

AIRMAX VSe™ HIGH SPEED BACKPLANE CONNECTORS

Enable High Speed Differential Signaling at up to 20 Gb/s

DESCRIPTION

Next-generation AirMax VSe connectors provide a migration path for up to 20 Gb/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 shield-less design with no metallic plates and closely edge-coupled differential pairs with innovative design improvements to yield low loss and crosstalk.

Right-angle receptacles and right-angle headers will support backplane, midplane, coplanar or orthogonal midplane 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 AirMax® system migration path for up to 20 Gb/s per differential pair
- FCI technologies for a shield-less design with no metallic plates and closely edge-coupled differential pairs combined with innovative design improvements yield low loss and crosstalk
- Fully backwards mating-compatible interfaces to existing AirMax VS® connectors with minimal changes to connector PCB footprints
- Maintains pin assignment flexibility of AirMax VS open pin field design
- Connectors with 3, 4 or 5 signal pairs/column will enable backplane or coplanar applications
- Available power and guide modules complement signal connector offering
- Compatible with Hard Metric equipment design practice

TARGET MARKETS / APPLICATIONS

- Communications
 - Switches
 - Routers
 - Access (xDSL, CMTS)
 - Optical Transport / Transmission
 - Wireless Base Stations
- Data
 - Servers
 - Storage Systems
- Industrial
- Medical
- Test & Measurement



TECHNICAL SPECIFICATIONS (PRELIMINARY)

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 on standard lead-free products. Tin-lead option available upon request.
- Housings: High temperature thermoplastic, UL-94-V0

MECHANICAL PERFORMANCE

- Durability: 200 cycles
- Mating force: 0.60 N maximum/contact
- Unmating force: 0.15 N minimum/contact
- Compliant pin insertion force: right-angle headers or right-angle receptacles: 11 N maximum per pin

ENVIRONMENTAL

- Telcordia GR-1217-CORE Central Office qualification pending

PRODUCT SPECIFICATIONS

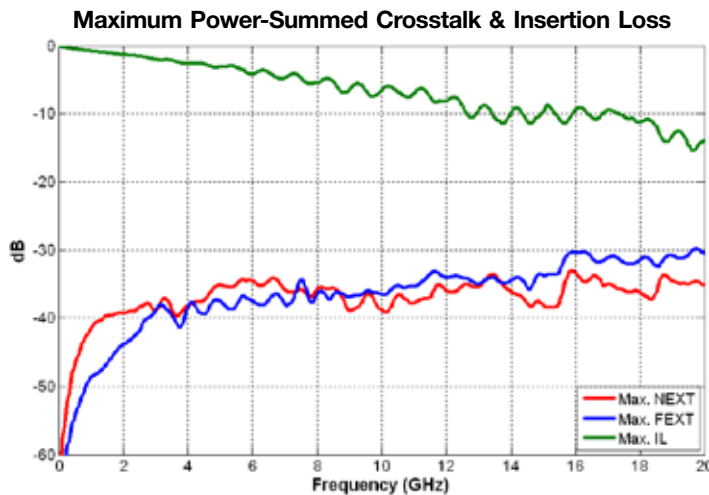
- Product specification: GS-12-0956
- Application specification: GS-20-0305

APPROVALS & CERTIFICATIONS

- UL and CSA approvals pending

ELECTRICAL PERFORMANCE

- Contact resistance: $\leq 60 \text{ m}\Omega$ initial in backplane application, $\leq 120 \text{ m}\Omega$ initial in coplanar application
- Current rating (with $\leq 30 \text{ }^\circ\text{C}$ temperature rise above ambient): 0.5 A/contact with all contacts powered
- Insertion loss performance: see below
- Crosstalk performance: see below



PART NUMBERS

DESCRIPTION

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	LIMITED PRODUCTION	MASS PRODUCTION
Right-Angle Receptacle: 3 Pairs/column x 6 columns (18 differential pairs) on 2mm column pitch	10115165	10115910
Right-Angle Receptacle: 4 Pairs/column x 10 columns (40 differential pairs) on 2mm column pitch	10115015	10115911
Right-Angle Receptacle for Orthogonal Midplane: 4 Pairs/column x 4 columns (16 differential pairs) on 4.2mm column pitch	10115642	10115642
Right-Angle Receptacle: 5 Pairs/column x 10 columns (50 differential pairs) on 2mm column pitch	10115627	10115913
Right-Angle Header: 3 Pairs/column x 6 columns (18 differential pairs) on 2mm column pitch	10115608	10119886

For additional technical information visit www.fciconnect.com/highspeed or contact us at airmax@fci.com