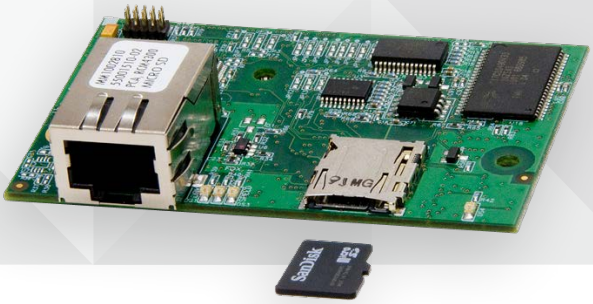
COMMUNICATIONS AND CONTROL PROCESSOR



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.

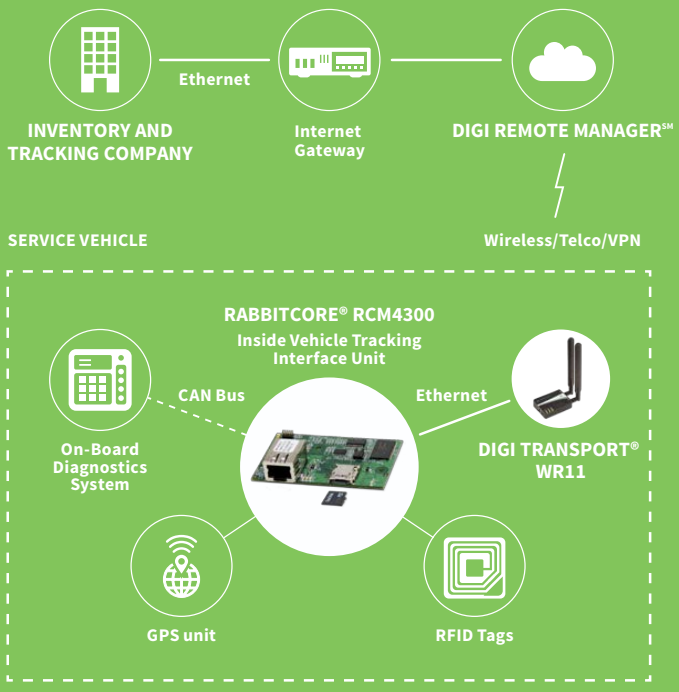
The RCM4300 series is pin-compatible with other RCM4XXX core modules, enabling migration to other designs with specific requirements.

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

APPLICATION EXAMPLE



RELATED PRODUCTS



RabbitCore® RCM3000 Series | RabbitCore® RCM4000 Series | RabbitCore® RCM4200 Series | Rabbit MiniCore® RCM6700 | Dynamic C®

SPECIFICATIONS	RCM4300	RCM4310	RCM4320
FEATURES			
MICROPROCESSOR	Rabbit® 4000 at 58.98 MHz		
EMI REDUCTION	Spectrum spreader for reduced EMI (radiated emissions)		
ETHERNET PORT	10/100Base-T, RJ-45, 3 LEDs		
DATA SRAM	512K (8-bit)		
PROGRAM EXECUTION FAST SRAM	1 MB (8-bit)	512K (8-bit)	1 MB (8-bit)
SERIAL FLASH MEMORY	2 MB	1 MB	4 MB
MEMORY (DATA STORAGE)	microSD™ Card 128-2 GB/32GB -micro SDHC		
LED INDICATORS	LINK/ACT (link/activity) FDX/COL (full-duplex/collisions) SPEED (on for 100Base-T Ethernet connection) SD (microSD™ mounted status)		
BACKUP BATTERY	Connection for user-supplied backup battery (to support RTC and data SRAM)		
GENERAL-PURPOSE I/O	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	
ADDITIONAL INPUTS	2 startup mode, reset in, CONVERT	2 startup mode, reset in	
ADDITIONAL OUTPUTS	Status, reset out, analog VREF	Status, reset out	
ANALOG INPUTS:	8 channels single-ended or 4 channels differential Programmable gain 1, 2, 4, 5, 8, 10, 16, and 20 V/V	N/A	
	12 bits (11 bits single-ended)		
	180 µs		
AUXILIARY I/O BUS	Can be configured for 8 data lines and 5 address lines (shared with parallel I/O lines), plus I/O read/write		
SERIAL PORTS	5 shared high-speed, CMOS-compatible ports: • All 5 configurable as asynchronous (with IrDA), • 4 as clocked serial (SPI), and 1 as SDLC/HDLC • 1 clocked serial port shared with programming port • 1 clocked serial port shared with A/D converter, serial flash, and microSD™ card	6 shared high-speed, CMOS-compatible ports: • All 6 configurable as asynchronous (with IrDA), • 4 as clocked serial (SPI), and 2 as SDLC/HDLC • 1 clocked serial port shared with programming port • 1 clocked serial port shared with serial flash and microSD™ card	
SERIAL RATE	Maximum asynchronous baud rate = CLK/8		
SLAVE INTERFACE	Slave port allows the RCM4300 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 PWM registers with 10-bit free-running counter and priority interrupts		
INPUT CAPTURE	2 input capture channels 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)	3.0–3.6 VDC, 350 mA (typ.) @ 3.3V, 385 mA @ 3.6V and 85° C (max.)		
OPERATING TEMPERATURE	-20° C to +85° C		
HUMIDITY	5% to 95%, non-condensing		
CONNECTORS	One 2 × 25, 1.27 mm pitch IDC signal header; One microSD™ Card socket; One 2 × 5, 1.27 mm pitch IDC programming header		
BOARD SIZE	1.84" × 2.85" × 0.84" (47 mm × 72 mm × 21 mm)		
PRODUCT WARRANTY	1 year		

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

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