Technical Note

Rabbit 2000™ Features
and Their Use in Board-Level Products

New features have been introduced over time into the Rabbit 2000™ chip, which is used in Z-World and Rabbit Semiconductor single-board computers and RabbitCore modules. The table below lists these features and when they were first introduced, and matches them against the version of Dynamic C where software support became available.

Rabbit 2000™ Features/Revisions	Dynamic C Version First Available in	Chip Revision First Available in	Notes
Spectrum Spreader	7.32 Premier	2000B (*IQ4T*)	Enabled by default for 2000B and later chips, except for BL1800
External Interrupt Fix*	7.25	2000A (*IQ3T*)	Use `SetVectExtern3000`, `GetVectExtern3000` functions
Separate Instruction and Data Space	7.30	2000A (*IQ3T*)	Do not use before DC 7.30 under any circumstances
Early I/O Enable	7.32	2000C (*IQ5T*)	Enabled by default if spectrum spreader is on
Long Stop Bit	7.32 Premier	2000A (*IQ3T*)	

* See Technical Note TN301, *Rabbit 2000™ Microprocessor Interrupt Problem*, for more information if you have an original Rabbit 2000 chip (marked *IQ2T*).

For example, the spectrum spreader was added to revision B of the Rabbit 2000™ chip, and support for the spectrum spreader first appeared in Dynamic C 7.32 Premier, which was released late in 2002. Using the spectrum spreader mitigates radiated emissions, and the spectrum spreader is now enabled by default for all boards with revision B and later of the Rabbit 2000™ chip, except the BL1800 where the spectrum spreader should remain turned off. The spectrum spreader may also be turned off on other boards through a simple change so that the following BIOS line reads `#define ENABLE_SPREADER 0`.

```
#define ENABLE_SPREADER 1  // Set to 0 to disable spectrum spreader
                           // 1 to enable normal spreading, or
                           // 2 to enable strong spreading.
```

NOTE: The strong spreading setting is not needed for Z-World and Rabbit Semiconductor board-level products.

Refer to the *Rabbit 2000 Microprocessors User's Manual* and to the *Dynamic C Premier User's Manual* for more information on these enhancements and their use.

Z-World and Rabbit Semiconductor
Products Using the Rabbit 2000™ Chip

Product	Spectrum Spreader
All products shipped prior to November, 2002	OFF
Products shipped after November, 2002, with *IQ5T* Rabbit 2000 chip and Dynamic C 7.32 or later	
RCM2000 Series RCM2100 Series RCM2200 Series RCM2300 Series	ON
BL1800	OFF
BL1810, BL1820	ON
BL2000 Series BL2100 Series OP6600, OP6700, TCP/IP Development Kit OP6800 Series OP7200 Series EG2100	ON

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