

Velox® 8-left and 16-left

### Velox® for VPX

ept's **Velox®** is a modular connector system for high speed backplane applications specifically designed for defense industry and other markets that require high performance systems.

**Velox®** is designed to meet the harsh requirements of VITA 46 systems. The product series is available in four different types with the flexibility for customized pin assembly allowing designers to create a flexible backplane design.

The 1.27  $\mu\text{m}$  (50 micro inch) heavy gold plating and a rated durability of at least 200 mating cycles ensure a high-speed signal transmission during the entire lifetime of a system.

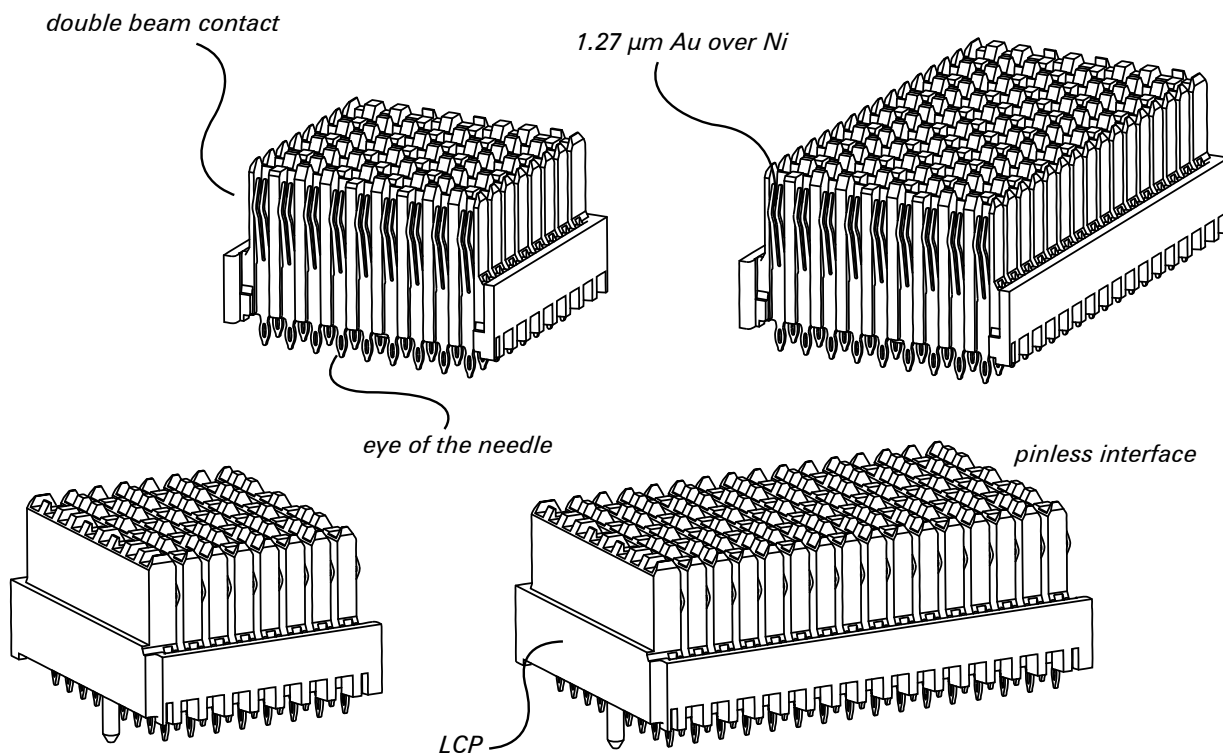
### Key Features

- 10 Gbit/s
- Rugged design
- Tested in accordance to VITA 46
- Durability rated to 200 cycles
- Heavy gold plating
- Backplane connector with "pinless" interface
- Modular connector system
- Custom loaded designs

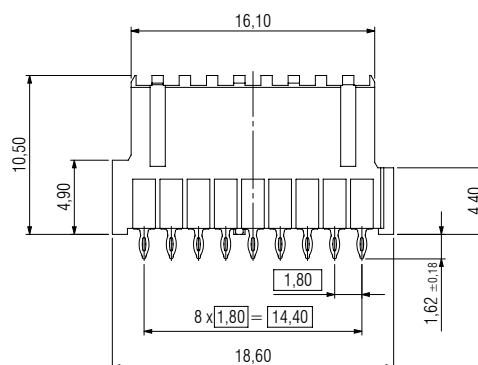
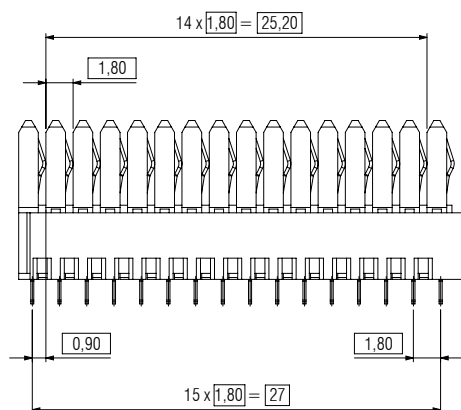
### Applications

