

Liquid Flow-Through (LFT) ATR Platform

VITA 48.4

DESCRIPTION

Increasingly power-hungry OpenVPX modules require a cooling solution guaranteed to keep the mission on course. From the experts in packaging for extreme environments comes the VITA 48.4 LFT field-deployable ATR platform.

Elma Electronic's newest rugged OpenVPX ATR platform is designed to accommodate boards requiring liquid flow-through (LFT) cooling per the VITA 48.4 standard.

VITA 48.4 establishes the mechanical design interface, outline and mounting requirements for 6U OpenVPX liquid-flow-through cooled plug-in modules within associated sub-racks. While the connector layout remains common with VITA 46, VITA 48.4 standard modules are cooled by liquid flowing through an integral heatsink. Circuit boards and electronic components are cooled more effectively as compared to other more traditional cooling methods such as air or conduction cooling alone. Quick disconnect coupling assemblies allow fluidic coupling to the chassis manifold.



Features

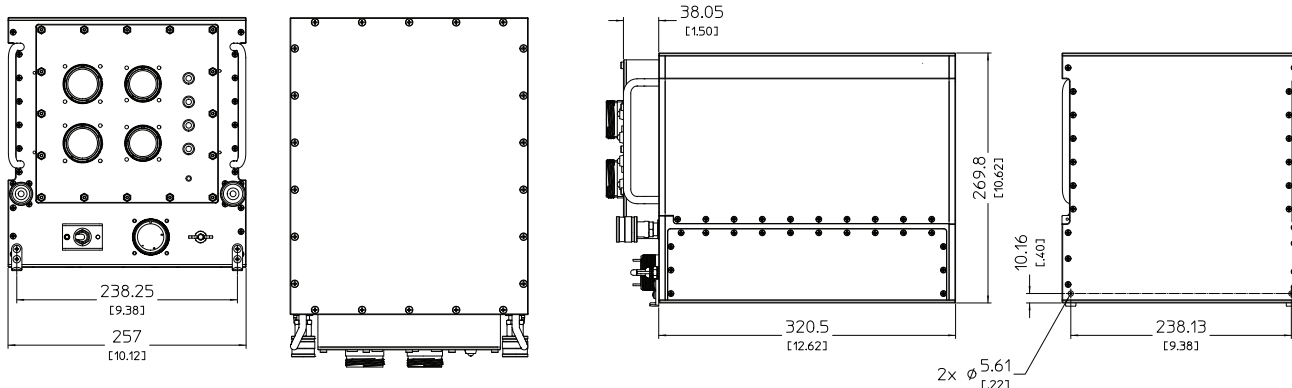
- 1 ATR tall short
- Rugged, bolted construction
- Liquid flow-through (LFT) cooling compliant to VITA 48.4
- 6U OpenVPX backplane with 6-slots on 1.2" pitch supports 300W/slot
- Configurable front I/O connectors on removable panel
- On/off power switch with guard and LED status indicators
- Filtered power input connector
- Individual card coolant flow rates are adjustable with selectable openings
- Supports dual VITA 62 power supplies
- VITA 46.11 compliant Shelf Manager option
- Designed to meet MIL-STD-461, MIL-STD-810, MIL-STD-1275

Backplane

Designed for data rates up to 10 Gbps, the backplane is designed to handle 300 Watts per slot. It features eight 6U slots on a 1.2" pitch. Clockable guide pins are included at each slot to allow for easier keying (angle rotation) without having to deal with the removal of the backplane from chassis. From left to right:

- Two VITA 62-compliant power supply slots
- Three 6U Payload slots with VITA 67.3c apertures in J3 & J6
- One Switch slot with VITA 67.3d aperture in J6b
- Two 6U Payload slots populated with all J1-J6 connectors

DRAWINGS



BACKPLANE DETAILS

The backplane routes two 40GBASE-KR4 fat pipes (FPs) from the switch slot to each payload slot on the Data Plane, two 10GBASEKR Ultra Thin Pipes (UTPs) from the switch slot to each payload slot on the Control Plane, two 40GBASE-KR4 double fat pipes (DFPs) in a ring fashion between the first 3 payload slots on the Expansion Plane.

The Backplane profile topology is shown below; each Slot profile is detailed at right.

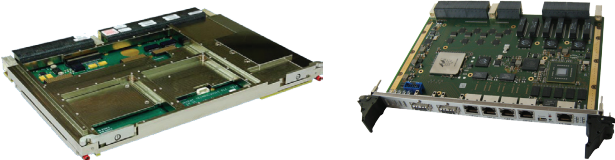
The order of the slot profiles, from left to right when looking at the front of the chassis

- VITA 62.0 Power
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- SLT6-PAY-4F1Q1H4U1T1S1S1TU2U2T1H-10.6.3-n
- SLT6-PAY-4F1Q1H4U1T1S1S1TU2U2T1H-10.6.3-n
- SLT6-PAY-4F1Q1H4U1T1S1S1TU2U2T1H-10.6.3-n
- SLT6-SWH-14F16U1U15U1J-10.8.1-n
- SLT6-PAY-4F1Q2U2T-10.2.1
- SLT6-PAY-4F1Q2U2T-10.2.1

ENVIRONMENTAL

	Operating	Storage / Transit
Temperature:	-40°C to +71°C	-55°C to +85°C
Altitude:	60,000ft (18,288m)	
Humidity:	0% to 95% non-condensing	5% to 95% non-condensing
Shock:	40g @ 11ms	
Vibration:	1g ² /Hz (RMS 12g) @ 15 to 2,000Hz	
Agencies:	Designed to meet MIL-STD-810F, MIL-STD-461E, MIL-STD-901D, MIL-STD-704 and RTCA DO-160	
Weight:	Approx: 12.5lbs	

RELATED PRODUCTS



- › 6U single board computers compliant with OpenVPX (VITA 65) or aligned to the SOSA Technical Standard.
- › A wide range of storage solutions; secure, rugged, encrypted, NAS, RAID
- › Blade level networking boards (fabric switches)
- › FPGA configurable I/O solutions
- › Ruggedization

ORDER INFORMATION

Please contact sales for complete ordering details.

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