Application: Physics
Product: DC270 Digitizer

Germany's Renowned Max Plank Institute Chooses Advanced Acqiris Data Acquisition System Customer Article

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The Max Plank Institute (MPI), Germany's premier physics laboratory, has chosen Agilent Acqiris to supply a state-of-the-art 144-channel high-speed data acquisition system. Agilent Acqiris was chosen over other digitizer suppliers in a competitive tender process. The high-speed system will be used in experimentation aimed at fast and accurate plasma temperature measurements made on the basis of Thomson scattering methods.

Agilent Technologies

The Agilent Acqiris system offers unique capabilities in performance, size and packaging. Using Agilent Acqiris' modular CompactPCI/PXI products, the 144-channel system features nine 5-slot model CC105 crates for superior 16-channel modularity, 36 model DC270 Digitizers and 9 model IC210 fiber optic interfaces. In addition, each of the nine crates houses 16 channels of fast (1GS/s) digitizers (4 model DC270 digitizer cards per crate).

Complete, modular, compact and very economical, the low-power Acqiris system features ASBus (patent pending) allowing digitizer cards in each crate to share common clock and trigger signals. A key feature of the system, ASBus is a proprietary inter-modular clock and trigger distribution system with over 1 GHz capability. It greatly improves inter-channel timing by allowing clock and trigger synchronization to better than ± 100 ps.

Each of the crates also contains a high-speed fibre optic interface for very fast data transfer to a host PC up to 30 m away. The fiber optic interface allows data transfer at 80 Mbytes/s using Agilent Acqiris' speed-optimized driver routines with direct memory access (DMA) capability. PCs are interconnected using Ethernet so that data can be processed locally or ported to other PCs for further evaluation.

The result is a system that is so fast that the full 144 channels of data can be acquired and transferred to PCs, and the system reinitialized in less than 5 ms! Germany's Max Plank Institute is just one of many laboratories where Acqiris products combine intelligent innovative design with the integration of the most advanced technologies to make data acquisition and conversion less complex, less costly, less time-consuming and much more powerful. With principal offices in Geneva, Switzerland, Acqiris is a world-class supplier of advanced 2 GS/s data acquisition systems for science and industry. Founded in 1998, Swiss-based Acqiris operates subsidiaries in the United States and Asia.

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