

ATLAS

GVA, MOSA, SOSA and OpenVPX developer system for rapid prototyping and deployment

FEATURES

- Rapid deployment of ATLAS GVA programme start
- 4-slot SOSA VPX hardware
- ATLAS Digital Crew including HMI
- ATLAS Registry, Alarms, Usage Monitoring
- TALOS Land Operating Systems (option)
- TALOS hosted map tile server
- HERMES Intelligent Voice (option)
- Astute DDS middleware
- Astute DDS Inspect QoS debugging tool
- LDM v10 exploration
- Prototype-to-deployment pathway
- Bench-to-rugged transition
- Flexible VPX backplanes
- VITA 62 power options
- Host XMC / FMC Mezzanine options



MADE IN AUSTRALIA

The ATLAS/REN GVA Developer Kit is a rugged developer system for defence integrators building and validating Generic Vehicle Architecture (GVA) solutions on MOSA, SOSA and OpenVPX hardware. It combines a compact VPX chassis with Astute software and middleware so teams can move from bench prototyping to field deployment without rebuilding the stack for each phase.

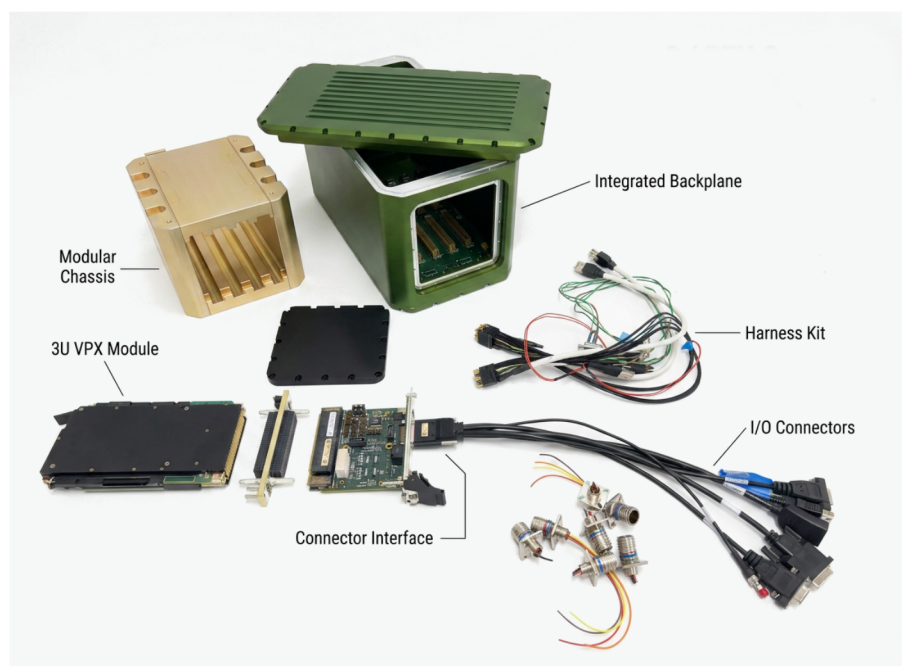
The kit ships with Astute DDS middleware, ATLAS Digital Crew, a reference HMI, and the Land Data Model explorer aligned to UK MoD LDM v10. This makes it suitable for quick-start evaluation, software integration, operator workflow exploration, and early platform proof-of-function work on a single configurable system.

The developer kit is intended as a project box for VPX-based GVA development. The underlying chassis concept supports a 4-slot VPX layout with conduction-cooled cards and VITA 62 power options, giving integrators a practical bench-to-field path for early system bring-up and rugged application testing. At the software layer, the system is configured as an integrated

developer environment rather than a bare chassis. Astute DDS provides the common data bus, ATLAS Digital Crew provides the crew-facing interface, and the reference HMI enables immediate validation of display layouts and mission workflows.

ATLAS Digital Crew gives defence teams a mission-focused operator experience from day one, reducing integration friction between services, displays, and crew applications. By combining role-aware workflows, reusable HMI patterns, and standards-aligned data models, it shortens the path from system integration to usable crew capability in vehicle, lab, and field environments.

