

11 February 2013

High Performance VPX

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6U High Performance VPX



System Solutions

Integrated Systems Chassis Platforms Backplanes Embedded Products Cabinets

Enclosures & Components

Enclosures Front Panels Handles

Rotary Switches

Switches/Encoders Knobs LEDs

Two new 6U backplanes

12-slot dual star with 4 fat pipes to each slot

6-slot single star with 4 fat pipes to each slot

Data Plane 40Gbase-KR4, InfiniBand FDR 56Gbps

Expansion Plane – Double Fat Pipes PCI Gen3

PCB dielectric – Megtron6

Profile name	Mechanical		Slot Profiles and Section		Channel Gbaud Rate		
	Pitch (in)	RTM Conn	Payload	Switch	Control Plane	Data Plane	Expansion Plane
BKP6-CEN12-11.2.XX-6	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.2	SLT6-SWH-16U20F-10.4.2	1.25	14.1	8.0

Note: A 6U high performance 4-slot mesh backplane is in development.

New High Performance VPX 40GBase-KR4 or x4 14.4Gbaud Infiniband FDR

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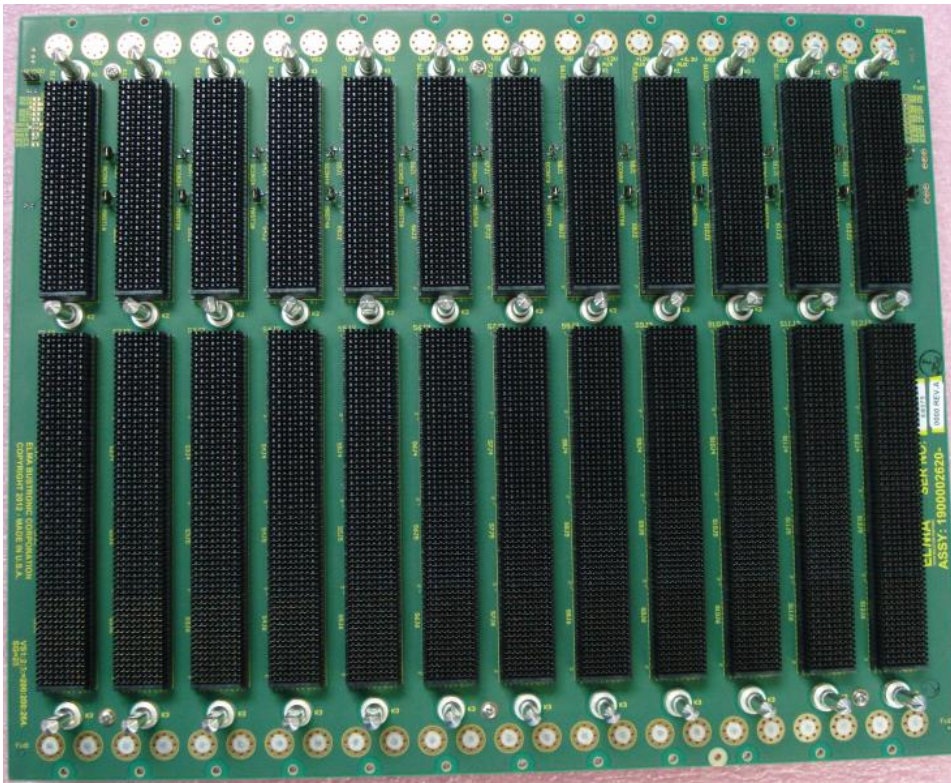
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1OVX612FZ5-1X01R



1OVX 606HZ5-1X01R

New Proposed Data Rates for VITA 65 r3



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Profile name	Mechanical		Slot Profiles and Section		Channel Gbaud Rate		
	Pitch (in)	RTM Conn	Payload	Switch	Control Plane	Data Plane	Expansion Plane
BKP6-CEN12-11.2.XX-1	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.2	SLT6-SWH-16U20F-10.4.2	1.25	3.125	5.0
BKP6-CEN12-11.2.XX-2	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.2	SLT6-SWH-16U20F-10.4.2	1.25	5.0	5.0
BKP6-CEN12-11.2.XX-3	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.2	SLT6-SWH-16U20F-10.4.2	1.25	6.25	5.0
BKP6-CEN12-11.2.XX-4	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.2	SLT6-SWH-16U20F-10.4.2	1.25	10.4	5.0
BKP6-CEN12-11.2.XX-5	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.2	SLT6-SWH-16U20F-10.4.2	1.25	10.4	8.0
BKP6-CEN12-11.2.XX-6	1.0	VITA 46.10	SLT6-PAY-4F1Q2U2T-10.2.2	SLT6-SWH-16U20F-10.4.2	1.25	14.1	8.0

