

Velox Highspeed Backplane

Modular Backplane Connector System V

elox® is a modular connector system for highspeed backplane applications. It was specifically designed for markets with high performance requirements. The Velox® product series meets the demanding requirements of VITA 46 systems. Four different types are available, and customized assembly is possible. This gives developers more flexibility when designing circuit board layouts. In addition, a 1.27- μm gold surface ensures the durability of the system.



Features

- 10 Gbps
- Robust design
- Tested in accordance with VITA 46
- High durability, 200 mating cycles
- “Heavy gold” plating
- Internal contacts
- Modular connector system
- Customized contact assembly

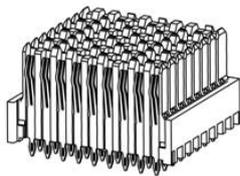
Applications

- Military
- Aerospace industry
- Systems for high loads
- Telecommunications/data transfer rate

Features



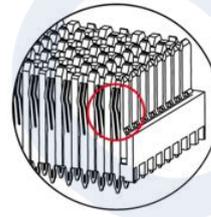
The Velox® connectors feature a robust design including a gold surface of 1.27 μm (50 μin) thickness. The contacts are on the inside, giving them additional protection. All these features contribute to a very high durability of at least 200 mating cycles. For this reason, Velox® is particularly suitable for highspeed backplane applications with a data transfer rates of 10 Gbps. The high resistance of the connectors has already been proven in tests carried out in accordance with the VITA 46 standard.



Velox 8-left
detail overview



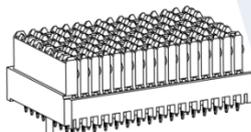
double beam
contact



1,27 μm Au
over Ni



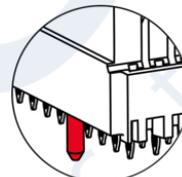
press-fit zone
eye of the
needle



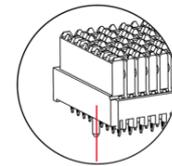
Velox 16-left
detail overview



pinless
surface



guiding post



LCP

The VITA 46 Specification:

The VITA 46 specification (or VPX) describes a new highspeed connector system. It transfers Gigabit Ethernet, PCI Express, Serial RapidIO, and InfiniBand, among others. The well-known 6HE and 3HE European PCB form factors from VMEbus are supported in order to ensure maximum compatibility. This also makes hybrid systems a possibility. The VITA 46 standard was developed by VITA mainly for computer systems that need to be able to withstand high stresses, for example, military applications.

Four different designs can be combined with each other in a modular way. Velox® connectors are very flexible due to the different numbers of contacts. This feature is underlined by the possibility to equip the variants individually.

Developer view:

The Velox® connector system was developed by ept specifically for VITA 46 systems (also called VPX systems). Velox® comprises four different types of connectors with a modular layout. Customers can specify the contact counts themselves. Fully pre-assembled connectors are available with 72 or 144 contacts, or the contact count can be specified individually. This gives developers added flexibility when designing their circuit boards. The system is specifically designed for applications with high requirements on performance. The system is extremely resilient thanks to its gold plating and the contacts being located inside of the housing.