

3U OPENVPX 6+1 SLOT BACKPLANE ALIGNED WITH SOSA™

6 slots plus 1 VITA 62 PSU slot (6+1 Backplane)

DESCRIPTION

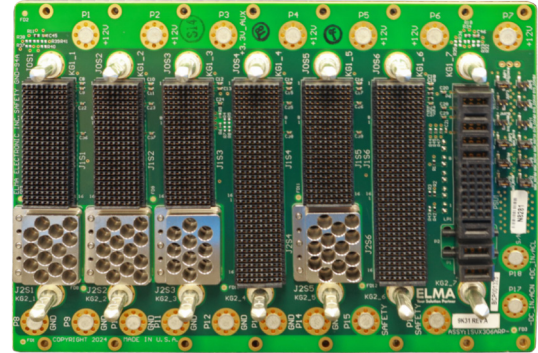
These backplanes with six VITA 65 slots plus one VITA 62 slot (6+1) are designed in alignment with The Open Group® Sensor Open Systems Architecture™ Technical Reference Standard, or SOSA® to support the defense industry's hardware and software convergence and interoperability initiatives per the DOD's Modular Opens Systems Approach (MOSA) and CMOSS (C5IR/EW Modular Open Suite of Standards).

The backplanes support the VITA 62 standard power supply module format designed for VPX-based systems. The standard ensures interoperability between different power supplies and backplanes, making it easier to swap power supplies during testing, development, and deployment. VITA 62 also supports built-in voltage monitoring and health status reporting.

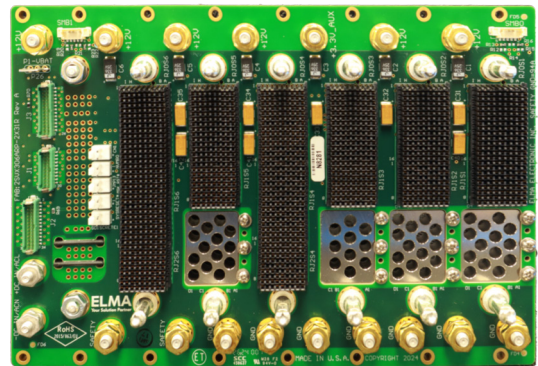
The backplanes support high-speed signals on all data paths and VITA 67 / VITA 66 connectors. The backplanes support dual domain Ethernet up to 100GBASE-KR4.

The **1SVX306ARP-9K31** backplane has been specifically designed to support CMOSS and RF applications with three payload slots and PNT supporting all slots.

The **1SVX306AUP-2X31** is designed for applications requiring high throughput, low latency sensor processing with X16 PCIe Gen 4 connectivity. This backplane features two GPU slots, both connected to payloads.



Front View



Rear View

FEATURES

- Slot profiles in alignment with the SOSA technical standard
- Six SOSA PIC slots 3U OpenVPX backplane
- One VITA62 Slot for Power Supply
- Supports dual domain Ethernet switch 1/10/25Gbps (1000BASE-KX, 10GBASE-KR, 40GBASE-KR4, 25GBASE-KR, 100GBASE-KR4)
- PNT slot profile SLT3x-TIM-2S1U22S1U2U1H-14.9.2 (1SVX306ARP-9K31 only)
- No PNT slot profile for 1SVX306AUP-2X31 but X16 PCIe connection on expansion plane with GPU
- Routed Expansion plane links support PCIe Gen 4 data rates
- All control and data plane links are designed for 25 Gbps data rates and support 100GBASE-KR4
- Maintenance serial ports routed to headers
- Matched length, low skew REF and AUX radial clocks
- IPMC header for external chassis manager. Header is also connected to the VITA62 slot
- Support for 2UM PICs with extended covers
- Support for isolation fins on the VITA 62 PSU connector for high altitude applications that may require increased clearance on the inputs

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BENEFITS

- Supports DOD's Modular Open Systems Approach (MOSA) mandate
- Supports current Ethernet and PCI Express standards
- Enables the development of a common, modular architecture across critical C5ISR and EVV systems
- Contributes to optimized SWaP requirements and lower life-cycle costs for rapid technology insertion

TOPOLOGY

BACKPLANE DESIGN (This full featured backplane has cutting edge interconnect technology and a range of OpenVPX slot profiles aligned with SOSA guidelines.)

