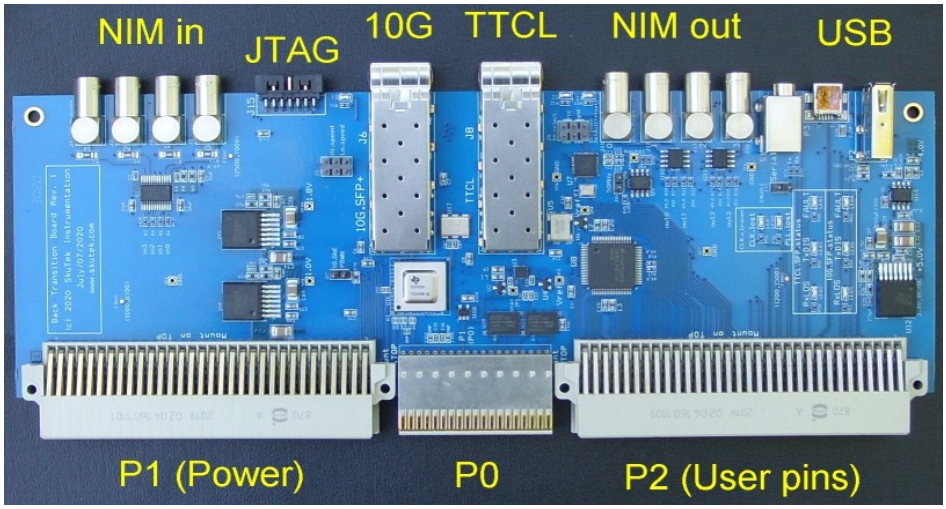
SkuTek Instrumentation

Where Science Meets Industry

Rear Transition Module with 10G Ethernet for the SkuTek DAQ



Rear Transition Module Specifications	
Description	The RTM is inserted into the back cage of the VME64x crate. It is connected with the main SkuTek board (either the digitizer or the Logic Module) over the 96 – pin P0 connector. The 10G data stream is directed from the FPGA on the main board to the optical cage labeled 10G. The main FPGA can stream the events over this link to the Data Collector Computer running SkuTek reception software. The other optical link labeled TTCL was developed in collaboration with Argonne National Lab in order to serve the GammaSphere / Gretina / GRETA environment. The additional NIM IO's were added for future expansion and for convenience. The "main board" means either the SkuTek 32-channel digitizer, or the SkuTek Logic Module described in the companion data sheets.
TTCL / GTCL	Time and Trigger Control Link for GammaSphere, Gretina, or GRETA. Not recommended for DAQ systems outside these three detectors.
10G Ethernet	10G optical link connected to the main FPGA can boost the data streaming rate 10x, compared with the 1G Ethernet natively present on the main SkuTek board.
NIM inputs and outputs	Four each (LEMO connectors)

SkuTek Instrumentation
www.skutek.com Email: info@skutek.com

VME64x Connectors	VME64x P1/P2 with 160 pins, and Hard Metric P0 with 96 pins
Physical Dimensions (cm)	Standard VME 64x Rear Transition Module with Hard Metric P0 connector
Form Factor	Standard 6U VME 64x back cage (Note: no VME readout. Streaming Ethernet is used)
Computer Interfaces	10G Ethernet
Power	VME +5 volts. Other voltages are not used
Software	Register Configuration via Python scripts or Jupyter. Please inquire.

About SkuTek Instrumentation

We are a small company dedicated to serving physics researchers worldwide. We specialize in high-speed Data Acquisition systems and Digital Pulse Processing electronics. Our product line comprises the whole data acquisition chain: detectors, digitizers, firmware pulse processing, and data management for scientific big-data applications.

SkuTek Instrumentation
www.skutek.com Email: info@skutek.com