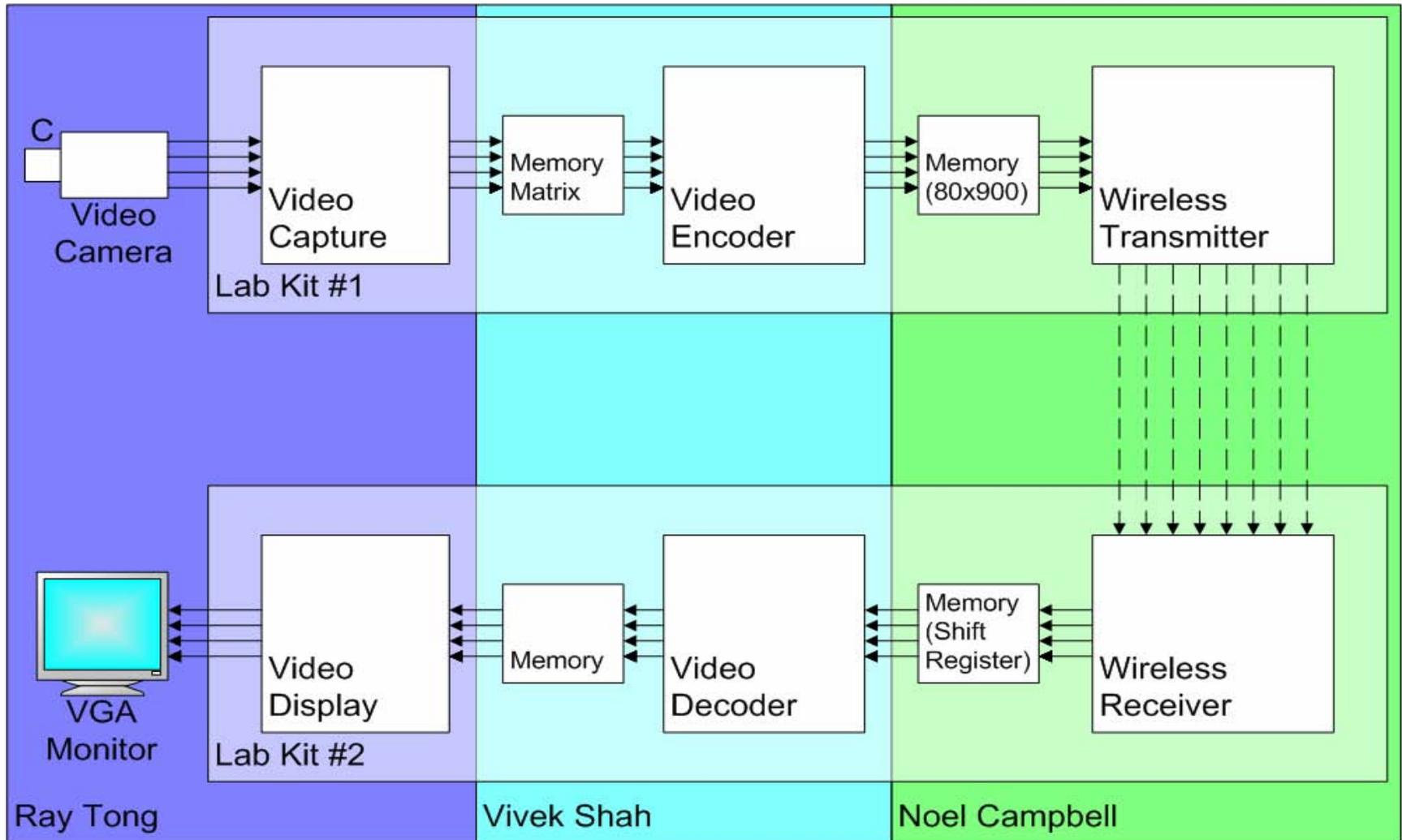


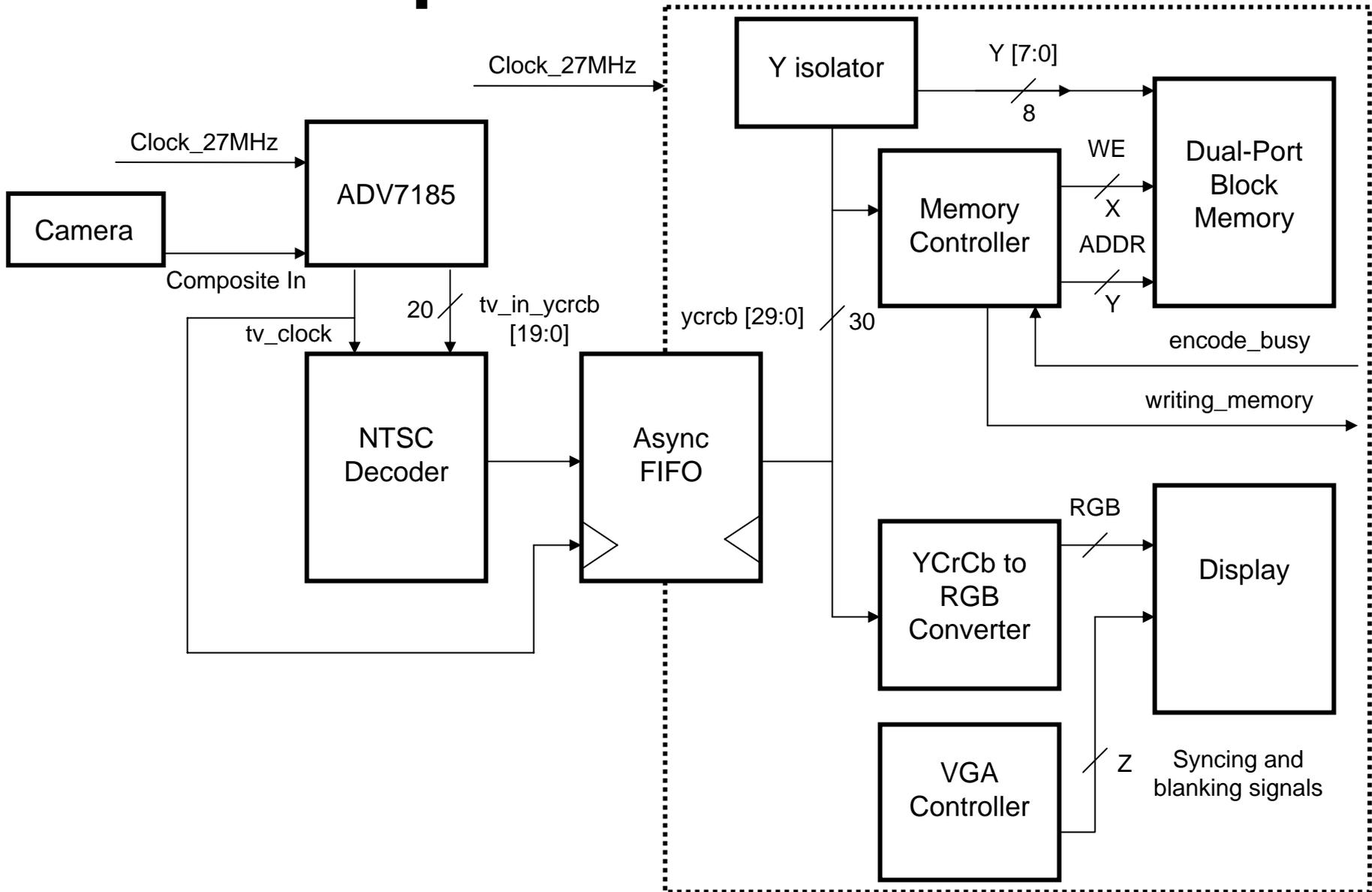
Wireless Security System

Noel Campbell
Vivek Shah
Raymond Tong

Video Surveillance Block Diagram



Video Capture Overview



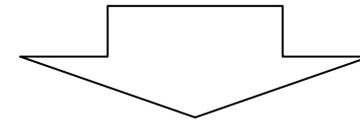
