ExaMEZZ™ HIGH SPEED MEZZANINE CONNECTOR SYSTEM

The Path to 40 Gb/s

OVERVIEW

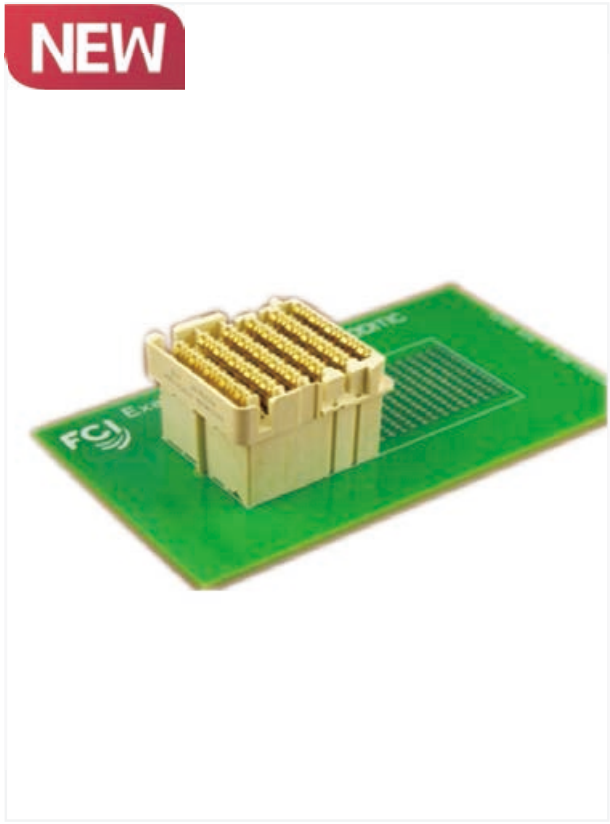
The ExaMEZZ™ connector system is designed to enable superior 25 Gb/s electrical performance and provide a path to 40 Gb/s in anticipation of further increases in bandwidth requirements and the data rates used for high speed signaling.

ExaMEZZ™ connectors feature a revolutionary beam-on-beam contact interface that minimizes the residual stub for improved signal integrity performance compared to typical blade-on-beam contact structures and provides exceptionally low mating force while maintaining excellent contact normal force.

Protected mating interfaces for both backplane and daughter card connectors also eliminate the exposed header pin field on the backplane, which can be susceptible to damage.

Each signal wafer incorporates an innovative one-piece, embossed ground structure to improve crosstalk performance through 40 Gb/s. The simple, functional design contributes to a very cost-effective solution.

The ExaMEZZ™ connector plastic body been optimized for mezzanine applications, with hermaphroditic mating. One part number can often be used on both boards.



FEATURES

BENEFITS

FEATURES	BENEFITS
• Capable of supporting data rates of 25 Gbps with scalable migration path to 40 Gbps	• Supports future system performance upgrades while eliminating costly redesign burden
• Unique beam-on-beam interface	• Superior signal integrity performance by impedance control and low cross-talk while eliminating insertion loss resonances. Mating forces reduced by 40% compared to traditional blade and beam designs
• Shares mating design with ExaMAX® backplane connector family	• Quickly accumulates experience, increasing volume, and reducing cost
• Hermaphroditic housing design	• Enables FCI to roll out more versions more quickly and cheaply making it more likely that your version will be available. Also enables the stack height to be divided evenly between mating halves, avoiding having extremely tall or 3 piece connectors
• Hermaphroditic mating interface protects mating beams	• Durable, reliable mating interface design. Eliminates crushed contacts
• Simple efficient 92 ohm design	• Supports both 85 and 100 Ohm applications
• Both press fit and solder ball versions	• fit the customer's preferred process while optimizing ruggedness and SI
• Stack height range from 15 to 45 mm	• Fits a large range of customer applications
• 0.36 mm PTH for signals and 0.5mm for grounds	• Friendly to PCB manufacturers, improving cost and yield
• Additional signal pin per IMLA	• Integrate high and low speed signals in the same connector

ExaMEZZ™ HIGH SPEED MEZZANINE CONNECTOR SYSTEM

TECHNICAL INFORMATION

MATERIALS

- Contacts: High performance copper alloy
- Plating(s): Performance based plating at the separable interface (Telecordia GR-1217 CORE) tin over nickel on the press-fit tails
- Housings: High temperature thermoplastic, UL 94 V-0

ELECTRICAL PERFORMANCE

- Contact resistance: <10 mohm change from initial reading after environmental exposure
- Current rating (with <30°C temperature rise above ambient): 0.5A/contact with all contacts powered. Both signal and ground contacts can carry current.
- Operating Voltage Rating: 50 VAC RMS

ENVIRONMENTAL

- Designed to meet Telcordia GR-1217-CORE central office environments
- Operating temperature range: -55°C to +85°C

MECHANICAL PERFORMANCE

- Long mating wipe of > 2 mm
- X and Y capture a generous ± 1.4 mm
- Mating force 0.38 N max. per contact
- Unmating force 0.10 N min. per contact
- Average force to insert one EON: 15 N max.

