

DSi screen notes

When browsing through the internet archive I found documentation of a working DSi Capture card that Katsukity's developer likely made.

Their code and viewer software was public, I don't know where I put those to be completely honest but they should be somewhere on archive.org.

I do have this fpga file which I think I ran through google translate to make it english readable (it was all in Japanese)

Translated Nisetro Dsi code

https://s3-us-west-2.amazonaws.com/secure.notion-static.com/91b1bbca-7221-4f6c-983e-860a8ebe377a/Nisetro_DSi_Translated_comments.v

DCLK is 2.667 - 3 Mhz

Colors are updated on both rising and falling DCLK

LS is a good hysnc - constant 15.73 khz clock

Could also use GCK for hysnc - same frequency

Have counters for row and column

if GSP is low then reset frame (row/column)

if GCK is low then reset column, add one to row

if GCK is low for all of the time between two LS jumps then end of frame

if DCLK changes (only happens when GCK is high) then save the frame data, increment column

Block ram is 18 kbit dual port (18432 bits of ram) (stick with 5 blocks per color for now)

https://www.xilinx.com/support/documentation/data_sheets/ds557.pdf - page 50/51

describes the block ram

https://www.xilinx.com/support/documentation/application_notes/xapp463.pdf