

ExaMEZZ® High Speed Mezzanine Connector System

Innovative “pinless” connector system delivering superior electrical performance at speeds 25 to 56Gb/s

SUPPORTS MANY INDUSTRY STANDARD SPECIFICATIONS; MIGRATION PATH TO HIGHER BANDWIDTH APPLICATIONS

ExaMEZZ® Mezzanine connector system meets industry specifications requiring higher bandwidth applications from 25Gb/s to 56Gb/s. The optimized connector design delivers superior signal integrity performance resulting in low crosstalk noise and low insertion loss while minimizing channel performance variation for every differential pair. Each signal wafer incorporates an innovative one-piece, embossed ground structure to improve crosstalk performance through 56Gb/s. The simple, functional design contributes to a very cost-effective solution.

- 15mm to 55mm stack height options in 2pair and 4pair configurations
- The innovative beam-on-beam contact interface minimizes residual stub for improved signal integrity performance while providing exceptionally low mating forces
- ExaMEZZ® optimizes design flexibility by integrating high speed differential signals, low speed signals and power in one connector

FEATURES

- Data rates scalable from 25Gb/s to 56Gb/s to support system upgrades without costly redesigns
- 92Ω nominal impedance
- Unique beam-on-beam interface
- Hermaphroditic mating interface protects mating beams
- Integrated power and additional signal pin per column
- High speed signal PCB hole: 0.36mm (finished hole)
- Ground pin PCB hole: 0.5mm (finished hole)
- Press-fit Pin Design

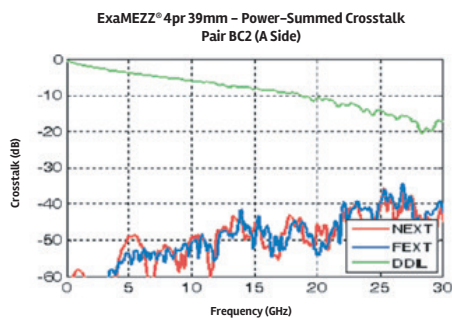
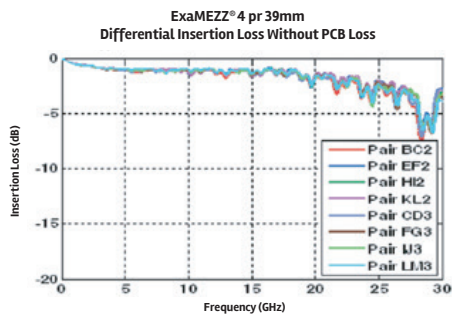


BENEFITS

- Meets Industry specifications such as PCI Express, SATA, SAS, OIF CEI; supporting future system performance upgrades while eliminating costly redesign burden
- Minimizes impedance discontinuities
- Supports both 85 and 100Ω applications
- Provides low crosstalk while eliminating insertion loss resonances
- Reduces mating force up to 65% compared to traditional blade and beam designs
- Durable, reliable mating interface design eliminates crushed pins
- Enables greater design flexibility; integrating high speed, low speed, and power in the same connector
- Optimizes electrical performance and aspect ratio
- Direct mechanical connection, optimizing ruggedness and signal integrity

TECHNICAL INFORMATION

SIGNAL INTEGRITY PERFORMANCE



MATERIAL

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

MECHANICAL PERFORMANCE

- Long mating wipe of > 2mm
- X and Y capture a generous ± 1.4 mm
- Mating Force 0.45N max. per contact
- Unmating Force 0.10N min. per contact
- Average Force to insert one EON: 12N max.

