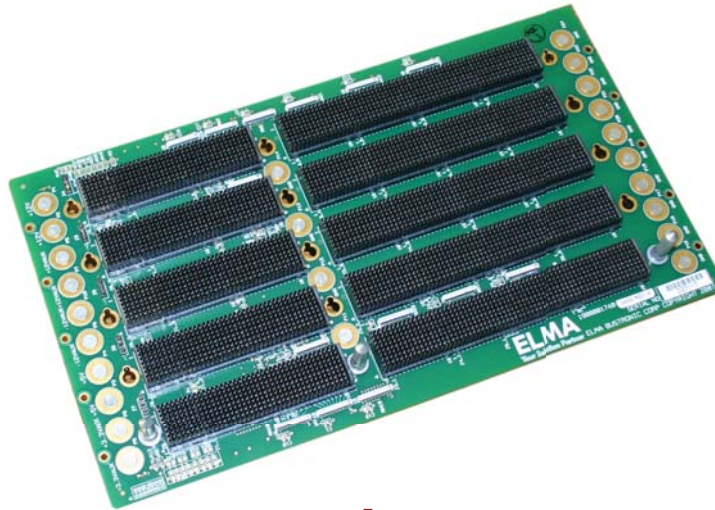


6U 5-Slot VPX Backplane



Description

VITA 46.0 is the core document for VPX and applies to all of the subsidiary documents. Therefore because our backplanes meet the requirements of VITA 46.0 they are designed to support all of the subsidiary documents for sRIO, PCI Express, Ethernet or Infiniband. Note that VITA 46.1 and 46.20 specify additional signals that are not present in a backplane unless specifically mentioned in its description.

While maintaining backward compatibility with legacy VME technology via preservation of the VMEbus 6U mechanical form factor and through-mapping of the current VMEbus signals to the VITA 46 connectors, the VITA 46 technology brings the following features to reality while maintaining ability to inter-operate with existing VME technology boards:

- Vastly increased high-speed serial I/O support for such needs as digital video, mass storage interconnects (e.g. SATA) and FPGA interconnects (e.g. RocketIO).
- Support for high-speed switched serial fabrics with performance up to 10 Gbps.
- Support for cost-reducing two-level maintenance by providing an Electrostatic Discharge (ESD) protection mechanism and board covers.
- Support of distributed switching that eliminates the need for dedicated switch card slots.
- Support for VITA 42 mezzanine sites with high speed I/O.

Elma is the leader in VITA 46/48 VPX products. Our experts developed the industry's first VPX backplane and proposed the first VME pinouts to the VITA 46 subcommittee. Since then, Elma has developed various VPX configurations with and without legacy VME64x slots.

Features

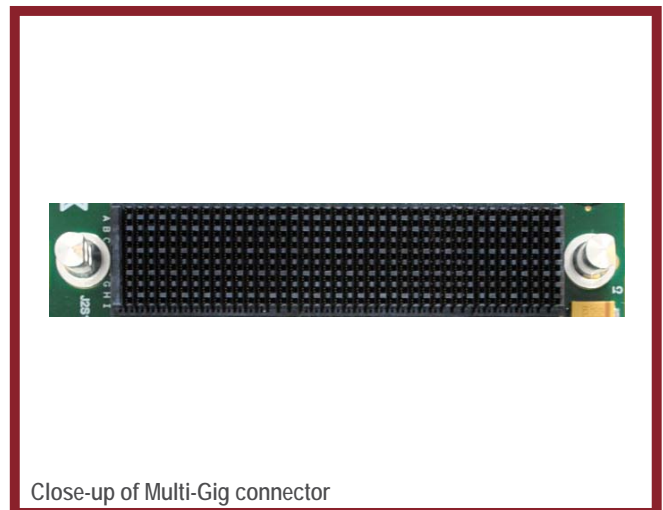
- Compliant to the latest VITA 46 Specifications
- High-speed Multi-gig connector in mesh topology
- Rugged Eurocard form factor in 6U height
- Provides built in ESD ground protection in every slot
- Signal Integrity studies available upon request
- 7 slot version with 5+2 (5 VPX, 2 legacy VME64x) is available

Board Specifications

- 20 layer stripline design
- 2 oz. power and ground
- PCB FR-4 or equivalent
- PCB .169" thick

