

Deployable cloud for mission-critical environments



ASTECC is encased in a 10U military-grade ruggedized case engineered to withstand the severity of storage, operations, and transport usage while providing protection from a variety of environmental elements such as shock, vibration, water and/or salt fog, dust and sand, and EMI. Designed to stack, ASTECC can be deployed with ease even in the most remote and austere environments and be rapidly scaled to create a larger network. ASTECC consists of 8 server nodes with 2U of additional space for external components such as cabling or network encryption devices.

At the heart of ASTECC is HyperCloud, an integrated platform that simplifies the delivery of private cloud by taking a highly opinionated approach to deployment across the entire stack from hardware provisioning to tenancy management. HyperCloud is self-assembling, self-managing, self-healing and has a unique stateless bare-metal bring-up process. As a result, ASTECC can be configured and provisioned by personnel with basic IT skills in the field, delivering unprecedented adaptability for workloads at the edge. HyperCloud's architecture delivers performance, flexibility, and simplicity in ASTECC's deployment and operation, ultimately removing the barriers to fast and consistent deployments of on-the-ground cloud environments.

Specifications

STORAGE

Useable storage (NVMe) 26 - 52 TB

Useable storage (SSD) 56 - 112 TB

COMPUTE

Processing 16 - 128 Cores AMD EPYC

Memory 512GB - 4TB DDR4

GPU 31.2 - 62.4 teraFLOPS

GPU Memory 24GB - 48GB GDDR6

NETWORK

Uplink 2 x 100GbE QSFP

ENCRYPTION

Layer 2 Ethernet TACLANE-ES10 (KG-185A) Ready

PHYSICAL

Size (mm) 1110L x 665H x 645W

Equipment 8 x 1RU HyperCloud Appliances + Ancillary equipment

Weight ~200kg

Operating temp 0 - 70°C

IP Protection IP65

Average load 2.5kW

Case finish MIL-P-53022 Primer & PE Enamel

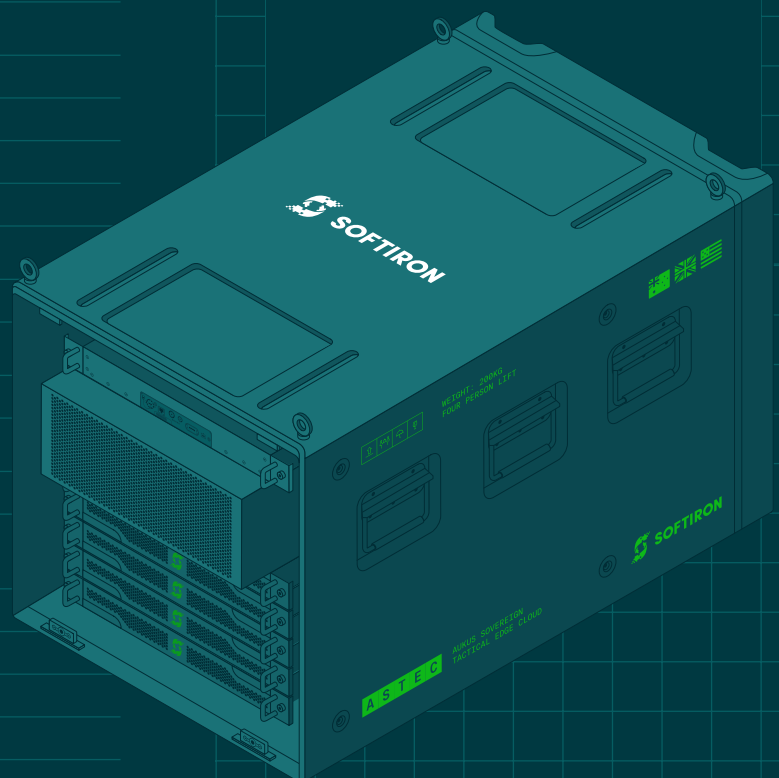
Case material Aluminium alloys

ASTECC

AUKUS Sovereign Tactical Edge Cloud

Applications and workloads must extend seamlessly from headquarters to the theater. Combining advanced applications and cloud services with ruggedized edge computing is vital for enabling effective operations, driving efficiencies, and facilitating data-informed decision-making in any environment.