For programme delivery, the ATLAS/REN kit helps lower schedule and technical risk by providing a repeatable, standards-based baseline that can be tested early and evolved incrementally. Integrators can prove interoperability, validate operator concepts, and mature capability in phases, while preserving a clear transition path to deployment-grade systems for land platforms.



FULL STACK GVA DEVELOPER KIT FOR LAND PLATFORMS



FIND OUT MORE

Commercial off the shelf digital crew solution

Astute Systems is a global leader in rugged AI computing and software for autonomous military systems and deployment in harsh environments.

SPECIFICATIONS

REN VPX HARDWARE & POWER

4-slot inner VPX rack plus outer rugged enclosure

1 inch pitch support for up to 4 SOSA conduction-cooled cards

Accepts 4-slot VITA VPX backplanes

Supports single-slot backplanes for pseudo-layout bring-up

POWER SUPPLY OPTIONS (VITA 62)

VITA 62 PSU backplane and PSU compatibility

PCS-6362: 3U VITA 62 power docking board/backplane (1 slot, 1 inch pitch)

PSC-6234: 28V DC input, 400 W PSU, 6CH OpenVPX support

PSC-6236: 85-264V AC input, 400 W PSU, 6CH OpenVPX support

28V DC 800 W PSU option available (application cooling dependent)

BACKPLANE & HIGH-SPEED I/O OPTIONS

VPX-7997 / VPX-7997-RS: 3U RT2 SOSA, Gen2 PCIe

VPX-0354 / VPX-0354-RS: 3U RT3 SOSA 14.2.16, Gen3 PCIe 25 Gbps

VPX-8467 / 8867 / 9518 (+ RS): VITA 67.1 / 67.2 / 67.3 single-slot options

VITA 67.3x single-slot (1.2 inch pitch) supported in alternate-slot layouts

Some RF connector + Meritec shroud combinations require mechanical fit verification

ORDERING

Outer case assembly part no: 12256-000

Internal VPX chassis part no: 12256-100-000

Customer I/O plate supports custom connectors

Typical availability: 2-8 weeks ex-stock

ATLAS DIGITAL CREW STACK

UK GVA Land Data Model v10 (DEF STAN 23-009)

GVA Core Services: Registry, Alarms, UACM

Crew role-based access and alarm management workflows

Qt6 HMI touchscreen with function keys, PPI, and video integration

Battlefield Management System with APP-6 symbology

Vehicle simulator for integration and workflow validation

Usage and condition monitoring with platform health indicators

LDMX topic monitor and debugger for rapid GVA integration

Bohemian SysML tooling and IDL-driven C++ workflow

ToolX diagnostics and browser-based operations dashboard

J1939 gateway and external platform integration support

TALOS LAND OPERATING SYSTEM

GVA External Application to LDMv10

Deploy on Linux, Windows & Android

Situational Awareness

Data Agnostic CoT, SAPINET, AIS, ADS-B and more...

Plugin architecture, extensible

HERMES INTELLIGENT VOICE

Human to Human Intercom

Human to Agent (AI Copilot)

Military Standard CODECS (low bandwidth)

Embedded deployment on BushNET

ASTUTE DDS SPECIFICATIONS

DDS 1.4 DCPS, DDSI-RTPS 2.5, DDS-XTypes 1.3

DDS Security 1.1/1.2 with X.509 PKI and AES-256-GCM

Interoperability: RTI Connex, Cyclone DDS, Fast DDS, OpenDDS

Type extensibility: @final, @appendable, @mutable

XCDRI/XCDR2 data representation with TypeObject negotiation

QoS: Reliability, Durability, History, Ownership, Deadline, Lifespan, Liveliness

Content-Filtered Topics and TypeLookup Service

IDL 4.2 compiler with C++ code generation and TypeSupport

Shared memory and TCP transport options

astuteds-inspect diagnostics and LDMX DDS debugging support

** Preliminary Datasheet Specifications are subject to change

CONTACT YOUR LOCAL REPRESENTATIVE

FOR MORE INFORMATION ON HOW WE CAN ADAPT OUR SOLUTIONS TO MEET YOUR IO REQUIREMENTS

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