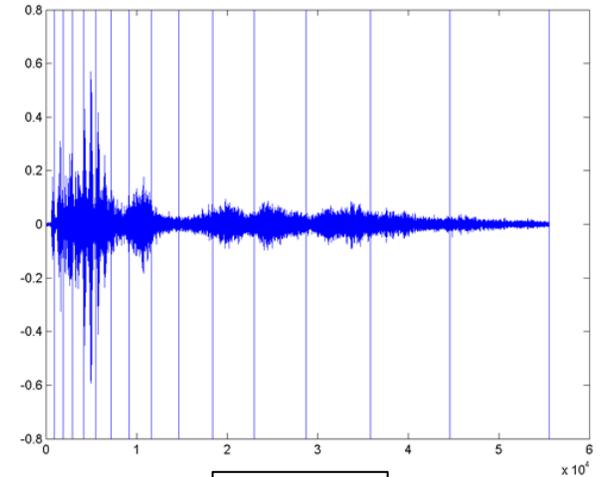
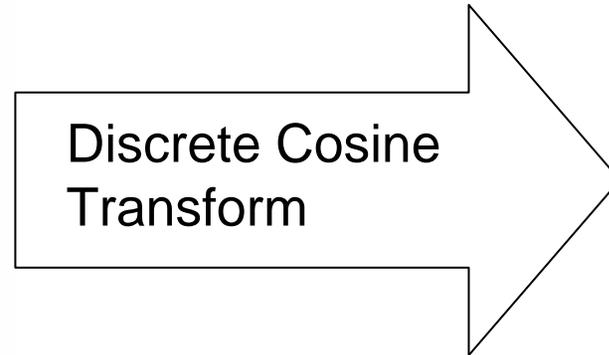
Technical Considerations

- Synchronization of data
 - ADV7185 clock vs lab kit 27 MHz clock
- Displaying data in VGA
 - Acquire 240 X 240 real time video
