Errata Pertains to the EP7312, EP7311, and EP7309 devices

LCD Frame Buffer (All EP73xx devices)

The LCD Frame Buffer memory is part of a DMA process of transferring data from an external memory source to the LCD controller internal buffer memory. This DMA process to the internal LCD frame buffer is 32 bit only. All external memory devices used to store LCD information for DMA must be in a x32 configuration.

Workaround

For smaller LCD panels, 320x240x4bpp, all LCD content will fit inside the internal 48KB SRAM, which is configured as x32. All external RAM/SDRAM devices must observe a x32 configuration.

SPI2 (All EP73xx devices)

SPI2 timing diagrams as shown in the EP7312 Data sheet are consistent with the operation of the SPI2 peripheral. This SPI2 port will not work for most master slave devices. For a typical device, the transmit data bit is shifted out on the rising edge of clock. Receive bits are sampled on the same rising edge of SCLK.

Workaround

An external D-Flip/Flop would be needed on SSITXDA pin to clock data out only on the falling edge of SCLK. This will re-align the data for other external devices using SSI2 for master/slave communication. Data to transmit will need to be shifted up by one bit before being sent to the SSI2 FIFO, to prevent loss of the LSB at the receiving end. SSITXFR will de-assert before the LSB can be clocked out in this configuration.

I2S (DAI Peripheral- EP7312 and EP7309 only)

For receiving data, 64FS and 128Fs modes do not sample data immediately after the falling/rising edge of LRCLK and the assertion of SCLK.

1. DAI 64FS mode: Data sampling is delayed by 1/2 of 1 SCLK after LRCLK and SCLK assert.

2. DAI 128F mode: Data sampling is delayed 3/4 of 1 SCLK delay after LRCLK and SCLK assert.

Workaround

Software: Configure the ADC for I2S mode. I2S mode will delay data by one SCLK for each sample. Configure the DAI for 64FS mode to receive data. Clock edges to data valid will align properly.

Contacting Cirrus Logic Support

For all product questions and inquiries contact a Cirrus Logic Sales Representative.

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