6U 12-slot 1OVX612FZ5-1X01R

40GBase-KR4 or x4 14.4Gbaud Infiniband FDR

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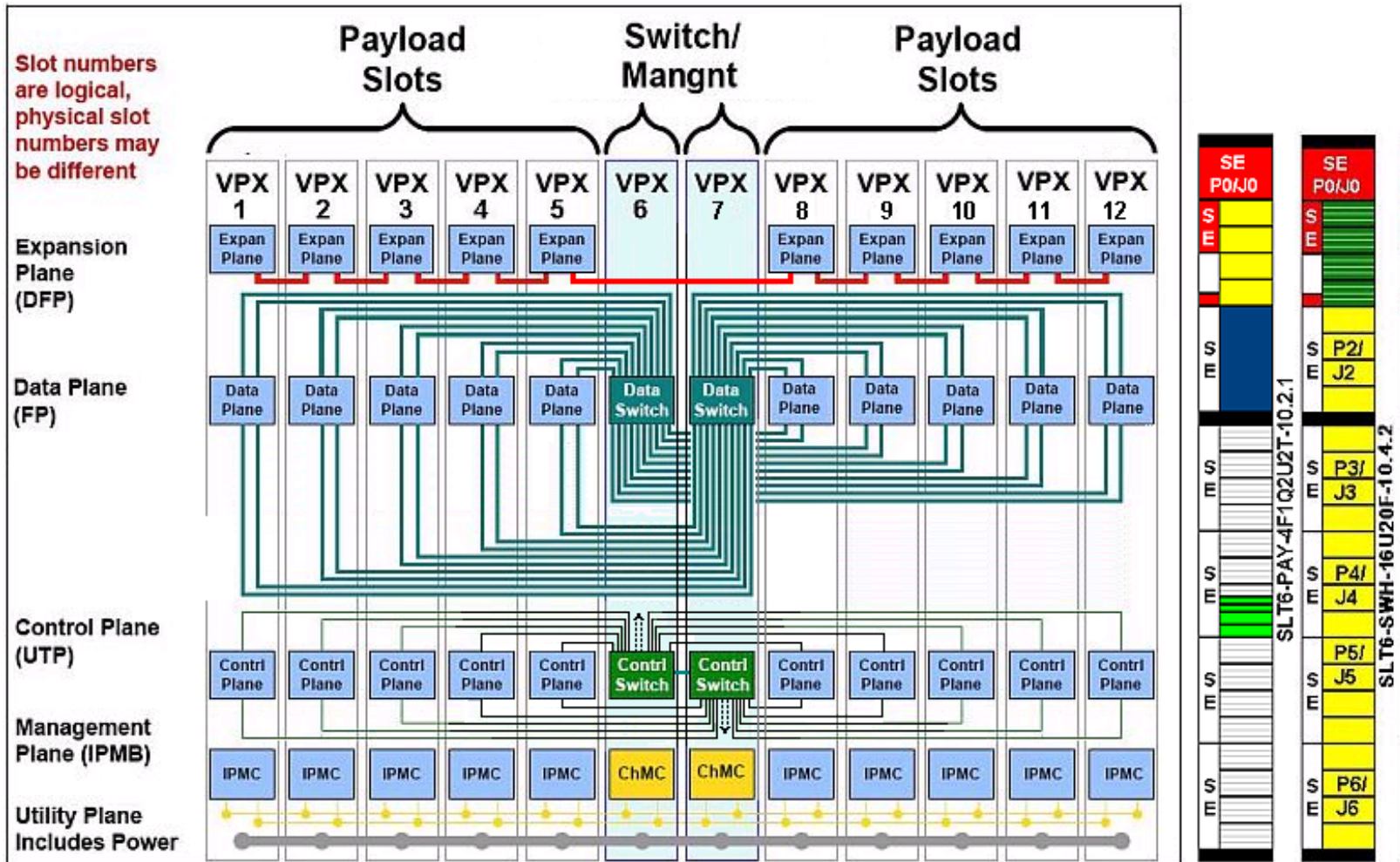
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6U 6-slot 1OVX606HZ5-1X01R