 - Write data to block memory then continuously read from it
- Memory Controller
 - Write a frame worth of data into block memory for encoding and transmission

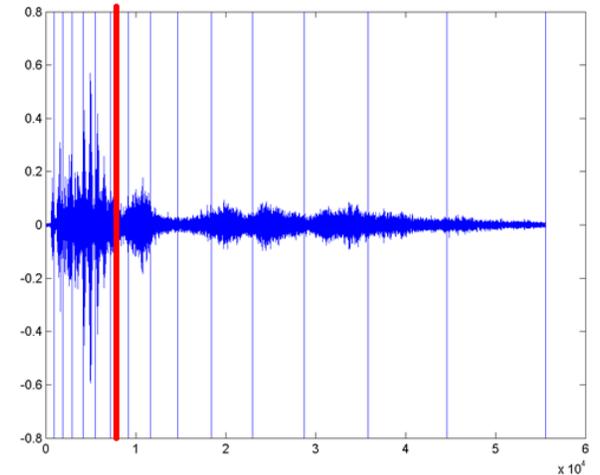
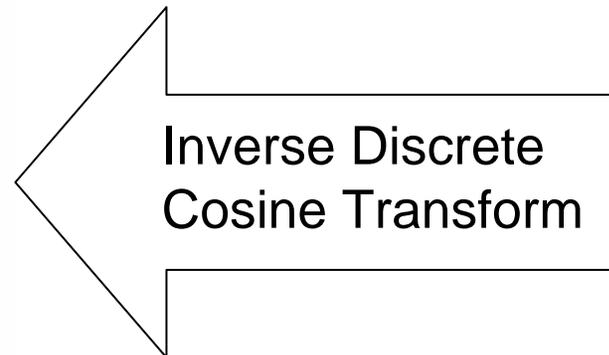
Video Compression



