

VersaPLUS Deployment Kit

OFF-THE-SHELF APPLICATION READY VNX+ SYSTEM

DESCRIPTION

The VersaPLUS Deployment Kit is a deployable VITA 90 VNX+ system for small form factor applications. Skip the hassle of integration and move right into mission application development. With the chassis designed in alignment with the SOSA® Technical Standard, and coming in at under 6 pounds, this passively cooled kit delivers ARM-based compute that is perfect for applications that benefit from low SWaP.

Take advantage of one of the largest and most mature embedded Linux ecosystems, mitigating risk and making sure your developers feel confident from day one.

The kit arrives assembled and configured: the SBC in payload slot 1, the power supply in the dedicated VITA 90.3 PSU slot, and an integrated chassis manager/maintenance port aggregator providing out-of-band management through front-panel port. The included cabling kit breaks each rugged front-panel connector out to standard commercial interfaces, and the second payload slot is open for expansion modules.



Features

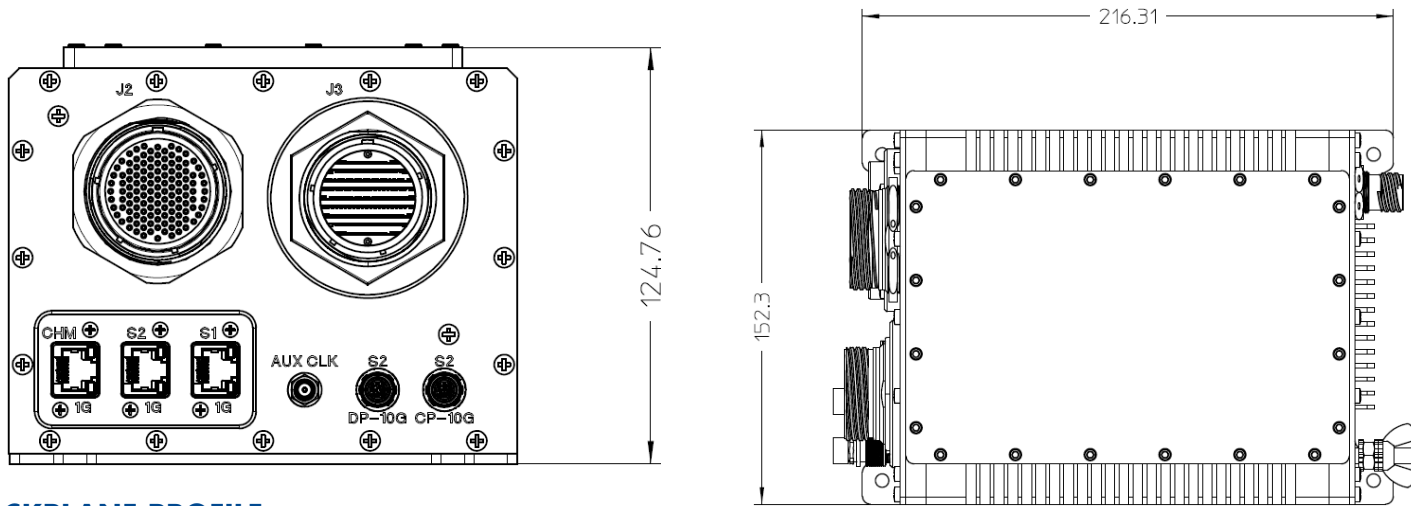
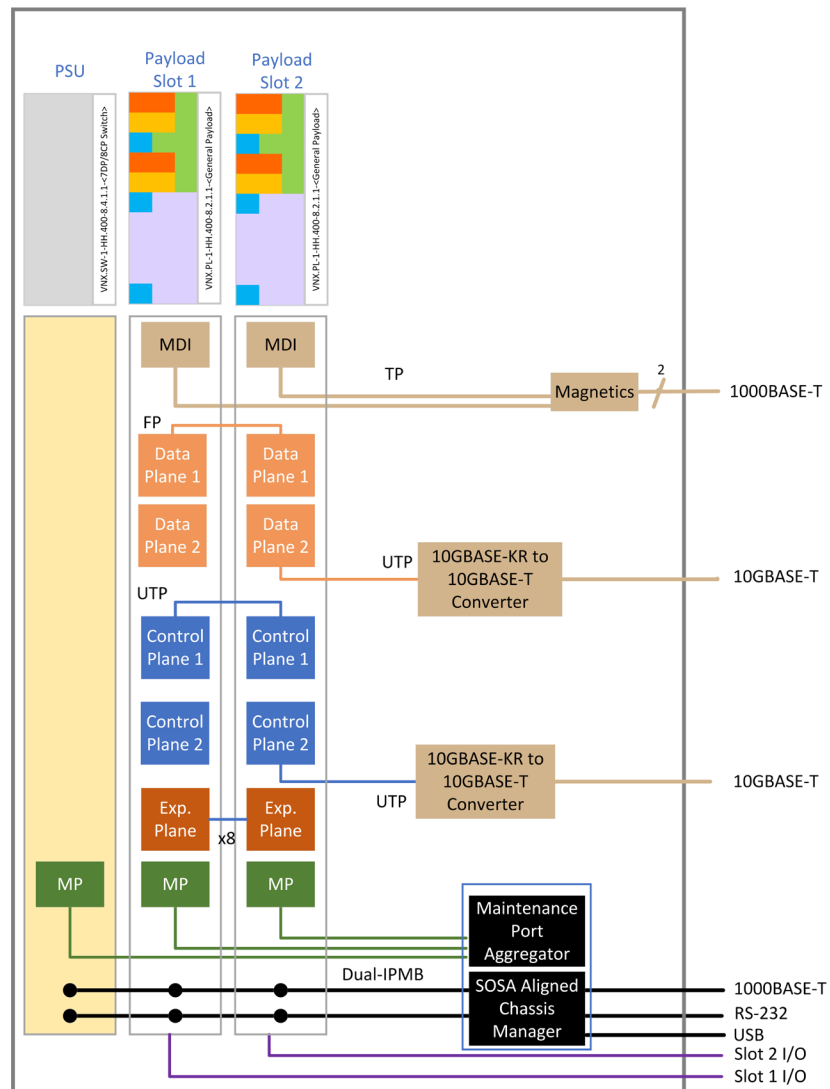
- Deploy a pre-integrated VNX+ system quickly and take advantage of standards-based refresh paths for long-life defense programs and rapid technology insertion
- SOSA Aligned VNX+ Deployable Chassis with 2 payload + 1 power supply slot; passive cooling
- VNX+ 320W Power Supply installed
- VNX+ Raspberry Pi CM5 SBC; quad ARM Cortex-A76; up to 16GB ECC; <10W envelope
- Included cabling kit breaks out rugged chassis connectors to standard commercial I/O interfaces
- Backplane has: 40GBASE-KR4 Data Plane, 10GBASE-KR Control Plane, and PCIe Gen4 Expansion Plane
- Integrated chassis manager and maintenance port aggregator
- Rugged design; designed to military standards, MIL-STD-810, MIL-STD-461, MIL-STD-704, MIL-STD-1257 and DO-160 section 25 ESD