40GBase-KR4 or x4 14.4Gbaud Infiniband FDR



System Solutions

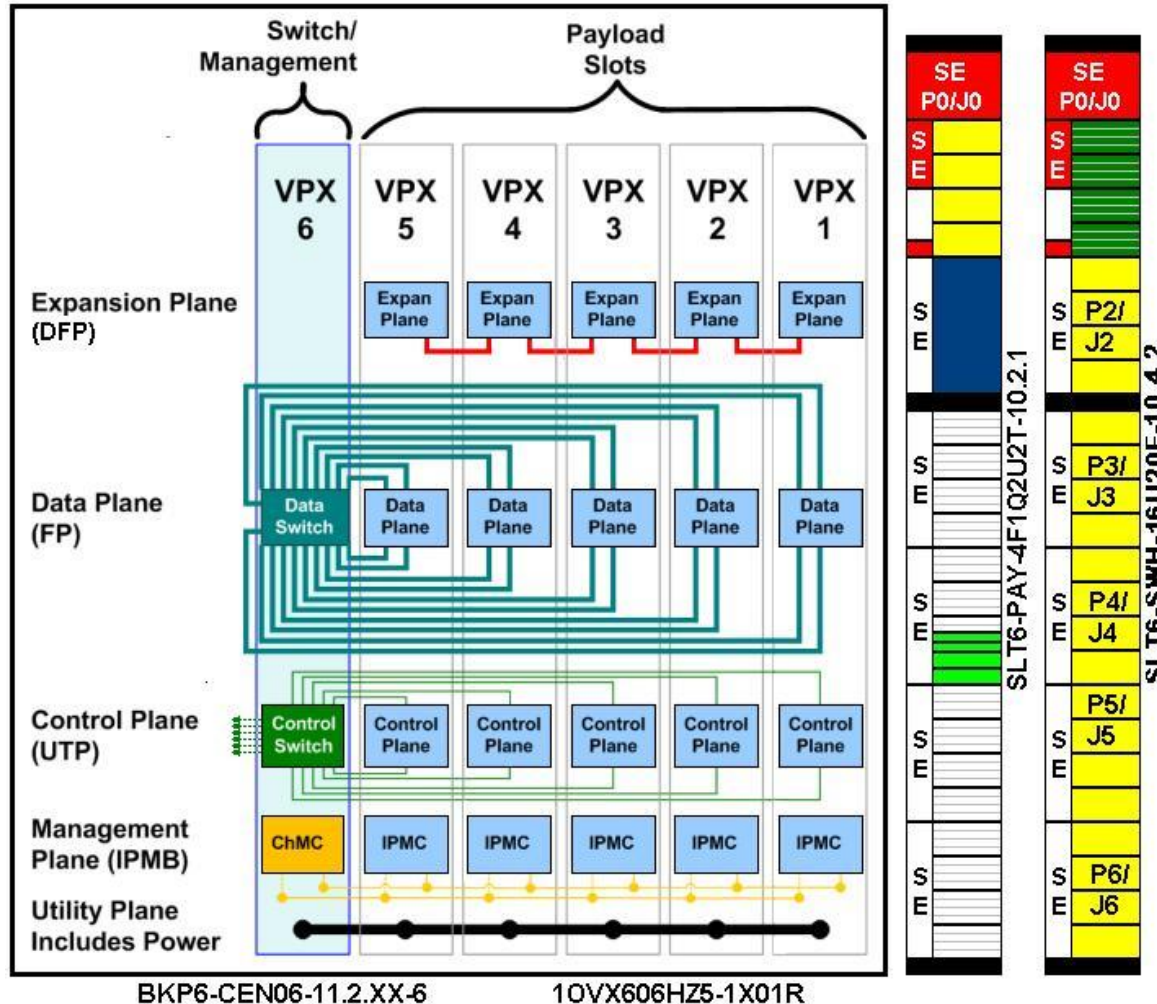
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Expansion Planes PCIe Gen3

