AirMax VSe® 25GB/S BACKPLANE CONNECTOR SYSTEM

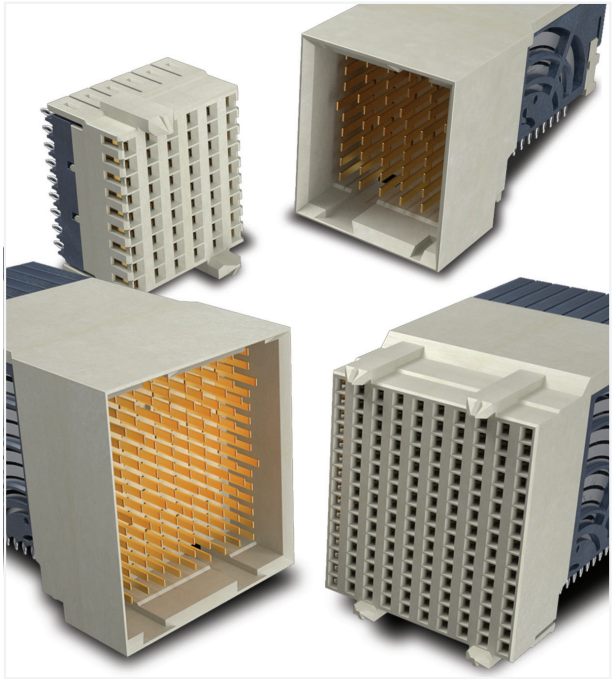
OVERVIEW

Next-generation AirMax VSe® connectors provide a migration path for up to 25Gb/s per differential pair with the flexibility of an open pin field design. The connectors also feature backwards mating-compatible interfaces to existing AirMax VS® connectors with minimal changes to connector footprints.

The connectors combine FCI technologies for a shieldless design with no metallic plates and closely edge-coupled differential pairs with innovative design improvements to yield low loss and low crosstalk.

Right angle receptacles and right angle headers will support backplane, midplane or coplanar applications.

The mating-compatible interfaces and capability to preserve critical pin assignments can provide opportunities for cost savings as new or upgraded equipment is deployed. For example, a backplane or chassis can be designed to allow the installation and continued use of legacy daughter cards, line cards or blades that are already in the field as well as new or future higher-speed module cards.



FEATURES	BENEFITS
• Provides a migration path for up to 25Gb/s per differential pair	• Enables users to upgrade systems for higher performance in the same form factor
• Shieldless design with closely coupled pairs	• Cost-effective solution yields low XT and Insertion Loss
• Backward mateable to existing AirMax VS® and AirMax VS2® designs	• Fall in upgrade to previous generation systems
• 3, 4 and 5 pair backplane and coplanar versions are available	• Same product covers a wide range of customer applications
• Hard metric design practice	• Can mix-and-match with other metric power and guidance components to create a system precisely

TECHNICAL INFORMATION

MATERIALS

- Contacts: High performance Copper Alloy
- Contact Finish:
  - Performance-based plating at separable interface (Telcordia GR-1217-CORE Central Office)
  - Tin over Nickel on press-fit tails
  - Tin-lead option
- Housings: High Performance Thermoplastic, UL94-V0

ELECTRICAL PERFORMANCES

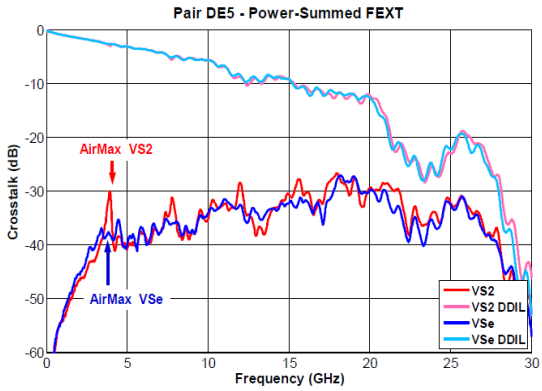
- Contact Resistance: ≤60 mΩ initial in backplane application, ≤120 mΩ initial in coplanar application
- Current Rating (with ≤30°C temperature rise above ambient): 0.5 A/contact with all contacts powered
- Insertion Loss Performance: see graph below
- Crosstalk Performance: see graph below

