

Video processing with OTEC's UHD controller reaches a whole new level of performance. High definition high frame rate real-time video processing is a reality.

**altera**<sup>™</sup>  
An Intel Company

*"On time, on budget, and meeting all our performance goals. We couldn't be more pleased with OTEC's work."*

– CTO Engineering,  
Video Display Development



**ORCHID TECHNOLOGIES  
ENGINEERING & CONSULTING, INC.**

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## Ultrahigh Definition 4K Video Processing

Exacting the highest quality, low latency video image switching, processing, and mixing requires high speed design techniques. The simultaneous processing of 4K deep color RGB and color compressed video data is compute intensive. HDMI, DisplayPort, SDI, DVI-I and Analog Video inputs are processed in real time.

## Altera Agilex FPGA

Altera Agilex and/or Altera Arria FPGA devices provide ample high-speed transceivers, DSP Blocks, memory interfaces and internal fabric to accomplish a large number of video processing requirements. OTEC multi-decade long experience with Altera FPGA devices makes Verilog implementation a sure thing.

## High Speed DDR4 Memory

64Bit wide high speed DDR4 memory provides a high bandwidth, flexible frame buffer storage system. Multiple video streams may read and write the frame buffer system at full 3840 x 2160 P60 data rates. Wide DDR4 memory provides all the bandwidth required.

## Altera Video and Image Processing Suite

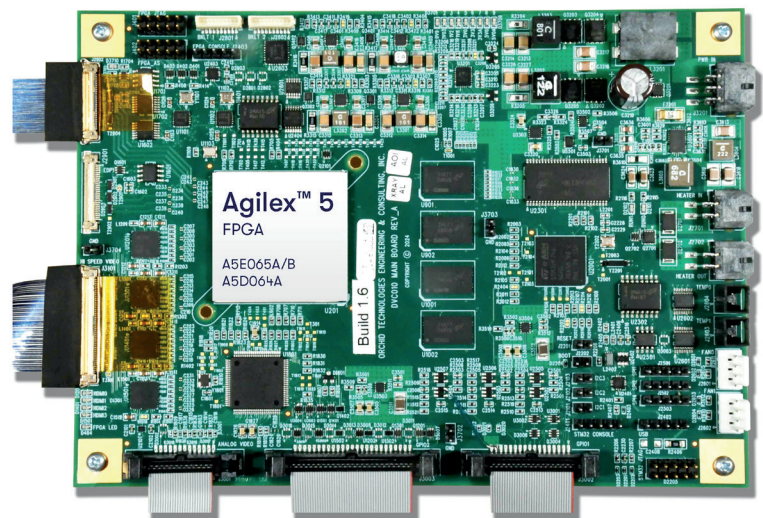
Altera video and image processing suite (VIP) provides core image processing functions including pattern generation, color space conversion, color sequence conversion, frame deinterlacing, gamma correction, and video image scaling. Avalon-ST VIP video transfer protocols permit rapid system reconfiguration.

## Altera Video Library

The rich Altera Video Library provides interfaces to standard video equipment through HDMI, DisplayPort, and Broadcast SDI systems. High speed video input and output makes use of both existing Altera IP and OTEC generated custom IP.

## Orchid Technologies: UHD Video Processing

The development of custom electronic products for our OEM clients is OTEC's entire business. The design of custom ultrahigh definition video processing equipment with rapid design cycles, demanding technical requirements, and unforgiving schedules sets us apart. Call Orchid Technologies today!



**Custom Engineering From Concept to Production**

147 Main Street, Maynard, MA 01754 [www.orchid-tech.com](http://www.orchid-tech.com) 978-461-2000 fax: 978-461-2003