

3U OPENVPX BACKPLANE ALIGNED WITH SOSA

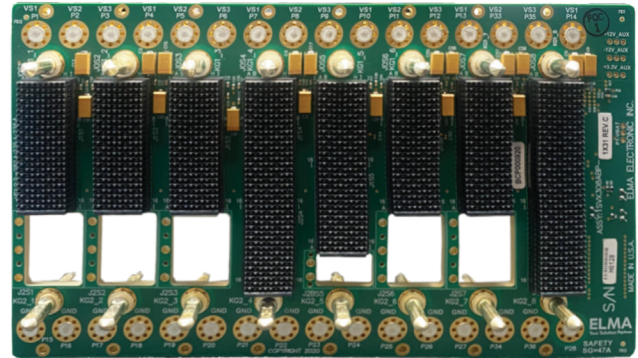
8-Slots with Optional VITA 66 & 67 connectors

DESCRIPTION

Designed in alignment with The Open Group® Sensor Open Standards Architecture™ Technical Standard, or SOSA™, this 3U SOSA backplane offers 8 PIC (Plug in Cards) slots to support the defense industry's hardware and software convergence initiatives per the DoD's Modular Opens Systems Approach (MOSA) (CMOSS (C5IR/EW Modular Open Suite of Standards)). It provides the foundation for high-performance mission-critical systems requiring lower lifecycle costs and rapid technology insertion. It enables complex, high speed signal processing systems with the latest optical fiber and RF connectivity as well as precision network timing (PNT), plus slot profiles for SBCs, switches, radial clock(s) and expansion.

The backplane supports high-speed signals on all data paths and VITA 67.3 connectors and VITA 66.5 optical connectors.

Developers can use the development backplane as configured or work with Elma to identify your specific profile configuration needs.



FEATURES

- Slot profiles in alignment with Snapshot 3 of the SOSA technical standard
- Eight SOSA PIC slots 3U VPX backplane
- Power studs
- Supports dual domain Ethernet switch 1/10/40 & 25/100
- PNT slot profile SLT3x-TIM-2S1U22S1U2U1H-14.9.2
- Expansion plane connection made from rear via RTM connectors using Meritec connectors, secondary payload expansion SLOT (physical slot #5) can connect to 4 primary payload expansion-slots
- All control and data plane links are designed for 25 Gbps data rates and support 100GBASE-KR4
- Maintenance serial ports routed to one header
- Matched length, low skew REF and AUX radial clocks
- IPMC header for external chassis manager

BOARD SPECIFICATIONS

- 24 layers
- 1 oz and ½ oz power and ground layers
- PCB Tachyon 100G
- PCB 0.212" thick

MECHANICAL SPECIFICATIONS

- 3U height
- 1 Switch slot, 1 Timing Slot and 6 Payload slots
- 5.067" tall x 8.770" wide

BENEFITS

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

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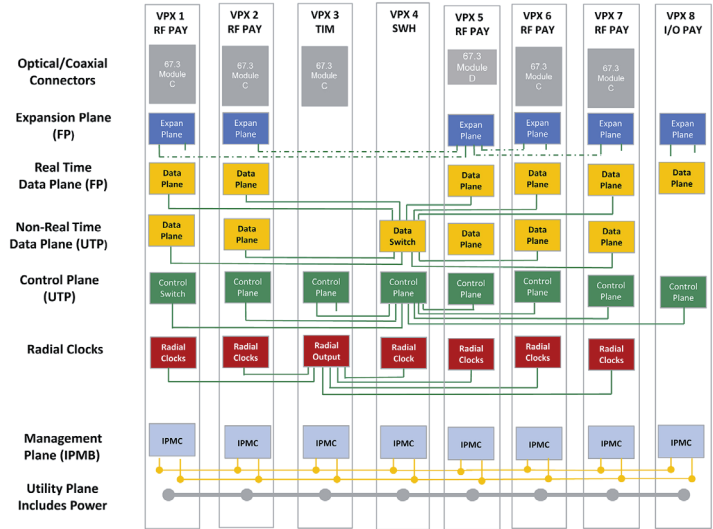
TOPOLOGY

BACKPLANE DESIGN

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

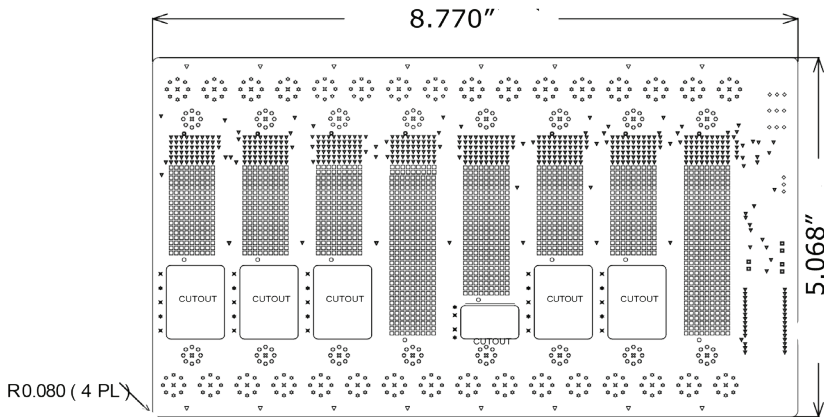
Slot profiles include:

