RT2 High-Speed Backplane Connectors for VPX (VITA 46)

VITA 46 · 6.25 Gbps (to 10 Gbps) · press-fit



Data rate	6.25 Gbps (10 Gbps capable)
Impedance	100 ± 15 Ω
Crosstalk	≥ 30 dB at 100 ps rise
Temperature	−55 to +125 °C
Mating cycles	200

Key features

- VITA 46 pinless backplane interface
- Controlled 100 ± 15 Ω differential impedance
- 6.25 Gbps, expandable to 10 Gbps
- Differential, single-ended and mixed modules; power and guide modules
- Press-fit, solderless termination
- LCP housing, UL94 V-0

Specifications

Signal integrity

Parameter	Value	Condition
Differential impedance	100 ± 15 Ω	
Crosstalk	≥ 30 dB	100 ps rise time
Data rate	0–6.25 Gbps	

Electrical

Parameter	Value	Condition
Withstanding voltage	500 V	Power and signal
Contact resistance	≤ 10 mΩ / ≤ 85 mΩ	Power / signal
Insulation resistance	≥ 5000 MΩ / ≥ 1000 MΩ	Power / signal
Current	2.5 A / 1 A	Power / signal, per circuit

Mechanical and environmental

Parameter	Value	Condition
Durability	200 mating cycles	
Sine vibration	10–2000 Hz, 20 g	
Random vibration	0.2 g²/Hz	
Shock	294 m/s², half-sine, 11 ms	

Mechanical and environmental		
Parameter	**Value**	**Condition**
Operating temperature	−55 to +125 °C	
Salt spray	48 h	
Flammability	UL94 V-0	
Materials	LCP housing; copper alloy contacts, selective gold and tin plating	

Standards

- **VITA 46 (interface)** — VPX backplane.

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