DATA SHEET

3U OPENVPX BACKPLANE ALIGNED WITH SOSA™

5 slots with optional VITA 66 & 67 connectors

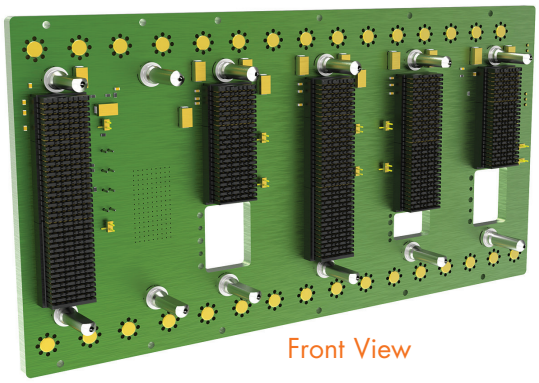
ELMA
Your Solution Partner

DESCRIPTION

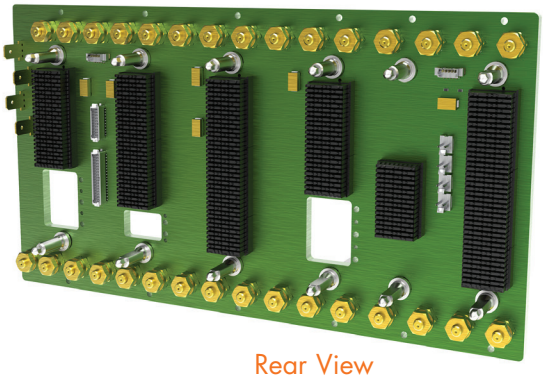
Designed in alignment with The Open Group® Sensor Open Systems Architecture™ Technical Reference Standard (SOSA), this 3U backplane offers 5 PIC (Plug in Card) slots to support the defense industry's hardware and software convergence initiatives per the DoD's Modular Opens Systems Approach (MOSA) and 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), and slot profiles for SBCs, switches, and payload 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.



Front View



Rear View

FEATURES

- Slot profiles in alignment with the SOSA technical standard
- Five SOSA PIC slots 3U OpenVPX backplane
- Unique rear facing partial slot for Expansion Plane cabling
- Backplane is designed for standalone use or is a standard option in the VITA 48.8 CompacFrame Air-Flow-Through Test and Development platform (39A05IZX6ZY3VCN0)
- Power studs
- Supports dual domain Ethernet switch 1/10/40 & 25/100
- PNT slot profile SLT3x-TIM-2S1U22S1U2U1H-14.9.2
- 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 one header
- Matched length, low skew REF and AUX radial clocks
- IPMC header for external chassis manager

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

SOSA™
Sensor Open Systems Architecture
MEMBER

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BOARD SPECIFICATIONS

- 16 layers
- 1 oz and ½ oz power and ground layers
- Low Dk/Df laminate built per IPC Class 2
- PCB 0.212" thick
- 3U height

MECHANICAL SPECIFICATIONS

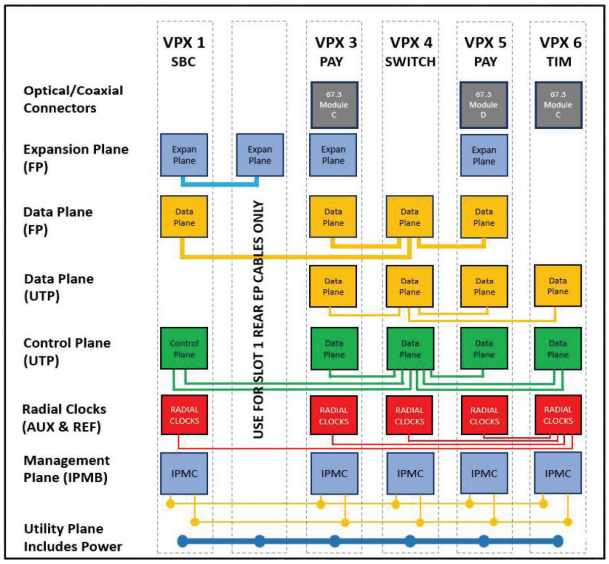
- 3U height
- 1 Switch slot, 1 Timing Slot and 4 Payload slots
- 5.067" tall x 6.770" wide

TOPOLOGY

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

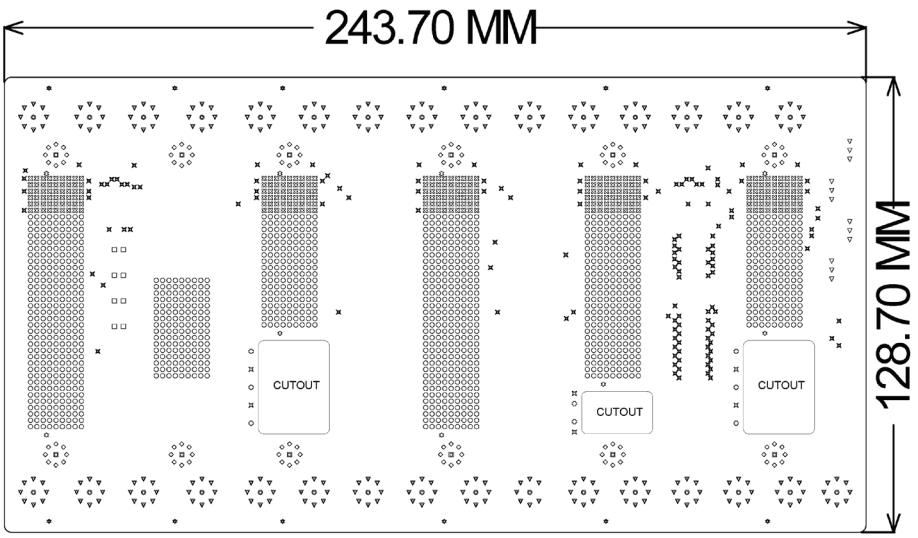
1SVX306ACP-1X31:

