LVDS Data Acquision

PRESENTED BY

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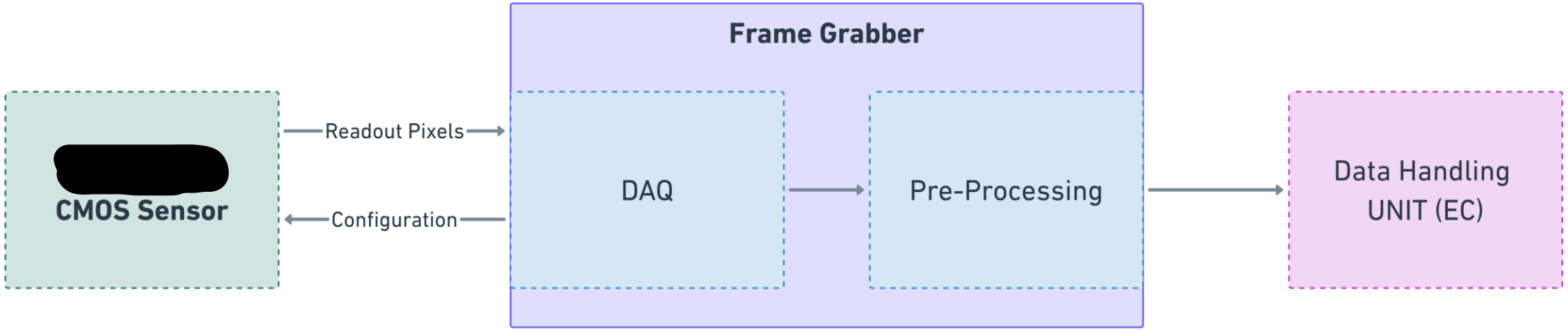
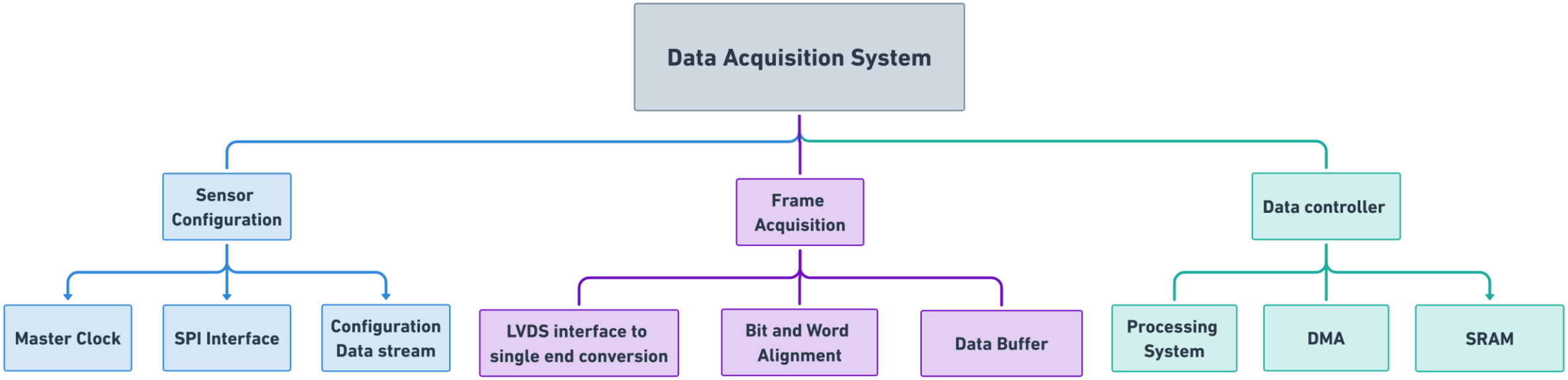
Introduction

