# Optically Coupled Precision Timing Intel-PSG Cyclone 10 FPGA Design



Precision Multichannel timing makes split second timing possible. OTEC's Cyclone 10 based FPGA solution leads the way.



"The most versatile multi-channel timing generator we've ever seen. Use of Intel-PSG FPGA's was a masterstroke."

- VP Engineering Light Box Systems Division

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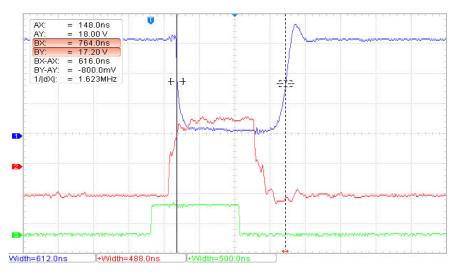
Optically coupled precision timing is required in applications where time measurement is a critical feature. Precision time base, with digitally controllable step features makes OTEC's FPGA based optically coupled precision timing generator unique in its class. Implementation of up to 30 coordinated timing channels with individual channel controls is performed using OTEC-custom timing IP. Add to that back end data acquisition, error detection, and trigger controls makes a complete, unique timing solution.

#### Intel-PSG Cyclone 10CL FPGA

Implemented using FPGA technology from Intel-PSG; OTEC's Cyclone 10CL based generator keeps end product costs manageable. Developed using Intel-PSG Platform-builder, OTEC's timing IP may be mixed and matched for flexibility. Platform builder aware modules from OTEC greatly speed up algorithm development while being highly flexible and low cost.

#### **Unique Micro-coded Timing State Machine**

Implemented as a micro-coded state machine, programmable multi-channel precision timing is realized on a pattern by pattern basis. Advanced triggering features together with deep timing pattern memory permits the implementation of endless timing sequences. Fine tuning of channel-to-channel performance with low jitter and clean signal integrity complete the overall circuit board design.



### **Orchid Technologies: Intel-PSG FPGA Solutions**

The development of custom electronic products for our OEM clients is OTEC's entire business. The design of Custom Intel-PSG FPGA Solutions with rapid design cycles, demanding technical requirements, and unforgiving schedules sets us apart. Call Orchid Technologies today!



## **Custom Engineering From Concept to Production**

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