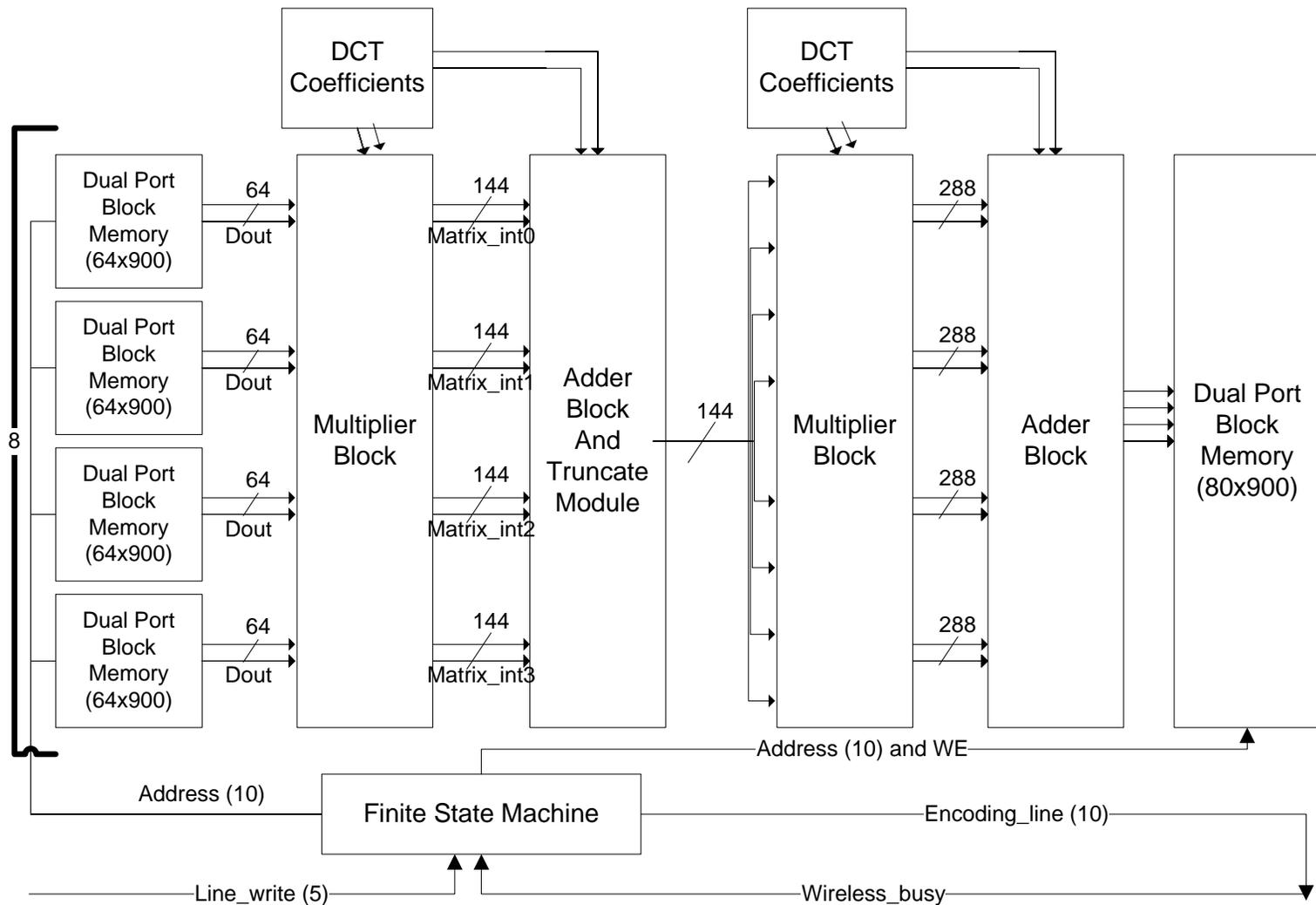
512 bits/block



56 bits/block



Video Encoder

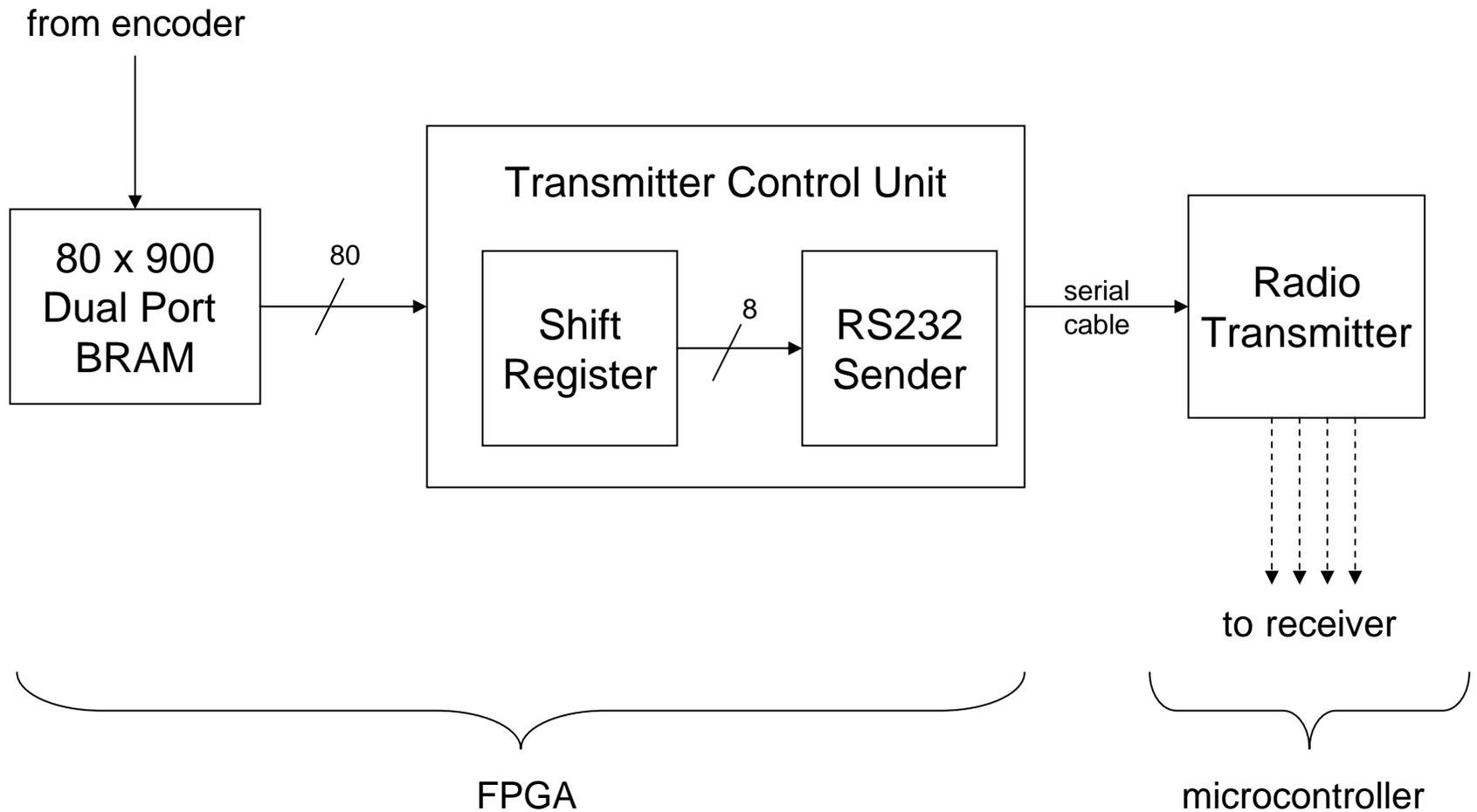


Wireless Transmission

- Data is sent serially from the labkit to the wireless kit
- Data is assembled into packets and sent from camera-end to fixed-end via CC2420 radio
- Data is then sent serially from receiver wireless kit to the receiver labkit

