Partner Case Study | MSI EdgeXpert

Sensor Intelligence at the Tactical Edge

Certus Core

Certus Core IBIS brings AI-powered data analysis to disconnected environments with MSI EdgeXpert



msi IPC | NVIDIA DGX SPARK | Certus Core

Certus Core Brings Sensor Intelligence to the Tactical Edge with MSI EdgeXpert

Compact local AI computing helps power IBIS for operators working beyond reliable cloud connectivity



MSI EdgeXpert alongside a laptop displaying a data analysis interface. Image supplied for this case study.

For military operators working in disconnected and contested environments, AI needs to run where the mission happens. Certus Core selected MSI EdgeXpert to bring its IBIS™ platform to the tactical edge, combining local AI computing and 128GB unified memory in a compact, portable system.

Turning disparate data into usable intelligence

Founded in 2021 by veterans and based in Tampa, Florida, Certus Core develops technology for defense missions. Its IBIS platform—short for Information Bridging and Integration System—brings sensor and multidomain data together so operators can query it in plain language.
Certus Core describes IBIS as a bridge between data collection and the Common Operating Picture. By returning text and visualizations from collected data, the platform helps operators make sense of information without depending on a connection to cloud infrastructure.

The challenge of bringing AI into the field

Certus Core's team develops and deploys AI solutions for electronic warfare, counter-drone operations, intelligence, surveillance, and maritime domain awareness. Across these missions, the company needed hardware that could run sophisticated AI models locally while remaining practical to transport and deploy.

Traditional GPU workstations offered an option for compute-intensive workloads, but Certus Core wanted to avoid the size and infrastructure demands associated with larger computing systems. Reliable cloud connectivity could not be assumed. The team needed a compact platform with enough compute performance and memory capacity to support IBIS close to its users.

Why Certus Core chose MSI EdgeXpert

After considering traditional GPU workstations and other compact AI platforms, Certus Core selected EdgeXpert for its combination of NVIDIA computing performance, portability, and value. The team identified three capabilities as especially useful: 128GB unified memory, NVIDIA Grace Blackwell architecture, and the compact form factor.

Built on the NVIDIA DGX Spark platform, EdgeXpert uses the NVIDIA GB10 Grace Blackwell Superchip and supports up to 128GB of coherent, unified LPDDR5x system memory. It also runs DGX OS, based on Ubuntu Linux, with the NVIDIA AI software stack. [3] For Certus Core, that combination provides a foundation for running multiple AI models and agents locally.

"MSI EdgeXpert gives us powerful AI computing in a remarkably small package. Combined with IBIS, we're bringing sophisticated sensor intelligence directly to military operators, where timely decisions matter most."

— Jake Dyal, CEO and Cofounder, Certus Core



A close view of MSI EdgeXpert in a portable computing setup. Photo courtesy of Certus Core.



Certus Core's outdoor equipment setup, with MSI EdgeXpert visible in the foreground. Photo courtesy of Certus Core.

Straightforward integration supports development

Certus Core reports that integration with its existing AI software stack has been straightforward. This has allowed the engineering team to focus on application development rather than hardware configuration, helping it bring IBIS onto a self-contained local computing platform.

Portable AI with room to grow

With EdgeXpert, Certus Core has packaged sophisticated AI capabilities into portable systems suitable for deployment across multiple defense customers. Consolidating inference onto compact, self-contained hardware reduces infrastructure complexity and dependence on cloud computing, according to the company.

Certus Core is continuing to gather quantitative operational performance data. It expects deployment efficiencies to grow with its installed base; specific ROI, time savings, and performance gains have not yet been quantified.



Building on the partnership

As IBIS adoption expands, Certus Core sees MSI as an important hardware partner for scaling distributed AI at the tactical edge. Future priorities include greater environmental ruggedization, wider operating temperature ranges, flexible DC power options, and potential laptop form factors. These are areas Certus Core would like to explore through continued collaboration.

For Certus Core, the value of EdgeXpert is practical: advanced AI computing in a portable platform that helps bring sensor intelligence directly to the people who need it.

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