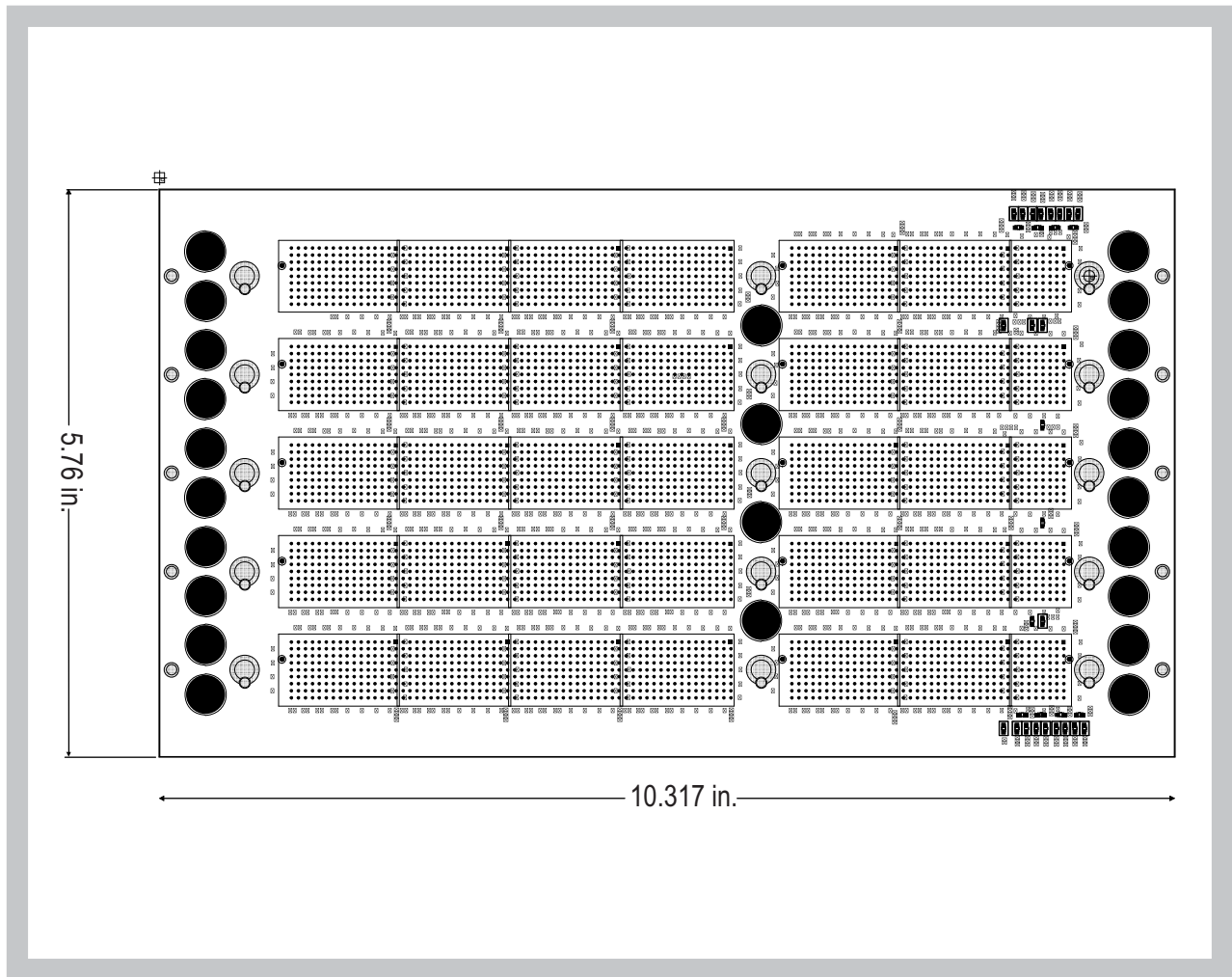
Mechanical Specifications

- 6U height
- 5 slots
- MultiGig RT-2 connectors

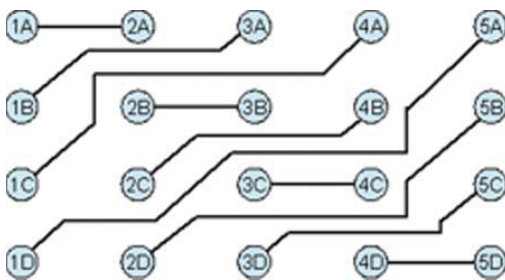


6U 5-Slot VPX Backplane

Line Drawing



Connectivity Chart



Order Information

Height

Total Slots

Part Number

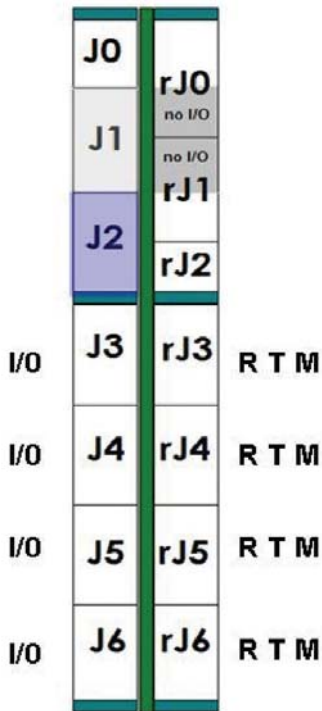
6U

5

101VPX605M-1X10R

6U 5-Slot VPX Backplane

Connector Positions



J0 Signal Assignments

	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	Vs1	Vs1	Vs1	Vs1	No Pad	Vs2	Vs2	Vs2	Vs2
2	Vs1	Vs1	Vs1	Vs1	No Pad	Vs2	Vs2	Vs2	Vs2
3	Vs3	Vs3	Vs3	Vs3	No Pad	Vs3	Vs3	Vs3	Vs3
4	GND	SM2	SM3	GND	-12V_Aux	GND	SYSRESET*	NVMRO	GND
5	GND	GAP*	GA4*	GND	3.3V_Aux	GND	SM0	SM1	GND
6	GND	GA3*	GA2*	GND	+12V_Aux	GND	GA1*	GA0*	GND
7	TCK	GND	GND	TDO	TDI	GND	GND	TMS	TRST*
8	GND	REF_CLK-	REF_CLK+	GND	GND	AUX_CLK-	AUX_CLK+	GND	GND

J1/P1 Signal Assignments

Plug-In Module P1	Row G	Row F	Row E		Row D	Row C	Row B		Row A
			Even	Odd			Even	Odd	
Bplane J1	Row i	Row h	Row g	Row f	Row e	Row d	Row c	Row b	Row a
1	RES_BUS_SE	GND	GND-J1	DP01-T0-	DP01-T0+	GND	GND-J1	DP01-R0-	DP01-R0+
2	GND	DP01-T1-	DP01-T1+	GND-J1	GND	DP01-R1-	DP01-R1+	GND-J1	GND
3	P1-VBAT	GND	GND-J1	DP01-T2-	DP01-T2+	GND	GND-J1	DP01-R2-	DP01-R2+
4	GND	DP01-T3-	DP01-T3+	GND-J1	GND	DP01-R3-	DP01-R3+	GND-J1	GND
