

ATO in a box: Rugged, AI-ready, and secure messaging for tactical edge

The tactical edge demands new solutions

Modern missions demand secure, resilient communications at the tactical edge, because teams often operate in harsh, disconnected, or regulated environments.

Traditional ATO (Authority to Operate) and compliance workflows are slow, leaving critical capability gaps. It's clear that you need a hardware and software stack that is rugged, compliant, and ready for edge deployment.

Spectro Cloud and **SNUC** have joined forces to create a compact “ATO in a box” solution that supports secure messaging, C2, AI/ML workloads, and compliance from OS through application layer, even in disconnected, air-gapped, or high-risk theaters.

It combines rugged SNUC hardware (NUCs, rugged / fanless edge servers) with Spectro Cloud's Palette VerteX, a Kubernetes management platform purpose-built for government, regulated, and edge environments.



Key capabilities

With our joint edge solution, you can clear the roadblocks that have been slowing your tactical edge projects. We check every box:

Deploy wherever your mission dictates

The Palette VerteX management plane can run self-hosted, air-gapped, in AWS GovCloud or Azure Government, or in your bare metal or virtualized data center.

Each edge device you provision is designed to work in detached or air-gapped environments and supports local operations, low bandwidth, intermittent connectivity.

SNUC's rugged hardware supports harsh environmental conditions and has support for LTE/5G, PoE (Power over Ethernet) for power and data simplification.

Choose your perfect software stack

With Palette VerteX you can repeatably model and deploy a truly mission-fit software stack to your edge hardware. Use a hardened OS like RHEL or Ubuntu Pro. Choose the perfect K8s distro, CNIs and CSIs, other addons and AI frameworks from our validated options, or bring your own.

Manage the full lifecycle

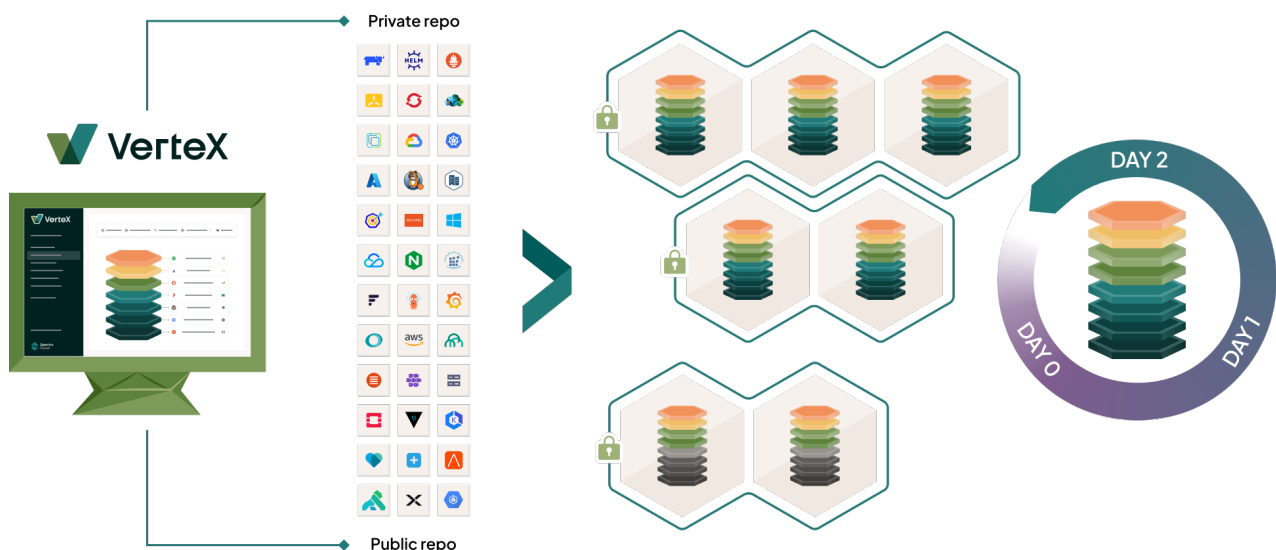
Palette provides full lifecycle automation at scale, from Day 0 through Day 2 operations. Accelerate patching, upgrades, security validation, observability, with the ability to manage many clusters / edge nodes from a unified control plane. SNUC provides a Nano-BMC for remote BIOS-level control, essential for isolated or dispersed deployments.

Secure the edge

Protect data and the mission with our zero trust security architecture. We offer immutable device images, trusted boot, full disk encryption, tamper-proof edge images, security scans, granular RBAC and logging.

Meet your regulatory obligations

Palette VerteX is FedRAMP Low ATO and Moderate In Process, and is validated to use FIPS 140-3 validated cryptographic modules in both the management plane and deployed clusters. SNUC offers rugged, fanless NUCs and edge servers that operate under harsh conditions (dust, vibration, high temperature up to ~60 °C).



A use case in action

A forward-deployed tactical unit deploys several rugged, fanless SNUC edge servers configured with VerteX. Once powered up, they:

- Use local Kubernetes clusters to run secure messaging and situational awareness tools.
- Have AI inference (e.g. object detection, predictive analytics) running on edge devices.
- Operate under air-gapped or intermittently connected conditions, yet retain centralized oversight for security audits, patching, and compliance.
- Leverage encrypted communication, trusted boot, and hardened OS so the stack remains secure even in contested environments.

