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Aerospace TESTING INTERNATIONAL

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Update on NASA's Space Launch System, the largest rocket ever built, ahead of its first firing and manned mission to the moon

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Engineers at Bombardier had to innovate new test methods to validate the flexible wing and smooth ride provided by the Canadian firm's latest business jet

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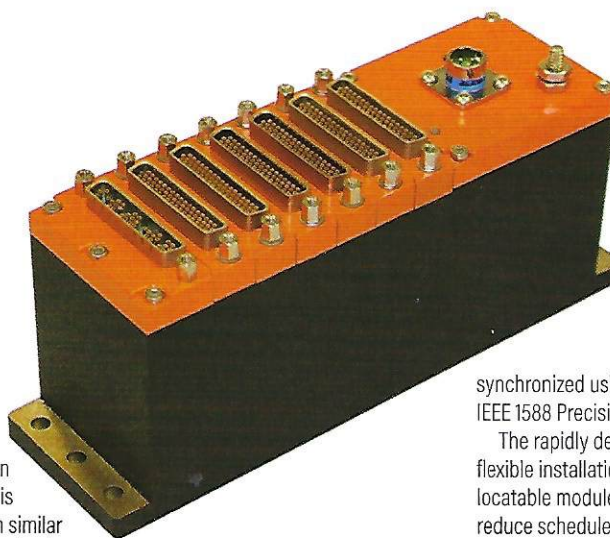
Experts reveal how fatigue in CFM56-7B engines may have contributed to the recent tragic incident and the measures being taken to avoid a repeat

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Meet the flight crews using the toughest data acquisition systems in the world to gauge the effect of climate change on the polar ice caps

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LIGHTWEIGHT, HIGH-PERFORMANCE DATA ACQUISITION UNIT



Flight test instrumentation (FTI) engineers today have a difficult task – capture more data in less time. Data must still be collected reliably on each and every flight, and the acquisition systems need to be developed and installed quickly and be capable of adapting to changing needs, both during and after the development cycle. Keeping size, weight and power (SWaP) requirements down is something every industry seeks to achieve and for FTI this means smaller, lighter and more power-efficient chassis.

Curtiss-Wright has developed an innovative airborne data acquisition system (DAS) – the Axon – to meet the increased

data, lower SWaP and installation needs of current and future programs. The Axon is an ultra-compact DAS that is dramatically lighter than similar offerings from other organizations. Increasing data needs are met with industry-leading throughput, ensuring that even higher demands in the future can be accommodated.

Axon works with the widely used Acra KAM-500 and TTC DAU chassis, supporting the same data formats and configured using the same setup software. Data can be

synchronized using a protocol such as the IEEE 1588 Precision Time Protocol.

The rapidly deployed system, which has flexible installation options including remote, locatable modules, saves time and helps reduce schedule risks.

In short, the Axon range provides a powerful, compact, light system with several innovative features to ensure it will meet FTI engineers' needs for years to come. \\

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CONFIGURABLE CONTROL BAY

Certia provides customers with test and measurement solutions across a wide range of applications including test rigs, simulation and integration, training, maintenance, and research and development.

The company responds to customer requirements. From a simple tool up to a complex integration test rig; from a laboratory test rig to an automatic acceptance test rig on a production line; from a mechanical unit to a high dynamic controlled loop, hydraulic power pack and services.

In 2018 Certia developed a brand-new generic control bay. The system can be easily interfaced with all existing test rigs without any wire modification. It can be configured from 128 to more than 384 channels, including digital input, digital output, analog input, analog output, pulse width modulation and main buses such as CAN (control area network), ARINC and AFDX (avionics full-duplex switched Ethernet).

Equipped with a high-end, real-time computer and field programmable gate array, the system is able to do real-time acquisitions and control a large range of actuators.

For very large test rigs, several systems can be connected together with a fiber-optic network. The control bay is provided with the Cockpit software suite, including modules for data acquisition, coordinate measuring machine test writing, test reporting, health monitoring, and maintenance with an augmented reality solution.

Certia has been involved in major aerospace and defense programs since 1987. The company's main customers include Airbus, Nexter Systems, Renault, PSA, Safran group, UTC group, Circor, Bosch Braking Systems, Westinghouse, Air France Industries and Air Algeria.

All of these clients have selected Certia as a supplier for their most critical test rig development projects. \\



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