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Uplink options from MicroTCA to external systems

Wednesday 7 December 2022 11:45 (15 minutes)

MicroTCA systems are no "island solutions": one typical requirement is to send data acquired by an MicroTCA system to an external server or any other compute platform along with providing precision timing information to the world external to a MicroTCA system.

On the one hand, Ethernet is the de-facto standard to communicate with the server or PC domain. On the other hand Ethernet is a non-deterministic media and thus transmitting time-critical data could easily set up very specific requirements which are not easy to meet and which are not always plug & play.

To understand the requirements for a working interconnection between a MicroTCA and any other system, this presentation will provide an overview about what is possible using Ethernet and PCIe today, the pro's and con's, the impacts from time critical aspects as well as likely trends for the future.

The presentation will look at the different options using a dedidcated PrAMC, the MCH and special I/O boards in more detail.

Summary:
Mature uplink and interoperability between different technology is crucial in science and industry. The presentation wil shed some light on what is available today and might be in the future, what are the different advantages and limits and how to serve different markets with cost effective solutions in the future.

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