MiniCore™ RCM5600W

Mini-Microprocessor Wi-Fi Core Module

The MiniCore RCM5600W offers an ultra-compact, cost-effective 802.11b/g Wi-Fi solution with low design risk and a long-term firmware solution.

Overview

The MiniCore line is Rabbit's smallest and lowest cost embedded solution. With an integrated hardware and software solution, Rabbit offers you an easy path to add reliable network connectivity enabling you to bring your product to market quickly.

The MiniCore RCM5600W module offers 802.11b/g Wi-Fi connectivity which includes WPA2, WPA and WEP security standards, allowing easy integration and interoperability within Wi-Fi networks. With six serial ports, four configurable as SPI, the RCM5600W can easily embed into any existing or new design and is pin compatible with current and future MiniCore products.

A Development Kit offers the essential hardware tools and includes the Dynamic C® software development system. The Kit contains a prototyping and interface board with USB connections that will allow you to evaluate and debug the RCM5600W.

Standard Development Kit

This affordable development kit includes everything you need to begin development

$149

MiniCore RCM5600W

Dynamic C

Application Highlight

Store/Warehouse Assistance System

Wi-Fi Access Point

Customer Service Interface

Wireless Network

Barcode Scanner

Speaker

Color Touchscreen

RS-232 Serial

MiniCore™ RCM5600W
on Customer Supplied Motherboard

Potential Applications: data archiving, tank monitoring, automatic meter reading, remote energy management, security and surveillance

Features and Benefits

- **Rabbit® 5000 running at 74 MHz**
- **On-board single-chip 802.11b/g transceiver**
- **Up to 35 GP I/O lines and six serial ports**
- **1 MB SRAM and 1 MB serial flash memory**
- **Built-in web server**
- **Certified to meet FCC and other international regulatory requirements**
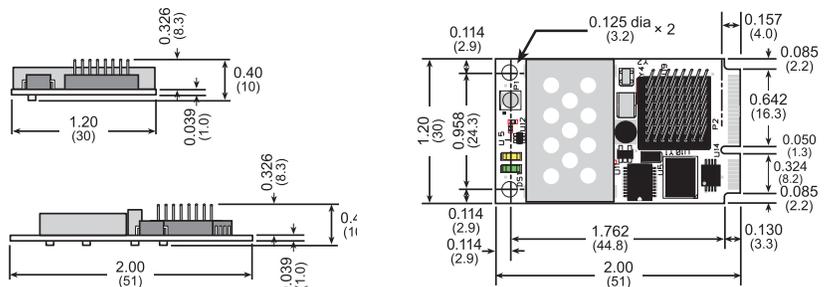- **Easy-to-use integrated design environment**

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MiniCore™ RCM5600W Specifications

Feature	RCM5600W
Microprocessor	Rabbit® 5000 at 74 MHz
EMI Reduction	Spectrum spreader for reduced EMI (radiated emissions)
Serial Flash Memory (program)	1 MB
SRAM	1 MB
Backup Battery	Connection for user-supplied backup battery (to support RTC)
General-Purpose I/O	Up to 35 parallel digital I/0 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	3.15 V DC (min.) – 3.45 V DC (max.) 625 mA @ 3.3 V while transmitting/receiving 85 mA @ 3.3 V while not transmitting/receiving
Operating Temperature	–30° C to +55° C
Humidity	5% to 95%, non-condensing
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	
Security	WEP 64-bit and 128-bit, WPA (TKIP), WPA2(AES/CCMP)
Network Access	Infrastructure, Ad-Hoc
Antennae	1 U.FL connector, 50 ohms
Compliance	802.11b/g, 2.4 GHz

Pricing		
Price (Qty. 1/100) Part Number	MiniCore RCM5600W module	$69 / $65 20-101-1265
Standard Development Kit Part Number	Contains RCM5600W module and antenna, interface board, prototyping board, USB cable, and Dynamic C IDE. (Note: may require the addition of power adapter to support the interface board, part number 101-1273)	$149 101-1284
Deluxe Development Kit Part Number	Includes everything in the Standard Development Kit plus a power adapter, digital I/O and serial communications accessory boards, and a DB9 to 10-pin header serial cable.	$249 101-1285

Dynamic C Add-on Module

Rabbit Embedded Security Module
AES encryption for transfer of sensitive data, and SSL/TLS for web security

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