



NEWS RELEASE

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Curtiss-Wright Adds 24 Channel Discrete Input Module to Industry Leading Axon™ DAU for Flight Test

New AXN/DSI/401 module brings to 24 channels of discrete input monitoring, each supported by persistent and numerous counters, to Axon DAUs for FTI applications

ASHBURN, Va. – August 1, 2019 – Curtiss-Wright's Defense Solutions division today announced that its Aerospace, Electronics & Motion Control business unit, a [leading supplier of flight test instrumentation \(FTI\) system solutions](#), has introduced a new module that further expands the capabilities of its [Axon™ data acquisition unit \(DAU\)](#). The [AXN/DSI/401 Discrete Input Module](#) can monitor the status (high/low) of up to 24 differential-ended discrete input channels simultaneously. Its input channels, each of which is supported with a dedicated programmable 32-bit counter, can also be used to trigger time tagged events. The module also has persistent counter types (i.e., they remember the number across multiple user-resettable power cycles). The AXN/DSI/401 is designed for demanding FTI applications such as engine speed measurement, data capture from a parallel bus and timestamping of events.

AXN/DSI/401 Performance Features

- 24 differential ended, discrete, bi-level input channels
- 24 independent, 32-bit counters with ten different operating modes
- Persistent and resettable counters
- 40 ns internal resolution
- FIFO based time tagging
- Detection of 0.5 μs wide input signal pulses

About the AXN-DSI-401

The AXN-DSI-401's counters can be programmed to operate in any of the following modes:

- Period
- Pulse Width
- Duty Cycle
- Frequency
- Events Since Sample
- Events Since Power Up
- Events Since Trigger
- Samples Since Power Up
- Samples Since Reset
- Time Since Event

Use of the new module enables FTI test engineers to program each of the 24 counters' range, threshold (within $\pm 28V$), hysteresis (0.8 to 20V), and sensitivity to the rising/falling edge. Every time a trigger occurs, a 96-bit word is written to the FIFO, consisting of the 24 inputs (configurable as either the input state after the change, or a value representing the bits which triggered the event) and the 64-bit at which the event happened. The user can choose to store either 48-bit IRIG 106 Chapter 4 time or 64-bit PTP time in the FIFO. In addition, the module provides three FIFO flags which indicate that the FIFO is empty, that a message has been skipped, or that a message is stale.

About the Axon DAU

Curtiss-Wright's commercial-off-the-shelf (COTS) Axon DAU is one of the industry's fastest, most compact and flexible data acquisition systems (DAS). It has outstanding reliability for demanding applications and enables flight test engineers to quickly develop, install and scale a robust data collection solution for FTI that easily adapts to evolving requirements. With a 1 Gbps Ethernet link dedicated to each data acquisition module, Axon can currently deliver a throughput of 380 Mbps. It features increased integration flexibility through the use of unique Axonite™ remote mountable modules (10m link distance). It also uniquely supports iNET, DARV3, Chap 10, iNET-X and IENA.

Axon Quick Start Kit Option

Curtiss-Wright also offers an [Axon Quick Start Kit \(QSK\)](#). The Axon QSK (AXN/QSK/001) enables FTI engineers to rapidly familiarize themselves with the DAU, as it includes everything needed in the supplied flight case. The QSK is also 100% usable in a full flight test campaign and can be

augmented with more modules, Axon chassis, or other DAUs from Curtiss-Wright. The Axon QSK lets FTI engineers easily familiarize themselves with our innovative new Axon data acquisition platform. With its miniature size and unprecedented flexible installation options, Axon lets FTI engineers lower the weight of equipment and wiring, gather more data, and meet demanding time schedules while ensuring that none of their critical data is lost during flight test. Available at a one-time only introductory cost, the Axon QSK makes it easier for FTI engineers to discover for themselves why Axon represents the future of flight test, missile and aircraft monitoring applications.

The Benefits of Complete DAU System Solutions

Axon systems are easy to integrate and expand. Multiple Axon modules can be integrated into a single Axon chassis. The Axon chassis, Axon user modules, and Axonite remote housing are designed to work with Curtiss-Wright's family of DAS products, including DAUs, high-speed cameras, data recorders, and switches. Axon DAUs provide the most powerful and modern solution on the market by combining unprecedented flexibility with outstanding reliability for demanding applications. They are also low power, meaning their compact form factor is not compromised with bulky heatsinks when deployed. Axon modules and chassis, now available in 6, 9, and 16-slot configurations, enable FTI engineers to quickly configure and deploy the vast amounts of data acquisition required to support demanding flight test, missile test, and space developmental/operation flight instrumentation programs.

Sales inquiries: Please forward all Sales and reader service inquiries to ds@curtisswright.com.

For more information about the Curtiss-Wrights Defense Solutions division, please visit www.curtisswrightds.com.

About Curtiss-Wright Corporation

Curtiss-Wright Corporation is a global innovative company that delivers highly engineered, critical function products and services to the commercial, industrial, defense and energy markets. Building on the heritage of Glenn Curtiss and the Wright brothers, Curtiss-Wright has a long tradition of providing reliable solutions through trusted customer relationships. The company employs approximately 9,000 people worldwide. For more information, visit www.curtisswright.com.

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