TN263

Updating Your Application from the RCM3200/RCM3220 to the RCM3209/RCM3229

Introduction

Rabbit is changing our product offerings to respond to both market requirements and the components available to us.

We can no longer obtain certain components for the RCM3200/RCM3220 RabbitCore modules that support the originally specified -40°C to +70°C temperature range. Instead of changing the design of the RCM3200/RCM3220 RabbitCore modules to handle available components specified for the original temperature range, we decided to develop a new product line — the RCM3209/RCM3229 — based on the RCM3900/RCM3910 RabbitCore modules that were released for the same reason.

We are introducing the RCM3209/RCM3229 RabbitCore modules in June, 2008. These new modules are similar in form, dimensions, and function to the RCM3200/3220 modules. We strongly recommend that existing RCM3200/3220 customers and designers of new systems consider using the new RCM3209/RCM3229 RabbitCore modules.

This Technical Note compares the two series of RabbitCore modules, and provides complete information on how to port your application developed for the RCM3200/RCM3220 to the equivalent RCM3209/RCM3229 RabbitCore modules.

Comparing the RCM3200/RCM3220 and the RCM3209/RCM3229

Temperature Specifications

RCM3200/RCM3220 RabbitCore modules manufactured after May, 2008, are specified to operate at 0°C to +70°C. The RCM3209/RCM3229, rated for -40°C to +85°C, are available starting in June, 2008.

Ethernet Chip

A different Ethernet controller chip is used on the RCM3209. The Ethernet chip is able to detect automatically whether a crossover cable or a straight-through cable is being used in a particular setup, and will configure the signals on the Ethernet jack interface. The RCM3229, like the RCM3220, has no Ethernet interface.

Maximum Current

The RCM3200/RCM3220 draws 255 mA vs. the 325 mA required by the RCM3209 (with Ethernet) or 190 mA (RCM3229 without Ethernet).

LEDs

The **LNK/ACT** LEDs have been combined to one LED on the RCM3209, and the RCM3209 has an **FDX/COL** LED where the **ACT** LED was on the RCM3200. The RCM3229, like the RCM3220, has no LEDs and no Ethernet.

Figure 1 compares the RCM3200/RCM3220 and the RCM3209/RCM3229 component layouts. The LED placements on the boards remain unchanged.
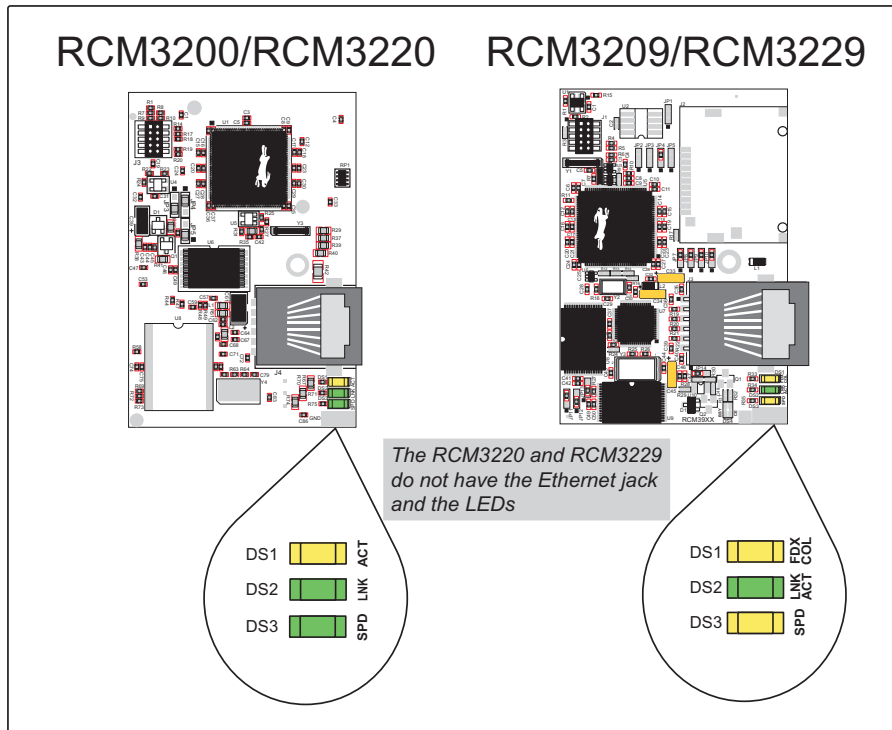

Figure 1. RCM3200/RCM3220 and RCM3209/RCM3229 LED Layouts

Dynamic C

You may run your application developed for the RCM3200/RCM3220 on the RCM3209/RCM3229 after you recompile it using Dynamic C v. 9.60 or later.

Dynamic C v. 9.60 now has many of the previously optional modules included in the standard release. Table 1 compares the Dynamic C features available for the two series of RabbitCore modules.

Table 1. Comparison of Dynamic C Resources

Dynamic C	RCM3200/RCM3220	RCM3209/RCM3229
Standard Release	v. 9.21	v. 9.60
Optional Modules (purchased separately)	• FAT File System • RabbitWeb • Point-to-Point Protocol (PPP) • Simple Network Management Protocol (SNMP) • µC/OS-II Real-Time Kernel • Library Encryption Executable • Modbus TCP	Included in Standard Release
Optional Security Modules (purchased separately)	• Advanced Encryption Standard (AES) • Secure Sockets Layer (SSL)	• Rabbit Embedded Security Pack
Other Optional Modules (available separately)	• Rabbit Field Utility source code • One-Year Telephone Technical Support Subscription	• Rabbit Field Utility source code • One-Year Telephone Technical Support Subscription

Summary

Table 2 summarizes the features for the two series of RabbitCore modules.

Table 2. Feature Comparison

Parameter	RCM3200	RCM3220	RCM3209	RCM3229
Ethernet Port	10/100Base-T, RJ-45, 3 LEDs	—	10/100Base-T, RJ-45, 3 LEDs	—
SRAM	512K program (fast SRAM) + 256K data		512K program (fast SRAM) + 256K data	
Flash Memory (program)	512K		512K	
Operating Temperature	-40°C to +70°C (up to May, 2008) 0°C to +70°C (after May, 2008)		-40°C to +85°C	
Operating Temperature	-40°C to +70°C		-40°C to +85°C	
Board Size	1.850" × 2.725" × 0.86" (47 mm × 69 mm × 22 mm)			
Dynamic C	v. 9.21 (standard release)		v. 9.60 (standard release)	

NOTE: The RCM3210 was discontinued in July, 2004, and is no longer offered. Therefore, there is no replacement for it.

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