1SVX306ARP-9K31:

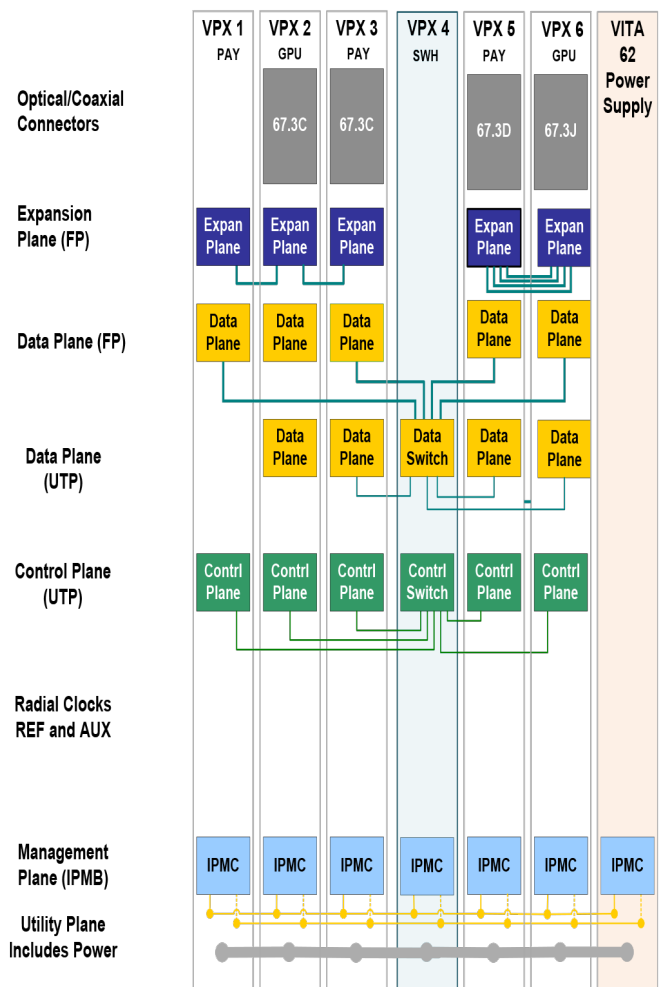
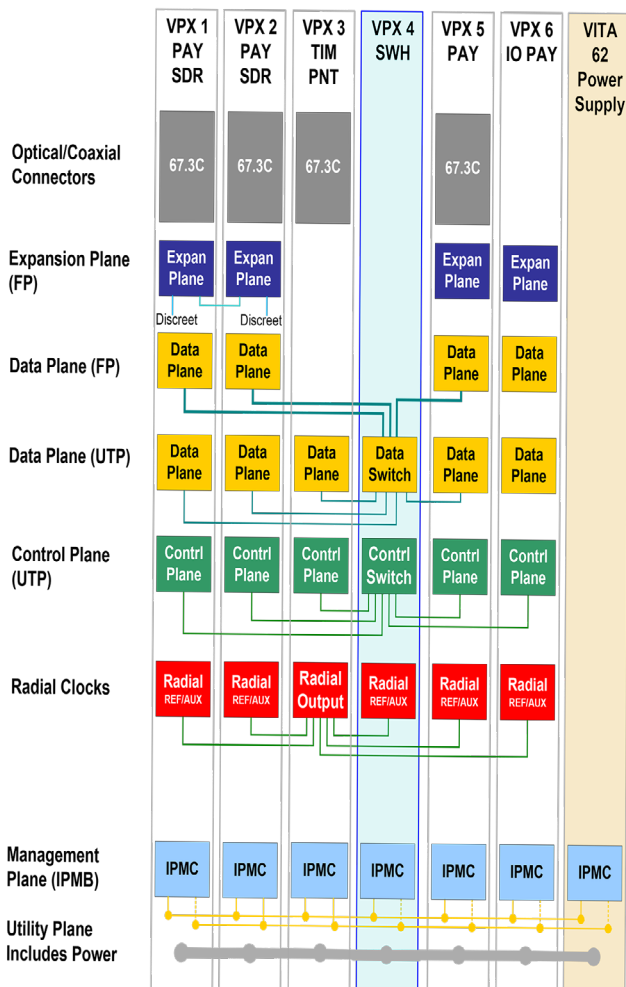
Slot 1,2,5: SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11-n
 Slot 3: SLT3x-TIM-2S1U22S1U2U1H-14.9.2
 Slot 4: SLT3-SWH-6F1U7U-14.4.14
 Slot 6: SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16-n