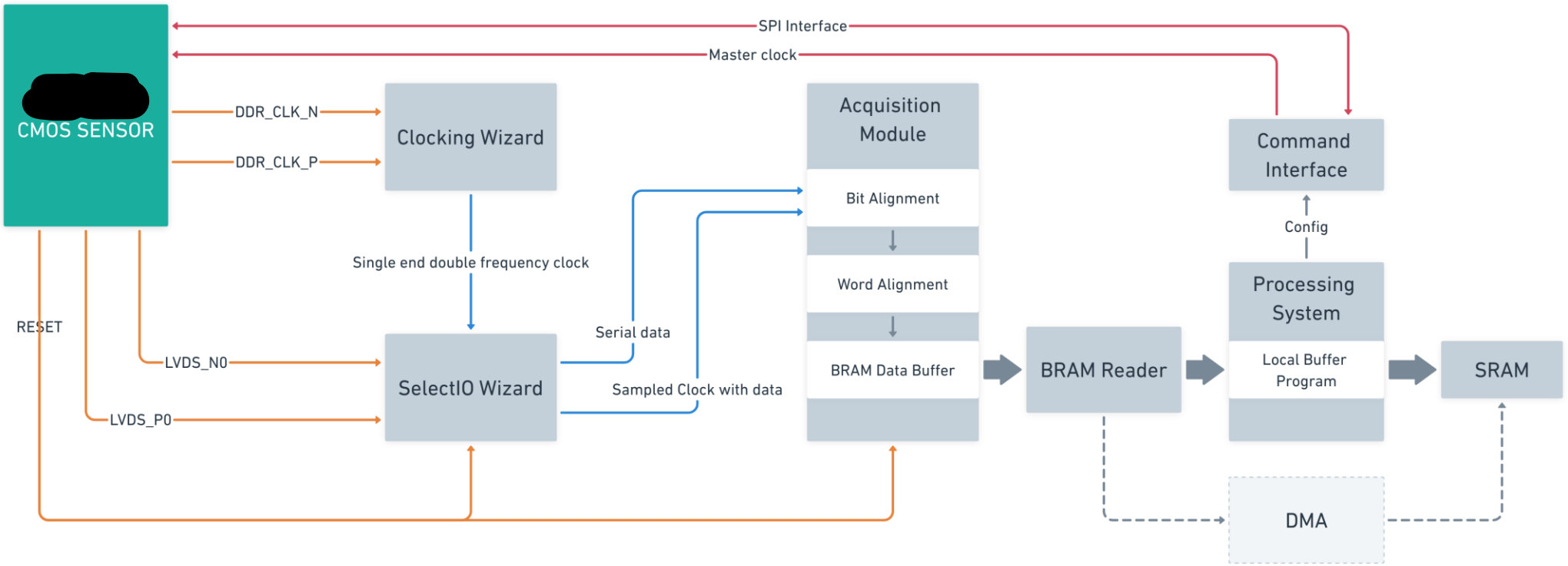
A data acquisition system (DAQ) is an electronic system that collects, stores and distributes information for further processing.



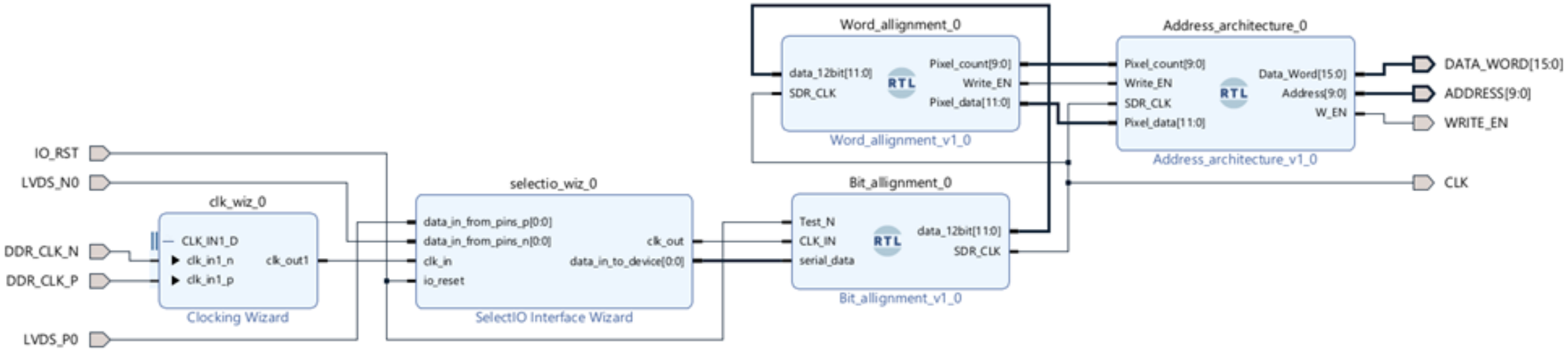
Categorizing the Data Acquisition System

