

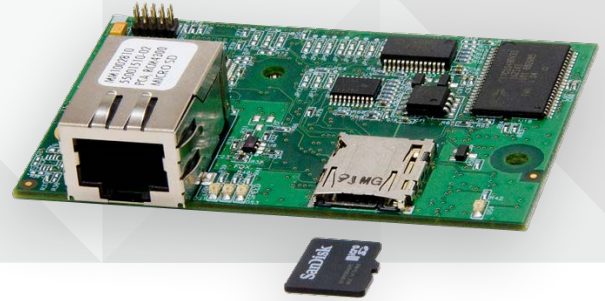


**THE DATASHEET OF**  
**20-101-1139**





COMMUNICATIONS AND  
CONTROL PROCESSOR



# DIGI RABBITCORE RCM4300 SERIES

The RabbitCore RCM4300 series delivers larger mass storage by allowing you to access up to 8 GB of hot swappable industry-standard memory

The RabbitCore RCM4300 series offers larger memory for memory intensive applications. The microSD™ card slot has the ability to store up to 8 GB of data, making this an ideal module for data logging applications. In combination with our FAT file system, users can easily access data via the built-in web server or by simply using the hot-swappable feature. Dynamic C® also adds Megabyte Code Support™ (MCS), which allows the use of 1 MB of on-board SRAM for shared memory and code space.

The RCM4300 series is pin-compatible with other RCM4XXX core modules, enabling migration to other designs with specific requirements.

The RabbitCore RCM4300 Development Kit makes evaluation easy with all the hardware and software needed to get started quickly.

## BENEFITS

- Rabbit 4000 running at 58.98 MHz
- Supports microSD and microSDHC memory card, 1 MB SRAM for shared code, 512K of battery-backed SRAM, FAT 16 file organization
- 10/100Base-T Ethernet, 36 GPIO, 6 serial ports
- 8 channel 12-bit resolution (RCM4300 only)
- Embedded web server
- Easily implement secure embedded devices with client side SSL or AES encryption
- Includes Remote Program Update allowing for firmware updates from anywhere in the world