MECHANICAL SPECIFICATIONS

- Six VITA 64 plus one VITA 62 slot
- 3U height
- 5.067"(128.70mm) tall x 7.425"(188.60mm) wide
- PCB 0.212" thick

1SVX306AUP-2X31:

Slot 1: SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16
 Slot 2 & 3: SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11-n
 Slot 4: SLT3-SWH-6F1U7U-14.4.14
 Slot 5 & 6: SLT3-PAY-1F1U1S1S1U1U4F1J-14.6.13-n

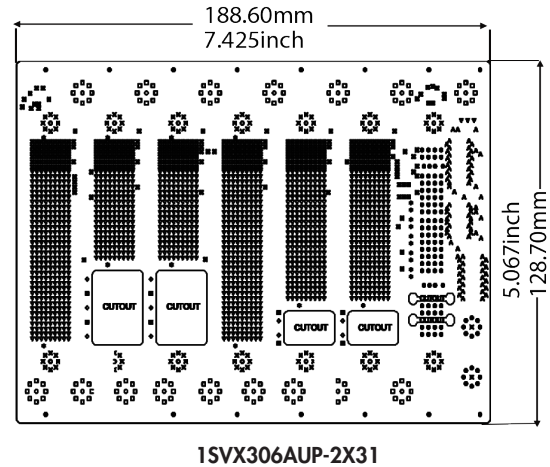
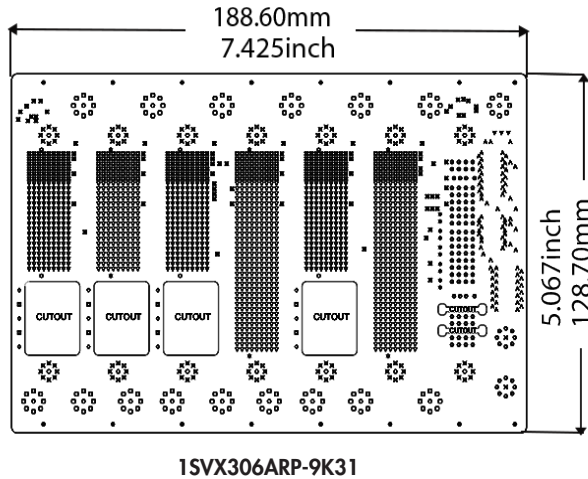


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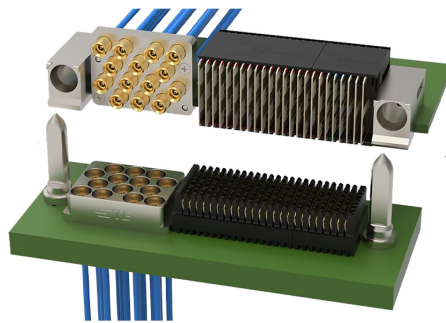
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LINE DRAWINGS