Key benefits

Faster ATO approval and deployment:

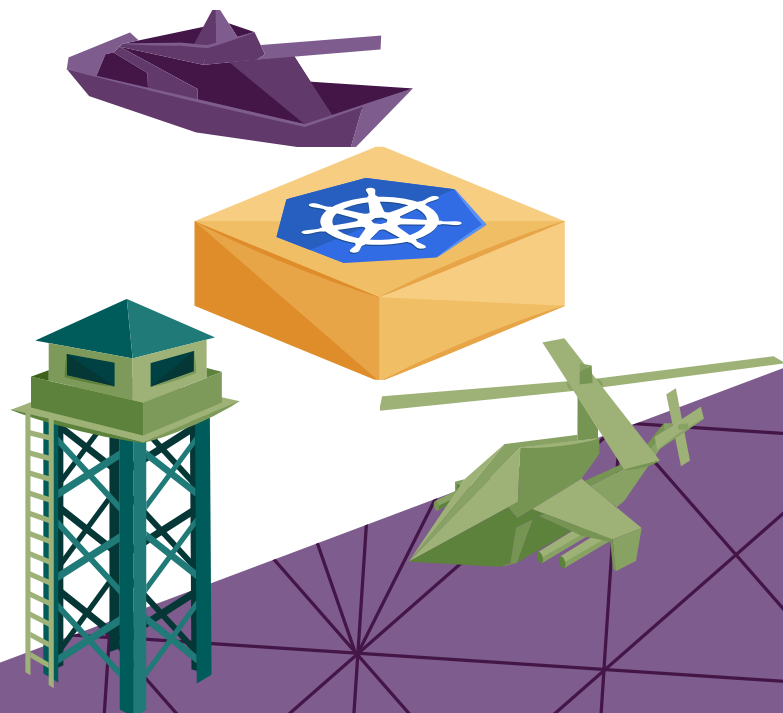
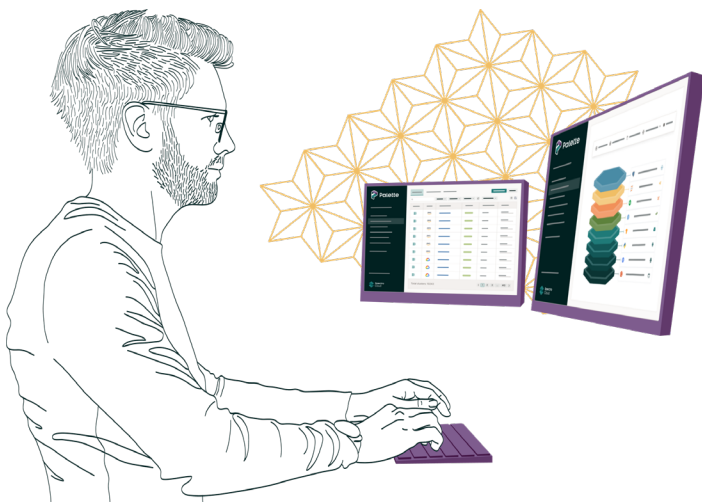
Because VerteX already meets key regs (FIPS, hardened OS, strict audit / logging etc.), it significantly reduces compliance friction.

Reliable messaging and C2: Even in harsh conditions, SNUC hardware and Palette VerteX ensure messaging apps operate even with low connectivity.

Reduced risk, secure operations: Every layer is hardened with trust from the silicon to app.

Scale without increasing overheads: With VerteX and SNUC, you can rapidly deploy many edge nodes, monitor and update them centrally without field engineering overhead.

Innovate edge AI/ML: VerteX simplifies deploying AI/ML workloads at the edge, vital for modern tactical edge capabilities.



The right choice

Together, SNUC and Spectro Cloud give you the simple, safe choice for your edge projects:

- **Trusted software:** VerteX is TRL-9, “Awardable” on DoD’s Tradewinds and P1 Solutions Marketplace, FIPS 140-3 Validated, and FedRAMP.
- **Choice and control:** Bring your own OS, choose distro, cloud or air-gapped, edge or cloud.
- **US-based support and channel partnerships:** Premium support from US citizen engineers; partners like Vertosoft for government. SNUC’s “Born in Texas. Built for the Edge.” heritage brings U.S. hardware supply and support footprint.
- **Rugged hardware:** fanless design and high environmental tolerances mean lower mean time between failures (MTBF) in the field.

About Spectro Cloud

Spectro Cloud delivers simplicity and control to organizations running Kubernetes at any scale.

With its Palette VerteX platform, Spectro Cloud empowers public sector organizations to deploy, manage, and scale Kubernetes clusters effortlessly — from tactical edge to data center to cloud — while maintaining the freedom to build their perfect stack.

Certified to the highest standards and trusted by military, defense and civilian agencies, Spectro Cloud enables you to pursue your mission with confidence.



FedRAMP



Get started

To learn more about our tactical edge solutions, arrange a 1:1 demo at spectrocloud.com/government.