APPROVALS & CERTIFICATION

- Telcordia GR-1217-CORE Central Office qualification passed
- UL E66906

ENVIRONMENTAL

- Designed to meet Telcordia GR-1217-CORE central office environments
- Operating Temperature Range: -55°C to $+85^{\circ}\text{C}$

ELECTRICAL PERFORMANCE

- Contact Resistance: $<10\text{m}\Omega$ change from initial reading after environmental exposure
- Current Rating (with $<30^{\circ}\text{C}$ temperature rise above ambient): signal contact 0.5A/contact with all contacts powered. Both signal and ground contacts can carry current.
- Operating Voltage Rating: 50 VAC RMS

INDUSTRY SPECIFICATIONS

- Product Specification: GS-12-1096
- Application Specification: GS-20-0361
- Power Design Guide: GS-20-0456
- Product Routing Guide: GS-20-0511

Industry Specifications	Speed Performance
CEI-56G-MR-PAM4 Long Reach Interface	56Gb/s PAM4
PCI Express (PCIe®) Gen 1/2/3/4/5	2.5Gb/s to 32Gb/s
Serial Attached SCSI (SAS) 1.1/2.1/3.0/4.0	3Gb/s to 24Gb/s
SATA Revision 1.x/2.x/3.x	1.5Gb/s to 6Gb/s
Fibre Channel (FC) Gen1/ Gen2/Gen3/ Gen4/Gen5	1.0625Gb/s to 14.025Gb/s
InfiniBand (IB) SDR/DDR/QDR/FDR/EDR	2.5Gb/s to 25Gb/s
Ethernet 1Gbe/10Gbe/40Gbe/ 100Gbe/25Gbe	1.25Gb/s to 25.78125Gb/s

TARGET MARKETS/APPLICATIONS



Hubs
Switches
Router
Optical Transport Wireless
Infrastructure Mezzanine IO cards
Expansion in all sorts of 1U box formats