- Slots 1,2,6 and 7: SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11
- Slot 3: SLT3x-TIM-2S1U22S1U2U1H-14.9.2
- Slot 4: SLT3-SWH-6F1U7U-14.4.14
- Slot 5: SLT3-PAY-1F1U1S1S1U1U4F1J-14.6.13
- Slot 8: SLT3-PAY-1F1F2U1T1U1T-14.2.16



LINE DRAWINGS

BACKPLANE DESIGN



VITA 66.5 OPTICAL AND 67.3 RF CONNECTOR EXAMPLES

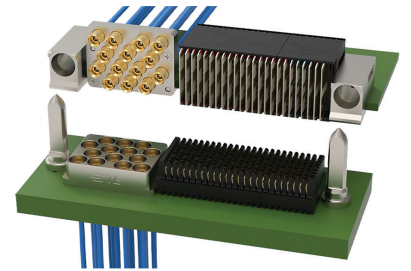
FOR USE IN BACKPLANE APERTURES



DOUBLE HYBRID



BACKPLANE

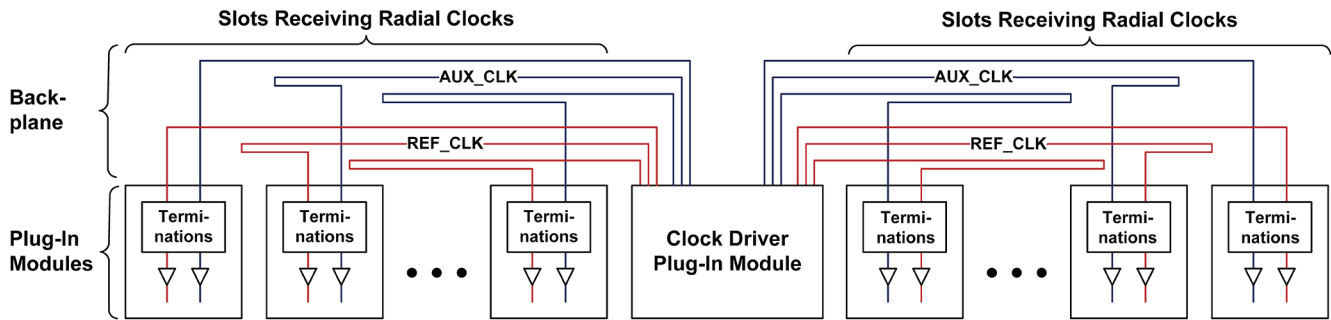


VITA67.3 C MODULE WITH 14 POS SMPM

PRECISE NETWORK TIMING

BACKPLANE DESIGN

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

**EXPANSION PLANE**

BACKPLANE DESIGN

Expansion Plane Connection made from the rear of the backplane via RTM connectors using Meritec cables.

APPLICATIONS

OpenVPX backplanes in embedded computing systems enable high speed data communication in critical defense and industrial applications including but not limited to:

- › 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

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RELATED PRODUCTS



- › Convection or conduction cooled load boards
- › Rear Transition Modules for I/O
- › Intel and ARM based Single Board Computers (SBCs)
- › Ethernet switches
- › 19" rackmount, rugged ATR and Small Form Factor enclosures and chassis platforms
- › Ruggedization programs
- › Cables, RF connectors, and optical connectors

ORDERING INFORMATION

Height	# Slots	Description	Switch Slot Profile	Payload Slots 1, 2, 6 & 7 Profile	Payload Slot 5 Profile	Timing Slot Profile	Part Number
3U	8	8-slots 25Gb backplane aligned to SOSA, with no VITA 66/67 modules installed	14.4.14	14.6.11-0	14.6.13-0	14.9.2-0	1SVX308ABP-1X31 (R)*
3U	8	8-slots 25Gb backplane aligned to SOSA, with no VITA 67.3 connector in slot 5, with 14 position SMPM connectors in Payload slots 1, 2, 6 & 7 and a 10 position SMPM connector in Timing slot 3	14.4.14	14.6.11-4	14.6.13-0	14.9.2-2	1SVX308ABP-9001(R)*
3U	8	8-slots 25Gb backplane aligned to SOSA, Slots 1, 2, & 3 with Amphenol SV Microwave SF9321-60086 (14 position SMPM) Slot 5 with TE 2313391-1(10-nanoRF+MT Ferrule hybrid) Slot 6 with TE 2378048-1(double nanoRF+MT Ferrule hybrid) Slots 1, 2, 5, 6, 7, and 8 with Meritec short rear housings and deployment rails	14.4.14	14.6.11-2	14.6.13-4	14.9.2-2	1SVX308ABP-9002(R)*

*RoHS-3 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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