RCM5750 and RCM5760 allow datalogging capabilites with increased memory options.

With six serial ports, four configurable as SPI, the RCM5700 series can easily embed into any existing or new design and is pin-compatible with current and future MiniCore products, such as MiniCores offering Wi-Fi 802.11b/g. The embedded web server offers an added level of control and monitoring for today's intensive applications.
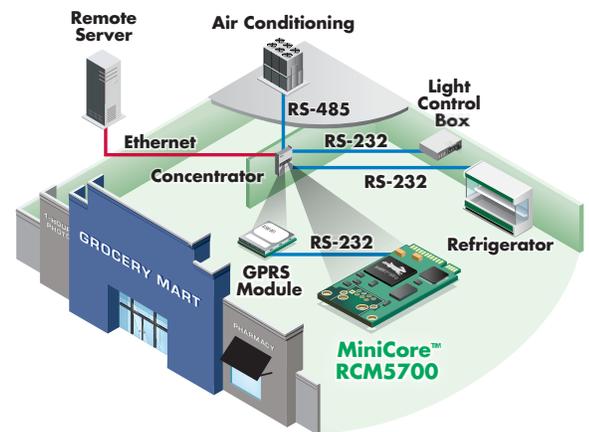
Application Highlight

Ideal Applications : Remote energy management, Security and surveillance, Building automation, Gaming (player tracking), Test and measurement equipment

Features/Benefits

- **10/100Base-T Ethernet**
- **Up to 640 KB SRAM for data, 1 MB Flash memory for program storage, 2 MB serial Flash for mass storage**
- **Up to 32 GPIO lines and 6 serial ports**
- **Serial to Ethernet bridge**
- **Embedded web server, Remote Firmware Update, open source code and royalty-free**
- **Cost-competitive embedded solution**
- **Quick time-to-market**

Development Kit

This affordable development kit includes everything you need to get started.

$99

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

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:

- RCM5700 module

- Interface board with standoffs/connectors

- Prototyping board with standoffs/connectors

- USB cable to program RCM5700 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

- CAT 5/6 Ethernet cable and DB-9 to 10-pin header serial cable

- Rabbit 5000 Processor Easy Reference poster

Specifications	RCM5700	RCM5710	RCM5750	RCM5760
Features				
Microprocessor	Rabbit® 5000 at 50 MHz			
EMI Reduction	10/100Base-T (Ethernet Signals Only)	10/100Base-T w/RJ-45 connector	10/100Base-T (Ethernet Signals Only)	10/100Base-T w/RJ-45 connector
Flash Memory (code)	1 MB parallel Flash			
SRAM (data)	128K internal to Rabbit 5000		128K internal to Rabbit 5000; 512K external Fast SRAM	
Battery Backable SRAM (data)	None			
Mass Storage Option	None		2 MB serial Flash	
Backup Battery	Connection for user-supplied backup battery (to be used for RTC)		None	
General Purpose I/O	Up to 32 parallel digital I/O			
Serial Ports	6 high-speed, CMOS-compatible ports: • All 6 configurable as asynchronous (with IrDA), 4 as clocked serial (SPI), and 2 as SDLC/HDLC • 1 asynchronous clocked serial port shared with programming port			
Serial Rate	Max. async = CLK/8, Max. sync = CLK/2			
Slave Interface	Slave port allows the RCM5700 to be used as an intelligent peripheral device slaved to a master processor			
Real-Time Clock	Yes		Yes (no battery backup)	
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			
Power	3.15 - 3.45VDC 70 mA @ 3.3V (typical — without Ethernet) 200 mA @ 3.3V (typical — with Ethernet)			
Operating Temperature	-40° C to +85° C			
Humidity	5% to 95%, noncondensing			
Connectors	Edge connectors for 52-pin Mini PCI Express socket	Edge connectors for 52-pin Mini PCI Express socket RJ45 (Ethernet)	Edge connectors for 52-pin Mini PCI Express socket	Edge connectors for 52-pin Mini PCI Express socket , RJ45 (Ethernet)
Board Size	1.20" × 2.00" × 0.12" (30 mm × 51 mm × 3mm)			
Pricing				
(Qty. 1/100) Part Number	$35/$29.50 20-101-1235	$45/$39.50 20-101-1300	$45/$39.50 20-101-1306	$55/$49.50 20-101-1307
Standard Development Kit Part Number	$99 101-1274			
Deluxe Development Kit Part Number	$199 101-1275			
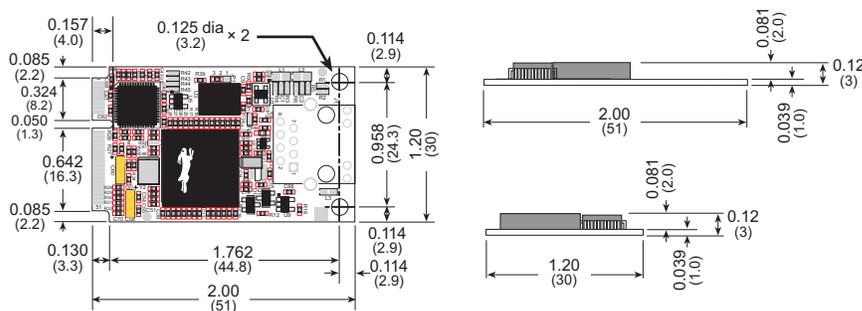
Visit www.digi.com for part numbers.

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