



# Video Test Generator Project Overview

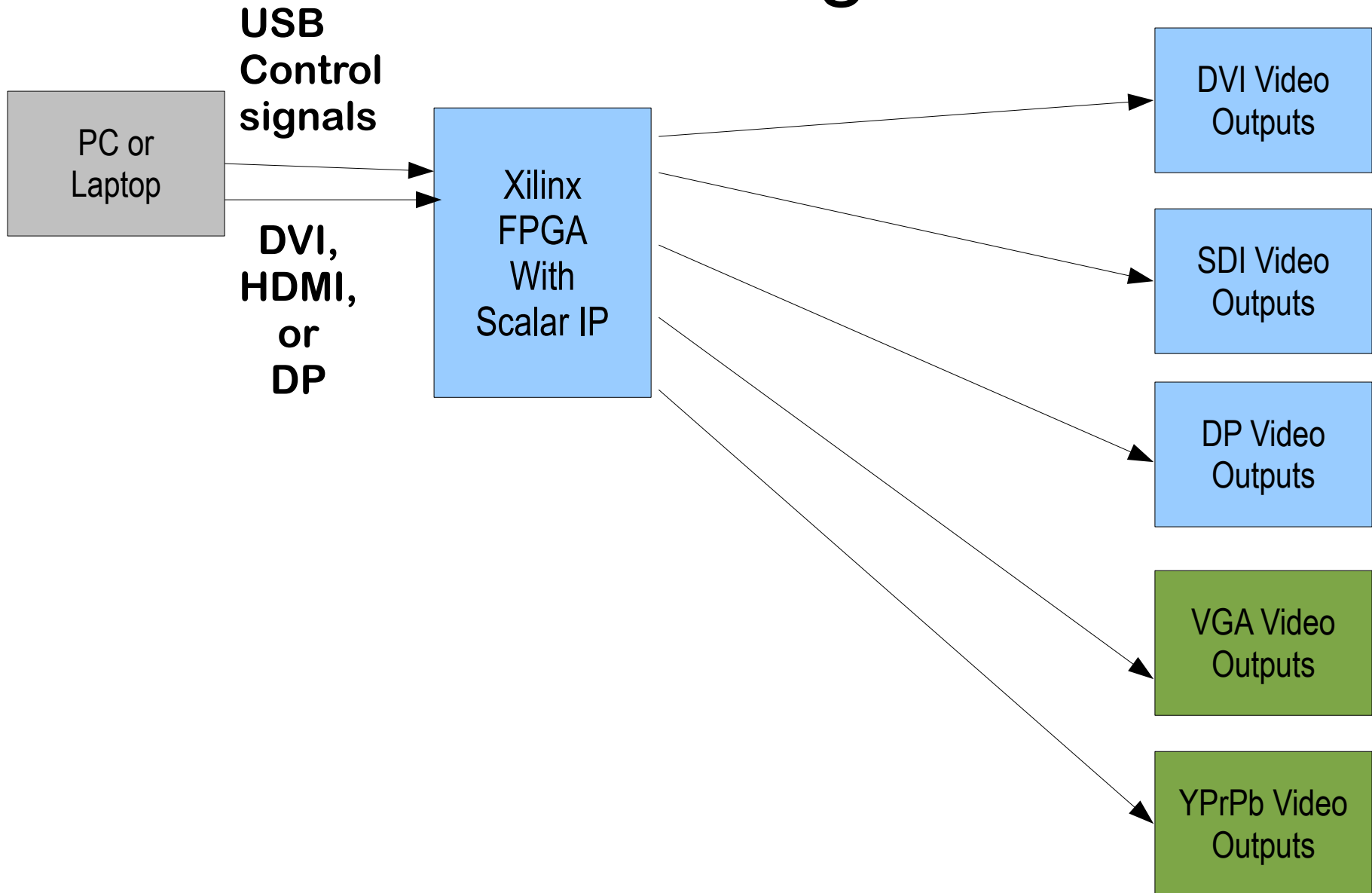
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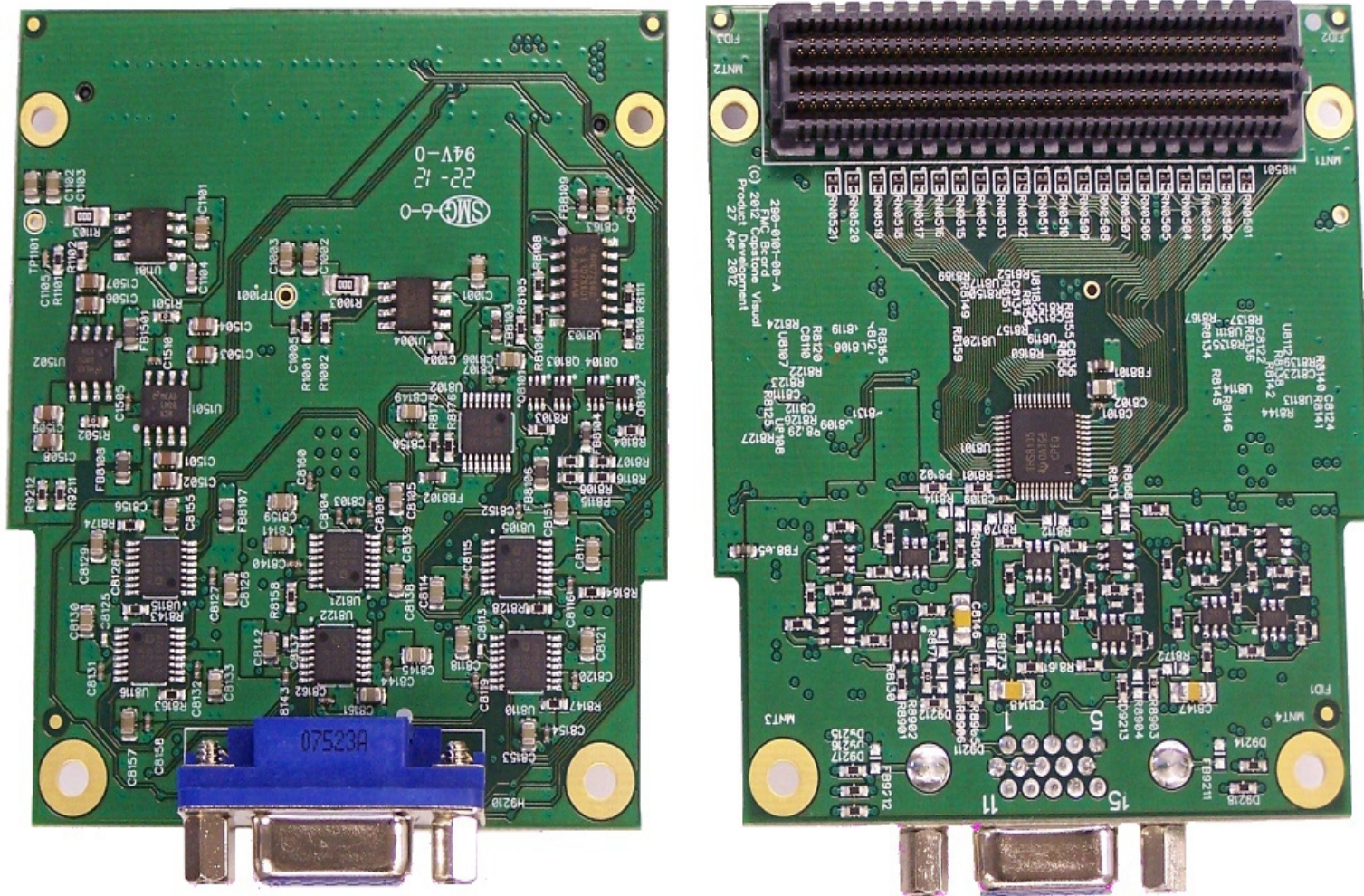
# Overview

- Design and test a printed circuit board (PCB) that converts input DisplayPort (DP), High Definition Media Interface (HDMI), and/or Digital Video Interface (DVI) signals into multiple formats of video output
  - Xilinx FPGA with Video Scalar Processing
  - Schematic Capture and Analysis
  - PCB layout and verification

# Block Diagram



# What we built so far...



... the analog output portion.

# Project Goals

Use existing Capstone Visual designs and Xilinx reference designs as basis for development of a video test signal generator

- Complete testing of prior prototypes
- Review current designs and combine them to create a video test signal generator
- Design circuitry schematic and PWB layout
- Develop VHDL for Xilinx chips
- Test hardware and demonstrate generation of test signals

# Project Status

This project is a continuation of the project from the 2011/12 year

- Complete testing of prototype
- Define all video outputs and control features
- Develop schematic and PWB layout
- Develop firmware and PC control software
- Test and write User's Manual

# Functional Positions

- Circuit Designer(s)
  - Review reference designs and current designs to gain understanding of entire system
  - Utilize DipTrace to complete schematic capture and PCB layout, validate design, and define Bill of Materials
- VHDL Engineer
  - Design and develop VHDL code