

Status of TaichuPix1&TaichuPix2

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EXCELENCIA
SEVERO
OCHOA

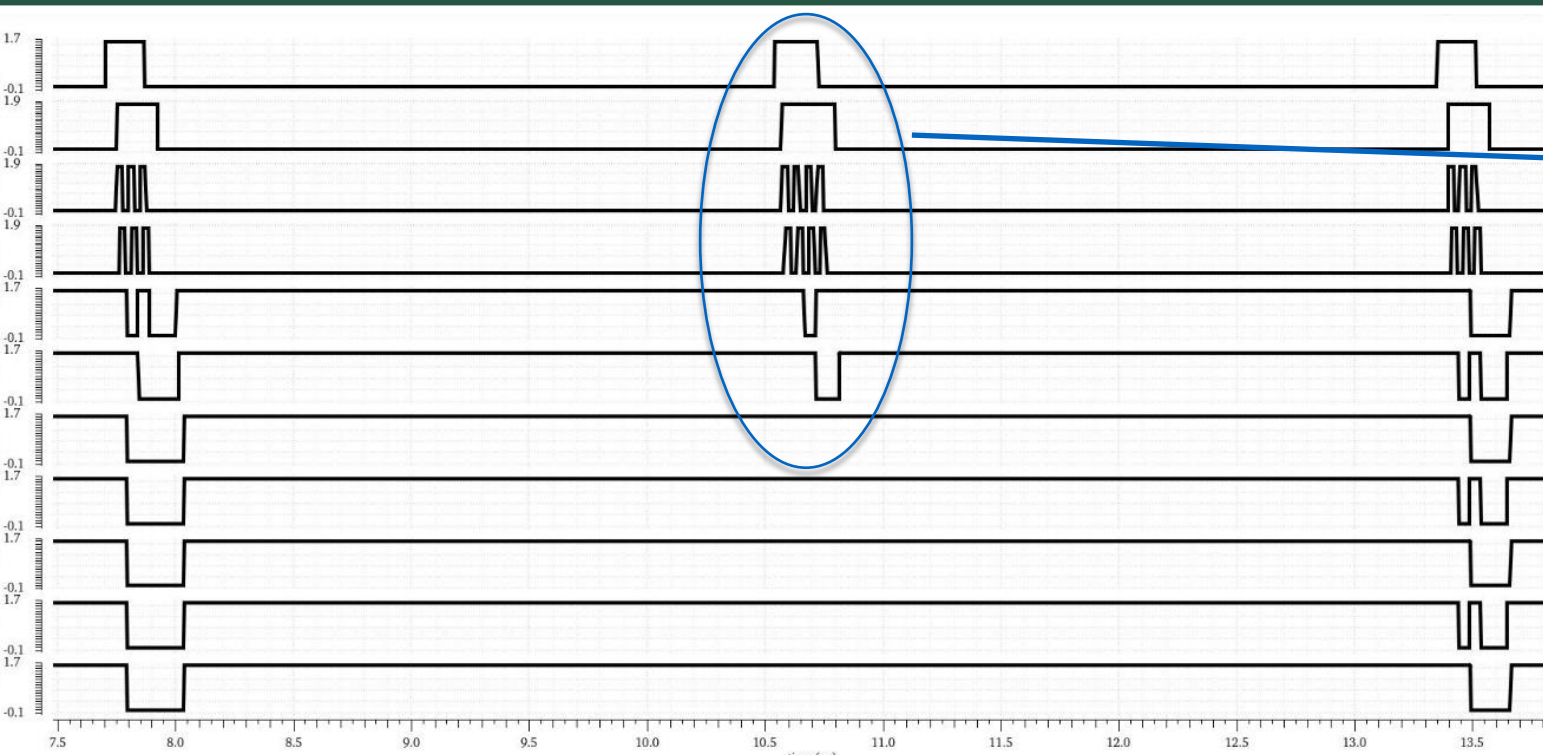


Barcelona Institute of
Science and Technology



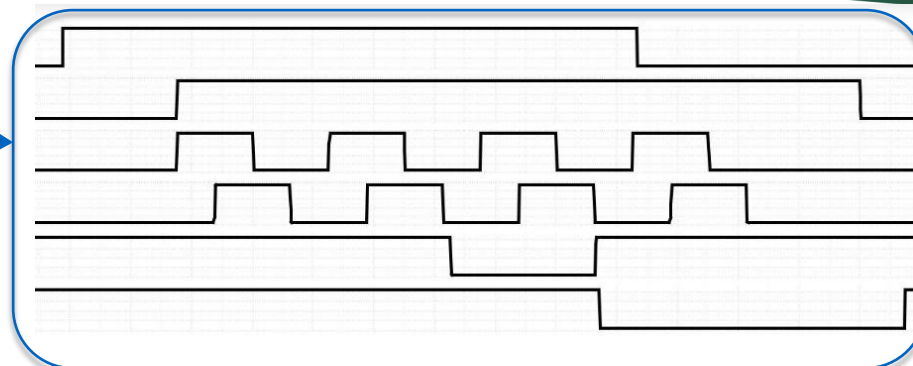
華中師範大學
CENTRAL CHINA NORMAL UNIVERSITY

Simulation with schematic



TaichuPix2 Column Reader Waveform(SS 50°C 1.6V)

