

# Bloomy DAQ System Profiles Jet Engine Performance



*Bloomy Controls Mobile DAQ System provides flexibility for high-channel-count, high-acquisition-rate engine performance testing.*

NI Select Alliance Partner Bloomy Controls, Inc., announces the Mobile DAQ System for high-performance aerospace engine development. With this customizable solution, you can collect and display large numbers of functional parameters, such as pressures, temperatures, flow rates, and vibration data, at fast sample rates. You can port the data, efficiently stored in binary format, to commonly employed software tools for further analysis or reporting. And you can easily and quickly change test configurations.

The Bloomy Mobile DAQ System combines modular NI PXI data acquisition and SCXI signal conditioning hardware, so you can customize the system for specific requirements and expand it to meet varying test requirements. The system software, written in LabVIEW, efficiently streams large amounts of data to disk and provides user interface tools that, in a simple way, present the user with a variety of choices. Housed in a rugged instrument rack that doubles as a shipping container, the Mobile DAQ System is a versatile and portable platform for a wide variety of engine test applications.

United Technologies Research Center (UTRC) uses the Mobile DAQ System to profile

performance of advanced jet engine subsystems. UTRC staff continuously collect data from 32 pressure and strain signals using SCXI-1520 modules at up to 30 kS/s, while they stream an additional 128 channels of temperature and flow data to disk using SCXI-1102 modules at up to 5 kS/s. Shared clock and triggering signals from the PXI backplane ensure that the data maintains synchronization and time coherence. PXI-6052E modules supply 16-bit measurements for all channels. The system provides sensor inputs and excitation power via standard MS, XLR, BNC, and TC front-panel connectors. To minimize noise and signal degradation potentially introduced from long sensor cables, the Mobile DAQ System operates in the test cell, close to the engine under test. A fiber-optic MXI-3 interface streams collected data at up to 128 MB/s to the host computer. ■

*To learn more or to download the Mobile DAQ System product sheet, visit [ni.com/info](http://ni.com/info) and enter **nsi4338**.*