

Wednesday, October 29, 2025

2:30 pm - 2:50 pm

AI-Powered Edge Computing for Mission Resilience in the Indo-Pacific.

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Abstract:

In the Indo-Pacific, mission success increasingly depends on the ability to collect, process, and act on data at the tactical edge. Operating environments are often disconnected, denied, intermittent, and limited (DDIL), making reliance on centralized cloud services impractical. To address this, we propose the deployment of Tsecond BRYCK AI Mini devices as a secure, ruggedized, and portable solution for edge computing in contested environments. BRYCK AI Mini devices combine high-capacity storage, onboard compute, and integrated GPU acceleration, enabling warfighters to run advanced AI/ML workloads, real-time video and image analytics, and cyber defense models directly in the field without dependency on external connectivity. Data collected at the edge can be processed, encrypted, and selectively synchronized with the cloud once secure connectivity is restored, ensuring both operational continuity and data sovereignty. Our approach empowers defense and humanitarian missions alike—supporting ISR (Intelligence, Surveillance, Reconnaissance), disaster relief coordination, and cyber defense operations—with a scalable, modular platform that aligns with zero-trust security principles.

The solution directly supports the conference theme, “Sword & Shield: Ensuring a Secure, Free, and Prosperous Indo-Pacific,” by enhancing decision-making speed, resilience against adversarial disruption, and regional mission readiness. By combining the rugged portability of BRYCK AI Mini with AI-driven insights at the tactical edge, this innovation ensures that Indo-Pacific forces can operate with agility, autonomy, and security—even in the most challenging & harsh conditions.