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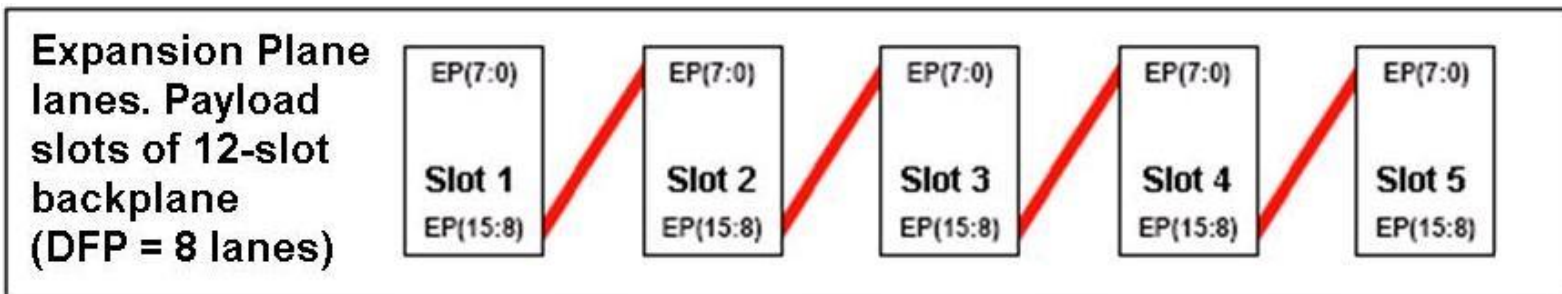
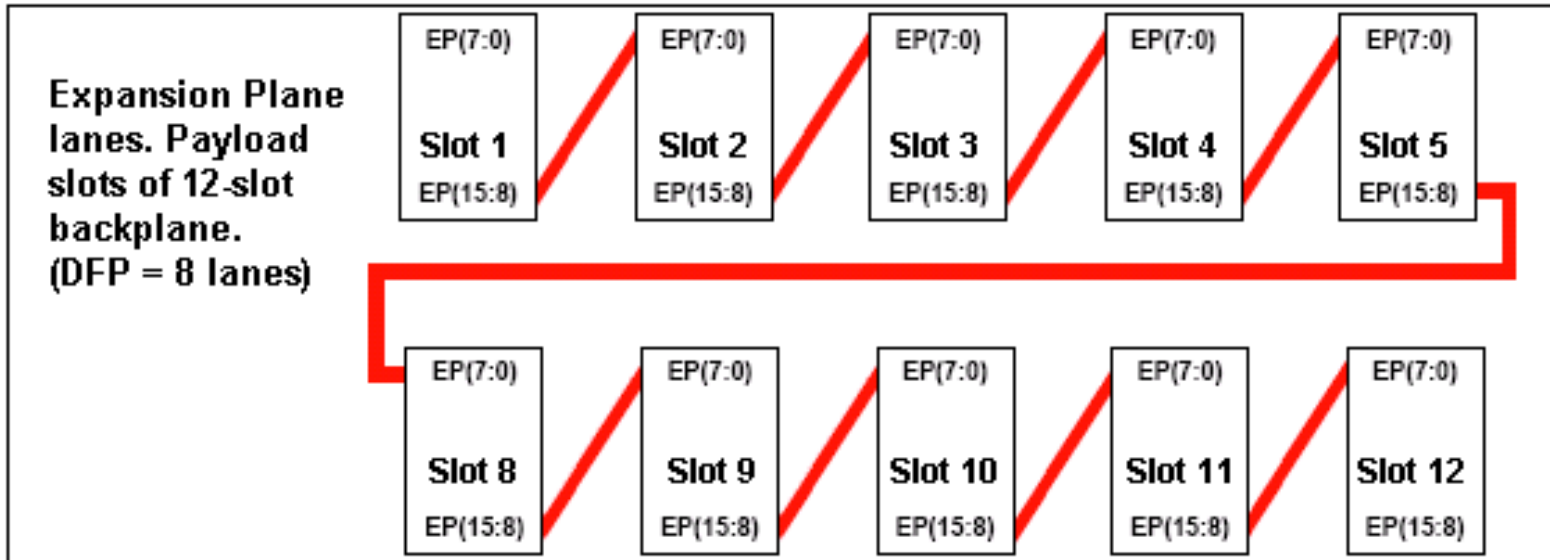
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These backplanes were co-developed with the payload and switch cards for which they are designed.

