Selection Guide

RCM2000/3000 RabbitCore™

Shared Features of the **RCM2000/3000** RabbitCore Series

Feature	RCM2XXX	RCM3XXX
EMI Reduction	Spectrum spreader for reduced EMI *(radiated emissions)*	
Serial Rate	Max. asynchronous burst rate = CLK/32	Max. asynchronous burst rate = CLK/8
Backup Battery	Connection for user-supplied battery *(to support RTC and SRAM)*	
Slave Interface	Permits use as master or intelligent peripheral with Rabbit-based or other master controller	
Real-Time Clock	Yes, battery backable	
Timers	Five 8-bit timers *(four cascadable from the first)* and one 10-bit timer with 2 match registers	Ten 8-bit timers *(six cascadable from the first, three reserved for internal peripherals)* and one 10-bit timer with 2 match registers
Watchdog	Yes	
Humidity	5–95%, noncondensing	
Pulse-Width Modulation	N/A	8-bit free running counter and four 10-bit pulse-width registers
Input Capture	N/A	2-channel input capture can be used to time input signals from various port pins
Quadrature Decoder	N/A	2-channel quadrature decoder accepts inputs from external incremental encoder modules

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RABBIT Semiconductor Z-WORLD

Distinguishing Features of the **RCM2000** RabbitCore Series

Feature	RCM2000	RCM2010	RCM2020	RCM2100	RCM2110	RCM2120	RCM2130	RCM2200	RCM2210	RCM2250	RCM2300
CPU Speed	25.8 MHz		18.4 MHz	22.1 MHz							
Ethernet	None			10Base-T RJ-45, 2 LEDs		None		10Base-T RJ-45, 2 LEDs	10Base-T raw signals	10Base-T RJ-45, 2 LEDs	None
Flash Memory	256K			512K	256K	512K		256K		512K	256K
SRAM	512K	128K		512K	128K	512K		128K		512K	128K
Serial Flash	None										
Analog Inputs	None										
General Purpose I/O*	40 parallel I/O • 26 configurable I/O • 8 fixed inputs • 6 fixed outputs			34 parallel I/O • 20 configurable I/O • 8 fixed inputs • 6 fixed outputs		40 parallel I/O • 26 configurable I/O • 8 fixed inputs • 6 fixed outputs		26 parallel I/O • 16 configurable I/O • 7 fixed inputs • 3 fixed outputs			29 parallel I/O • 17 config. I/O • 8 fixed inputs • 4 fixed outputs
Add'l Inputs	2 Startup Mode, Reset										
Add'l Outputs	Watchdog, Reset			Status, Clock, Watchdog, Reset				Status, Reset			
External I/O	13 address, 8 data, I/O Read-Write, Buffer Enable			13 buffered address lines, 8 buffered data lines, I/O Read-Write, Buffer Enable				4 address, 8 data, I/O Read-Write			
Serial Ports	Four 5 V CMOS-compatible • 4 configurable as asynchronous • 2 configurable as clocked serial *(SPI)*							Four 5 V CMOS-compatible • 4 configurable as asynchronous • 2 configurable as clocked serial *(SPI)***			
Power	4.75–5.25 V DC • 130 mA		4.75–5.25 V DC • 98 mA	4.75–5.25 V DC • 140 mA				4.75–5.25 V DC • 134 mA			4.75–5.25 V DC • 108 mA
Operating Temp.	–40°C to +85°C			–40°C to +70°C		–40°C to +80°C		–40°C to +70°C			–40°C to +85°C
Board Size	2.3″ x 1.9″ x 0.5″ *(58 x 48 x 13 mm)*			3.5″ x 2.0″ x 0.86″ *(89 x 51 x 22 mm)*		3.5″ x 2.0″ x 0.5″ *(89 x 51 x 13 mm)*		2.3″ x 1.6″ x 0.86″ *(59 x 41 x 22 mm)*			1.60″ x 1.15″ x 0.47″ *(41 x 29 x 12 mm)*
Connectors	2 x 20, 2 mm IDC headers							2 x 13, 2 mm IDC headers			
Part Number	101-0404	101-0405	101-0383	101-0434	101-0435	101-0436	101-0446	101-0454	101-0488	101-0494	101-0453
Development Kit Part Number	U.S.101-0398 Int'l 101-0399			U.S. 101-0451 Int'l 101-0452				U.S. 101-0475 Int'l 101-0478			U.S. 101-0480 Int'l 101-0481

