T2080 RCW Open Discussion

- VS Vismay Sharma
- **Forum name:** #Board Bring-Up

Hi

I am current using T2080RDB board and want to load a custom RCW from NOR flash. My Nor flash has been configured at address 0xF8000000 and the RCW is flashed at that address. Issue is the board doesnt read the flashed rcw and still takes the hardware RCW.

The dip switches have been set for NOR Flash and our code also loads perfectly from flash. The only issue we face is that the RCW loaded to NOR flash isnt used by the board and goes back to the hardcoded RCW.

Please let me know what is the issue and also what is the default RCW load address if wrong for the current configuration.

Thanks

Vismay

Comments (6)

Mohamed Ayoub Daalouch
2 years ago
Hello, RCW e.g. in the flash needs min. 16 byte more space because of the required format of data structure. The first 4 Byte must have the value 0xAA55AA55 per definition (RCW preamble). The fifth byte: 0x01 Byte 6 to 8: SYS_ADDR[23-0] (base address of the RCWSR registers, typically 0x0E0100) 64 Byte RCW The last bytes: 0x08138040 (Set PBI CRC check command) with a CRC (last 4 byte) In summary (with default values of SYS_ADDR and CRC): 0xAA55AA55, 0x010E0100, 64 Byte RCW (see above), 0x08138040, 0x4ACF54F9 From what I can tell, the RCWSR register's base address is 0xFE0E00E4 Otherwise, the RCW can also be generated by the debugger. You can find a template script for that under: demo\powerpc64bit\hardware\qoriq_t2\t2080rdb\demo_set_rcw.cmm Best Regards, Ayoub
Mohamed Ayoub Daalouch
2 years ago

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Best Regards,

Ayoub

VS **Vismay Sharma**
2 years ago
Hi Ayoub We have configured our nor flash at E8000000 and we are loading our RCW bin with the following format as mentioned above in your reply. The issue we face is even tho the RCW binary loads successfully to flash, the board doesnt not use the same or isnt able to read it. Also Our RCW registers are 0x400E00E4 as my CCSR base is 0x40000000, but the corresponding registers are read only in the DCPC section and writing to the same isnt possible. Any idea where should the actual RCW should be loaded then? Thanks for the response Vismay
Mohamed Ayoub Daalouch
2 years ago

Hello,

Can you try setting SYStem.Option.HRCWOVerRide ON before SYStem.Up and check if this changes the behavior.

Otherwise, I suggest we try to debug this in a remote session next week.

Best Regards,

Ayoub

VS **Vismay Sharma**
2 years ago
Hi Ayoub Thanks for the response. We have already tried the same and that didnt solve our issue. Lets Schedule a debug session at the earliest this week if possible. It would be helpful if we have someone present who has worked on T2080 would be helpful for us. Thanks Vismay
Mohamed Ayoub Daalouch
2 years ago
Hello, I've checked this internally, Please check if the desired RCW source is reflected in the PORSR1 register. You should then try to power cycle the target after changing the RCW source. If the RCW source does not reflect the desired setting, you need to contact NXP for further support on this matter. Also SYStem.Option.HRCWOVerRide ON was a wrong suggestion on my part, as the override would prevent taking the RCW values from FLASH. Best Regards, Ayoub