FASTOR
PULLEN
READ
LATCH
ADDR0
ADDR1
ADDR2
ADDR3
ADDR4
ADDR5
ADDR6



SS 50°C 1.6V 1024 pixels/Column

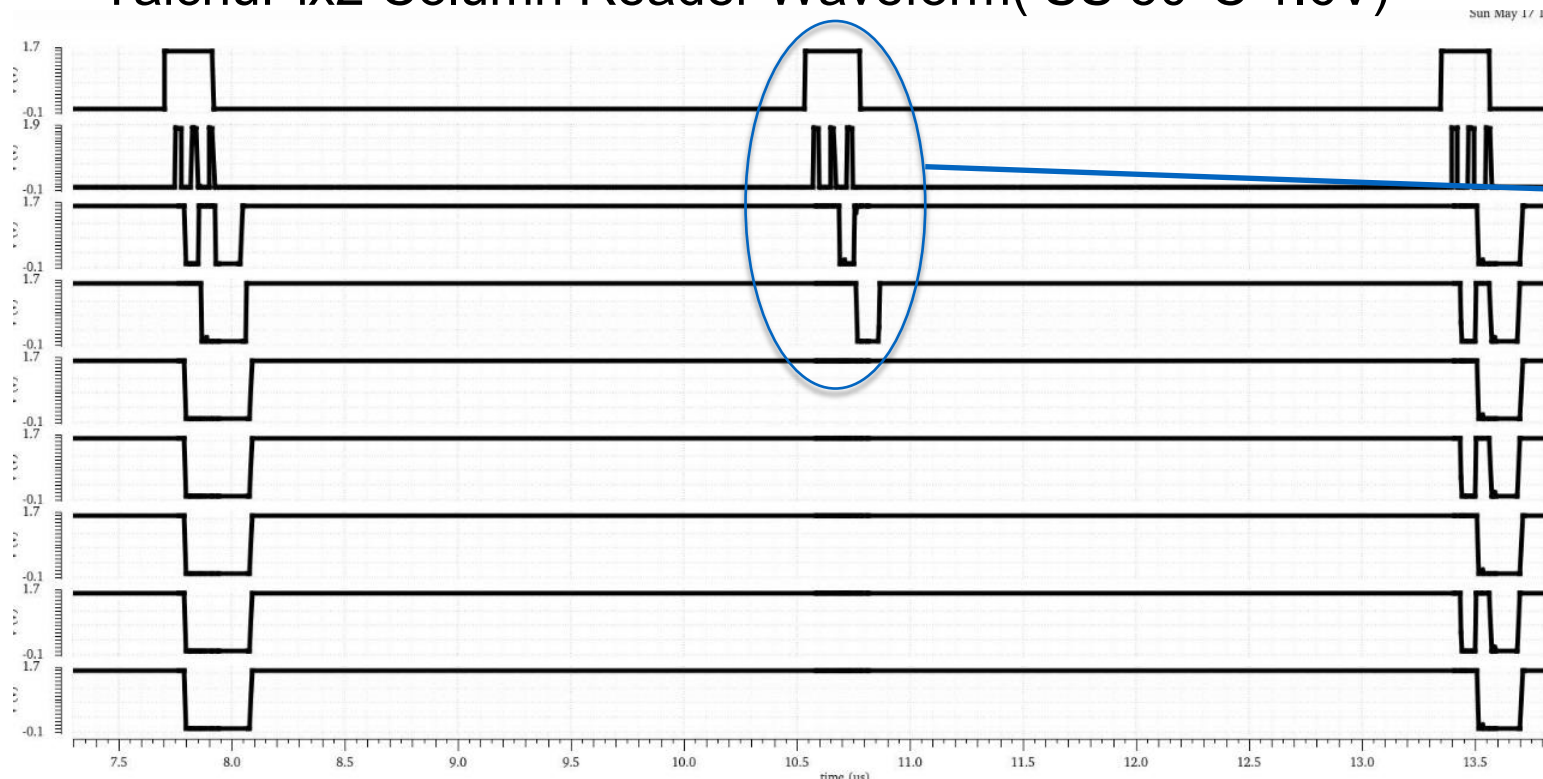
TDA: 30.62ns

TDFOR: 1.54ns

TT 27°C 1.8V 1024 pixels/Column

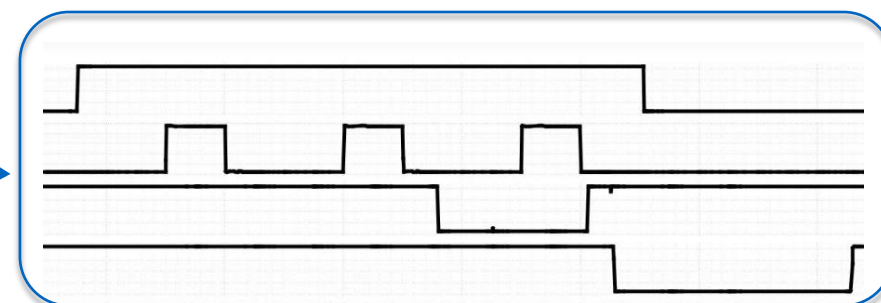
TDA: 37.85ns

TDFOR: 28.59ns



TaichuPix1 Column Reader Waveform(SS 50°C 1.6V)

FASTOR
READ
ADDR0
ADDR1
ADDR2
ADDR3
ADDR4
ADDR5
ADDR6



SS 50°C 1.6V 1024 pixels/Column

TDA: 39.82 ns

TDFOR: 51.62 ns

TT 27°C 1.8V 1024 pixels/Column

TDA: 25.01ns

TDFOR: 28.55ns

Some test results

- ◆ The format of the data is show as below, bit 32 is valid flag, then is 8 bit timestamp, 9 bit column address, 10bit row address and 4 bit pattern.



- ◆ The periphery support OCT mode, which only Operate Column0 and Column 95.
- ◆ The preliminary result of the first byte is always acquiring the same data :
 - 1 00000000 00011111 0000000000 0000 (DEC: 1 -0 -63- 0 -0)
 - 1 00000000 00101111 0000000000 0000 (DEC: 1 -0 -95- 0- 0)
- ◆ Then try to read 2000 times of FIFO1 and FIFO2. To make sure the FIFO is empty. Then we get some results.
 - 1 00110001 00101111 0101000011 0000 (DEC: 1- 49 -95 -323- 0)
 - 1 00110001 00000000 0101000011 0000 (DEC: 1 -49- 0 -323- 0)

*It's necessary to **READ EMPTY** of FIFOs*



Thanks for your attention.