ExaMAX® VS High Speed Backplane Connector System

Product Presentation

EXAMAX® VS

What is it?

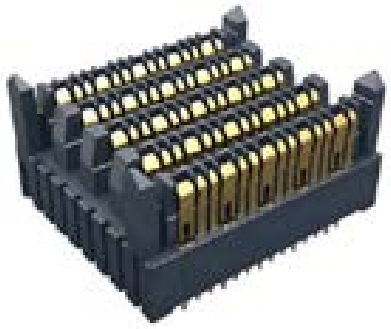
- ExaMAX® VS backplane connector system is a scalable, cost optimized connector system that meets industry specifications requiring higher bandwidth applications to 25Gb/s.

- The high performance connector system provides both mechanical robustness and superior signal integrity. ExaMAX® VS delivers low cross talk noise and low insertion loss while minimizing channel performance variation for every differential pair.

EXAMAX® VS

Advantages of ExaMAX® VS

- ExaMAX® VS offers a forward mating and footprint compatible design that enables a scalable migration path beyond 25Gb/s.
- The innovative beam-on-beam contact interface minimizes residual stub for improved signal integrity performance while providing exceptionally low mating forces.



INDUSTRY SPECIFICATIONS

Industry Specifications	Speed Performance
PCI Express (PCIe) Gen 1/2/3/4	2.5Gb/s to 16Gb/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/ 10Gbe/40Gbe/ 100Gbe/25Gbe	1.25Gb/s to 25.78125Gb/s

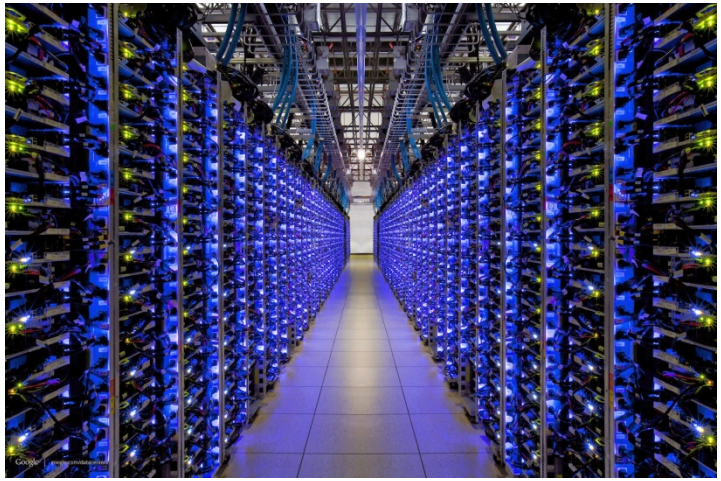
EXAMAX® VS

Features and Benefits

FEATURES	BENEFITS
▪ Capable of supporting data rates up to 25Gb/s	▪ Meets Industry specifications such as PCI Express, SATA, Fiber Channel, InfiniBand, Ethernet, SAS, OIF CEI, IBTA FDR, IEEE
▪ Scalable performance to higher bandwidth applications	▪ Forward mating compatible ▪ Footprint compatible to standard ExaMAX® (56Gb/s)
▪ Unique beam-on-beam interface and skew equalized leadframes	▪ Provides low crosstalk while eliminating insertion loss resonances ▪ Reduces mating force up to 65% compared to traditional blade and beam designs
▪ Hermaphroditic mating interface protects mating beams	▪ Durable, reliable mating interface design eliminates crushed pins
▪ 92Ω nominal impedance	▪ Minimizes impedance discontinuities
▪ Modular, hard metric connector block design	▪ 2mm pitch for high density application ▪ 3mm pitch enables quad routing and lower PCB cost
▪ Zero skew	▪ Optimizes PCB routing
▪ Additional signal pin per column	▪ Integrates high and low speed signals in the same connector
▪ High speed signal PCB hole: 0.036mm	▪ Optimizes electrical performance and aspect ratio
▪ Integrated guide design	▪ Improves mating performance using minimal board space

