

COMMUNICATIONS AND CONTROL PROCESSOR



## RABBITCORE® RCM4300 SERIES

The RabbitCore RCM4300 series delivers larger mass storage by allowing you to implement up to 2 GB of hot swappable industry-standard microSD™ memory

The RabbitCore RCM4300 series offers larger memory for memory intensive applications. The microSD™ card slot has the ability to store up to 2 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.

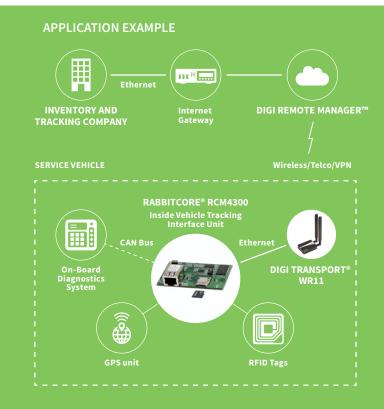
The RCM4300 series is pin-compatible with other RCM4XXX core modules, enabling migration to other designs with specific requirements.

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 up to 2 GB microSD memory card, 1 MB SRAM for shared code, 512K of battery-backed SRAM, FAT 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® Romanon Series Remain Remain



THERNET PORT  10/100Bas  PATA SRAM  512K (8-bi  PROGRAM EXECUTION FAST SRAM  1 MB (8-bi  PROGRAM)  MEMORY (DATA STORAGE)  MICROSD  MICROSD	Card 128 MB–2 GB	512K (8-bit)  1 MB  microSD™ Card 128 MB-2 GB  100Base-T Ethernet connection) SD (microSD™ mounted status) a SRAM)  36 parallel digital I/O lines: Configurable with 4 layers of alternate functions 2 startup mode, reset in Status, reset out
THERNET PORT  10/100Bas  PATA SRAM  512K (8-bi  PROGRAM EXECUTION FAST SRAM  1 MB (8-bi  PROGRAM)  MEMORY (DATA STORAGE)  MICROSD  MICROSD	spreader for reduced EMI (radiated emissions) e-T, RJ-45, 3 LEDs t) Card 128 MB–2 GB llink/activity) FDX/COL (full-duplex/collisions) SPEED (on fo n for user-supplied backup battery (to support RTC and dat digital I/O lines: ple with 4 layers of alternate functions node, reset in, CONVERT et out, analog VREF et out, analog VREF es single-ended or 4 channels differential Programmable , 5, 8, 10, 16, and 20 V/V	1 MB  microSD™ Card 128 MB–2 GB  r100Base-T Ethernet connection) SD (microSD™ mounted status) a SRAM)  36 parallel digital I/O lines: Configurable with 4 layers of alternate functions 2 startup mode, reset in
THERNET PORT  10/100Bas  PROGRAM EXECUTION FAST SRAM  PROGRAM EXECUTION FAST SRAM  1 MB (8-bit of the program o	e-T, RJ-45, 3 LEDs  t)  Card 128 MB–2 GB  (link/activity) FDX/COL (full-duplex/collisions) SPEED (on for on for user-supplied backup battery (to support RTC and dat digital I/O lines: ole with 4 layers of alternate functions mode, reset in, CONVERT  et out, analog VREF es single-ended or 4 channels differential Programmable es, 5, 8, 10, 16, and 20 V/V	1 MB  microSD™ Card 128 MB–2 GB  r100Base-T Ethernet connection) SD (microSD™ mounted status) a SRAM)  36 parallel digital I/O lines: Configurable with 4 layers of alternate functions 2 startup mode, reset in
ATA SRAM  512K (8-bi PROGRAM EXECUTION FAST SRAM  1 MB (8-bi PROGRAM)  2 MB  1 MB (8-bi PROGRAM)  1 MB (8-bi PROGRAM)  2 MB  1 MB (8-bi PROGRAM)  2 MB  1 MB (8-bi PROGRAM)  1 MB (8-bi PROGRAM)  2 MB  2	Card 128 MB–2 GB  link/activity) FDX/COL (full-duplex/collisions) SPEED (on fo n for user-supplied backup battery (to support RTC and dat digital I/O lines: pole with 4 layers of alternate functions node, reset in, CONVERT et out, analog VREF single-ended or 4 channels differential Programmable , 5, 8, 10, 16, and 20 V/V	1 MB  microSD™ Card 128 MB–2 GB  r100Base-T Ethernet connection) SD (microSD™ mounted status) a SRAM)  36 parallel digital I/O lines: Configurable with 4 layers of alternate functions 2 startup mode, reset in
