

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.

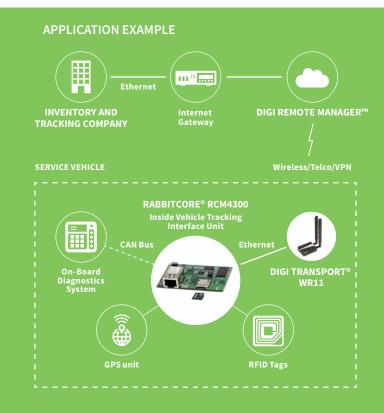
The RCM4300 series is pin-compatible with other RCM4XXX core modules, enabling migration to other designs with specific requirements.

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® Romanou Series Series Series Romanou Rom



MICROPROCESSOR Rabbit* 4000 at 58.08 MHz EMI REDUCTION Spectrum spreader for reduced EMI (radiated emissions)  ETHERNET PORT 10/1008ase*, RJ-45, 3 LEDs  321K (8-bit)  SERIAL FLASH MEMORY PROGRAM EXECUTION FAST SRAM SERIAL FLASH MEMORY PROGRAM EXECUTION FAST SRAM  SERIAL FLASH MEMORY 2 MB  MEMORY (DATA STORAGE) microSD**Card 128 MB-2 GB microSD**Card 128	SPECIFICATIONS	RCM4300	RCM4310	
EMIREDUCTION Spectrum spreader for reduced EMI (radiated emissions)  ETHERRET PORT 101/008ase-T, R2-45, 3 LEDs  DATA SRAM 312K (B-bit)  SERIAL FLASH MEMORY 2MB 1MB (b-bit)  SERIAL FLASH MEMORY 2MB 1MB (B-bit)  SERIAL FLASH MEMORY 2MB 1MB (B-bit)  ELD INDICATORS 101/MK/ACT (flink/activity) FDK/CDL (full-duplex/collisions) SPEED (on for 1008ase-T ethemet 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 a layers of alternate functions Configurable with a layers of alternate functions ADDITIONAL DUTPUTS 2statup mode, reset in, CONNET 2statup mode, reset in analog WREF 3status, reset out 3status, rese	FEATURES			
DATA SRAM  512K (8-bit)  PROGRAM EXECUTION FAST SRAM  512K (8-bit)  2 MB  1 MB  MICROSD**C and 128 MB-2 GB  MICROS	MICROPROCESSOR	Rabbit® 4000 at 58.98 MHz		
DATA SRAM  \$12K (8-bit)  PROGRAM)  ZMB  1MB (8-bit)  ZMB  1MB (Schit)  ZMB  1MB (MEMORY (DATA STORAGE)  MICROSD**Card 128 ME-2 GB  LINK/ACT ((Ink/activity) FDX/COL (full-duplex/collisions) SPEED (on for 1008ase-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  Zaparallel digital I/O lines: Configurable with 4 layers of alternate functions  Configurable with 4 layers of alternate functions  ADDITIONAL INPUTS  Z startup mode, reset in, CONVERT  Z startup mo	EMI REDUCTION	Spectrum spreader for reduced EMI (radiated emissions)		
SERIAL PORTS  SERIAL PORTS  SERIAL RATE  Maximum asynchronous baud rate = CLK/8  SERIAL PORTS  (A) CAP CLA	ETHERNET PORT	10/100Base-T, RJ-45, 3 LEDs		
SERIAL FLASH MEMORY (PROGRAM)  microSD**Card 128 MB-2 GB  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)  28 parallel digital I/O lines: Configurable with 4 layers of alternate functions  Configurable with 4 layers of alternate functions  ADDITIONAL INPUTS  2 startup mode, reset in, CONVERT  2 startup mode, reset in, CONVERT  3 schannels 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)  130 us  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  5 shared high-speed, CMOS-compabilis ports: All s configurable as synchronous fourth inCD), 4 as clocked serial (SPI), and 1 as SDLC/HDLC 1 clocked serial port shared with programming port 1 clocked serial port sha	DATA SRAM	512K (8-bit)		
PROGRAM  ZMB	PROGRAM EXECUTION FAST SRAM	1 MB (8-bit)	512K (8-bit)	
LINI/ACT (link/activity) FDX/CDL (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)  Ze parallel digital I/O lines: Configurable with a layers of alternate functions Configurable with 4 layers of alternate functions Configurable with 4 layers of alternate functions ADDITIONAL INPUTS  Ze startup mode, reset in, CONVERT Ze startup mode, reset in ADDITIONAL OUTPUTS  Status, reset out, analog VREF Status, reset out  Schannels 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 us  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  Schannels shared high-speed, CMOS-compatible ports: - All 5 configurable as asynchronous (with IrOA), - 4 as clocked serial [37], and 1 as SDLC/HDLC - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with AD converter, 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  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  WULSE-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 setremal 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	SERIAL FLASH MEMORY (PROGRAM)	2 MB	1 MB	
GENERAL-PURPOSE I/O  ZB parallel digital I/O lines: Configurable with a layers of alternate functions Configurable with graph and 20 /V  12 bits (11 bits single-ended) 180 us  Can be configured for 8 data lines and 5 address lines (shared with parallel I/O lines), plus I/O read/write  Schared high-speed, CMOS-compatible ports: All 5 configurable as asynchronous (with IrOA), A las clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with a programming port - 1 clocked serial port shared with A/D converter, 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  Ten s-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  1 in put 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  20°C	MEMORY (DATA STORAGE)	microSD™ Card 128 MB–2 GB	microSD™ Card 128 MB–2 GB	
GENERAL-PURPOSE I/O  28 parallel digital I/O lines: Configurable with 4 layers of alternate functions Configurable with 4 layers of alternate functions Configurable with 4 layers of alternate functions ADDITIONAL INPUTS  2 startup mode, reset in, CONVERT 2 startup mode, reset in  Status, reset out  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  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  5 shared high-speed, CMOS-compatible ports: - All is configurable as an asynchronous (with 1rOA), - 4 as clocked serial (SPI), and 1 as SDLC/HDLC - 4 ac locked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 2 clocked serial port shared with programming port - 3 clocked serial port shared with programming port - 4 clocked serial port shared with programming port - 5 clocked serial port shared with programming port - 6 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 2 clocked serial port shared with programming port - 3 clocked serial port shared with programming port - 4 clocked serial port shared with programming port - 5 clocked serial port shared with programming port - 6 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port - 1 clocked serial port shared with programming port -	LED INDICATORS	LINK/ACT (link/activity) FDX/COL (full-duplex/collisions) SPEED (on for 100Base-T Ethernet connection) SD (microSD™ mounted status)		