SPECIFICATIONS

- Product Specification GS-12-1150
- Application Specification GS-20-0373

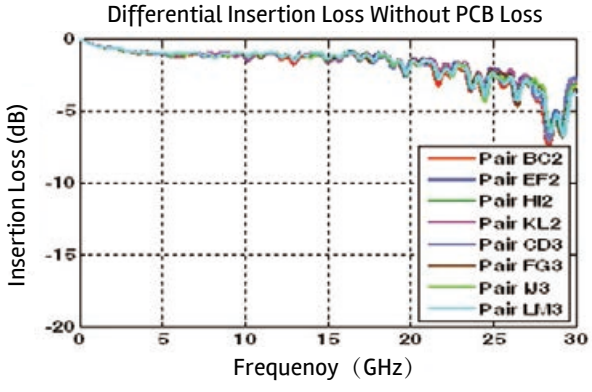
SIGNAL INTEGRITY PERFORMANCE

- See graphs below for IL and power-summed Crosstalk
- Impedance is tuned to 92 Ω making ExaMEZZ™ suitable for both 85 Ω and 100 Ω systems
- Test reports available showing performance in both 85 Ω and 100 Ω Environments
- Same mating interface as ExaMAX® Backplane connectors that meet the OIF CEI-25G-LR specification

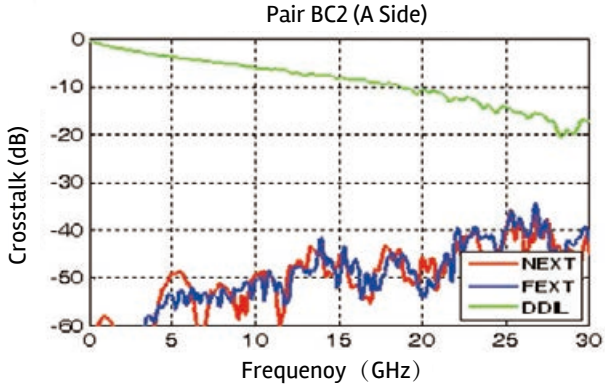
TARGET MARKET / APPLICATIONS

- Communications
  - Hubs, switches, routers
  - Optical Transport
  - Wireless Infrastructure
  - Mezzanine IO cards
  - Expansion in all sorts of 1U box formats
- Data
  - Servers
  - External Storage Systems
  - Supercomputers
- Test Equipment
- Emulation Equipment
- Instrumentation
- Military

ExaMEZZ™ 4 pr 39mm
Differential Insertion Loss Without PCB Loss



ExaMEZZ™ 4 pr 39mm – Power-Summed Crosstalk
Pair BC2 (A Side)



For more information,
please contact: Communications@fci.com
or visit us at www.fci.com

Disclaimer
Please note that the above information is subject to change without notice.

TECHNICAL INFORMATION

Available Stack Height

ExaMEZZ™ 4 pair

Receptacle Height (mm) \ Plug Height (mm)	19.5
19.5	39

ExaMEZZ™ 2 pair

Receptacle Height (mm) \ Plug Height (mm)	7.5	19.5	22.5
7.5	15	27	30
19.5	27	39	42
22.5	30	42	45

Differential Pairs per Connector

ExaMEZZ™ 4 pair

Receptacle Height (mm) \ Plug Height (mm)	19.5
19.5	44, 100

ExaMEZZ™ 2 pair

Receptacle Height (mm) \ Plug Height (mm)	7.5	19.2	22.5
7.5	38	38	38
19.5	38	38	38
22.5	38	38	38

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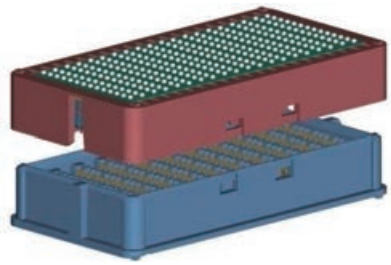
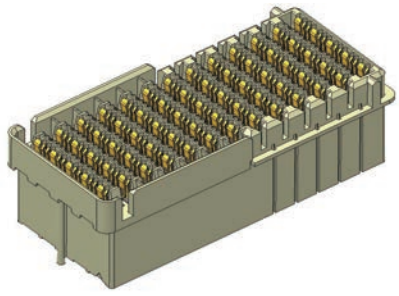
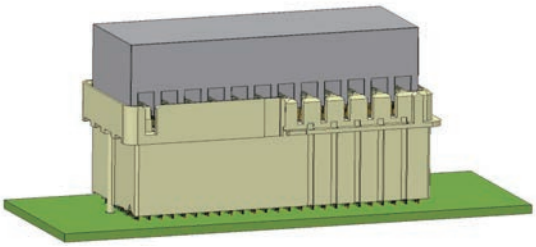
PART NUMBERS

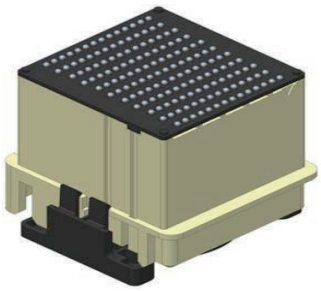


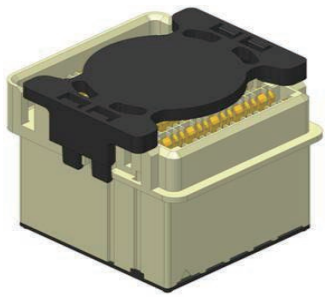


2 Pair ExaMEZZ™ Product Number Table – Press Fit

Height / Number of Columns	7.5	19.5	22.5	Insertion Tool	Removal Tool
19	10127225-107500ULF	10127225-119500ULF	10127225-122500ULF	10125494-019	10125499-019







4 Pair ExaMEZZ™ Product Number Table – Press Fit

Height / Number of Columns	7.5	19.5	22.5	Insertion Tool	Removal Tool
19		10128487-119500ULF		10125496-011	10125509-011
25		10128494-119500ULF		10125496-025	10125509-025

BPLEXAMEZZ1114EA4

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