*** Grouped in 8-bit ports and shared with serial ports**
****1 clocked line available only on programming header**

Distinguishing Features of the **RCM3000** RabbitCore Series

Feature	RCM3000	RCM3010	RCM3100	RCM3110	RCM3200	RCM3220	RCM3300	RCM3310
CPU Speed	29.4 MHz				44.2 MHz			
Ethernet	10Base-T, RJ-45, 2 LEDs		None		10/100Base-T, RJ-45, 3 LEDs	None	10/100Base-T, RJ-45, 3 LEDs	
Flash Memory	512K *(2 x 256K)*	256K	512K *(2 x 256K)*	256K	512K			
SRAM	512K	128K	512K	128K	512K program + 256K data		512K program + 512K data	
Serial Flash	None						8 MB	4MB
Analog Inputs	None							
General Purpose I/O*	52 digital I/O • 44 configurable I/O • 4 fixed inputs • 4 fixed outputs				52 digital I/O • 44 configurable I/O • 4 fixed inputs • 4 fixed outputs		49 parallel digital I/O • 43 configurable I/O • 3 fixed inputs • 3 fixed outputs	
Add'l Inputs	2 Startup Mode, Reset							
Add'l Outputs	Status, Reset							
External I/O	6 address *(shared with I/O)*, 8 data, plus I/O Rd, I/O Wr						5 address *(shared with I/O)*, 8 data, plus I/O Rd, I/O Wr	
Serial Ports	Six 3.3 V CMOS-compatible: • 6 configurable as asynchronous *(with IrDA)* • 4 configurable as clocked serial *(SPI)* • 2 configurable as SDLC/HDLC						Five 3.3 V CMOS-compatible: • 5 configurable as asynchronous *(with IrDA)*, • 3 configurable as clocked serial *(SPI)* • 2 configurable as SDLC/HDLC • 1 asynchronous serial port *(programming)*	
Power	3.15–3.45 V DC • 150 mA		3.15–3.45 V DC • 75 mA		3.15–3.45 V DC • 255 mA		3.15–3.45 V DC • 350 mA @ 3.3 V	
Operating Temp.	–40°C to +70°C		–40°C to +85°C		–40°C to +70°C			
Board Size	2.73″ × 1.85″ × 0.86″ *(69 x 47 x 22 mm)*		1.85″ × 1.65″ × 0.55″ *(47 x 42 x 14 mm)*		2.73″ × 1.85″ × 0.86″ *(69 x 47 x 22 mm)*		2.73″ × 1.85″ × 0.86″ *(69 x 47 x 22 mm)*	
Connectors	Two 2 x 17, 2 mm IDC headers							
Part Number	101-0507	101-0508	101-0517	101-0518	101-0520	101-0522	101-0691	101-0698
Development Kit Part Number	U.S. 101-0523 Int'l 101-0524		U.S. 101-0533 Int'l 101-0534		U.S. 101-0552 Int'l 101-0553		U.S. 101-0704 Int'l 101-0705	

*** Grouped in 8-bit ports and shared with serial ports**

Feature	RCM3400	RCM3410	RCM3600	RCM3610	RCM3700	RCM3710
CPU Speed	29.4 MHz		22.1 MHz			
Ethernet	Reference Design for 10/100Base-T Mac ID installed		None		10Base-T, RJ-45	
Flash Memory	512K	256K	512K	256K	512K	256K
SRAM	512K	256K	512K	128K	512K	128K
Serial Flash	None				1MB	
Analog Inputs	8 channels single-ended *(11-bit)* or 4 channels differ. *(12-bit)*, Prog. gain 1, 2, 4, 5, 8, 10, 16, and 20 V/V.		None			
General Purpose I/O*	47 digital I/O • 41 configurable I/O • 3 fixed inputs • 3 fixed outputs		33 parallel digital I/O lines • 31 configurable I/O • 2 fixed outputs			
Add't Inputs	2 Startup Mode, Reset In, CONVERT		Reset			
Add't Outputs	Status, Reset Out, BVREF		None			
External I/O	6 address *(shared with I/O)*, 8 data, plus I/O Rd, I/O Wr		5 address *(shared with I/O)*, 8 data, plus I/O Rd, I/O Wr			
Serial Ports	Five 3.3 V CMOS-compatible: • 4 configurable as asynchronous *(with IrDA)* • 3 as clocked serial *(SPI)*, 2 as SDLC/HDLC *(with IrDA)* • 1 asynchronous serial port *(programming)* • Support for MIR/SIR IrDA transceiver		Four 3.3 V CMOS-compatible: • 4 configurable as asynchronous *(with IrDA)* • 3 as clocked serial *(SPI)* and 1 as SDLC/HDLC *(with IrDA)*, or 1 SPI and 2 SDLC/HDLC • 1 asynchronous serial port *(programming)*			
Power	3.0–3.45 V DC • 97 mA @ 29.4 MHz; 2.8–3.45 V DC • 57 mA @ 14.7 MHz		4.75-12.6 VDC • 60 mA @ 22.1 MHz; 38 mA @ 11.06 MHz		4.75-5.25 VDC • 100 mA @ 22.1 MHz; 78 mA @ 11.06 MHz	
Operating Temp.	–40°C to +85°C				–40°C to +70°C	
Board Size	1.38" × 1.16" × 0.31" *(35 x 29 x 7.4 mm)*		2.10" × 1.20" × 0.62" *(53 x 30 x 16 mm)*		2.95" × 1.20" × 0.88" *(75 x 30 x 22 mm)*	
Connectors	Two 2 x 17, 1.27 mm IDC Headers		Single 2 x 20, 0.1" IDC header			
Part Number	101-0561	101-0562	101-0672	101-0673	101-0674	101-0675
Development Kit Part Number	U.S. 101-0587 Int'l 101-0588	U.S. 101-0587 Int'l 101-0588	U.S. 101-0678 Int'l 101-0679	U.S. 101-0678 Int'l 101-0679	U.S. 101-0680 Int'l 101-0681	U.S. 101-0680 Int'l 101-0681

*** Grouped in 8-bit ports and shared with serial ports**