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).
The LED placements on the boards remain unchanged.

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**

<table>
<thead>
<tr>
<th>Dynamic C</th>
<th>RCM3200/RCM3220 v. 9.21</th>
<th>RCM3209/RCM3229 v. 9.60</th>
</tr>
</thead>
</table>
| **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

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

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