PROGRAM EXECUTION FAST SRAM  1 MB (8-bit SERIAL FLASH MEMORY PROGRAM)  2 MB  MEMORY (DATA STORAGE)  ED INDICATORS  LINK/ACT  SACKUP BATTERY  Connection  SENERAL-PURPOSE I/O  DDITIONAL INPUTS  DDITIONAL OUTPUTS  ANALOG INPUTS:  UXILIARY I/O BUS  SERIAL PORTS  1 MB (8-bit Serial Ports of the processor of the proc	Card 128 MB–2 GB  (link/activity) FDX/COL (full-duplex/collisions) SPEED (on fo n for user-supplied backup battery (to support RTC and dat digital I/O lines: ple with 4 layers of alternate functions node, reset in, CONVERT et out, analog VREF single-ended or 4 channels differential Programmable , 5, 8, 10, 16, and 20 V/V	1 MB  microSD™ Card 128 MB–2 GB  r100Base-T Ethernet connection) SD (microSD™ mounted status) a SRAM)  36 parallel digital I/O lines: Configurable with 4 layers of alternate functions 2 startup mode, reset in
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PROGRAM)  MEMORY (DATA STORAGE)  ED INDICATORS  LINK/ACT  CONNECTED  ACKUP BATTERY  Connection  SENERAL-PURPOSE I/O  ADDITIONAL INPUTS  DDITIONAL OUTPUTS  STATUS, 12  LINK/ACT  28 paralle  Configura  28 paralle  Configura  8 channel  gain 1, 2, 4  12 bits (11  180 µs  LUXILIARY I/O BUS  5 shared I  All 5 co  4 as clo  1 clock  1 clock  and mi  EERIAL PORTS  Maximum	llink/activity) FDX/COL (full-duplex/collisions) SPEED (on fo n for user-supplied backup battery (to support RTC and dat digital I/O lines: ole with 4 layers of alternate functions node, reset in, CONVERT et out, analog VREF single-ended or 4 channels differential Programmable , 5, 8, 10, 16, and 20 V/V	microSD™ Card 128 MB–2 GB  100Base-T Ethernet connection) SD (microSD™ mounted status) a SRAM)  36 parallel digital I/O lines: Configurable with 4 layers of alternate functions 2 startup mode, reset in
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gain 1, 2, 4   12 bits (11   180 μs	, 5, 8, 10, 16, and 20 V/V	
12 bits (11 180 µs  Can be co  5 shared h All 5 co 4 as clc 1 clock 1 clock and mi  ERIAL RATE  Maximum	bits single-ended)	NI/A
UXILIARY I/O BUS  5 shared I All 5 co 4 as clc 1 clock 1 clock and mi ERIAL RATE  Maximum		N/A
5 shared h All 5 co 4 as clc 1 clock 1 clock and mi ERIAL RATE Maximum		
• All 5 co • 4 as clc • 1 clock • 1 clock and mi  ERIAL RATE  Maximum	Can be configured for 8 data lines and 5 address lines (shared with parallel I/O lines), plus I/O read/write	
	igh-speed, CMOS-compatible ports: Ifigurable as asynchronous (with IrDA), cked serial (SPI), and 1 as SDLC/HDLC ed serial port shared with programming port ed serial port shared with A/D converter, serial flash, croSD™ 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
I AVE INTERFACE Slave port	Maximum asynchronous baud rate = CLK/8	
	Slave port allows the RCM4300 to be used as an intelligent peripheral device slaved to a master processor	
REAL-TIME CLOCK Yes	Yes	
IMERS	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	
VATCHDOG/SUPERVISOR Yes	Yes	
PULSE-WIDTH MODULATORS 4 PWM reg	4 PWM registers with 10-bit free-running counter and priority interrupts	
NPUT CAPTURE 2 input ca	2 input capture channels can be used to time input signals from various port pins	
QUADRATURE DECODER 2-channel	2-channel quadrature decoder accepts inputs from external incremental encoder modules	
POWER (PINS UNLOADED) 3.0–3.6 VE	3.0–3.6 VDC, 350 mA (typ.) @ 3.3V, 385 mA @ 3.6V and 85° C (max.)	
PPERATING TEMPERATURE -20° C to +	-20° C to +85° C	
IUMIDITY 5% to 95%	5% to 95%, non-condensing	
CONNECTORS One 2 × 25	, non-condensing	
SOARD SIZE 1.84" × 2.8	, non-condensing , 1.27 mm pitch IDC signal header; One microSD™ Card socl	tet; One 2 × 5, 1.27 mm pitch IDC programming header

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

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