Applications

- Small UAS mission systems: Group 2 and 3 drones carrying EO/IR, ISR, EW, or communications payloads on tight SWaP-C budgets
- Unmanned ground & maritime: autonomy and payload integration for UGVs, USVs, and AUVs on standard 28 VDC platform power
- Manpack & dismounted systems: backpack-carried or vest-mounted processing where battery runtime and carry weight matter
- C4ISR edge nodes: forward-deployed processing for sensor aggregation, tactical comms, and edge data routing

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DIMENSIONS**BACKPLANE PROFILE**

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SYSTEM SPECIFICATIONS

Form Factor	2 payload slots + 1 power supply slot, SOSA@aligned
Dimensions	216.31 mm x 152.4 mm x 124.76 mm
Weight	6.7 lbs (with modules installed)
Input Power	28 VDC nominal (16–50 VDC range)
Cooling	Passive convection; 50°C ambient with 25 W payloads
Thermal (VITA 47.1 CCW4)	MIL-STD-810G, –40°C to +50°C ambient; 71°C at module cold-wall interface
Vibration (VITA 47.1 V3)	MIL-STD-810G, 5–100 Hz, PSD increasing at 3 dB/octave; 100–1000 Hz, 0.10 g ² /Hz; 1000–2000 Hz, PSD decreasing at 6 dB/octave
Shock (VITA 47.1 OS2)	44 g, 11 ms half-sine pulses in all three axes
EMI / ESD	MIL-STD-461G
Data Plane	40GBASE-KR4
Control Plane	10GBASE-KR
Expansion Plane	PCIe Gen4
Payload Slot Profile	VNX.PL-1-HH.400-8.2.1.1 — General Payload (both slots)
Chassis Manager	VITA 46.1.1 Tier-3 Chassis Manager with integrated maintenance port aggregator
Wedgelocks	Available with or without wedgelocks
Mechanical Data	STEP file available upon request