SLOT 1: SBC SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16
SLOT 3: PAYLOAD SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11
SLOT 4: SWITCH SLT3-SWH-6F1U7U-14.4.14
SLOT 5: PAYLOAD SLT3-PAY-1F1U1S1S1U1U4F1J-14.6.13
SLOT 6: TIMER SLT3x-TIM-2S1U22S1U2U1H-14.9.2



LINE DRAWINGS

BACKPLANE DESIGN



1SVX306APP-1X31

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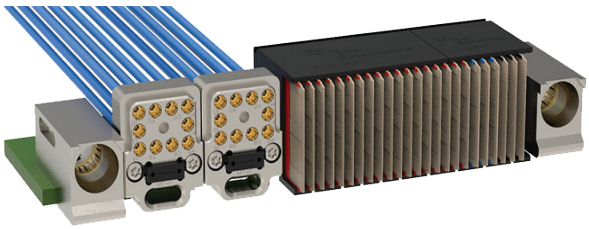
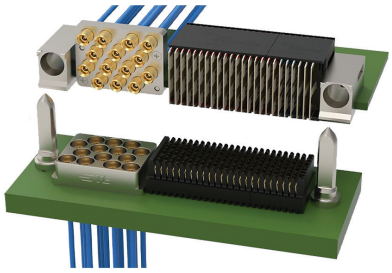
VITA 66.5 OPTICAL AND 67.3 RF CONNECTOR EXAMPLES

FOR USE IN BACKPLANE APERTURES



DOUBLE HYBRID

BACKPLANE

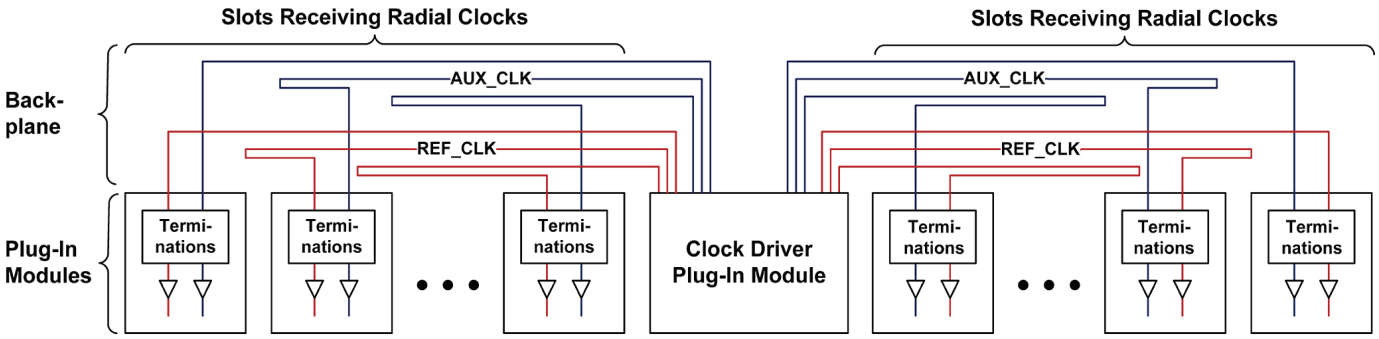


VITA 67.3 C MODULE WITH 14 POS SMPM

PRECISE NETWORK TIMING

BACKPLANE DESIGN

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



EXPANSION PLANE

BACKPLANE DESIGN

Expansion Plane connection links can be used with Meritec cables, between slots 1 & 2 on the available RTM pins.

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:

- 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)
- NVIDIA based, high performance GPGPU cards
- Cables, RF connectors, and optical connectors
- 19" rackmount, rugged ATR and Small Form Factor enclosures and chassis platforms

ORDERING INFORMATION

Height	# Slots	Description	Switch Slot Profile	Payload Slots 2, 5 & 6 Profile	Timing Slot Profile	Part Number
3U	5	5-slots 25Gb backplane aligned to SOSA, with 67.3 aperture in the payload and timing slot, three fat pipes (FP) on the data plane, and ultra-thin pipe (UTP) on data plane to the timing slot. Additional rear mounted RTM for Expansion Plane Cabling	14.4.14	14.6.11-3	14.9.2	1SVX306APP-1X31*

*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.

SOSA™ Sensor Open Systems Architecture MEMBER

MEMBER VITA Open Standards, Open Markets

Please contact our sales team for more details.

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