



NEWS RELEASE

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Curtiss-Wright Boosts High-Speed Wireless Data Acquisition Support for Flight Test and Monitoring Applications

New KAM/WSI/104/C module enhances ACRA KAM-500 DAU wireless data capture with support for LORD LRXS®-200 Series Wireless Sensors

EUROPEAN TEST AND TELEMETRY CONFERENCE (ettc2020) – JUNE 23, 2020 – Curtiss-Wright's Defense Solutions division today announced that its Aerospace Instrumentation (AI) group, a [trusted leading supplier of flight test instrumentation \(FTI\) system solutions](#), has updated its popular [KAM-500 data acquisition unit \(DAU\)](#) to support LORD MicroStrain Sensing's latest high-speed wireless sensor node products, the LRXS-200 Series Wireless nodes. Curtiss-Wright's new [KAM/WSI/104/C interface module](#) for the KAM-500 enables simultaneous, high-speed sensing and data aggregation from a LORD wireless sensor network. Wireless sensor nodes can be quickly added to a single location where additional data is required. They also make it easier to acquire data from challenging locations on an aircraft where placing a wired sensor would prove both difficult and costly. Wireless sensor nodes are also ideal when drilling new holes in the platform to place additional sensors isn't an acceptable option, such as during post-production.

"We are very excited to further enhance and upgrade the proven wireless sensor network capability of our existing suite of FTI data acquisition products," said Lynn Bamford, President, Defense and Power. "Curtiss-Wright's new KAM/WSI/104/C wireless sensor network module is the latest example of our commitment to continually update to the capabilities of our industry-leading KAM-500 data acquisition unit. With support for Lord Microstrain's high-speed 200 series wireless sensor nodes, we can now deliver significantly more data for critical applications such as flight test."

The KAM/WSI/104/C is designed for use in demanding FTI, condition-based monitoring, structural health monitoring, environmental monitoring, usage monitoring, and production test applications. It enables system engineers to rapidly and easily configure remote wireless sensor networks using LXRS-200 series wireless nodes. These nodes support the LXRS (lossless extended range synchronized) wireless protocol, a 4,096 Hz IEEE 802.15.4-compliant communication architecture ideal for sensor monitoring, data acquisition, performance analysis, and sensing response applications.

LXRS-200 Series Wireless Sensor Nodes Supported by the KAM/WSI/104/C:

- G-Link 200: Rugged Wireless Accelerometer, 3-Axis
- G-Link 200-R: Rugged Wireless Accelerometer, 3-Axis, ASTM F2137 Compliant
- SG-Link-200: Rugged Wireless Strain/Analog Sensor Node, 3-Channel
- TC-Link-200: Wireless Thermocouple/Voltage Sensor Node, 12-Channel
- V-Link-200: Wireless Strain/Analog Sensor Node, 8-Channel
- G-Link-200-OEM: Embeddable Wireless Accelerometer, 3-Axis
- SG-Link-200-OEM: Embeddable Wireless Strain/Analog Sensor Node, 2-Channel
- TC-Link-200-OEM: Embeddable Wireless Temperature Sensor Node, 1-Channel
- RTD-Link-200: Wireless RTD/Resistance Sensor Node, 6-Channel
- Torque-Link-200: Rugged Wireless Torque/Strain Sensor Node, 1-Channel
- IEPE-Link-LXRS: Wireless IEPE Sensor Node, 1-Channel

About the KAM/WSI/104/C Module

The KAM/WSI/104/C enables high-speed sampling, $\pm 32 \mu\text{s}$ node-to-node synchronization with a transmission range of up to 2 km, and lossless data throughput under most operating conditions. Sampled data can be read from the KAM/WSI/104/C synchronously as an analog parameter or asynchronously as a packetized buffer, which can be assembled into an Ethernet frame in an Ethernet controller. Each channel on a remote LXRS node is represented as an analog channel on the KAM/WSI/104. Each analog channel presents data as a single parameter, which can be placed in PCM or Ethernet frames. The KAM/WSI/104 can also optionally packetize each LXRS node, transmitting to the KAM/WSI/104 in both iNET-X and IENA formats.

KAM/WSI/104/C Performance Features

- LXRS wireless protocol supported on IEEE 802.15.4 compliant wireless radio

- Acquires data from LORD MicroStrain® wireless sensor nodes
- Node-to-node synchronization up to $\pm 32 \mu\text{s}$
- Scalable, long range wireless sensor networks up to 2 km
- Lossless data throughput under most operating conditions
- Aperiodic transmission of packetized samples from each sensor node in IENA-P, M, and iNET-X formats

Users can easily program LXRS-200 series wireless nodes for continuous, periodic burst, or event-triggered sampling with LORD's SensorConnect software. An optional web-based SensorCloud interface optimizes data aggregation, analysis, presentation, and alerts for sensor data from remote networks

About the Acra KAM-500

The Acra KAM-500 is a compact, low-power, modular DAU that has been developed through decades of experience and continued investment in R&D. Driven by hardwired finite state machines, the DAU is extremely reliable, and its small size makes it ideal for installing in locations that have limited space. The Acra KAM-500 has passed rigorous environmental testing ensuring it is fully qualified for aerospace applications, enabling rugged flight data acquisition in the harshest of environments.

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 is headquartered in Davidson, N.C. and employs approximately 9,100 people worldwide. For more information, visit www.curtisswright.com.

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