

Modern surgical procedures benefit from high definition stereo image processing. FPGA devices and IP from Orchid enable low latency medically useful stereo imaging.



“Low latency video processing is the name of the game. FPGA devices and IP from Orchid made it all possible.”

- Video Systems Manager

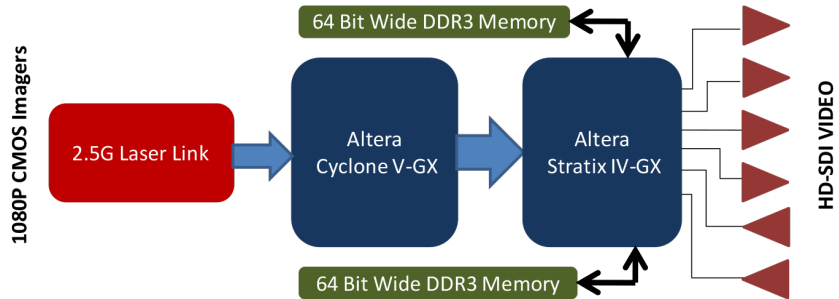
High Definition Stereo Image Processor

Medical imaging for surgical procedures benefits from high definition imaging systems. Low latency high definition CMOS image sensors may be inserted into the body to view previously inaccessible regions of the human anatomy. Stereo imaging gives the surgeon an adjustable depth perspective in real time. High speed laser based optical links between camera and processing equipment achieve a high degree of reliability and patient safety.

Altera Cyclone and Stratix FPGAs

Altera FPGA technology together with Orchid's Verilog Image Processing Chain achieves extremely low latency processed video. Image latency below single frame timing is achievable. Orchid's Image processing IP includes:

- Bayer Color Conversion
- Gamma Image Correction
- HD-SDI Image Generation
- Region of Interest Detection
- Low Latency Adjustable Zoom
- LUT Color Replacement
- Color Bar Testing
- Overlay Image Processing

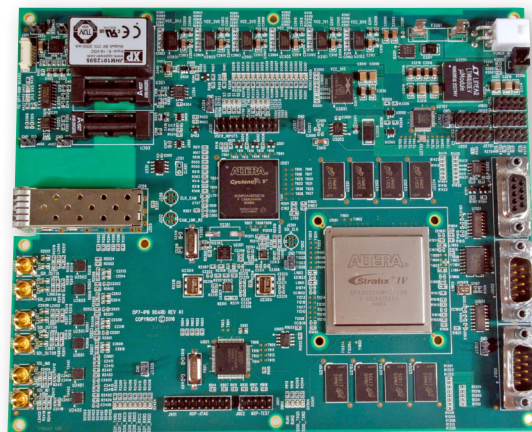


High Speed DDR3 Memory Subsystem

Dual high speed, 64 bit wide DDR3 memory banks permit the rapid processing of incoming and outgoing video data. 64 bit wide memory allows internal FPGA processes to run at comfortable data rates while maximizing overall data throughput.

Orchid Technologies: FPGA Image Processing

The development of custom electronic products for our OEM clients is Orchid's entire business. The design of medical grade FPGA Image Processing systems with rapid design cycles, demanding technical requirements, and unforgiving schedules sets us apart. Call Orchid Technologies today!



**ORCHID TECHNOLOGIES
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Custom Engineering From Concept to Production

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