NEWS RELEASE

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Contact: John Wranovics
(925) 640-6402

Curtiss-Wright Releases Rugged Deployable Version of 2-Channel 40 Gigabit Ethernet Digital Data Recorder for ISR Applications

HSR40 40 GbE High Speed Data Recorder now available in Conduction Cooled Version

PARIS AIR SHOW 2019, PARIS, France (Kallman U.S. Chalet #8) **– June 17, 2019 –** Curtiss-Wright's Defense Solutions division, a trusted leading supplier of rugged data storage and protection solutions, today announced a new conduction cooled variant of the **High Speed Recorder 40 GbE (HSR40),** the industry's first two-channel 40 Gigabit Ethernet (GbE) network attached storage (NAS) system designed to address the extremely high bandwidth data capture requirements of today's most demanding intelligence, surveillance, and reconnaissance (ISR) applications. The new **HSR40-CC** is a fully ruggedized solution that can capture UDP or TCP/IP data from two 40 GbE ports at sustained rates of over 6 GB/s. With its ability to capture and store up to 48 TB of wire-rate data, the HSR40-CC is ideal for handling the huge amounts of data collected on today's sensor-rich ISR platforms. Its two NVMe-based Removable Memory Blades (RMB) speed and ease the transfer of critical data to the ground station for post-mission download and analysis. Even better, the commercial-off-the-shelf (COTS) HSR40-CC requires minimal NRE. It provides system integrators with a proven and cost-effective solution for applications with immediate time-to-deployment requirements.

The HSR40-CC joins the air-cooled version HSR40-AC, as the newest member of Curtiss-Wright's 40 GbE recorder family. While the HSR40-AC is designed for application development, the HSR40-CC provides system integrators with a field-ready data recorder built to perform optimally in the intense shock and vibration environments common to manned and unmanned ISR platforms such as P3s, P8s, and AWACS aircraft.

“With the introduction of our fully rugged, conduction-cooled HSR40-CC high speed data recorder, Curtiss-Wright further extends its market-leading range of COTS-based rugged data solutions for demanding ISR applications,” said Lynn Bamford, Senior Vice President and General Manager, Defense Solutions division. “Now, the industry’s highest performance two-channel 40 GbE NAS solution is fully deployable with unprecedented data capture capability to record vast amounts of critical data at full wire-speed.”

Superior Data Bandwidth

Previously, designers of high bandwidth data recorders depended on the high speed, low latency Serial Front Panel Data Port (sFPDP) communications protocol, which could handle ~1.6 GB/s, using multiple channels, to support high speed ISR sensor applications. Now, leveraging advances in processor architectures and faster solid state drives (SSD), the HSR40 can absorb >6 GB/s of streaming data, 400% more bandwidth than the fastest sFPDP recorder.

The HSR40’s performance breakthrough results in part from the built-in 40 GbE interfaces provided by its CHAMP™-XD2 Intel® Xeon® D processor-based digital signal processor (DSP) module, and in part from the use of a new class of super fast NVMe SSDs.

The NVMe Advantage

For over a decade SATA has been the preferred SSD architecture, but for the most compute intensive applications, SATA can pose a data bottleneck. Instead, the HSR40 uses faster PCI Express® (PCIe) based NVMe storage devices, which eliminate the need to convert PCIe data to SATA. Configured with two removable NVMe-based RMBs, each supporting 24 TB of storage, the HSR40 is able to absorb the full 6.4 GB/sec data stream while storing more than 2 hours of mission data at maximum speed. The HSR40 is designed to operate as either a Network File Server (NFS) or a Streaming Recorder.

Secure Data Options

To support applications that require security for data-at-rest, the HSR40 can be

optionally equipped with Software Full Disk Encryption (SWFDE), using AES 256-bit encryption to protect all data sent to the RMB storage modules. If a second layer of encryption is required, Hardware Full Disk Encryption (HWFDE) is available via self-encrypting drives. The HWFDE supports AES 256-bit full disk encryption compliant with the Trusted Computing Group (TCG) Opal storage specification.

HSR-40 -CC Performance Features:

- 2 x 40 GbE data channels (optical)
- 1 x 1 GbE control channel (copper)
- >6 GB/s throughput
- Network File Server (NFS) or Streaming Recorder operation
- 48TB removable storage (NVMe-based blades)
- Optional AES 256-bit encryption
- Low profile design
- Multiple mounting options
- Rugged design:
    - Size: 3.88 x 21.17 x 10.5” (98.43 x 537.72 x 266.7 mm)
    - Weight: 28 Lbs (~12 Kg)
    - Power:
        - +28 VDC (MIL-STD 704E)
        - 350W with 2 RMB

Software support for the HSR40 includes Linux® CentOS.

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

For more information about Curtiss-Wright’s 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

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