

## MTI Instruments Highlights MRO Benefits of ARINC 429 and AFDX Integration in PBS-4100 Engine Balancing Systems

*Digital aircraft data access streamlines engine vibration diagnostics and reduces maintenance time*



**Lockport, IL—May 20, 2025—** MTI Instruments, a Vitrek brand and provider of precision measurement and aviation maintenance technologies, is highlighting the growing role of digital aircraft data integration in modern maintenance operations following the introduction of ARINC 429 and ARINC 664 (AFDX) support in its PBS-4100 and PBS-4100R engine vibration balancing systems.

As commercial aircraft increasingly rely on digital avionics networks for engine monitoring and diagnostics, maintenance teams must be able to access these same data streams during vibration analysis and balancing procedures. By supporting both ARINC 429 and AFDX aircraft data interfaces, the PBS-4100 platform allows MRO technicians to directly access engine speed and vibration

parameters from the aircraft's onboard data network.

This capability simplifies test setup and enables faster diagnostics when performing trim balancing procedures on modern turbofan and turboprop engines.

“Aircraft systems have steadily evolved over the past decade, with many platforms adopting digital avionics architectures,” said Ken Ameika, VP Global Sales at Vitrek. “By enabling direct access to ARINC and AFDX data, the PBS-4100 systems allow maintenance teams to work more efficiently with modern aircraft while maintaining the precision required for accurate vibration balancing.”

Traditionally, engine vibration balancing required technicians to connect multiple analog signals such as tachometer pickups and vibration sensors to external measurement systems. With digital aircraft data integration, key parameters such as engine speed and vibration can now be retrieved directly from the aircraft's avionics network, reducing wiring complexity and setup time.

For maintenance, repair, and overhaul (MRO) organizations operating under tight turnaround schedules, these improvements can help streamline vibration diagnostics and minimize aircraft downtime.

The PBS-4100 and PBS-4100R systems are widely used by airlines, MRO facilities, and aerospace service providers to perform engine vibration analysis and trim balancing across a wide range of commercial and business jet engines. When combined with advanced vibration analysis software and portable instrumentation, the systems help maintenance technicians identify imbalance conditions and calculate optimal correction weights with minimal engine runs. As aircraft fleets continue to adopt advanced digital avionics systems, the ability to interface directly with onboard data networks is becoming increasingly important for maintenance equipment used in aviation service environments.

### About Vitrek



MTI Instruments, a Vitrek brand, designs and manufactures precision measurement systems used in aerospace, manufacturing, and research environments. The company's aviation solutions include portable engine vibration balancing systems used by airlines, MRO providers, and aerospace service organizations worldwide.