ADDITIONAL INPUTS  ADDITIONAL INPUTS  ADDITIONAL OUTPUTS  Statup mode, reset in, CONVERT  ADDITIONAL OUTPUTS  Statup, reset out, analog VREF  Schannels 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  AUXILIARY I/O BUS  Can be configurable with a layers of alternate functions  SERIAL PORTS  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  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  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	BACKUP BATTERY	Connection for user-supplied backup battery (to support RTC and data SRAM)		
ADDITIONAL OUTPUTS  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  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  5 shared high-speed, CMOS-compatible ports: - All Is configurable as asynchronous (with irDA), - 4 as clocked serial port shared with programming port - 1 clocked serial port shared with Programming port - 1 clocked serial port shared with A/D converter, 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  WATCHDOG/SUPERVISOR  Yes  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  Status, reset out  N/A  N/A  N/A  N/A  10	GENERAL-PURPOSE I/O			
ANALOG INPUTS:  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  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  5 shared high-speed, CMOS-compatible ports: • All 5 configurable as asynchronous (with IrDA), • 4 as clocked serial (SPI), and 1 as SDIC/HDLC • 1 clocked serial port shared with programming port • 1 clocked serial port shared with programming port • 1 clocked serial port shared with A/D converter, serial filash, 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  4.00 C 2 × 5, 1.27 mm pitch IDC programming header  CONNECTORS  OR 2 × 25, 1.27 mm pitch IDC programming header	ADDITIONAL INPUTS	2 startup mode, reset in, CONVERT	2 startup mode, reset in	
ANALOG INPUTS:    gain 1, 2, 4, 5, 8, 10, 16, and 20 V/V     12 bits (11 bits single-ended)     180 µs     AUXILIARY I/O BUS     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 programming port     1 clocked serial port shared with programming port     1 clocked serial port shared with A/D converter, 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     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 c-hannel 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	ADDITIONAL OUTPUTS	Status, reset out, analog VREF	Status, reset out	
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  5 shared high-speed, CMOS-compatible ports:	ANALOG INPUTS:		N/A	
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  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 Programming port - 1 clocked serial port shared with A/D converter, 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  One 2 × 25, 1.27 mm pitch IDC signal header; One microSD™ Card socket; One 2 × 5, 1.27 mm pitch IDC programming header		12 bits (11 bits single-ended)		
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 programming port  • 1 clocked serial port shared with A/D converter, serial flash, and microSD™ card  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  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  2 one 2 × 25, 1.27 mm pitch IDC signal header; One microSD™ Card socket; One 2 × 5, 1.27 mm pitch IDC programming header		·		
PALL 5 configurable as a synchronous (with IrDA), A 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  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  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 One 2 × 25, 1.27 mm pitch IDC signal header; One microSD™ Card socket; One 2 × 5, 1.27 mm pitch IDC programming header	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		
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  One 2 × 25, 1.27 mm pitch IDC signal header; One microSD™ Card socket; One 2 × 5, 1.27 mm pitch IDC programming header	SERIAL PORTS	<ul> <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,</li> </ul>	<ul> <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</li> </ul>	
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	SERIAL RATE	Maximum asynchronous baud rate = CLK/8		
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	SLAVE INTERFACE	Slave port allows the RCM4300 to be used as an intelligent peripheral device slaved to a master processor		
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	REAL-TIME CLOCK	Yes		
PULSE-WIDTH MODULATORS  4 PWM registers with 10-bit free-running counter and priority interrupts  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	TIMERS			
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	WATCHDOG/SUPERVISOR	Yes		
QUADRATURE DECODER  2-channel quadrature decoder accepts inputs from external incremental encoder modules  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	PULSE-WIDTH MODULATORS	4 PWM registers with 10-bit free-running counter and priority interrupts		
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	INPUT CAPTURE	2 input capture channels can be used to time input signals from various port pins		
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	QUADRATURE DECODER	2-channel quadrature decoder accepts inputs from external incremental encoder modules		
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	POWER (PINS UNLOADED)	3.0–3.6 VDC, 350 mA (typ.) @ 3.3V, 385 mA @ 3.6V and 85° C (max.)		
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	OPERATING TEMPERATURE	-20° C to +85° C	-20° C to +85° C	
	HUMIDITY	5% to 95%, non-condensing		
BOARD SIZE 1.84" × 2.85" × 0.84" (47 mm × 72 mm × 21 mm)	CONNECTORS	One 2 × 25, 1.27 mm pitch IDC signal header; One microSD™ Card soci	ket; One 2 × 5, 1.27 mm pitch IDC programming header	
DOTATE VILLE TOTAL PROPERTY AND A VIOLATION OF A VI	BOARD SIZE	1.84" × 2.85" × 0.84" (47 mm × 72 mm × 21 mm)		

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

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