



NEWS RELEASE

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New Miniaturized High Data Rate Modules Expand Capabilities of Flight Test Data Acquisition System with Bulk and Selected Capture of Digital Avionics Bus Data

New MDAU-1553 and MDAU-1394 miniature bus data acquisition modules capture 100% of MIL-STD-1553 and IEEE-1394 digital avionics bus data while reducing module count and cost

ASHBURN, Va. – October 21, 2024 – [Curtiss-Wright's Defense Solutions Division](#) today introduced two miniature avionics bus data acquisition unit (DAU) modules that enable flight test engineers to capture 100% of a test program's digital MIL-STD-1553 and IEEE-1394 data and support selected data capture for insertion into the PCM telemetry stream. The MDAU-1553 and MDAU-1394 modules are designed for use with Curtiss-Wright's MnACQ-2700, its industry-leading miniature network data acquisition (MnACQ) encoding system. The high data rate (HDR) modules significantly reduce the complexity, module count and cost of simultaneously capturing bulk digital avionics bus data and telemetering select data during flight tests. For example, capturing eight (8) channels of MIL-STD-1553 bus data with our traditional solution would require nine (9) modules with a height of 3.6". The MDAU-1553 can perform the same operation with only three (3) modules and a height of 1.2". These new DAU modules expand the capabilities of the MnACQ-2700 product line, which retains 100% backward compatibility with the MnACQ-2600 and is supported by over 200 I/O modules.

“Our new high data rate MIL-STD-1553 and IEEE-1394 avionics bus data acquisition modules for the MnACQ-2700 system enable flight test engineers to process more data in the same amount of space, which can help reduce the number of costly test flights,” said Brian Perry, Senior Vice President and General Manager, Curtiss-Wright Defense Solutions. “These miniature modules add next-generation capabilities to the MnACQ product line while retaining full backward compatibility with the industry’s largest catalog of data acquisition modules.”

The MDAU-1553 is an 8-channel MIL-STD-1553 miniature bus acquisition module and the MDAU-1394 is a 3-channel IEEE-1394b acquisition module. The modules enable selected data to be captured and inserted into a PCM format at rates up to 40 Mbps. This PCM format can be multicasted over Ethernet and transmitted as a traditional clock/data PCM. Simultaneously, 100% of the MIL-STD-1553 or 1394b data can be bulk captured and transmitted over dual Gigabit Ethernet (GbE) ports as multicast packets. Ethernet data can be encoded using IRIG-106 Chapter 10/11, IRIG-106 TmNS Chapters 21-26, or DARv3 encapsulation. Additional status and performance information is also available for insertion into the PCM format or transmission over Ethernet.

About the MnACQ-2700 Data Acquisition System

The MnACQ-2700 enables an Ethernet-based network data acquisition solution for analog and bus data capture and system safety monitoring applications. With dual GbE ports that support both 100Base-T and 1000Base-T, the MnACQ-2700 provides bulk data and selected data to an FTI network for demanding applications such as new aircraft development and technology refresh programs. The MnACQ-2700 also provides pulse-code modulation (PCM) outputs up to 40 Mbps for real-time telemetry of mission and safety-critical data. The MnACQ-2700 is configurable using IRIG-106 metadata description language (MDL) and by Curtiss-Wright’s TTCWare software utility.

The [MDAU-1553 product sheet is available for download here](#).

The [MDAU-1394 product sheet is available for download here](#).

The [MnACQ-2700 product sheet is available for download here](#).

For additional information about Curtiss-Wright Defense Solutions products, please visit www.curtisswrightds.com, LinkedIn, and X (formerly Twitter) @CurtissWrightDS.

About Curtiss-Wright Corporation

Curtiss-Wright Corporation is a global integrated business that provides highly engineered products, solutions and services mainly to Aerospace & Defense markets, as well as critical technologies in demanding Commercial Power, Process and Industrial markets. We leverage a workforce of approximately 8,600 highly skilled employees who develop, design and build what we believe are the best engineered solutions to the markets we serve. Building on the heritage of Glenn Curtiss and the Wright brothers, Curtiss-Wright has a long tradition of providing innovative solutions through trusted customer relationships. For more information, visit www.curtisswright.com.

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