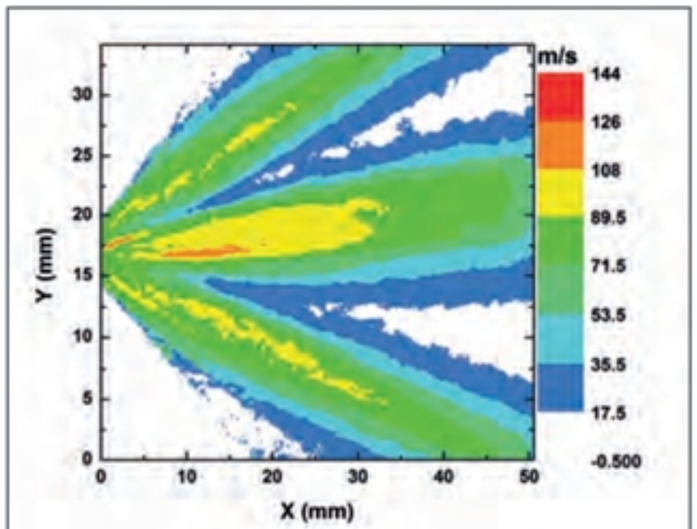
PATTERN IMAGING VELOCIMETER

En'Urga is announcing the release of its SPIvel velocimeter (Statistical Pattern Imaging velocimeter). The near injector region of most modern high-pressure aerospace fuel nozzles is optically dense. Obtaining accurate velocity measurements near the nozzles is almost impossible using conventional tools such as phase Doppler interferometers and particle image velocimeters. For this reason En'Urga has developed a statistical pattern imaging velocimeter that provides planar velocities in aerospace fuel nozzles. The unit takes a series of high-speed videos and uses proprietary software to provide the planar velocities in these nozzles.

The software is also available for licensing to use with any high-speed video camera that has a minimum 10kHz frame rate. In addition to sprays, the software can be used to obtain velocities in turbulent flames and two-phase flows in pipes. With the addition of the SPIvel velocimeter, En'Urga provides a full suite of spray characterization instruments including the SETscan optical patternator and the SETXvue x-ray patternator. \\



ON TRACK WITH EXPRESS

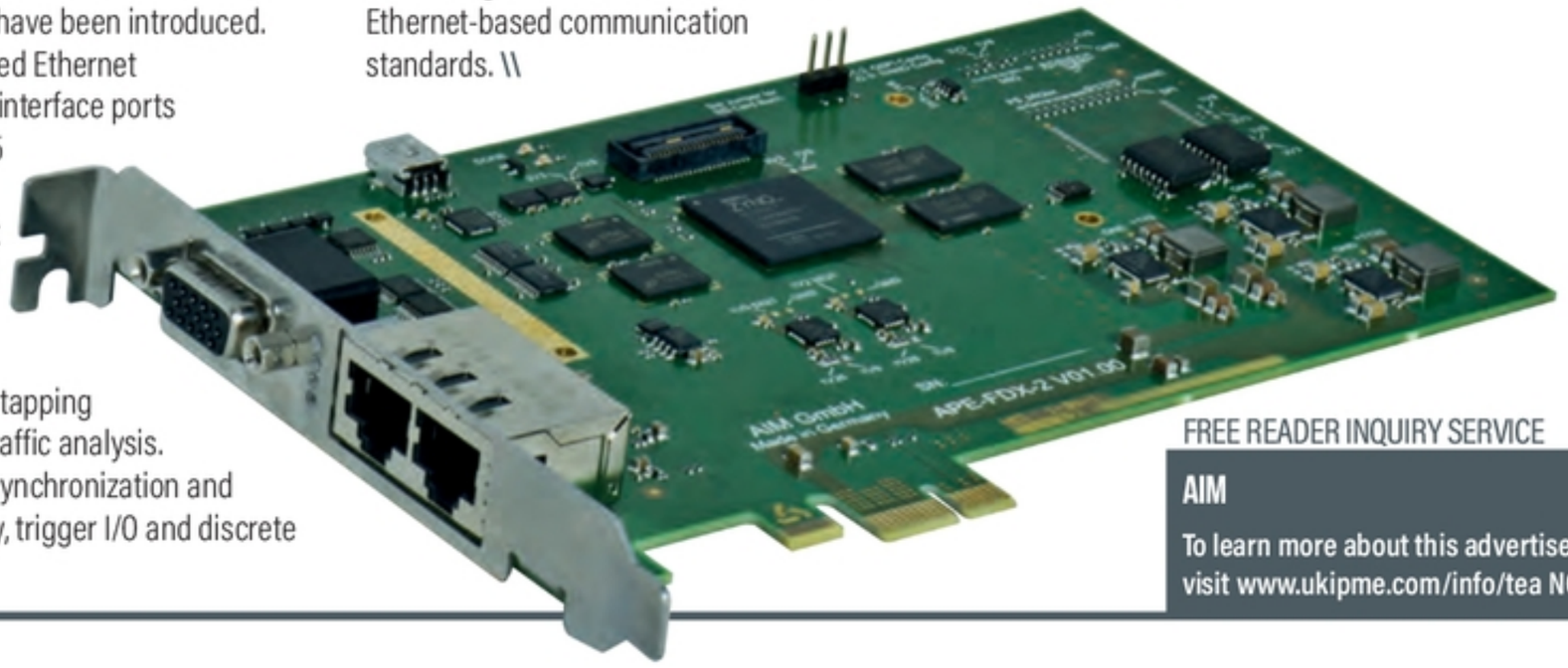
Recently AIM released the APE-FDX-2, AFDX/ARINC664P7 PCI Express test and simulation interface module (PCIe 2.0 x1), which is on track to be the successor of the formidable API-FDX-2 (PCI/PCI-X) module.

