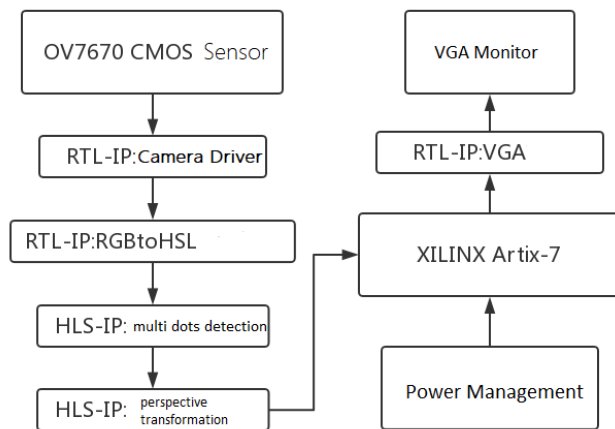


AR based Smart Glasses

Design

- We programmed XILINX Artix-7 platform to achieve some augmented reality applications on our smart glasses.
- By using Vivado HLS, we designed our IP cores including detecting four green dots at the same time and perspective transformation of the rectangle area.
- For the RTL design, we programmed the FPGA to drive the CMOS camera and to do the color space transformation between RGB and HSL.



Results

- Within all the functions achieved, our glasses can do AR applications like taking notes, painting, and automatically translating.