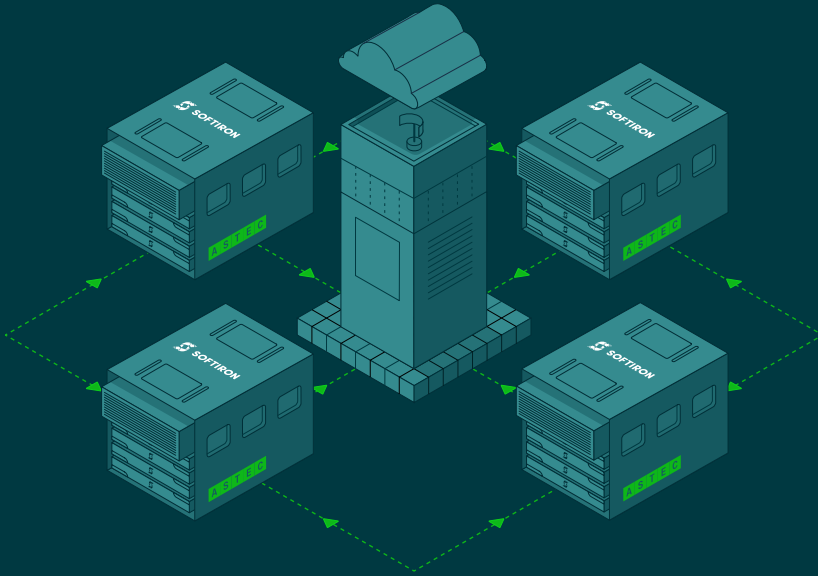
ASTECC is a portable, versatile, and ruggedized edge solution that delivers high performance, low latency, and scalable cloud computing even in space-constrained and denied, disrupted, intermittent, and limited (DDIL) network environments. ASTECC delivers advanced capabilities, including containerization, deployable images, infrastructure as code, and secure multi-tenancy to enable effective multilateral military and humanitarian operations. ASTECC is able to support multiple applications simultaneously, and unlike comparable deployable solutions, is independent and non-dependant on any one public or private cloud provider.



Deploying ASTEC

ASTEC delivers a breakthrough in the ability to deploy edge cloud computing in a range of network conditions and where access to skills and resources are limited. As a result, ASTEC can be deployed on expeditionary land, sea, or air operations for anything from combat operations to humanitarian response missions.

ASTECs deployed in the field can connect to a variety of public, private, or cloud services as policy and availability dictate, or form a “mesh” infrastructure themselves should those services be unavailable.



Benefits



Low latency platform delivered as a single, integrated, and fully supported system



Capable of running multiple applications in network-denied or interrupted environments



Deployable with a 1kW power supply, typically consuming 25% less power than competitors



Enables true multi-cloud with interoperability between different cloud environments



Ruggedized and portable case optimized for all environments



Provision, commission, and decommission hardware on the fly



All componentry is designed, engineered, and manufactured in AUKUS countries only



Each module can be carried by 4 people

HyperCloud and ASTEC 'zero' strategy

- 0 Day install
- 0 Day administration
- 0 Trust hardware and software with stateless nodes
- 0 Bit/packet/clock cycle loss
- 0 Scale limits with incremental growth
- 0 Legacy or integration
- 0 Variable licensing fees

Use cases

ASTEC can be utilized to meet the more intelligent and demanding requirements of applications and workloads that are being deployed on any cloud environment - private, public, hybrid, or multi-cloud - at the edge.

Run workloads either disconnected or seamlessly burst to core infrastructure

Develop, test, and validate workloads

Run machine-learning, containerized, traditional virtualized, and bare-metal workloads

Store, collect, and process large datasets locally or transfer them to other cloud environments

