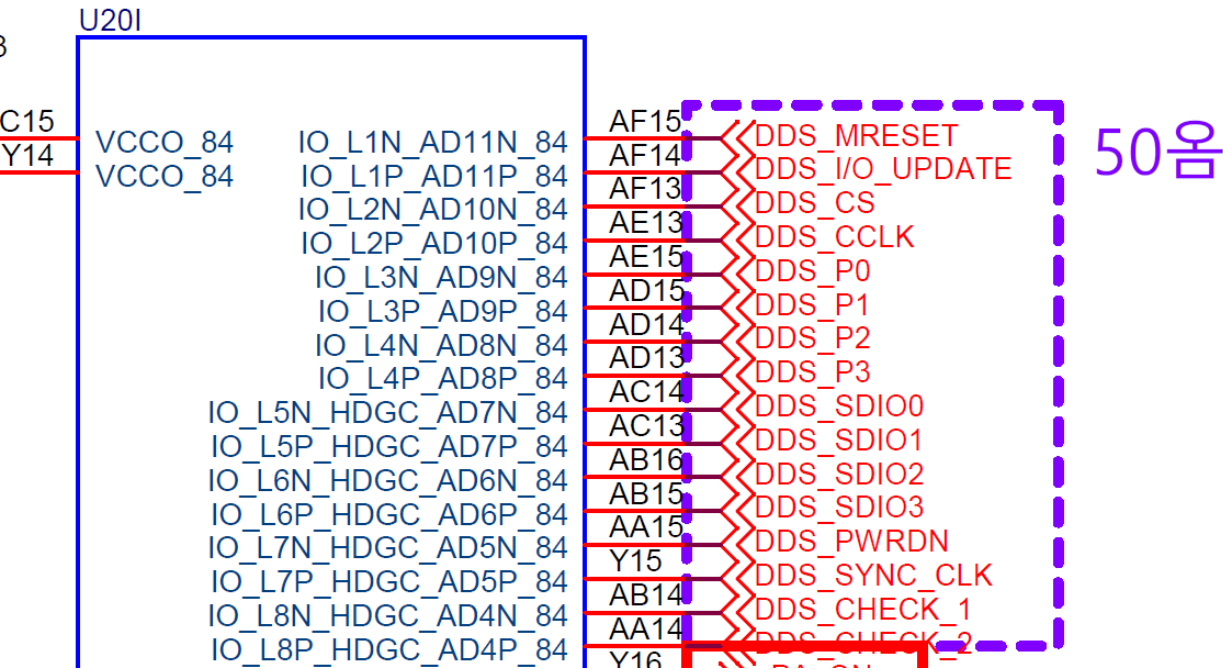


AD9958 TEST

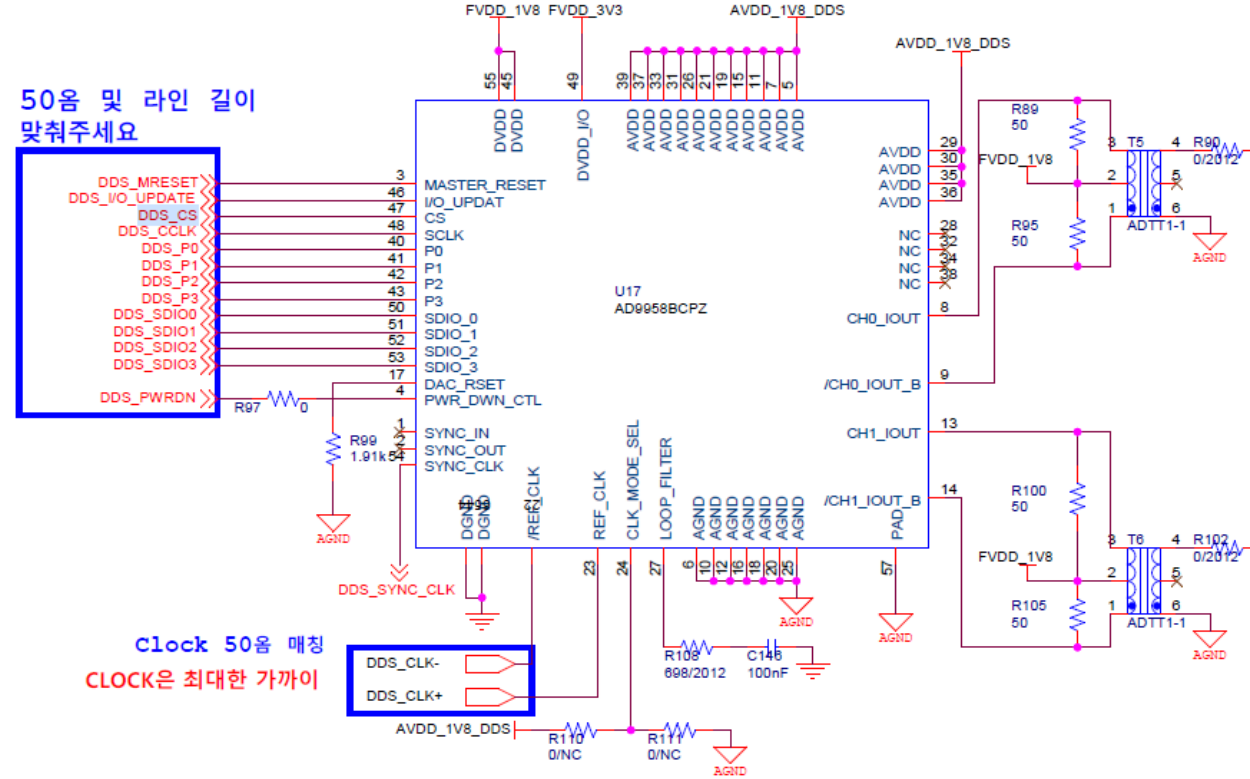
LUPE

2022/09/28

Schematic



FPGA(Artix Ultrascale+)



DDS(AD9958)

Register Setting Value

The screenshot displays the AD9958/59 Evaluation Software GUI. The main interface includes several control panels:

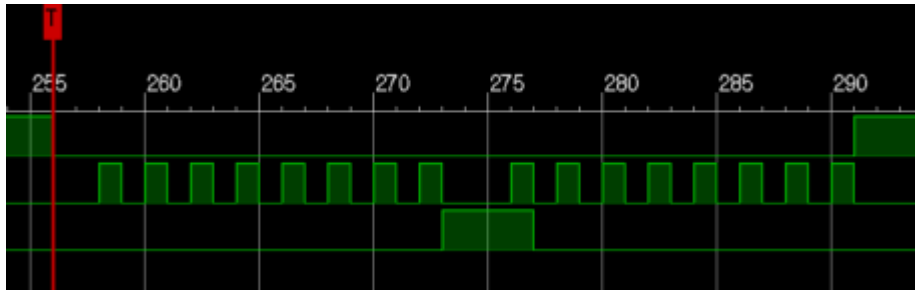
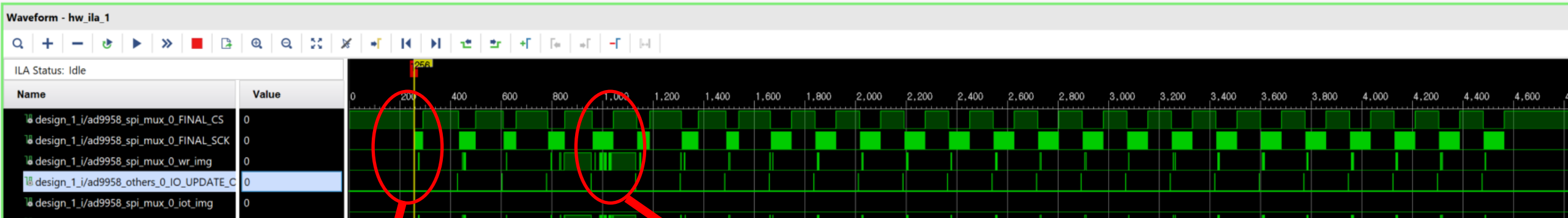
- Chip Level Control:** Contains settings for Clock (Ref Clock: 125.000 MHz, Multiplier: 4, CP Current: 75 uA, System Clock: 500.000 MHz), All Channel Power Down, External PD Control, and All Channel Accumulator Control.
- Channel Control:** Shows settings for Channel 0, Channel 1, Channel 2, and Channel 3, including Pwr Down, Pipe-Line Latency Control, DAC Full Scale Current Control, Modulation Output Type, and Output Waveform.
- Debug:** Features DUT Signals (PD, PA, PB, CTL) and Serial Port Status (LSB First, Serial I/O Mode).
- Register Map Debug:** A window showing a table of registers and their values.