The payload and switch card launches were simulated along with the backplane channel to ensure performance.

The Data Plane was simulated in accordance with IEEE 802-3-2012 for 40GBase-KR4 as well as to meet the InfiniBand FDR bandwidth of 56 Gbps.

The Expansion Plane was simulated in accordance with PCI-SIG PCIe Gen3

Insertion Loss and ILD: 14Gbps* FDR Backplane Channel - Max 12.5" Length Tyco Connector

System Solutions

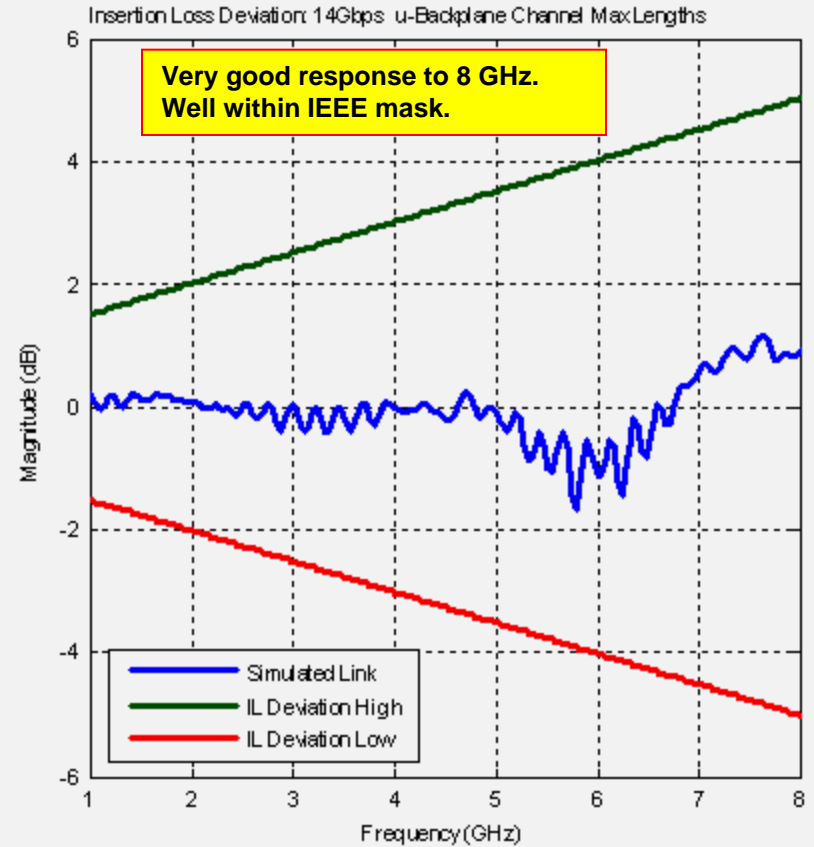
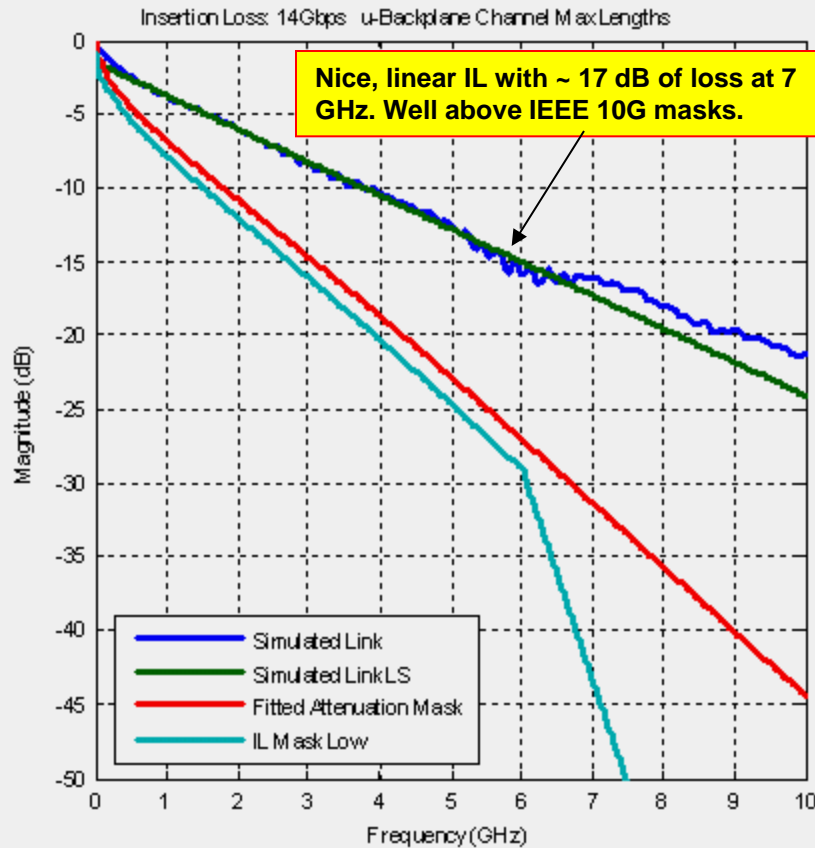
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In VITA 65 data rates are given in Gigabaud not Gbps.