Servers
External Storage Systems
Supercomputers

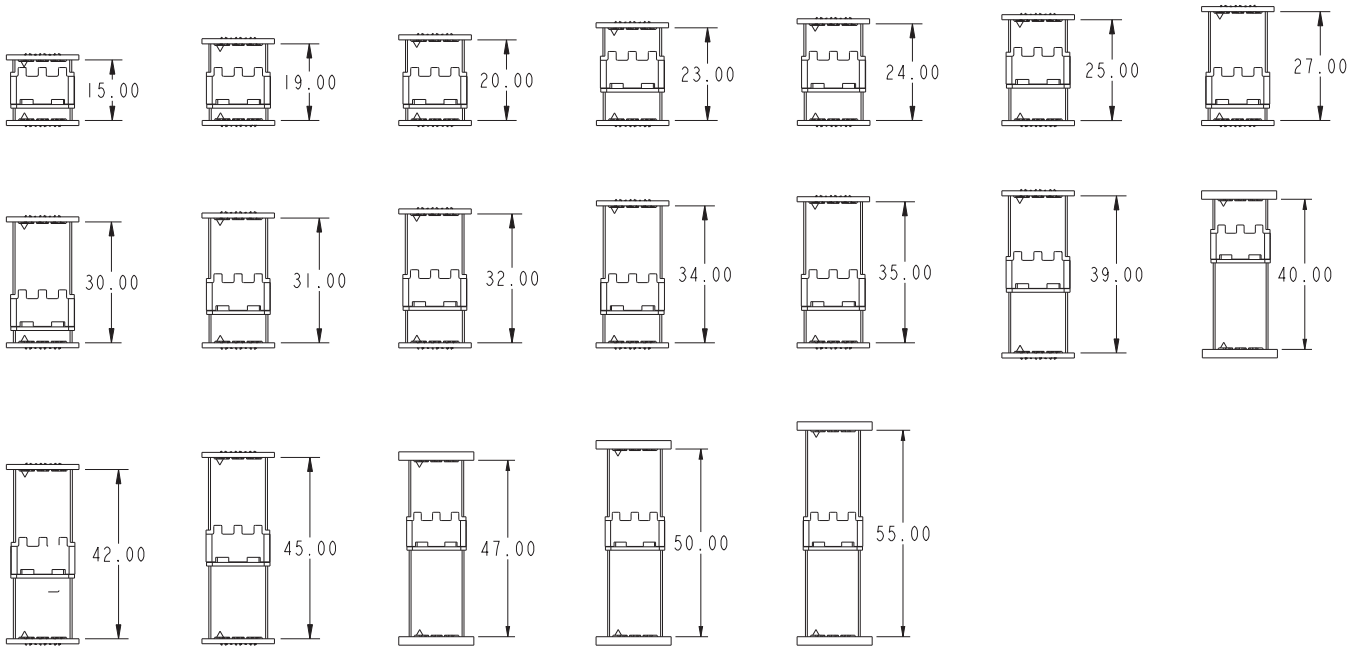


Test Equipment
Emulation Equipment
Instrumentation



Medical

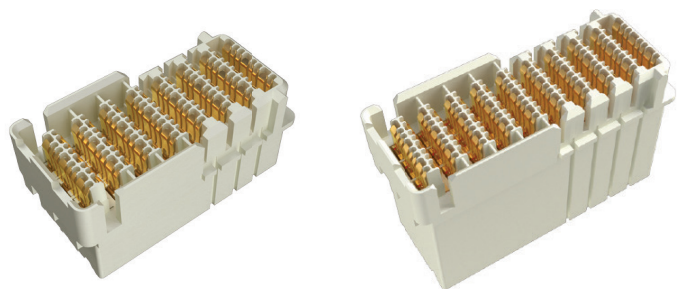
ExaMEZZ® – 2 PAIR MATED HEIGHT OPTIONS



Receptacle Height (mm)	Plug Height (mm)					
	7.5	11.5	12.5	19.5	22.5	27.5
27.5						55
22.5					45	50
19.5				39	42	47
12.5			25	32	35	40
11.5		23	24	31	34	39
7.5	15	19	20	27	30	35

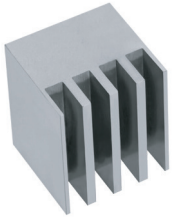
DIFFERENTIAL PAIRS

Number of Columns	Differential Pairs
7	14
11	22
13	26
15	30
19	38
21	42
25	50



PART NUMBERS

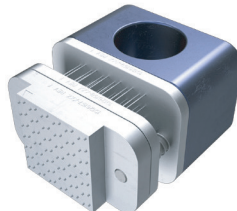
ExaMEZZ® 2 pair 92Ω							
Number of Columns	Type	Plug Height (mm)					
		7.5	11.5	12.5	19.5	22.5	27.5
7	standard	10128475-107500ULF	10128475-111500ULF	10128475-112500ULF	10128475-119500ULF	10128475-122500ULF	10128475-127500ULF
11	standard	10128477-107500ULF	10128477-111500ULF	10128477-112500ULF	10128477-119500ULF	10128477-122500ULF	10128477-127500ULF
13	standard	10128479-107500ULF	10128479-111500ULF	10128479-112500ULF	10128479-119500ULF	10128479-122500ULF	10128479-127500ULF
15	standard	10128481-107500ULF	10128481-111500ULF	10128481-112500ULF	10128481-119500ULF	10128481-122500ULF	10128481-127500ULF
19	standard	10127225-107500ULF	10127225-111500ULF	10127225-112500ULF	10127225-119500ULF	10127225-122500ULF	10143267-127500ULF (BLIND MATE)
21	standard	10138102-107500ULF	10138102-111500ULF	10138102-112500ULF	10138102-119500ULF	10138102-122500ULF	10138102-127500ULF
25	standard	10128483-107500ULF	10128483-111500ULF	10128483-112500ULF	10128483-119500ULF	10128483-122500ULF	10128483-127500ULF