ENVIRONMENTAL

- Telcordia GR-1217-CORE Central Office qualification passed

MECHANICAL PERFORMANCE

- Durability: 200 cycles
- Mating Force: 0.50N max./contact
- Unmating Force: 0.15N min./contact
- Average Compliant Pin Insertion Force/ pin:
  - 0.4mm PCB hole: 15N max.
  - 0.5mm PCB hole: 30N max.



SPECIFICATIONS

- Product: GS-12-0956
- Application: GS-20-0305

APPROVALS AND CERTIFICATIONS

- UL approved

PACKAGING

- Trays or Tubes

TARGET MARKETS/APPLICATIONS

- Communications
  - Switches
  - Routers
  - Access
  - Optical Transmission
  - Wireless Base Stations
- Data
  - Servers
  - Switches
  - Storage
- Industrial & Instrumentation
  - Test & Measurement
- Medical

For more information,
please contact: Communications@fci.com
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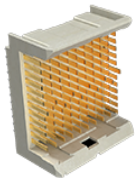
Disclaimer
Please note that the above information is subject to change without notice.

PART NUMBERS

AirMax VSe® TRADITIONAL MOTHER–DAUGHTER BOARD CONNECTORS

Product Variation			2.0mm Column Pitch		Differential Impedance
			Mating Connector System		
Pairs	Columns	Differential Pairs	Vertical Header (2 Wall)	Right Angle Receptacle	
3	6	18	10116601–101LF	10115910–101LF	100 OHMS
	8	24	10129146–101LF	10122263–101LF	
	10	30	10130519–101LF	10124432–101LF	
4	6	24	10130521–101LF	10130562–101LF	
	8	32	10130531–101LF	10130563–101LF	
	10	40	10117992–101LF	10115911–101LF	
5	8	40	10130530–101LF	10130564–101LF	
	10	60	10116602–101LF	10115913–101LF	

Right Angle Receptacle



Vertical Header (2 Wall)

AirMax VSe® INVERSE MOTHER–DAUGHTER BOARD CONNECTORS

Product Variation			2.0mm Column Pitch		Differential Impedance
			Mating Connector System		
Pairs	Columns	Differential Pairs	Vertical Receptacle	Right Angle Header (4 Wall)	
3	6	18	10120757–101LF	10119886–101LF	100 OHMS
	8	24	10120758–101LF	10122919–101LF	
	10	30	10120759–101LF	10124451–101LF	
4	6	24	10120764–101LF	10130569–101LF	
	8	32	10120765–101LF	10124864–101LF	
	10	40	10120766–101LF	10120001–101LF	
5	8	40	10120771–101LF	10130570–101LF	
	10	60	10120773–101LF	10120009–101LF	

Right Angle Header (4 Wall)

Vertical Receptacle

AirMax VSe® COPLANAR CONNECTORS

Product Variation			2.0mm Column Pitch		Differential Impedance
			Mating Connector System		
Pairs	Columns	Differential Pairs	Right Angle Receptacle	Right Angle Header (4 Wall)	
3	6	18	10115910–101LF	10119886–101LF	100 OHMS
	8	24	10122263–101LF	10122919–101LF	
	10	30	10124432–101LF	10124451–101LF	
4	6	24	10130562–101LF	10130569–101LF	
	8	32	10130563–101LF	10124864–101LF	
	10	40	10115911–101LF	10120001–101LF	
5	8	40	10130564–101LF	10130570–101LF	
	10	60	10115913–101LF	10120009–101LF	

Right Angle Header (4 Wall)

Right Angle Receptacle

* AirMax VSe® parts all have GXT™ plating and 0.4mm small press–fit tails

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For more information,
please contact: Communications@fci.com
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