



NEWS RELEASE

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Curtiss-Wright Debuts Industry's First 2-Channel 40 Gigabit Ethernet Digital Data Recorder Solution for ISR Applications

New High Speed Recorder 40 GbE data recorder captures >6 GB/s of streaming data

SPECIAL OPERATIONS FORCES INDUSTRY CONFERENCE (SOFIC) 2018, TAMPA, Fla. (Booth #1919) – May 21, 2018 – Curtiss-Wright's Defense Solutions division today introduced the industry's first two-channel 40 Gigabit Ethernet (GbE) digital data recorder designed to address the extremely high bandwidth data capture requirements of today's most demanding ISR applications. The new [High Speed Recorder 40 GbE \(HSR40\)](#) is a SWaP-optimized digital data recorder that can capture UDP or TCP/IP data from two 40 GbE interfaces at sustained rates of over 6 GB/s. The challenge of capturing wire-rate data from today's compute intensive ISR sensor platforms puts new meaning to the old metaphor "drinking from a firehose." Some platforms have hundreds of cameras and other sensors generating data that needs to be captured and stored. What's more, these critical sensor systems can't be throttled in order for the recording system to catch up with the flow of data.

"Curtiss-Wright is committed to bringing the most advanced, rugged digital data recorder solutions to our Military and Aerospace customers," said Lynn Bamford, Senior Vice President and General Manager, Defense Solutions division. "We are proud to announce the industry's highest performance two-channel 40 Gigabit Ethernet data recorder, the new HSR40, which delivers unprecedented data capture capability to deployed ISR applications. It breaks through data bottlenecks to record vast amounts of critical data at full wirespeed."

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 Non-Volatile Memory Express (NVMe) SSDs.

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 Removable Memory Blades (RMB), each supporting 32 TB of storage, the HSR40 is able to absorb the full 6.4 GB/sec data stream while storing more than 2-1/2 hours of mission data at maximum speed. The HSR40 is designed to operate as either a Network File Server (NFS) or a Streaming Recorder.

Thanks to its unprecedented performance, the HRS40 is ideal for supporting high-speed I & Q RADAR data and deployment on manned and unmanned ISR platforms such as P3s, P8s, and AWACS aircraft.

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.

High Speed Recorder 40 GbE (HSR40) 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
- 64TB removable storage
- Optional AES 256-bit encryption
- Low profile design
- Multiple mounting options
- SWaP-optimized 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 drivers for 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

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