Register	MSB	Register Data	LSB	Calc Tuning Word...	Load	Read
CSR (00h):			10000000			
FR1 (01h):	10010000	00000000	00000000			
FR2 (02h):		00000000	00000000			
CFR (03h):		00000000	00000011	10000001		
CTW0 (04h):	00000101	00011110	10111000	01010010		
CPOW (05h):	8		00000000	00000000		
ACR (06h):	8		00000000	00000000		
LSR (07h):			00000000	00000000		
RDW (08h):	00000000	00000000	00000000	00000000		
FDW (09h):	00000000	00000000	00000000	00000000		
CTW1 (0Ah):	00000000	00000000	00000000	00000000		
CTW2 (0Bh):	00000000	00000000	00000000	00000000		
CTW3 (0Ch):	00000000	00000000	00000000	00000000		
CTW4 (0Dh):	00000000	00000000	00000000	00000000		
CTW5 (0Eh):	00000000	00000000	00000000	00000000		
CTW6 (0Fh):	00000000	00000000	00000000	00000000		
CTW7 (10h):	00000000	00000000	00000000	00000000		
CTW8 (11h):	00000000	00000000	00000000	00000000		

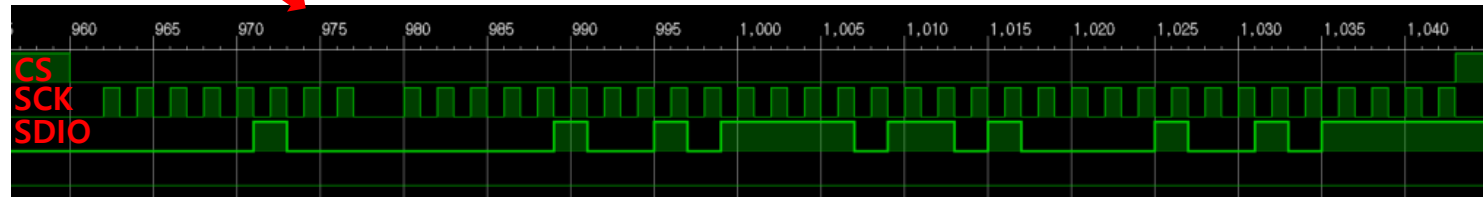
The Register Map Debug window also shows a 'Serial I/O' section with 'RegAddr' set to '00 Hex' and '10000000'.

AD9958 GUI

SPI Setting

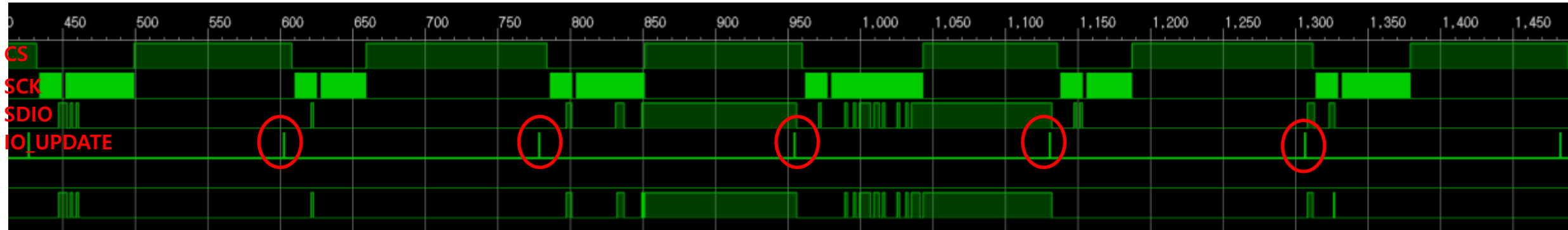


0x00 => 0x80



0x04 => 0x04BDA12F

IO_UPDATE Capture



SPI로 Register에 데이터를 보내고 새로운 SPI를 보내기 전에 IO_UPDATE를 High로 내보냄

Others IO Pins

- 1) MS_RESET : '0'로 세팅
- 2) PWR_DOWN : '0'로 세팅
- 3) P0_DOUT : '0'로 세팅
- 4) P1_DOUT : '0'로 세팅
- 5) P2_DOUT : '0'로 세팅
- 6) P3_DOUT : '0'로 세팅
- 7) SDIO_1 : '0'로 세팅
- 8) SDIO_2 : '0'로 세팅
- 9) SDIO_3 : '0'로 세팅