Bringing Data Center Power to the Front Line

Achieve the Previously Impossible.

It's now possible to achieve data center level AI inferencing performance for critical defense applications at the edge. J-Squared edge AI solutions with UntetherAI acceleration technology deliver fast, energy efficient processing for compute-intense ML computer vision applications in compact hardware designed to withstand the harshest environmental conditions.

J-Squared's ruggedized platforms are SWAP-C optimized to solve common AI connectivity, scale, and cost challenges. UntetherAI's unique at-memory architecture for deep learning minimizes data movement and power consumption and maximizes throughput, further reducing the cost and complexity of deploying and running sophisticated AI models.

Defense Analytics – Easily and Cost Effectively

With J-Squared and Untether AI, all compute needs are delivered in a compact form factor that matches the performance requirements of a given application. Rapid data analysis drives wide-ranging defense use cases, delivering superior operational and tactical advantages.

✓ **Surveillance & Reconnaissance**

Vast amounts of surveillance and sensor data are used to detect patterns and anomalies and track objects, providing real-time intelligence.

✓ **Threat Anticipation**

Identify patterns, trends, and potential threat scenarios. Advanced analytics illuminate and predict potential security threats, enabling proactive defense strategies and resource optimization to enhance military readiness and operational efficiency.

✓ **Friend vs. Foe Identification**

Distinguish friendly vehicles/forces from potential threats during operations with low-visibility conditions such as night or obscured environments.

✓ **Autonomous Weapons Systems**

Identify, track and engage targets with minimal human involvement to minimize risks and improve military operations efficiency.

✓ **Unmanned Aerial Vehicle (UAV) Detection /C-UAS**

Distinguish drones from other moving objects with high accuracy and in a variety of conditions.

Higher Performance. Lower Cost.

Eliminate Reliance on Cloud & Connectivity
Flexible edge solution runs regardless of wireless connectivity availability, ideal for dynamic outdoor military use cases.

Lower Total Cost of Ownership
Running AI workloads faster and cooler drives down costs of deploying and performing AI applications.

Protect Data Privacy
Data is securely processed, stored, and analyzed at the edge for optimum protection.

Optimize Compute
Scalable compute and AI acceleration match application performance requirements.

350 FPS of real-time AI inferencing performance.

What Makes J-Squared with Untether AI Different?

With state-of-the-art architectures and scalable compute, J-Squared systems with Untether AI tsunAImi accelerator technology are easily configurable and work out of the box.

Rugged, fully featured 1U, 2U amd 3U rackmount server models are available to accommodate varying needs.

✔ **Reference design speeds AI development**
Build a high-performance video analytics pipeline for wide-ranging defense applications using a supplied reference design.

✔ **All compute needs in one box**
Hardware enhanced for data- and compute-intensive AI includes a configurable number of streaming video feeds for image segmentation, object detection and classification models.

✔ **Faster, cooler workloads**
Workloads run faster, cooler, and more cost effectively with energy-centric AI inference acceleration from the edge to the cloud.

✔ **Rugged hardware runs in any environment**
Hardware designed to withstand harsh environments is also compute-optimized to solve common AI connectivity, scale, and cost challenges.

✔ **Data security and privacy**
Edge-native architecture ensures that data is securely processed, analyzed, and stored.

Market-Proven Technology

J-Squared Technologies. Inc™ is a global leader in computer systems built for mission-critical land, sea, and air applications. J-Squared has a rich 30-year history of providing the North American electronics market with rugged, high-performance systems and premium lifecycle support, from conceptualization, design, build and test to long-term in-service product support.

Untether AI® provides energy-centric AI inference acceleration from the edge to the cloud, supporting any type of neural network model. With its at-memory compute architecture, Untether AI has solved the data movement bottleneck that costs energy and performance in traditional CPUs and GPUs, resulting in high-performance, low-latency neural network inference acceleration without sacrificing accuracy. Untether AI embodies its technology in runAI® and speedAI® devices, tsunAImi® acceleration cards, and its imAIgine® Software Development Kit.

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