FRONT-PANEL I/O

3x RJ45 1 GbE	1000BASE-T — 2x MDI ports from payload slots + 1x to Chassis Manager / maintenance port aggregator
2x 10 GbE	One port to Data Plane, one port to Control Plane
1x SMA (AUXCLK)	1 PPS input, distributed to both payload slots
High-Speed Connector	Slot 1: USB 3.0 + power, video output, mezzanine-mapped I/O, GPXLVDS, Peripheral Port (MIPI CSI to RPi); Slot 2: USB 3.0 + power, video output
D38999	Chassis manager/maintenance port aggregator console USB/UART, 2x USB 2.0 + power (one for each payload slot), UART (2x RS-232 or 1x RS-422/485), UEIO, GPIO, system discretes

COMPUTE — RPI CM5 SBC**

CPU	Quad ARM Cortex-A76 (ARMv8, 64-bit) @ 2.4 GHz
SoC	Broadcom BCM2712
GPU	OpenGL ES 3.1 / Vulkan 1.2
Video	Hardware-accelerated 4k60 HEVC decode; HDMI 2.0 out; MIPI CSI in
Memory	16 GB LPDDR4X-4267 ECC SDRAM
Storage	64 GB eMMC
I/O	Expansion Plane: PCIe Gen2 x1, 1000BASE-T (GbE1), USB 3.0, USB 2.0, UART (RS-232/422/485), UEIO (I2C/SPI), GPIO, GPXLVDS, MIPI CSI (Peripheral Plane)
Power	<10 W
Slot Profile	VITA 90.1 VNX.PL-1-HH.400-8.2.1.1

POWER — RUGGED VNX+ 320 W PSU**

Input	28 VDC nominal (16–50 VDC range)
Output	320 W maximum combined
Rails	12.0 V @ 15.0 A / 5.0 V @ 15.0 A / 3.3 V @ 13.0 A / 3.3 V AUX @ 1.0 A continuous
Efficiency	Up to 92%
Isolation	2250 VDC (input-to-output)
Operating Temp.	–40°C to +85°C
Form Factor	19 mm plug-in module; VITA 90.3 Balanced Profile; conduction cooled
Environmentals	DEF-STAN-00-35 / MIL-STD-810 climatic; DEF-STAN-59-411 / MIL-STD-461 EMC*
Standards Compliance	VITA 90.0, VITA 90.3 RoHS

* Full EMC performance requires additional external components.

** Unlike the chassis/backplane, the PSU and SBC are NOT designed in alignment to the SOSA Technical Standard due to the lack of IPMC, though they do use SOSA aligned slot profiles.

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RELATED PRODUCTS

JetSys and JetKit Family

High Performance Embedded Computing Products
Rugged, Industrial, and Plug-in packages available



JetSys and JetKit Family

NetSys Family

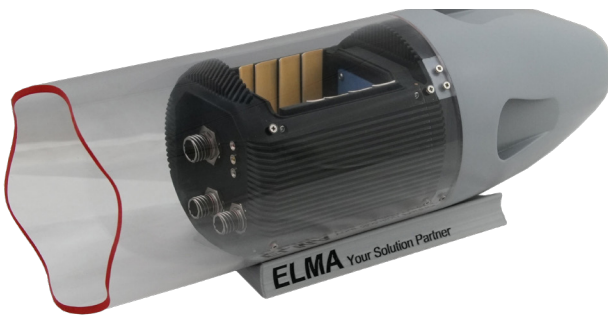
Compact mobile, IP router
Cisco router/Ethernet switch combination
Railway compliant mobile router (ESR-5915)



NetSys 5300 Family

VNX+ VersaPlus Family

Upcoming Tube Chassis Form Factor
Fits In 5-inch Diameter Tubes
For UAS, Pod, and Tube Applications



ORDER INFORMATION

VersaPLUS Deployment Kit
50.A.A.Z64G.X.L.B.VERSAPLUS-DEPL-KIT

- VersaPLUS deployable chassis with modules pre-installed:
 - Raspberry Pi CM5 VNX+ SBC
 - 320W Power Supply Module
- Cable Kit - consisting of:
 - CAE061671 J1 External Cable
 - CAE061674 J2 External Cable
 - CAE061808 J3 External Cable (USB 3.0 + HDMI)
 - CAE061676 DP-10G External Cable
 - CAE061677 CP-10G External Cable
 - 3x 1G Ethernet Cables

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Please contact our sales team for more details.