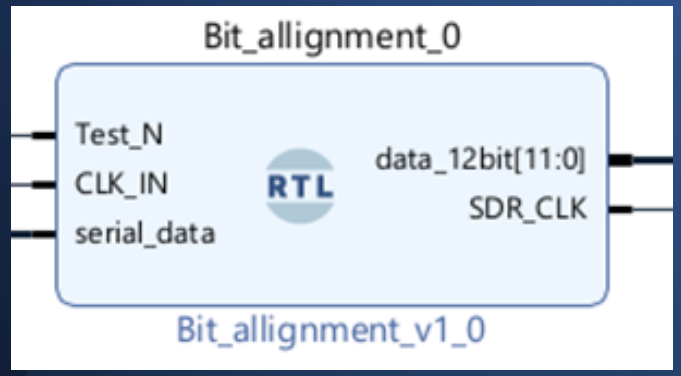


Sample architecture for Prototyping

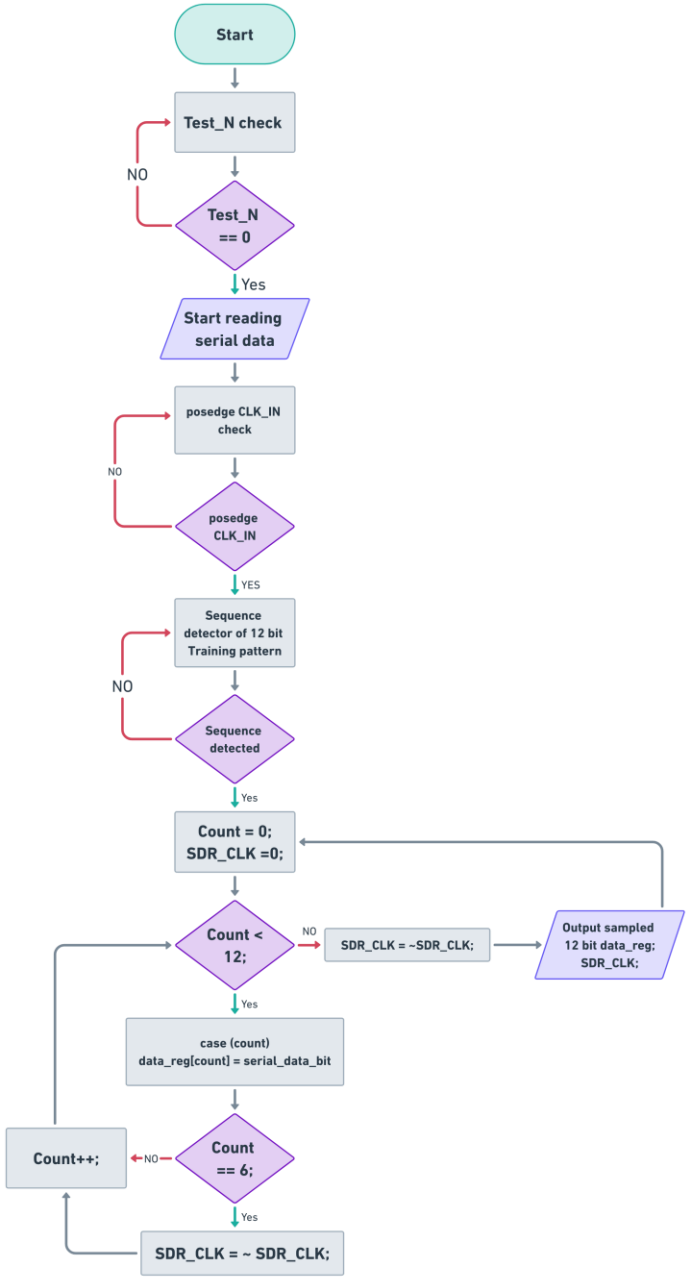


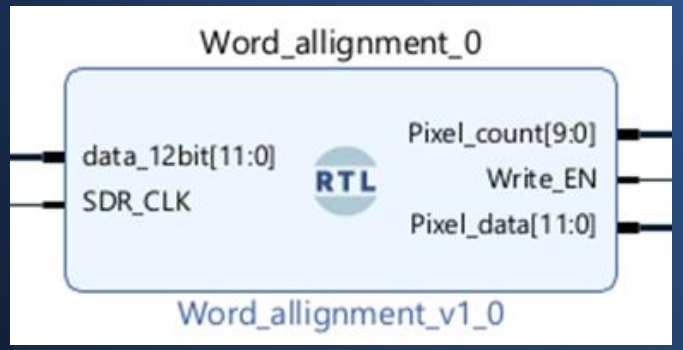
Frame acquisition



