



## NEWS RELEASE

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### **Curtiss-Wright Adds Kinetica Software Support to the PacStar® 453 GPU Module for Intelligent Sensor Data Analytics**

*Combination of PacStar 453 NVIDIA GPU Module with Kinetica vectorized database software delivers powerful solution for Intelligent Sensor Data Analytics at the Tactical Edge*

**ASHBURN, Va. – September 22, 2021 – [Curtiss-Wright's Defense Solutions division](#)** today announced that its [PacStar](#) business, a leading developer and supplier of advanced communications solutions for the U.S. Department of Defense (DoD), has added support for [Kinetica](#) vectorized database software on its [PacStar 453 NVIDIA GPU Enhanced Server Module](#). The PacStar 453 is a tactical edge, high-performance compute platform for tactical and distributed deployment of video and AI applications. Support for Kinetica software brings advanced AI/ML capabilities to systems based on the PacStar 400-Series family of small communications modules. Kinetica can quickly ingest and correlate objects across sensors, building feature-rich entities. This enables military operators to deepen their data analysis capabilities and increase their situational awareness across the edge of the battlefield by combining functions currently performed by multiple isolated systems into a cloud platform that produces real-time intelligence for leadership.

“Kinetica brings a new class of vectorized database processing and analysis to the edge of the battlefield to deliver the secure, high-speed data replication capability needed to realize the DoD’s vision of JADC2 and ABMS applications such as Pattern of Life (POL) data processing and mobile cloud computing,” said Chris Wiltsey, Senior Vice President and General Manager, Curtiss-Wright Defense Solutions division. “When hosted on our rugged size, weight and power (SWaP) optimized PacStar 453 module, the combination provides a deployable solution for high performance cloud-based data analytics in the field.”

“Designed to process massive volumes of sensor data, the PacStar 453 is an ideal AI and video processing platform for the tactical edge,” said Peggy Miller, Senior General Manager, PacStar Business Unit, Curtiss-Wright Defense Solutions division. “Because Kinetica works with cloud services, such as Microsoft Azure Government cloud and Amazon Web Services GovCloud, it can connect sensor data from all military branches into a single network.”

### **About Kinetica Software**

Kinetica software is purpose built for the unique requirements and demands of analyzing data across space and time. It quickly processes huge data sets because it is predicated on data level parallelism that processes all of the data simultaneously with a single instruction. That means Kinetica can process intelligent sensor data analytics at speeds rated more than 1000x faster than traditional task level parallelism. The software uses industry standard Structured Query Language (SQL) to query and analyze billions of rows of data in a matter of microseconds.

Kinetica optimally routes query processing in each node across CPUs and GPUs for fastest results. At the core of Kinetica is a distributed, columnar, memory-first database designed for workloads that combine task level and data level parallelism to achieve orders of magnitude performance gains versus task parallelism alone. Data is stored across multiple nodes for parallel processing, and the most frequently used data is pre-loaded into RAM to eliminate IO bottlenecks.

### **Kinetica on the PacStar 453**

The PacStar 453 provides system integrators with an ideal tactical server for hosting Kinetica software. The NVIDIA GPU enhanced deployable, rugged, small form factor server delivers best-in-class performance combined with rugged environmental protection. The module's small footprint enables Kinetica software to be deployed in small vehicles or even backpack-based deployments.

The PacStar 453 is the heart of the recently introduced PacStar Tactical Fusion System (TFS), a COTS-based, modular, tactical and expeditionary, rugged processing and data distribution node for sensor-enabled platforms. PacStar TFS combines the PacStar 453 module with additional network route/switch, storage and wireless modules to provide a single compact solution for cloud connectivity and replication, and local processing of large datasets in realtime. This type of tactical and expeditionary rugged data center is capable of hosting mission command, cloud/storage, sensor fusion, AI and analytics applications.

### **About PacStar 453**

The PacStar 453, a supported platform for Kinetica software, enables the deployment of video and artificial intelligence (AI) applications in environments with disconnected, intermittent and limited connectivity to networks providing cloud and headquarters data access. The module is based on the powerful and proven PacStar 451 server platform that features Intel Xeon D processing, up to 128 GB RAM, 30 TB storage, and 10 GbE SFP+ ports, combining high-power general-purpose computing with a PCIe connected NVIDIA GPU with 512 CUDA cores. The new module is a key component in ensuring access to mission critical data processing, while maintaining SWaP requirements unmatched by other COTS appliances.

Curtiss-Wright's PacStar business offers a wide array of system packaging options for PacStar 400-Series, including briefcase, transit case, rack mount, vehicle mount, and backpack transport.

Curtiss-Wright's PacStar products are manufactured in its facility in Portland, Oregon.

For more information about PacStar, visit [our site](#).

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### **About PacStar's Family of Leading Battlefield Solutions**

PacStar's industry-leading family of advanced communications solutions addresses a wide range of military, intelligence and commercial applications. PacStar creates and manufactures COTS-based rugged, small form factor expeditionary and mobile communications systems. Separately, it developed integrated, network communications management software, IQ-Core Software, for the military, federal, state/local government and emergency responder markets. The company's patented IQ-Core Software, hardware technology, and integrated solutions provide secure, command, control and communications systems, particularly in remote or infrastructure starved areas. In addition, PacStar's communications systems are ideally suited for commercial/industrial organizations with mission-critical field communications requirements. For additional information, please visit <https://pacstar.com>, [LinkedIn](#), and Twitter [@pacstarcomm](#).

### **About Curtiss-Wright Corporation**

Curtiss-Wright Corporation (NYSE:CW) is a global innovative company that delivers highly engineered, critical function products and services to the Aerospace and Defense markets, and to the Commercial markets including Power, Process and General Industrial. 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 8,200 people worldwide. For more information, visit <http://www.curtisswright.com>.

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