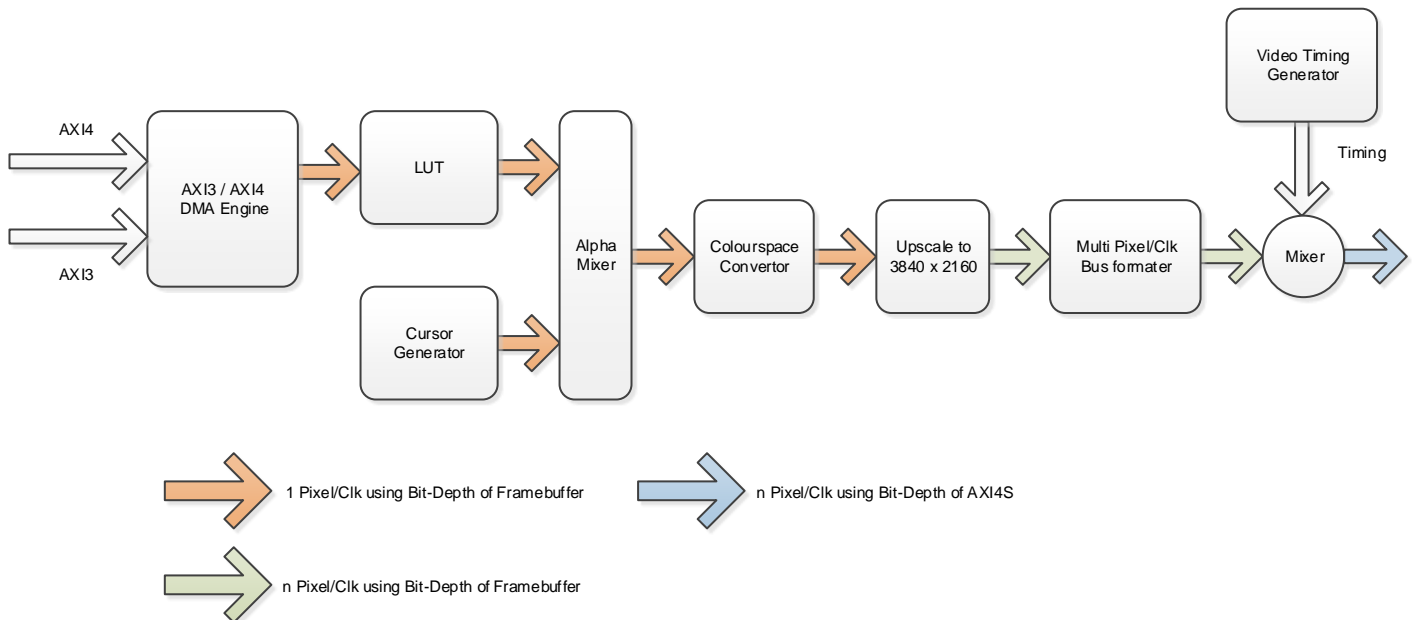


The OmniTek 2D Graphics IP is a complete IP and software solution in reference design for adding 2D graphics capability to the Xilinx Zynq Processors. The three main interfaces on the frame buffer module are AXI4 compliant –

1. The module connects to the Processing System SDRAM via an AXI4-MM interface
2. Video data is output on an AXI4-S interface
3. Software control is via an AXI4-Lite interface



Key Features

- The RTVE reference design is also AXI4 compliant, utilising AXI4-S for all internal pixel interfaces, thus, for example, allowing the frame buffer to connect into the OmniTek OSD to blend the Frame Buffer with live video.
- Dedicated firmware is provided to offload from software the generation of a simple cursor.
- The Frame Buffer canvas is up to 1920x1080 pixels. An upscaler is provide to allow for 3840 x 2160 output.
- The frame rate can be upto 120Hz.
- Low latency output
- Choice of 16 bits (5:6:5 RGB) of 32 bits (8:8:8:8 RGBA) per pixel graphics
- The Frame Buffer contains its own optional timing generator to allow for stand-alone operation. The module output can be genlocked to a reference signal via the timing generator.
- Output Colour Matrix

Software features

- Linux Framebuffer driver, as part of the OmniTek IP Framework.
 - Works as part of the OmniTek IP Framework.
 - Ability to set a Colour Martrix (for changing, for example, the output colour space) when available
 - Ability to enable and control a firmware accelerated cursor, when available
- The OZ745 OSVP reference design illustrates the 2D Graphics IP using QT 4.7 (currently) to give an output, including a web browser.

