



DSP\BIOS SPI Device Driver

Version: 1.10.03

Release Notes

April 16 2009

The product release notes in this document are for DM648/C6452 BIOS SPI Device Driver, which is tested on DM648/C6452 EVM development board.

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1 General information

The SPI device driver included in this release package supports h/w capabilities of DSP SPI peripheral device.

The driver supports Synchronous I/O and implements Polled and Interrupt modes of operation.

The driver is based on an architecture that allows for easy customization/extension. It separates blocked-calls from basic device management for data transfers.

The driver is multi-instantiable and re-entrant safe for use in multi-threaded environment.

1.1 Sample Application

The sample DSP/ BIOS application (sample folder) is a representative test program. In Application initialization is done via registering the init function in the Bios. This task, starts-up the driver in polling (which is the default). The application then performs typical IO (read/write) operation with EEPROM slave connected to it.

Note: - To perform R/W operations on EERPOM, SPI driver needs to be configured w.r.t the particular EEPROM which is inserted into the socket. Refer corresponding EEPROM specs for more details

1.2 Limitations/Constraints of SPI driver while performing RW with EEPROM:

SPI drivers the following features are not tested because of the limitations with the EEPROM connected to SPI

- In SPI mode 00, 11, the MSB should be sent first.
- EEPROM shall not support frequency greater than 3 MHz
- Driver is tested only in 4-pin CS mode
- Power down feature is not supported
- Delay of 5m.sec might be needed between successive submits as EEPROM write cycle is for 5ms

2 New In This Release

- None.

3 System Requirements

Details about the tools and the BIOS version that the driver is compatible with can be found in the system Release Notes.

4 Installation and Usage

1. Install DM648/C6452 package as per instructions provided along with the package.
2. BIOS SPI Device driver sources are available in <root>/drivers/SPI folder.

3. Build the SPI project file in build directory to build the debug/release library.
4. Sample application /test code is provided in DM648/C6452 BIOS package.

5 Uninstallation

1. Un-install the DM648/C6452 BIOS package as per instructions provided with the package.

6 Fixed In This Release:

- Fixed MR DPSP00011355. When CSHOLD bit (32 bit write) is reset at the end of the transfer, it also updates the data part of the SPIDAT1 register and hence send an extra transfer. This is solved by resetting only CSHOLD bit (8 bit write), rather resetting the whole SPIDAT1 register. File affected : ti/sdo/pspdriers/drivers/spi/src/ddc_spi.c
- Fixed MR DPSP00011484. The RXEMPTY tokens YES/NO for SPI were swapped in the csl. This has been corrected. File affected: ti/sdo/pspdriers/soc/dm648/dsp/cslr_spi.h

7 Known Issues:

None