Insertion Loss and ILD: 14Gbps* FDR Backplane Channel - Max 12.5" Length - Viper Connector

System Solutions

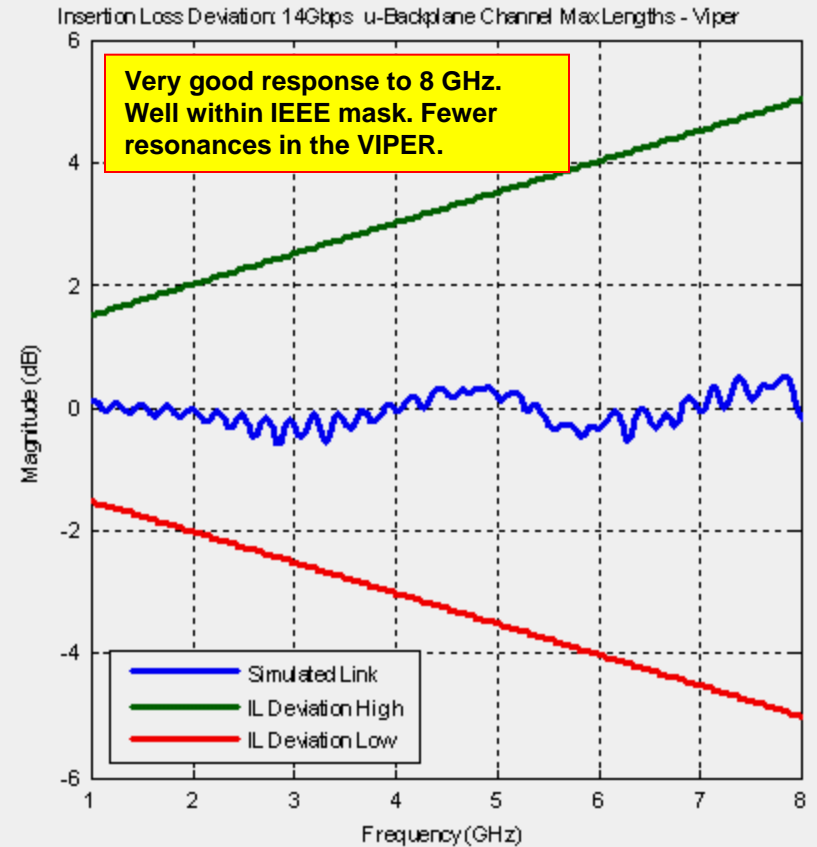
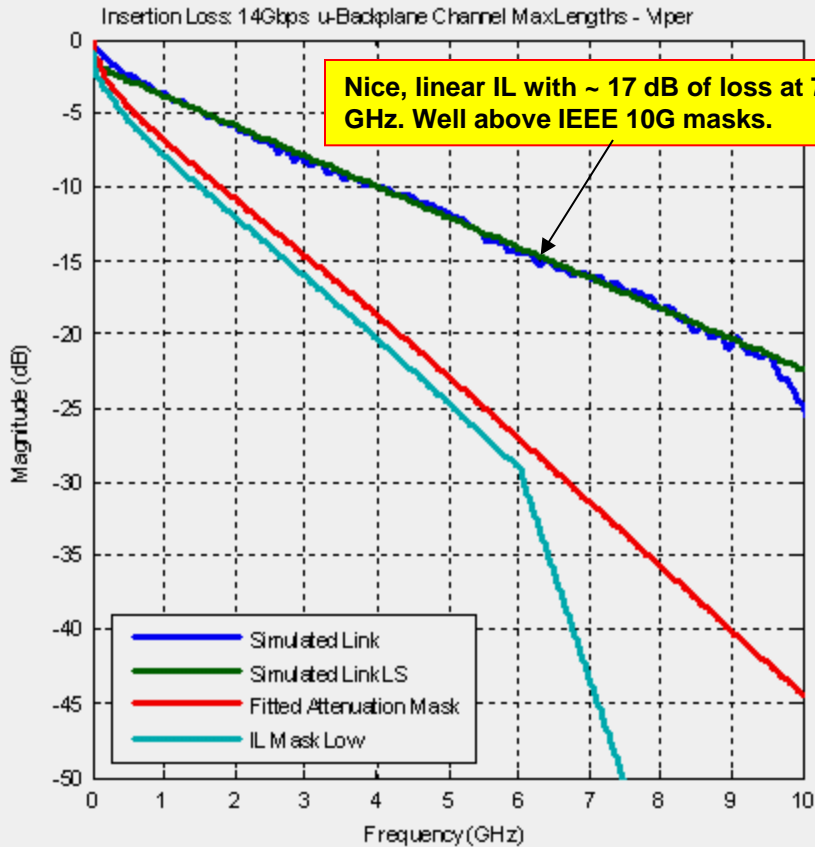
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In VITA 65 data rates are given in Gigabaud not Gbps.