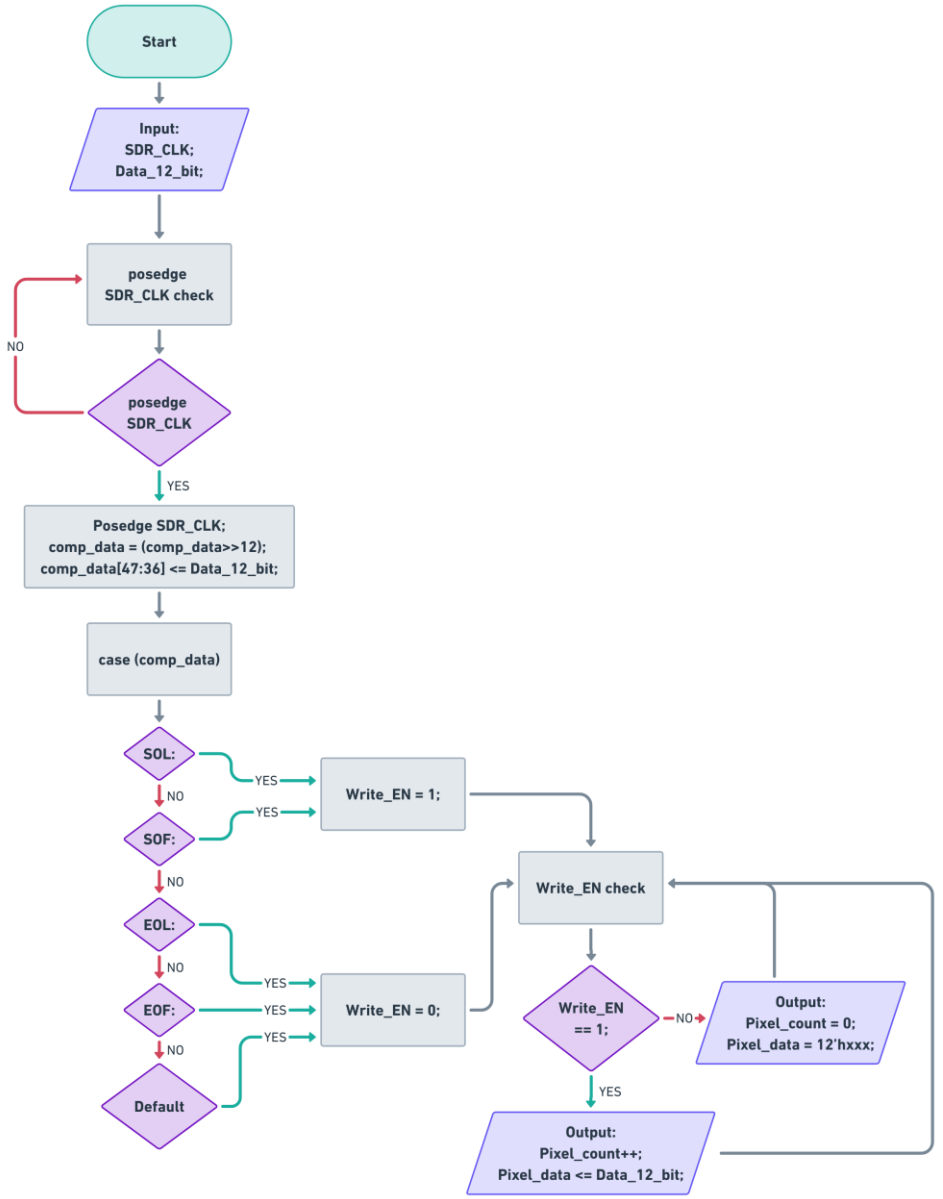


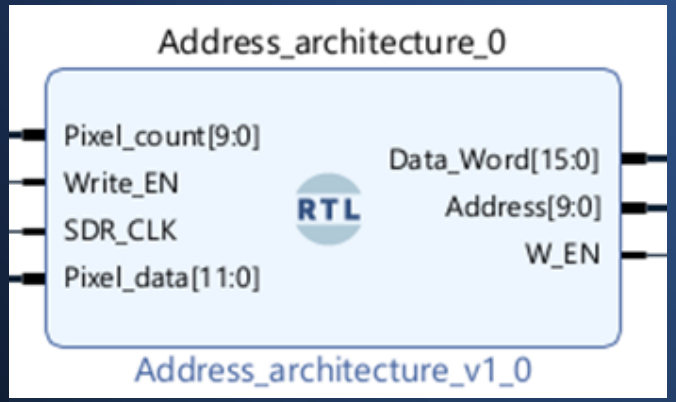
Bit Alignment



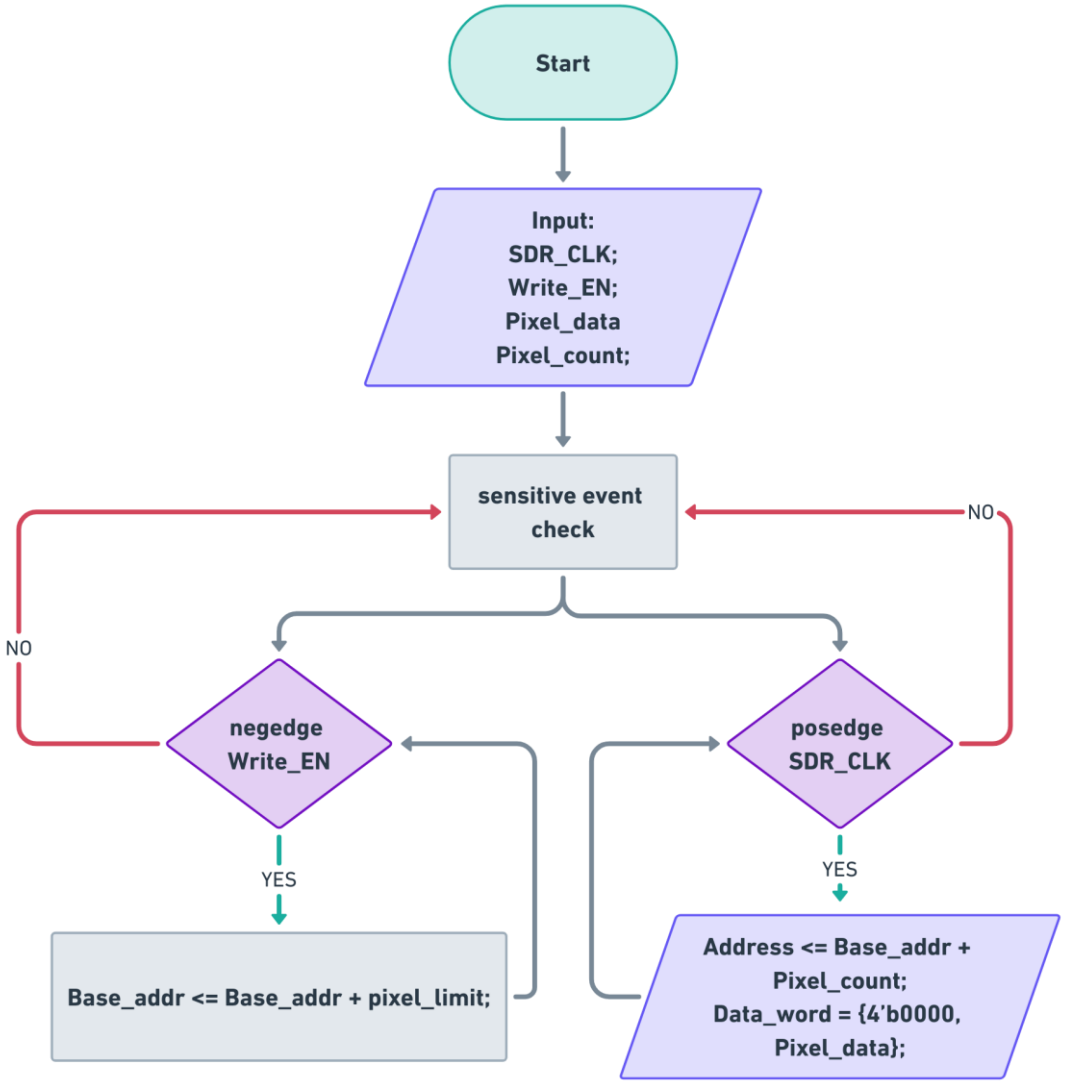


Word Alignment

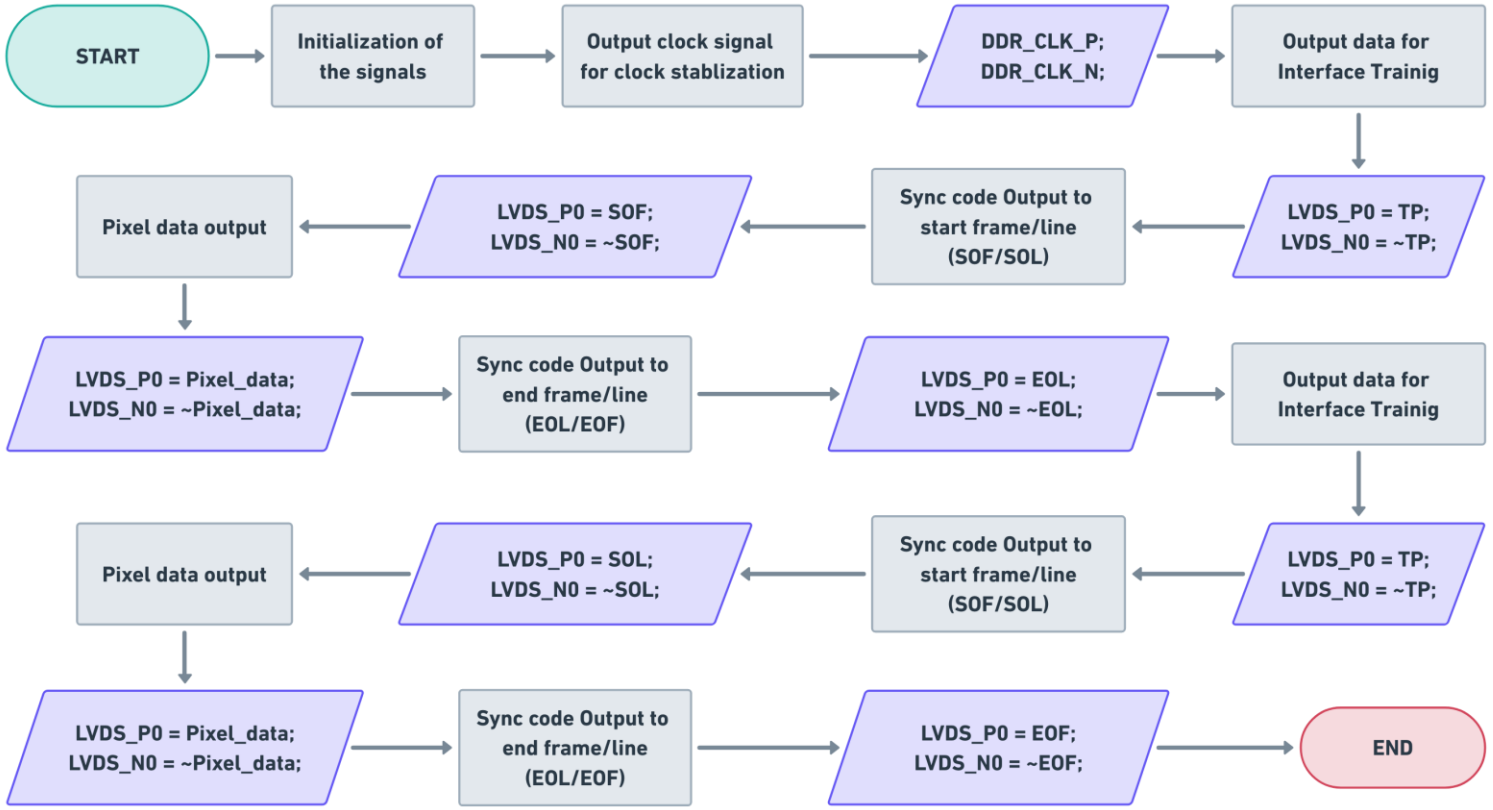