Insertion Tool



Vertical and Right Angle Header Removal Tool



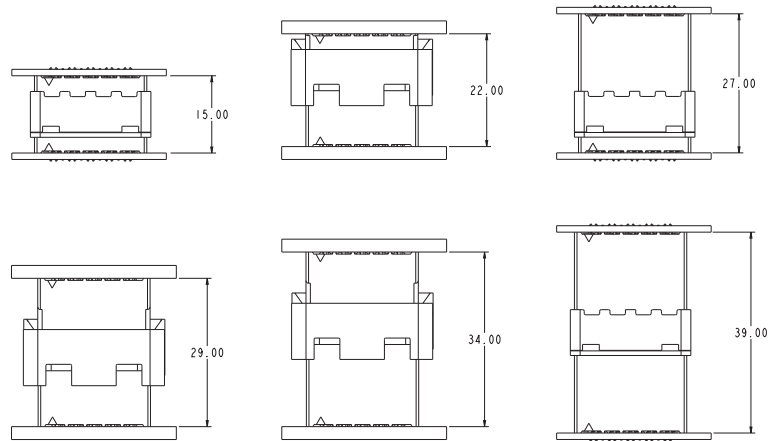
Right Angle Receptacle Removal Tool

ExaMEZZ® 2 pair 92Ω Insertion and Removal Tooling			
Number of Columns	Type	Tools	
		Insertion	Removal
7	standard	10125494-007	10125499-007
11	standard	10125494-011	10125499-011
13	standard	10125494-013	10125499-013
15	standard	10125494-015	10125499-015
19	standard	10125494-019	10125499-019
21	standard	10125494-021	10125499-021
25	standard	10125494-025	10125499-025

▶ ExaMEZZ® High Speed Mezzanine Connector System

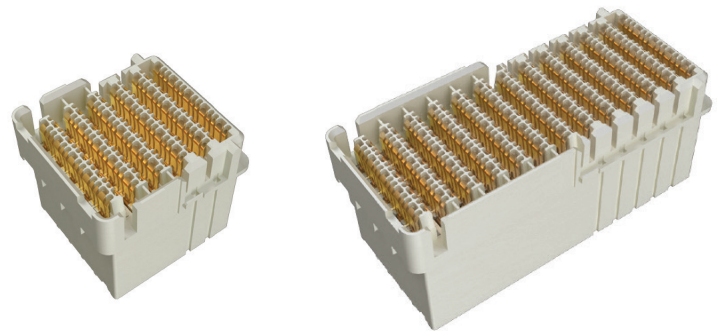
ExaMEZZ® – 4 PAIR MATED HEIGHT OPTIONS

Receptacle Height (mm)	Plug Height (mm)		
	7.5	14.5	19.5
19.5			39
14.5		29	34
7.5	15	22	27



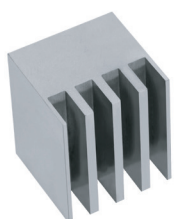
DIFFERENTIAL PAIRS

Number of Columns	Differential Pairs
7	28
11	44
13	52
15	60
19	76
23	92
25	100

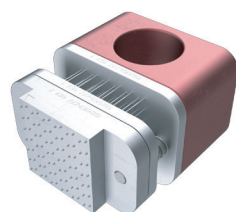


PART NUMBERS

ExaMEZZ® 4 pair 92Ω						
Number of Columns	Type	Plug Height (mm)			Tools	
		7.5	14.5	19.5	Insertion	Removal
7	standard	10128485-107500ULF	10128485-114400ULF	10128485-119500ULF	10125496-007	10125509-007
11	standard	10128487-107500ULF	10128487-114400ULF	10128487-119500ULF	10125496-011	10125509-011
13	standard	10128488-107500ULF	10128488-114400ULF	10128488-119500ULF	10125496-013	10125509-013
15	standard	10135573-107500ULF	10135573-114400ULF	10135573-119500ULF	10125496-015	10125509-015
17	standard	10139635-107500ULF	10139635-114400ULF	10139635-107500ULF	10125496-017	10125509-017
19	standard	10135574-107500ULF	10135574-114400ULF	10135574-119500ULF	10125496-019	10125509-019
23	standard	10131422-119500ULF	10131422-114400ULF	10131422-119500ULF	10125496-023	10125509-023
25	standard	10128494-107500ULF	10128494-114400ULF	10128494-119500ULF	10125496-025	10125509-025



Insertion Tool



Vertical and Right Angle Header Removal Tool



Right Angle Receptacle Removal Tool

HSBPEXAMEZZ032EA4