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Development of MicroTCA.4 based remote DAQ system for KSTAR Tokamak

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To standardize and simplify the control system at Korea Superconducting Tokamak Advanced Research (KSTAR), we develop 10G Ethernet based remote DAQ system. By separating the DAQ system and the host, the structure of the control system can be made more flexible. We have developed a DAQ module with a 10G Ethernet interface based on a MicroTCA.4 system designed to control devices in real time on a remote server via 10GE. To connect proposed device and host, we use real time network based on UDP multicast atop 10GbE cut-through packet switching infrastructure. This system is implemented using Zynq based MicroTCA.4 board, matched RTM board that has analogue input/output interface and power supply system. By using remote DAQ system, multiple host server can subscribe the DAQ data without additional computational cost in real time. This system will be applied to control fueling system at KSTAR Tokamak.

Minioral

No

Description

MicroTCA DAQ

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