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External FPGA interface for high throughput multi-channel event timers

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The speed of modern Time-Correlated Single Photon Counting (TCSPC) requires very fast host interfaces and/or real-time data processing. We present a new instrument design with scalability for many channels, an extremely short dead-time, 5 ps resolution and a high speed interface to one or more external FPGAs, where custom algorithms for real-time data processing can be implemented. The interface can carry a total rate of up to 1.8 Gtags/s from up to 64 synchronized input channels. It is based on open standards and can be connected to a variety of FPGAs.

Summary

Proceedings

Ich entscheide später

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