AirMax VS2® BACKPLANE CONNECTOR SYSTEM

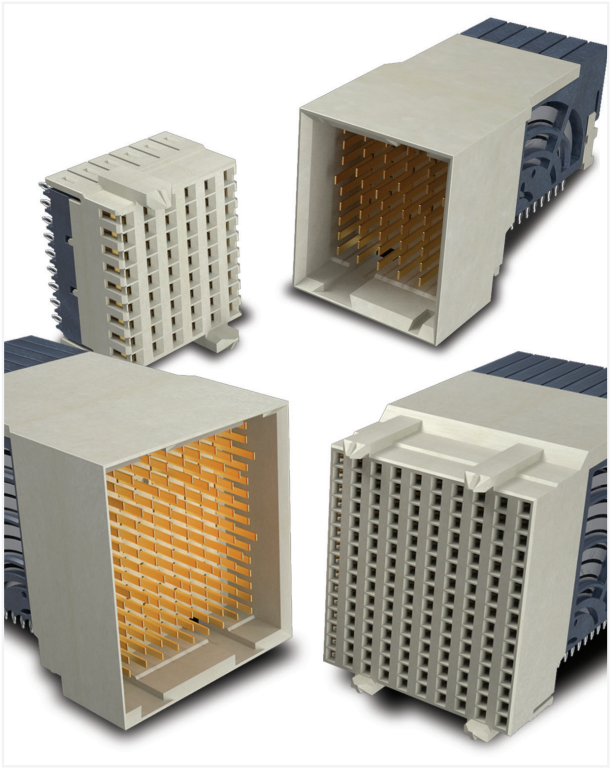
OVERVIEW

AirMax VS2® connectors provide a migration path from AirMax VS® for speeds up to 20Gb/s, providing margin of safety for typical 802.3ap system performance with the flexibility of an open pin field design. The connectors leverage AirMax VS® and VSe® design features and technology to achieve improved signal integrity and mechanical attributes compared to AirMax VS® connectors.

The connector utilizes FCI technology for a shieldless design with no metallic plates and closely coupled differential pair design to yield low loss and low crosstalk.

AirMax VS2® connectors are mating-compatible to both AirMax VS® and AirMax VSe® connectors and require no changes to connector PCB footprints. The mating-compatible interfaces and capability to preserve critical pin assignments can provide opportunities for cost savings as new and 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.

Right angle and vertical receptacles and headers support backplane, midplane and coplanar applications.



FEATURES

BENEFITS

FEATURES	BENEFITS
• Provides a migration path to 20Gb/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 VS and VS2 designs	• Drop 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
• Available with 0.5mm or 0.4mm compliant pins	• 0.5mm vias provide a drop-in replacement for VS parts • Improved SI with the 0.4mm tails, same as VSe
• Hard metric design practice	• Can mix-and-match with other metric power and guidance components to create the precise system configuration that is needed

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, 94-V0
- Plating GXT+™

ELECTRICAL PERFORMANCES

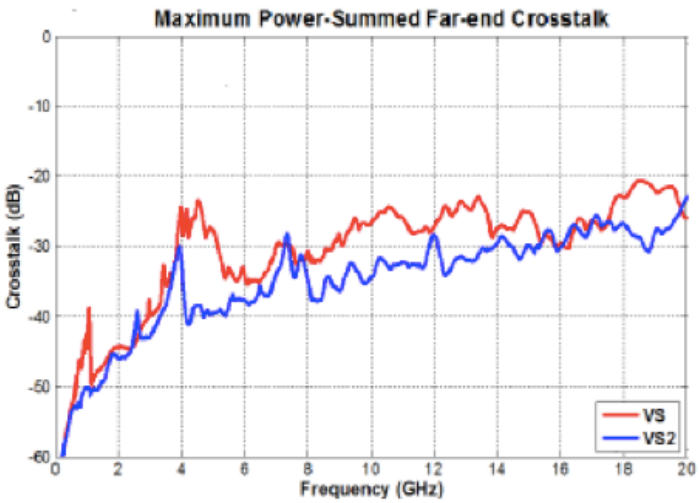
- Contact Resistance: ≤60 mΩ initial in backplane application, ≤120 mΩ initial in coplanar application
- Current Rating (with ≤30°C temperature rise above ambient): 0.5 A/contact with all contacts powered
- Insertion Loss Performance: see graph below
- Crosstalk Performance: see graph below

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,
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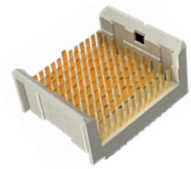
PART NUMBERS

AirMax VS2® TRADITIONAL MOTHER–DAUGHTER BOARD CONNECTORS 0.5mm PTH PRESS–FIT*

Product Variation			2.0mm Column Pitch		Differential Impedance
			Mating Connector System		
Pairs	Columns	Differential Pairs	Vertical Header	Right Angle Receptacle	
3	6	18	10122769–101LF	10122643–101LF	100 OHMS
	8	24	10127937–101LF	10124355–101LF	
	10	30	10127939–101LF	10124420–101LF	
4	6	24	10130556–101LF	10130565–101LF	
	8	32	10130557–101LF	10130566–101LF	
	10	40	10122770–101LF	10122655–101LF	
5	8	40	10130558–101LF	10128702–101lf	
	10	50	10122771–101LF	10122665–101LF	

Right Angle Receptacle



Vertical Header
(2 Wall)

AirMax VS2® INVERSE MOTHER–DAUGHTER BOARD CONNECTORS 0.5mm PTH PRESS–FIT*

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	10124469–102LF	10123543–101LF	100 OHMS
	8	24	10125811–102LF	10124408–101LF	
	10	30	10127116–102LF	10124422–101LF	
4	6	24	10127117–102LF	10125538–101LF	
	8	32	10126796–102LF	10125530–101LF	
	10	40	10125559–102LF	10123536–101LF	
5	8	40	10127118–102LF	10128706–101LF	
	10	50	10124470–102LF	10123529–100LF	

Right Angle Header
(4 Wall)

Vertical Receptacle

AirMax VS2® COPLANAR CONNECTORS 0.5mm PTH PRESS–FIT*

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	10122643–101LF	10123543–101LF	100 OHMS
	8	24	10124355–101LF	10124408–101LF	
	10	30	10124420–101LF	10124422–101LF	
4	6	24	10130565–101LF	10125538–101LF	
	8	32	10130566–101LF	10125530–101LF	
	10	40	10122655–101LF	10123536–101LF	
5	8	40	10128702–101LF	10128706–101LF	
	10	50	10122665–101LF	10123529–101LF	

Right Angle Header
(4 Wall)

Right Angle Receptacle

*0.5mm standard press–fit pin is the same as the standard AirMax VS® connectors

For more information,
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