EXAMAX® VS

Typical Application



Data center

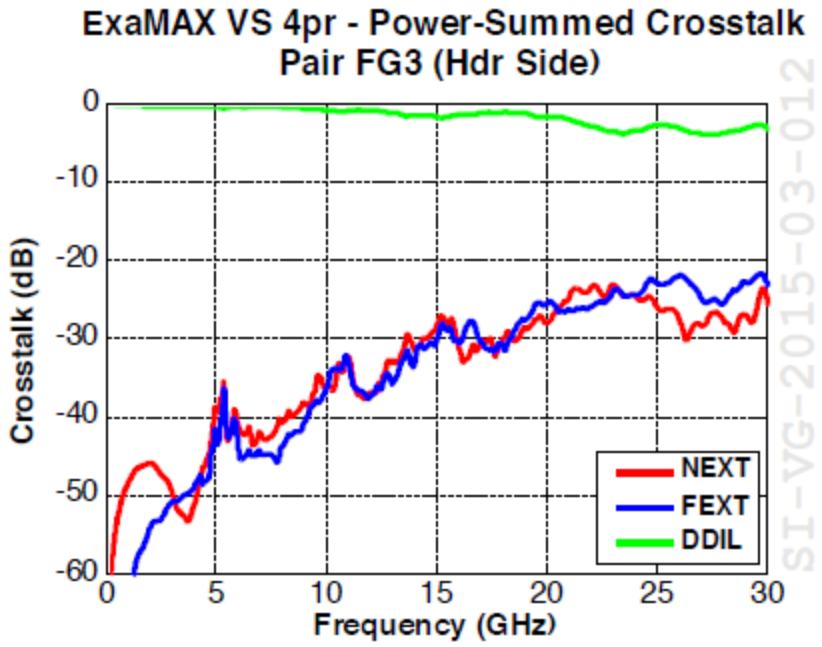
High End Telecom

Computer Sever

EXAMAX® VS

Specifications

Signal Integrity Performance



*8 nearest aggressors included in power- summed crosstalk calculation

MECHANICAL PERFORMANCE

- Long mating wipe of > 2mm
- X and Y capture a generous 1.4mm
- Mating Force: 0.36N max. per contact
- Unmating Force: 0.12N min. per contact
- Average press-fit Insertion Force: 15N max. per contact

APPROVALS AND CERTIFICATIONS

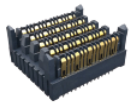
- Telcordia GR-1217-CORE Central Office qualification passed
- UL E66906

EXAMAX® VS

Part Numbers

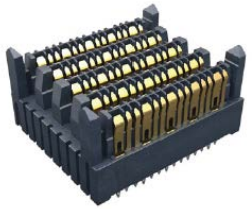
EXAMAX® VS TRADITIONAL MOTHER–DAUGHTER BOARD: NO GUIDE

Product Variation			Mating Connector System	
			No Guide Pin	
Pairs	Columns	Differential Pairs	Vertical Header (VH)	Right Angle Receptacle (RAR)
4	6	24	10127896–101LF	10137857–101LF
	8	32	10121067–101LF	10137858–101LF
	10	40	10126366–101LF	10137859–101LF
	12	48	10132074–101LF	10137860–101LF



Vertical Header (No Guide)

Right Angle Receptacle (No Guide)



EXAMAX® VS TRADITIONAL MOTHER–DAUGHTER BOARD: LEFT GUIDE

Product Variation			Mating Connector System	
			Left Guide Pin	
Pairs	Columns	Differential Pairs	Vertical Header (VH)	Right Angle Receptacle (RAR)
4	6	24	10127896–12JLF	10137857–12JLF
	8	32	10121067–12JLF	10137858–12JLF
	10	40	10126366–12JLF	10137859–12JLF
	12	48	10132074–12JLF	10137860–12JLF

Vertical Header (Left Guide)

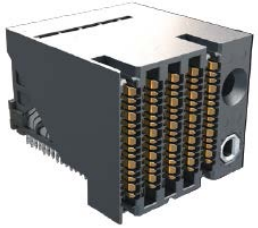
Right Angle Receptacle (Left Guide)

EXAMAX® VS TRADITIONAL MOTHER–DAUGHTER BOARD: RIGHT GUIDE

Product Variation			Mating Connector System	
			Right Guide Pin	
Pairs	Columns	Differential Pairs	Vertical Header (VH)	Right Angle Receptacle (RAR)
4	6	24	10127896–11JLF	10137857–11JLF
	8	32	10121067–11JLF	10137858–11JLF
	10	40	10126366–11JLF	10137859–11JLF
	12	48	10132074–11JLF	10137860–11JLF

Vertical Header (Right Guide)

Right Angle Receptacle (Right Guide)



THANK YOU