SWITCH CARD FOOTPRINT Via Field Model

For Tyco Multi-Gig and Amphenol VIPER



System Solutions

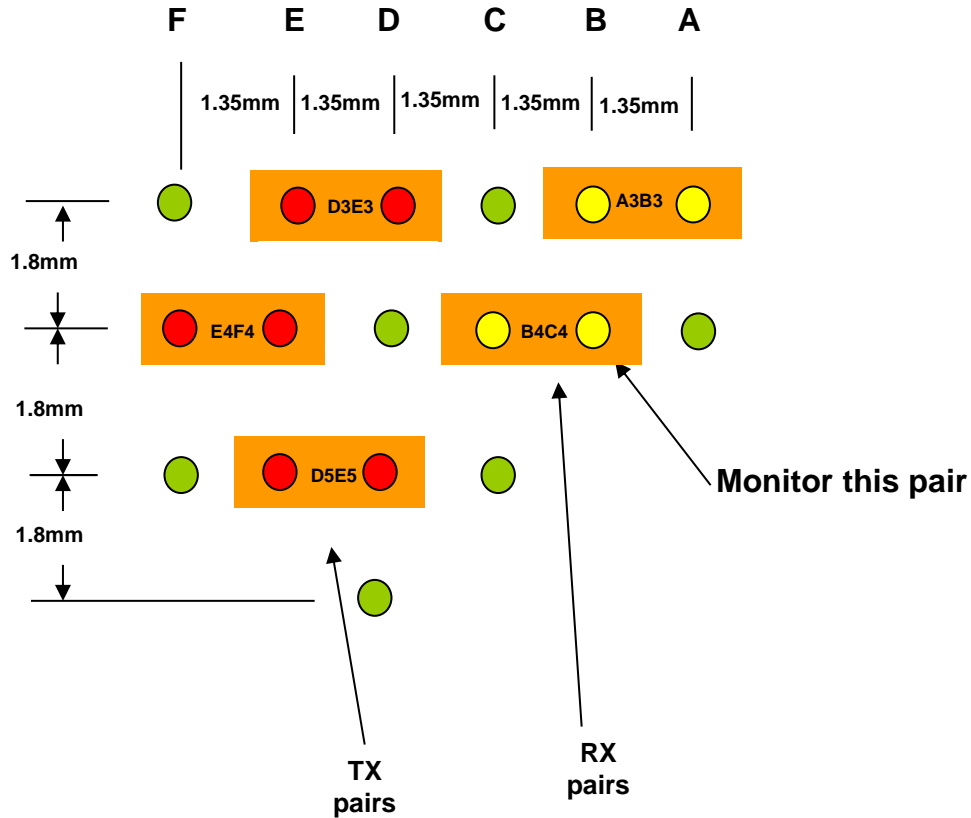
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SWITCH CARD FOOTPRINT Via Field Model