With full software compatibility with its predecessor on both the API and PBA.pro layers, the new APE-FDX-2 comes with the latest AIM Common Core architecture, using the latest system-on-chip (SOC) design.

In addition to its predecessor's rich set of field proven test and simulation features, two additional features have been introduced. First, two triple-speed Ethernet (10/100/1000Mbps) interface ports with standard RJ-45 copper front-end connectors support single or redundant configured AFDX/ARINC664P7 links. Second is a built-in tapping function for inline traffic analysis. Support for IRIG-B synchronization and generator capability, trigger I/O and discrete I/O are included.

An onboard LINUX operating system is executed on one CPU of the dual-core processor. The second core CPU implements the hard real-time bus interface unit that communicates with a customized MAC controller in the FPGA section.

This new architecture offers a powerful and flexible platform for today's and future standard AFDX/ARINC664P7 test and simulation tasks, including support of the Boeing ARINC664P7 variant and other Ethernet-based communication standards. \\



ROBOTIC INSPECTION

The intensive use of information technologies in production processes and the presence of robots able to communicate and cooperate are relatively new in the aerospace sector, but not in other industries such as the automotive. However, the need for quality assurance during aero-parts production by integrating fully robotized cells is one driver behind the so-called fourth industrial revolution (Industry 4.0).

The challenge in the manufacturing digitization drive is connectivity between cells in the production line, reducing the number of steps needed and making manipulators perform multiple tasks. Robotized solutions for ultrasonic testing of manufactured parts are frequently needed. Innovations from NDT systems suppliers are welcomed.

Tecnatom has long experience providing these novel solutions. For instance, by providing robotized cells with interchangeable headers adapted to the characteristics and geometry of the area to be inspected, safer, more productive and human-error free operation is achieved. Headers can be managed by one or two robots, and entirely disassembled and assembled by an automatic header changer without physical operator intervention.

Implementation of IoT technology, to improve process efficiency and cost savings, allows a fully automated inspection operation, including capture of the part geometry, generation of inspection paths, launching and reporting, thereby increasing connectivity between the elements of the production and the human environment and plant management. Within the factory environment, Tecnatom equipment is getting very encouraging results, so data and information can be generated and monitored and available for review on management systems. \\