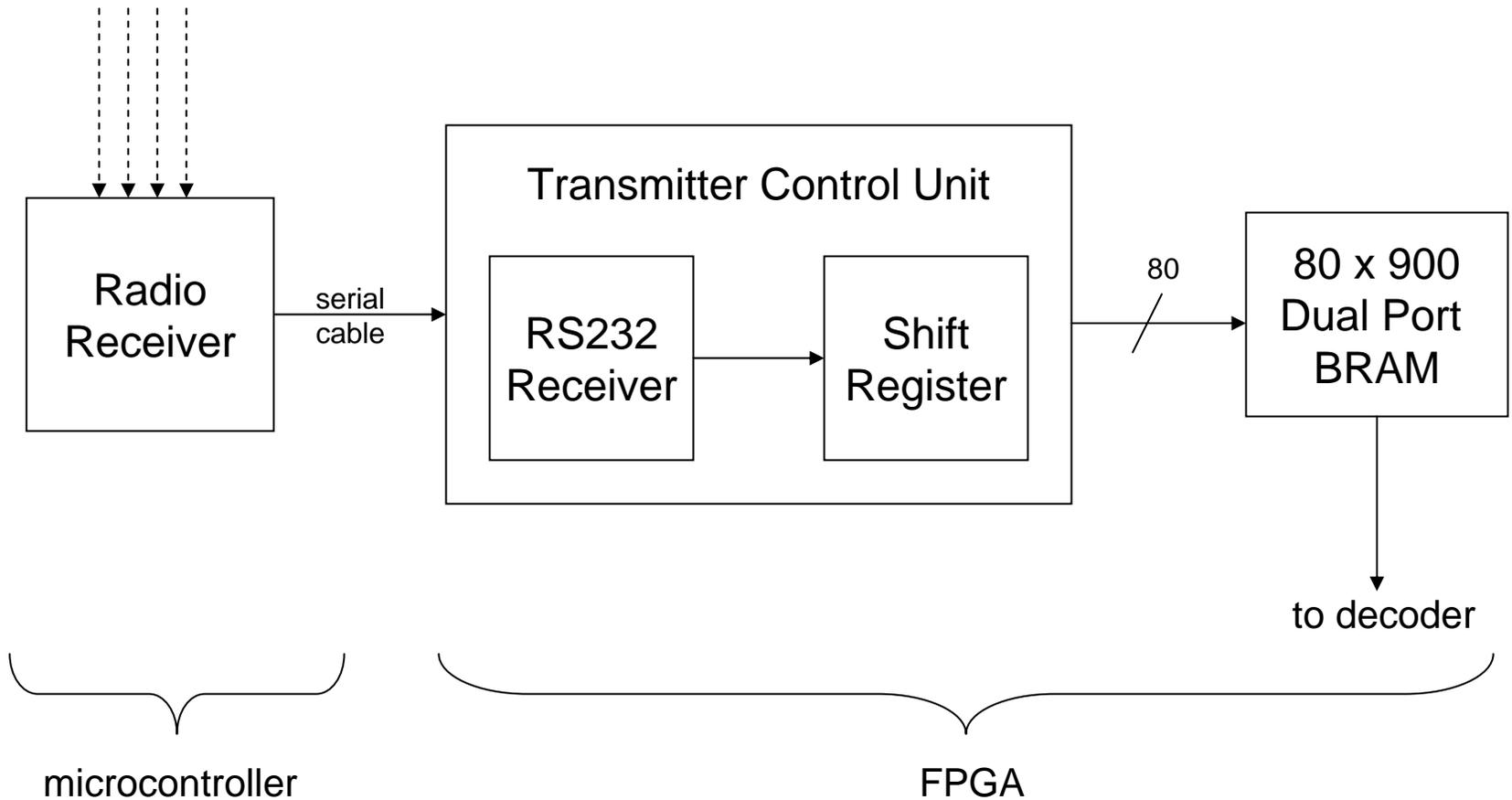


Transmitter

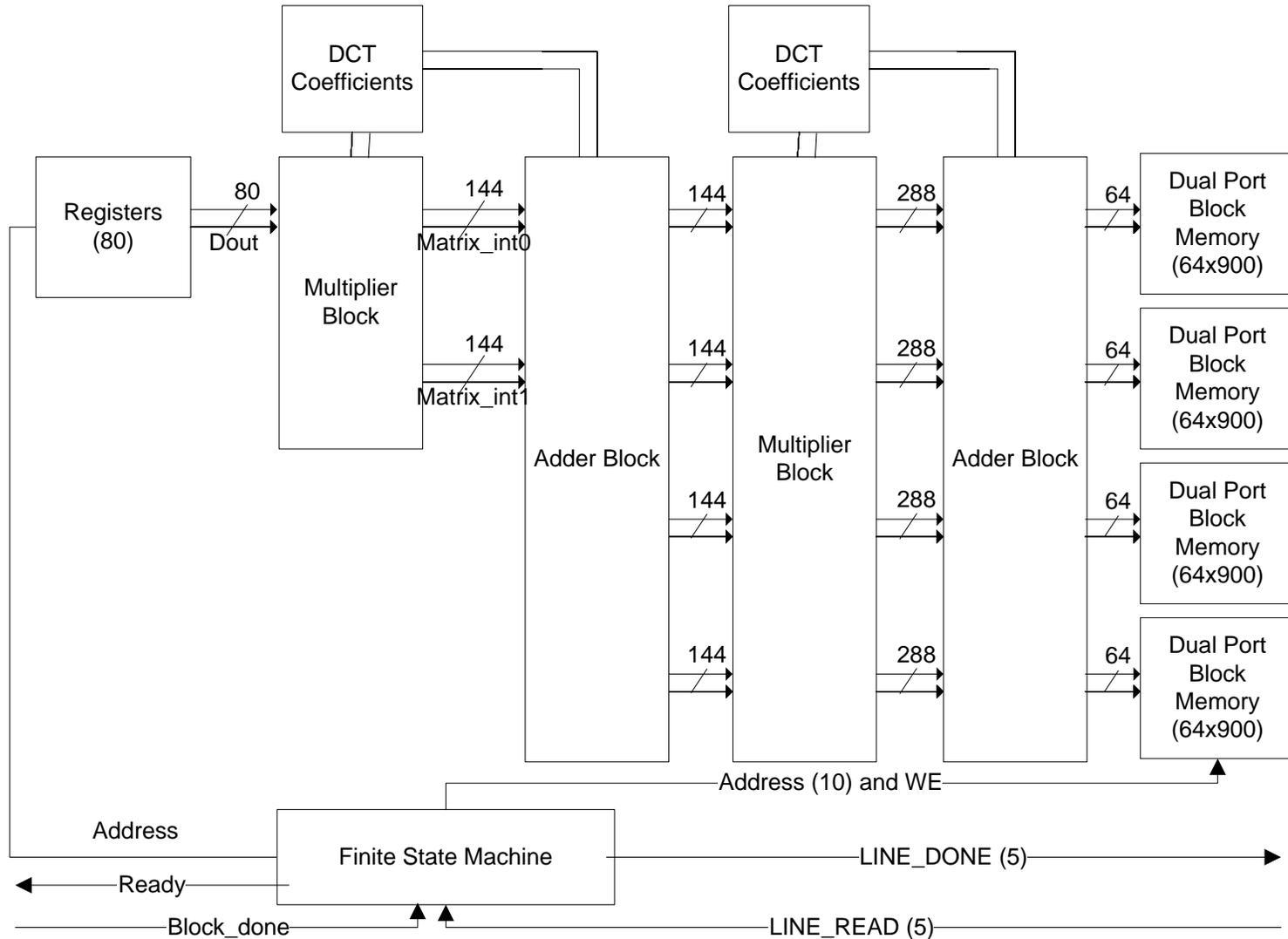