## RELATED PRODUCTS



RabbitCore®  
RCM3000  
Series



RabbitCore®  
RCM4000  
Series



RabbitCore®  
RCM4200  
Series

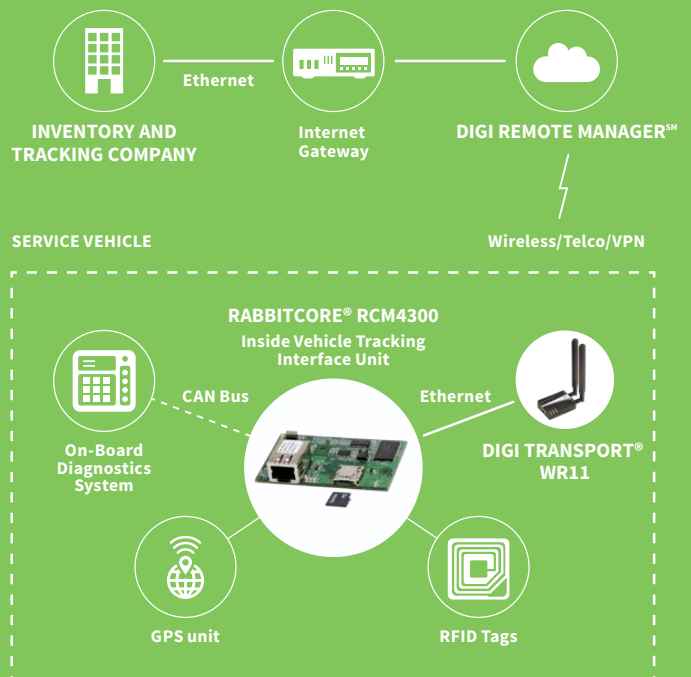


Rabbit  
MiniCore®  
RCM6700



Dynamic C®

## APPLICATION EXAMPLE



SPECIFICATIONS	RCM4300	RCM4310	RCM4320
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FEATURES			
<b>MICROPROCESSOR</b>	Rabbit® 4000 at 58.98 MHz		
<b>EMI REDUCTION</b>	Spectrum spreader for reduced EMI (radiated emissions)		
<b>ETHERNET PORT</b>	10/100Base-T, RJ-45, 3 LEDs		
<b>DATA SRAM</b>	512K (8-bit)		
<b>PROGRAM EXECUTION FAST SRAM</b>	1 MB (8-bit)	512K (8-bit)	1 MB (8-bit)
<b>SERIAL FLASH MEMORY</b>	2 MB	1 MB	4 MB
<b>MEMORY (DATA STORAGE)</b>	microSD™ Card 128-2 GB/32GB -micro SDHC		
<b>LED INDICATORS</b>	LINK/ACT (link/activity) FDX/COL (full-duplex/collisions) SPEED (on for 100Base-T Ethernet connection) SD (microSD™ mounted status)		
<b>BACKUP BATTERY</b>	Connection for user-supplied backup battery (to support RTC and data SRAM)		
<b>GENERAL-PURPOSE I/O</b>	28 parallel digital I/O lines: Configurable with 4 layers of alternate functions	36 parallel digital I/O lines: Configurable with 4 layers of alternate functions	
<b>ADDITIONAL INPUTS</b>	2 startup mode, reset in, CONVERT	2 startup mode, reset in	
<b>ADDITIONAL OUTPUTS</b>	Status, reset out, analog VREF	Status, reset out	
<b>ANALOG INPUTS:</b>	8 channels single-ended or 4 channels differential Programmable gain 1, 2, 4, 5, 8, 10, 16, and 20 V/V 12 bits (11 bits single-ended) 180 μs	N/A	
<b>AUXILIARY I/O BUS</b>	Can be configured for 8 data lines and 5 address lines (shared with parallel I/O lines), plus I/O read/write		
<b>SERIAL PORTS</b>	5 shared high-speed, CMOS-compatible ports: <ul style="list-style-type: none"> <li>All 5 configurable as asynchronous (with IrDA),</li> <li>4 as clocked serial (SPI), and 1 as SDLC/HDLC</li> <li>1 clocked serial port shared with programming port</li> <li>1 clocked serial port shared with A/D converter, serial flash, and microSD™ card</li> </ul>	6 shared high-speed, CMOS-compatible ports: <ul style="list-style-type: none"> <li>All 6 configurable as asynchronous (with IrDA),</li> <li>4 as clocked serial (SPI), and 2 as SDLC/HDLC</li> <li>1 clocked serial port shared with programming port</li> <li>1 clocked serial port shared with serial flash and microSD™ card</li> </ul>	
<b>SERIAL RATE</b>	Maximum asynchronous baud rate = CLK/8		
<b>SLAVE INTERFACE</b>	Slave port allows the RCM4300 to be used as an intelligent peripheral device slaved to a master processor		
<b>REAL-TIME CLOCK</b>	Yes		
<b>TIMERS</b>	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		
<b>WATCHDOG/SUPERVISOR</b>	Yes		
<b>PULSE-WIDTH MODULATORS</b>	4 PWM registers with 10-bit free-running counter and priority interrupts		
<b>INPUT CAPTURE</b>	2 input capture channels can be used to time input signals from various port pins		
<b>QUADRATURE DECODER</b>	2-channel quadrature decoder accepts inputs from external incremental encoder modules		
<b>POWER (PINS UNLOADED)</b>	3.0–3.6 VDC, 350 mA (typ.) @ 3.3V, 385 mA @ 3.6V and 85° C (max.)		
<b>OPERATING TEMPERATURE</b>	-20° C to +85° C		
<b>HUMIDITY</b>	5% to 95%, non-condensing		
<b>CONNECTORS</b>	One 2 × 25, 1.27 mm pitch IDC signal header; One microSD™ Card socket; One 2 × 5, 1.27 mm pitch IDC programming header		
<b>BOARD SIZE</b>	1.84" × 2.85" × 0.84" (47 mm × 72 mm × 21 mm)		
<b>PRODUCT WARRANTY</b>	3 year		

PART NUMBERS	DESCRIPTION
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20-101-1138	RCM4300
20-101-1139	RCM4310
20-101-1142	RCM4320

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