- Military
- Aerospace
- Ruggedized systems
- Telecom / Datacom





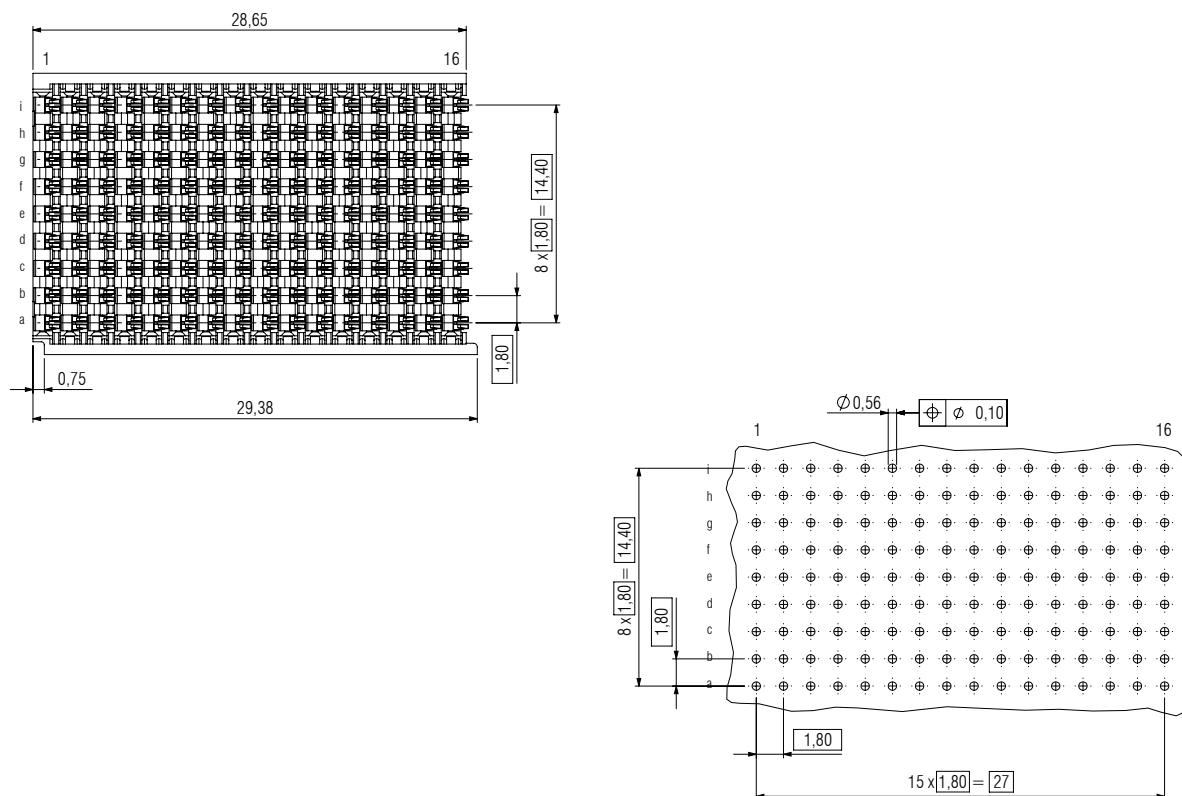
Velox®	
High-speed Backplane Connector for VPX	
Specification	VITA 46
No. of contacts	72 / 144
Termination technology	Press-fit
Operating temperature range	-55°C to +105°C
Insulator material	LCP, UL 94-V0
Contact material	Phosphor Bronze
Plating	1.27 µm Au in contact area over Ni, SnPb on press-fit zone
Grid	1.8 mm
Mating force per pin	max. 0.75 N
Separating force per pin	min. 0.15 N
Durability	200 mating cycles
Operational current	1.0 A (< 30°C)
Operating voltage	50 V AC peak or DC
Contact resistance	max. 80 mΩ (acc. to IEC 512-5)
Insulation resistance	min. 1000 MΩ (acc. to IEC 512-5)
Test voltage	500 V (AC/DC)
Data transfer rate	10 Gbit/s
Packaging	Tray
Flammability	UL pending
Environment	RoHS compliant



Velox® center, Dimensions in mm

		PCB Hole Specifications		
		Nominal Hole Ø 0.56 mm		
			imm. Sn printed circuit boards	Ni, Au printed circuit boards
	A	PCB thickness	min 1.4 mm	min 1.4 mm
	B	Plated hole	0.56 ± 0.05 mm	0.56 ± 0.05 mm
	C	Drill hole	0.65 ± 0.02 mm	0.65 ± 0.02 mm
	D	Cu plating	min. 25 µm	min. 25 µm
	E	Plating	max. 1.5 µm imm. Sn	0.05 - 0.2 µm Au; more than 2.5 - 5 µm Ni
	F	Annular ring	min. 0.1 mm	min. 0.1 mm

Plated through-hole according to IEC 60352-5



Velox® center, Dimensions in mm

	Velox High-speed Backplane Connectors			
	8-left	center	16-right	16-left
	Part number			
fully loaded (No. of contacts)	308-52200-41 (72 contacts)	308-50100-41 (144 contacts)	308-51100-41 (144 contacts)	308-52100-41 (144 contacts)
custom loaded	on request	different versions available	on request	on request

**On request**

– Different custom loaded version

**Accessories**

– Press-fit tool  
– Support tool

**Note**

– For detailed information  
see customer drawing