

## **Argonne National Labs Selects PXI in System Migration**

DynamicSignals has recently successfully delivered a two-chassis KineticSystems PXI system for Argonne National Labs.

Argonne National Laboratory is one of the U.S. Department of Energy's oldest and largest national laboratories for science and engineering research. As an existing CAMAC customer of KineticSystems, Argonne was seeking a solution to migrate to a system based on much a newer technology, a PXI-based system, for adding/updating instrumentation to control/monitor klystrons and linacs. A majority of the channels are used to control and monitor the magnets for the linac and other channels for controlling the klystrons. They wanted to move to PXI to achieve the following:

- Lower price
- Faster throughput
- Flexibility
- Better compatibility with a modern PCI-based systems
- Easier for future channel count expansion

Beyond the basic DAQ requirements, such as channel count, channel type, sampling rate, etc., this project faced many other challenging issues related to instrument location, budgetary constraints and cabling requirements. The customer had provided data of his envisioned equipment at the beginning to KineticSystems based on other competitors' technical specifications. KineticSystems' objective was to meet and surpass all the requirements within the prescribed budget.

KineticSystems' technical and sales team set up several meetings to discuss in detail Argonne's system requirements. One of the beneficial discussions was on their current implementation. By understanding how their current system work, KineticSystems was able to suggest a migration path from the installed equipment to the replacement instruments. They were also able to make numerous system configuration suggestions in order to satisfy Argonne's requirement, including several Gage digitizers for a portion of the system (Gage is another brand of DynamicSignals, LLC), and the DS207/8 1U solution, 3U configuration and 3U/6U configuration. By proposing various system configuration solutions to the customer, DynamicSignals demonstrated its flexibility and breadth of solving system integration issues, which in term earned them the contract for the project.

DynamicSignals and Argonne finally agreed upon a hybrid system in which Argonne would use a portion of their existing CAMAC system in conjunction with the new PXI equipment. The total cost of the system was now in-line with their budget constraints.