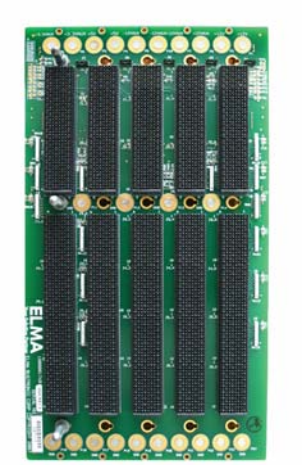
VITA 46 BACKPLANES

ELMA
Your Solution Partner



Features

- Compliant to the lastest VITA 46 Specifications
- High-speed Multi-gig connector in mesh topology
- Supports redundant meshes, pipeline topologies and a cluster computing
- High flexibility allowing applications to dictate the necessary fabric mapping
- Provides built in ESD ground protection in every slot
- RoHS compliant versions optional
- 3U versions also available
- Signal Integrity studies available upon request
- High-grade laminate material optional

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
- Multi-Gig RT-2 7-row P0 connectors

Description

VPX uses the high-speed multi-gig connector in a mesh topology, vastly increasing the potential bandwidth of the system. 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:

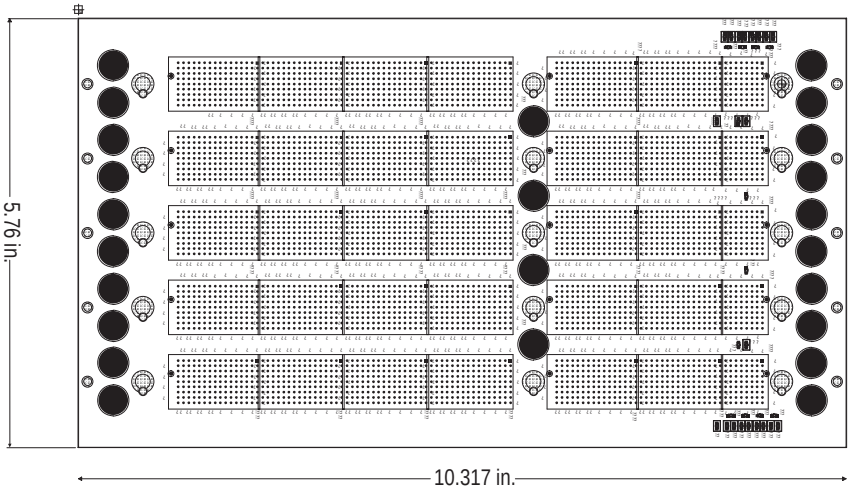
- Vastly increased high-speed serial I/O support for such needs as digital video, mass storage interconnects (e.g. SATA) and FPGA interconnects (e.g. RocketIO).
- Support for high-speed switched serial fabrics with performance up to 10 Gbps.
- Support for cost-reducing two-level maintenance by providing 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.

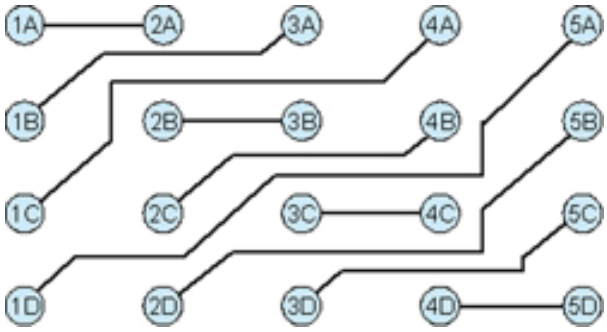
VPX presents design challenges with higher layer-count backplanes, and more demanding power and cooling requirements. Elma tackles these problems with signal integrity analysis, thermal simulation and testing.

Elma's creative routing techniques reduce layer counts, preventing long via stubs that hamper signal continuity. To optimize VPX backplane performance, we often use low-dielectric laminate materials like FR408 or Nelco 4000-13SI, depending on data rates and performance requirements.

Line Drawing



Connectivity Chart



Order Information

Height	Total Slots	Part Number
6U	5	1900001710-0000R5