Licensing Options

Evaluation licence

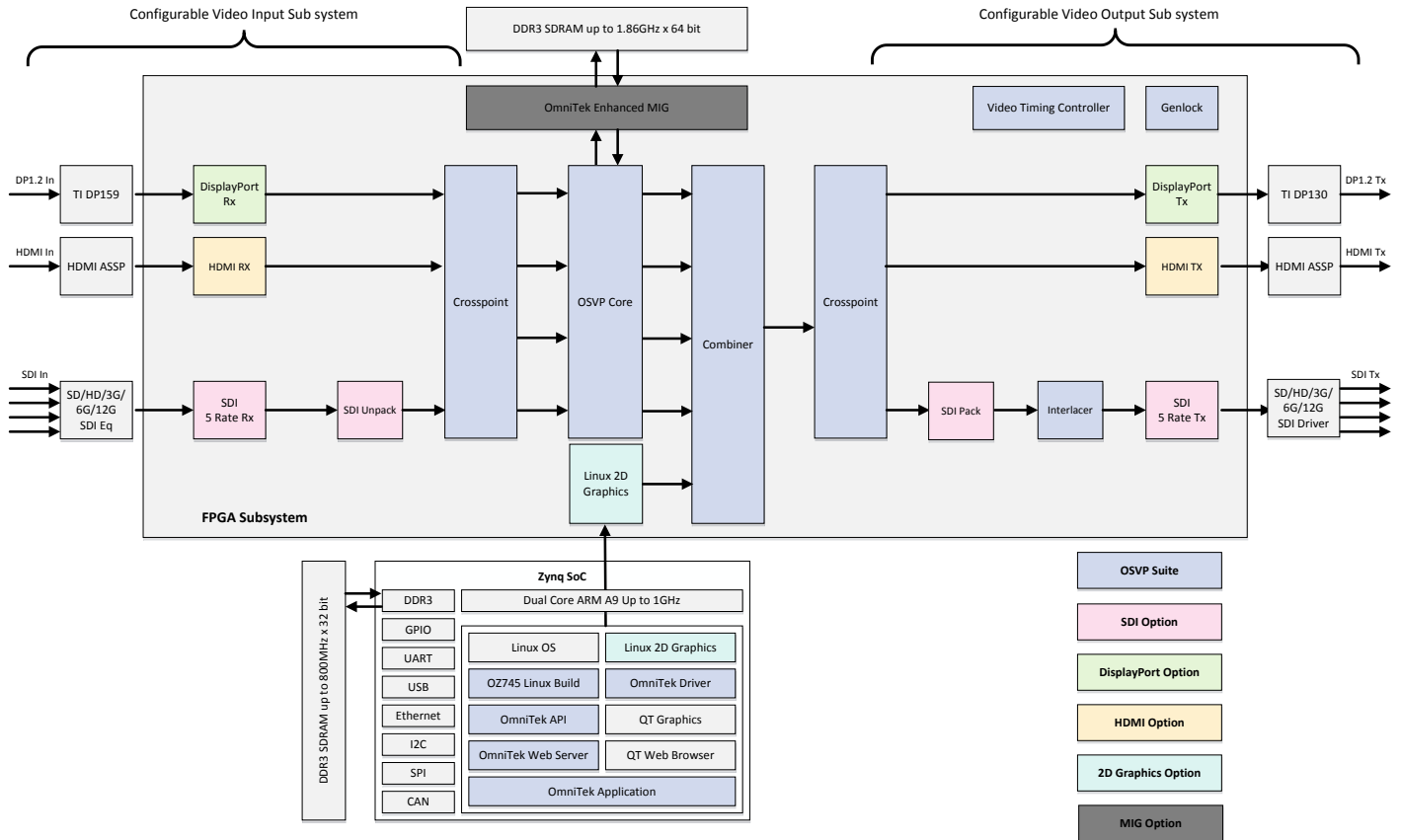
- Available for free for 30 days through OmniTek website. Includes access to documentation (unencrypted).

Annual Encrypted IP licence

- Allows IP to be used in a production system.

Source Code licence

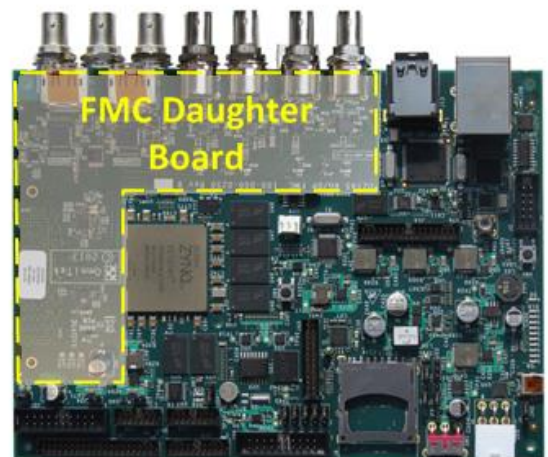
- Allows customisation of IP.



OZ745 OSVP Reference Design

Reference Design

The OmniTek 2D Graphics IP is included in the OZ745 OSVP Reference Design. This design uses the OSVP IP to scale and combine multiple video inputs onto a single output. The 2D Graphics can be combined with the video output



OmniTek OZ745 Video Development Kit, with FMC daughter card



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