For Tyco Vita68_MultiGigRt2.sp



System Solutions

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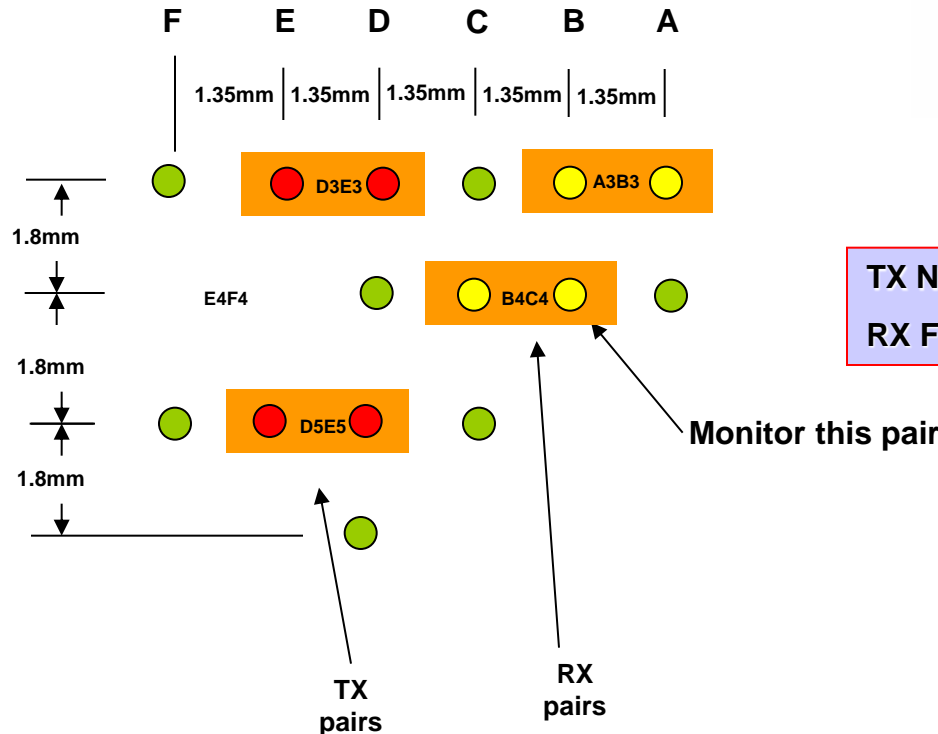
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PINS:

Backplane A3	---	A3	Daughter Card
Backplane B3	---	B3	Daughter Card
Backplane E3	---	D3	Daughter Card
Backplane F3	---	E3	Daughter Card
Backplane C4	---	B4	Daughter Card
Backplane D4	---	C4	Daughter Card
Backplane G4	---	E4	Daughter Card
Backplane H4	---	F4	Daughter Card
Backplane A5	---	A5	Daughter Card
Backplane B5	---	B5	Daughter Card
Backplane E5	---	D5	Daughter Card
Backplane F5	---	E5	Daughter Card
Backplane I3	---	G3	Daughter Card
Backplane I5	---	G5	Daughter Card



SWITCH CARD FOOTPRINT Via Field Model

For Amphenol VIPER model

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