BACKPLANE DESIGN

**VITA 67.3 CONNECTOR EXAMPLES**

FOR USE IN BACKPLANE APERTURES

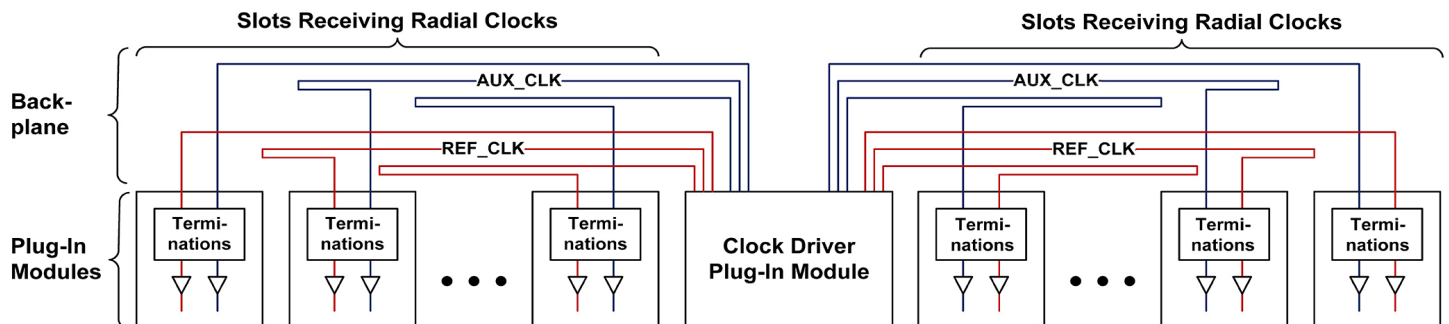


VITA 67.3 C MODULE WITH 14 POS SMPM

PRECISE NETWORK TIMING

BACKPLANE DESIGN

The backplane supports a radial slot card for precision timing and synchronization.



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APPLICATIONS

OpenVPX backplanes aligned to SOSA are used in embedded computing systems that enable high speed data processing in critical defense and industrial applications, such as:

- › Artificial Intelligence
- › Mission control
- › Sensor based systems
- › Surveillance
- › Radar and other beamforming applications
- › Weapons control
- › Target tracking and display
- › Navigational Control
- › Threat detection
- › Process monitoring
- › Environmental monitoring

RELATED PRODUCTS

- › CMFF, Rugged ATR, and Test and Development platforms
- › Intel and ARM based Single Board Computers (SBCs)
- › NVIDIA based, high performance GPGPU cards
- › Single and Dual Domain Ethernet switches
- › Cables, RF connectors, and optical connectors
- › Convection or conduction cooled load boards
- › Rear Transition Modules for I/O

ORDERING INFORMATION

Height	# Slots	Description	Switch Slot Profile	Payload Slots Profile	Timing Slot Profile	Part Number
3U	6+1	6-slots 25Gb backplane aligned to SOSA, with payloads on slots 1,2,5, PNT on slot 3, a switch on slot 4, and a 14.2.16 IO payload on slot 6. Slots 1,2,3,5 have apertures for VITA 67.3 connectors. Slot 7 has a connection for a VITA62 Power Supply	14.4.14	14.6.11-0	14.9.2	1SVX306ARP-1X31(R)*
3U	6+1	6-slots 25Gb backplane aligned to SOSA, with two GPUs on slot 2 and 6 supporting PCIe 16x to primary payload or 8x to secondary payload. 1 I/O on slot 1 and switch on slot 4. Slots 2,3,5,6 have apertures for VITA 67.3 connectors. Slot 7 has a connection for a VITA62 Power Supply	14.4.14	14.6.11-0	None	1SVX306AUP-2X31(R)*

*RoHS-3 REACH compliant assemblies of these part numbers are available upon request.
Upon request we can provide VITA 66/ VITA 67 connector modules installed in the backplane apertures.



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