1. Modification Target

Sirius qspi-flash controller can’t support page write function, it will treat each burst write on ahb bus as a separate write. For example, if we use dma to write 256 bytes to flash, the longest burst on ahb is 16, the whole data will be split into 64 write burst transfer. The qspi-flash controller will execute 64 page program cmd to flash. The modification target is to achieve page write, which will execute one page program cmd to flash and continuously write 256 bytes once.

1. Method

And two registers “block\_bit\_cnt”, “block\_en” in spi\_apb block, these registers will control data counter during SPI\_WR\_DATA state.

1. Files Modified

hp\_spi\_ahb.v

hp\_spi\_top.v

hp\_spi\_apb.v

hp\_spi\_ctrl.v

1. How to use page write
2. Init qspi-flash controller as before
3. Set cmd register as before
4. Set block\_en register to 0x1
5. Set transfer bit number to block\_bit\_cnt register. E.g. set 2048 to block\_bit\_cnt for 256 bytes write
6. Use dma to transfer data to flash address.(total transfer bits should equal to block\_bit\_cnt)
7. Check flash status register to wait for write complete
8. Set block\_en register to 0x0
9. Example

/home/jima/project/Sirius/trunk/sim2/sim\_system/C\_testcase/m7\_test/main\_m7.c