5	SYS_CON*	GND	GND-J1	DP02-T0-	DP02-T0+	GND	GND-J1	DP02-R0-	DP02-R0+
6	GND	DP02-T1-	DP02-T1+	GND-J1	GND	DP02-R1-	DP02-R1+	GND-J1	GND
7	Reserved	GND	GND-J1	DP02-T2-	DP02-T2+	GND	GND-J1	DP02-R2-	DP02-R2+
8	GND	DP02-T3-	DP02-T3+	GND-J1	GND	DP02-R3-	DP02-R3+	GND-J1	GND
9	UD	GND	GND-J1	DP03-T0-	DP03-T0+	GND	GND-J1	DP03-R0-	DP03-R0+
10	GND	DP03-T1-	DP03-T1+	GND-J1	GND	DP03-R1-	DP03-R1+	GND-J1	GND
11	UD	GND	GND-J1	DP03-T2-	DP03-T2+	GND	GND-J1	DP03-R2-	DP03-R2+
12	GND	DP03-T3-	DP03-T3+	GND-J1	GND	DP03-R3-	DP03-R3+	GND-J1	GND
13	UD	GND	GND-J1	DP04-T0-	DP04-T0+	GND	GND-J1	DP04-R0-	DP04-R0+
14	GND	DP04-T1-	DP04-T1+	GND-J1	GND	DP04-R1-	DP04-R1+	GND-J1	GND
15	UD	GND	GND-J1	DP04-T2-	DP04-T2+	GND	GND-J1	DP04-R2-	DP04-R2+
16	GND	DP04-T3-	DP04-T3+	GND-J1	GND	DP04-R3-	DP04-R3+	GND-J1	GND

J2/P2 Signal Assignments

J2-J6 Signal Assignments = User Defined

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- System Platforms – need a chassis for your backplane?
- VPX Embedded Computing Products – SBCs, Switches, Storage, and More



Did you know we also offer with this VPX backplane?

- VPX Extenders, load boards, RTMs, test modules
- Thermal or backplane simulation/test, paint/silkscreen, customization, integration

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Backplanes

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