Receiver

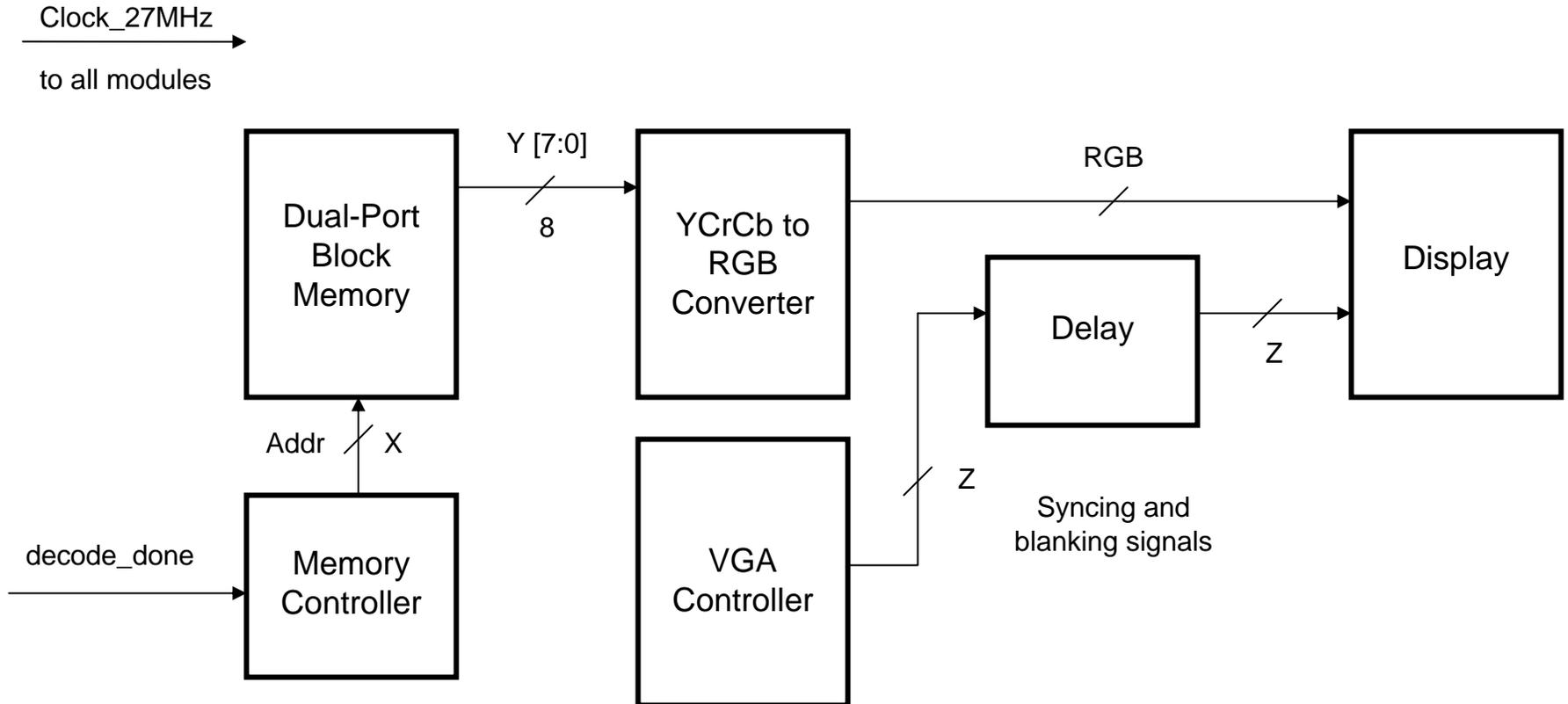
from transmitter



Video Decoder



Video Display Overview



* Only chrominance (Y) is important if displaying grayscale image