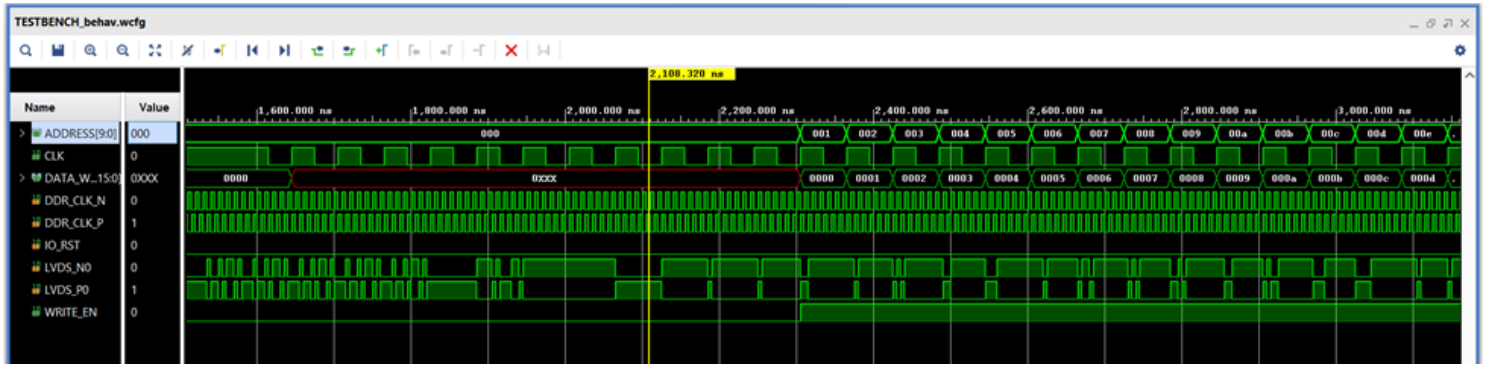
Address Architecture

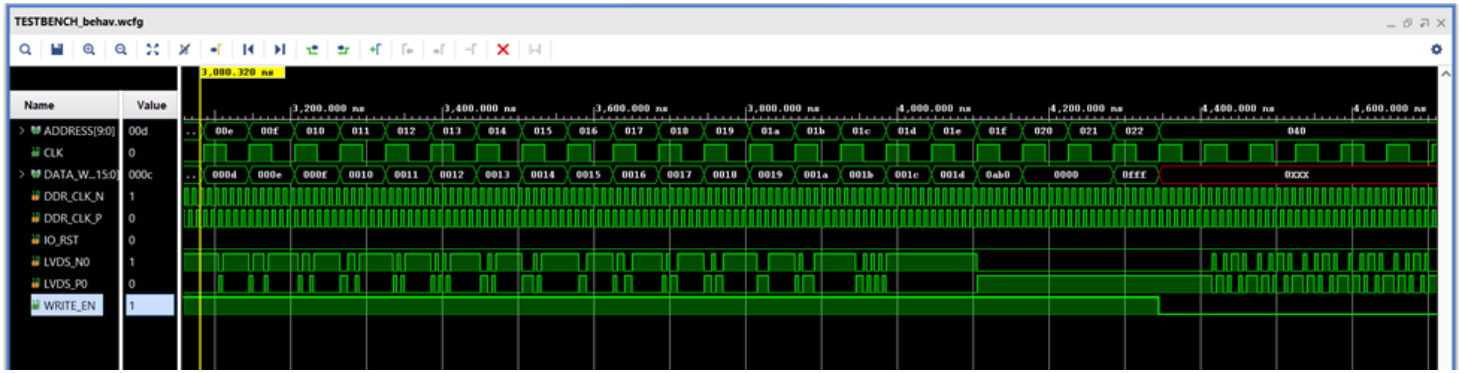


Simulation using testbench



Results from the simulation





- The architecture aligned the bit and word using the training pattern and detected the all-sync code pattern (SOF/SOL/EOL/EOF) successfully.
- It provides the pixel data and individual address for every pixel and also the Write_EN control signal for writing the pixel data into the data buffer s BRAM.
- For the sample input it writes 2 times in the Bram with individual addresses for every pixel in both the streamed line of the pixels.

Thank You