

# ECSE-487

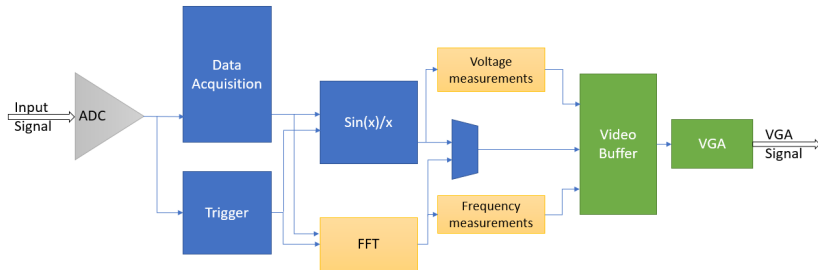
## Digital Storage Oscilloscope

### Mid-term presentation

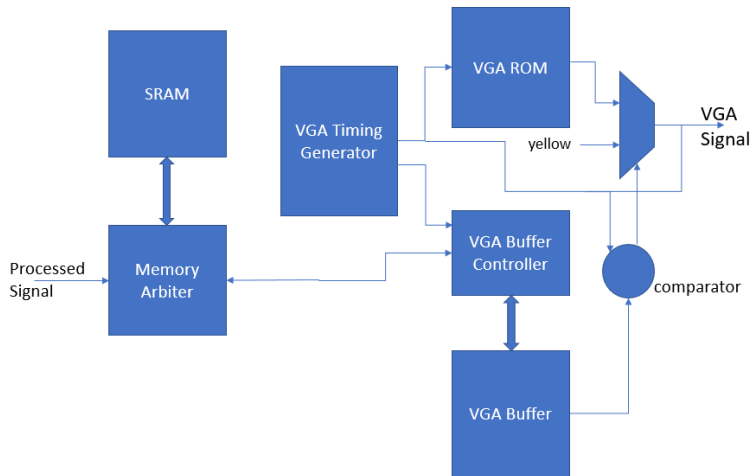
Andrei Purcarus   Ze Yu Yang

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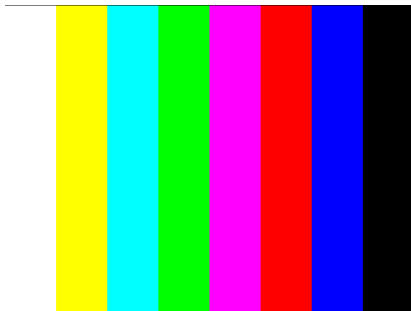
# Digital Storage Oscilloscope - Overview



# VGA Module - Overview

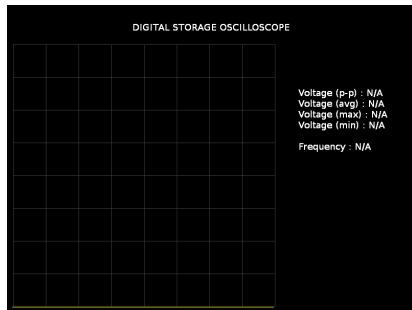


# VGA Timing Test Results



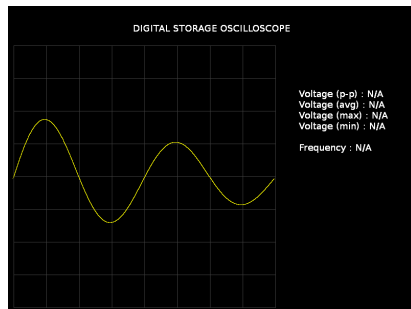
- ▶ A testbench was used to generate color bars based on ROW and COLUMN.
- ▶ The VGA output was displayed using a simulator.

# VGA Background Image Test Results



- ▶ The background image file was loaded into the ROM.
- ▶ The VGA output was displayed using a simulator.

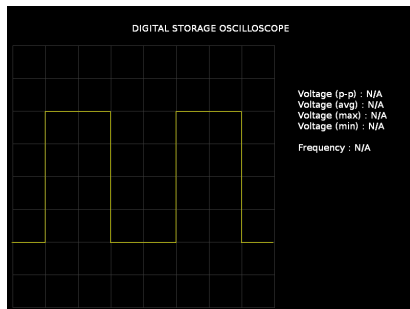
# VGA Test Signal Results



- ▶ The test signal was loaded into the SRAM.
- ▶ The VGA output was displayed using a simulator.

$$f(t) = \sin(2\pi t/T)e^{-t/2T}$$

# VGA Test Signal Results



- ▶ The test signal was loaded into the SRAM.
- ▶ The VGA output was displayed using a simulator.

$$f(t) = \text{square}(2\pi t/T)$$