



# General Discussion and Potential Motions

IEEE 802.3bs 400Gb/s Ethernet  
September 2014 version r1

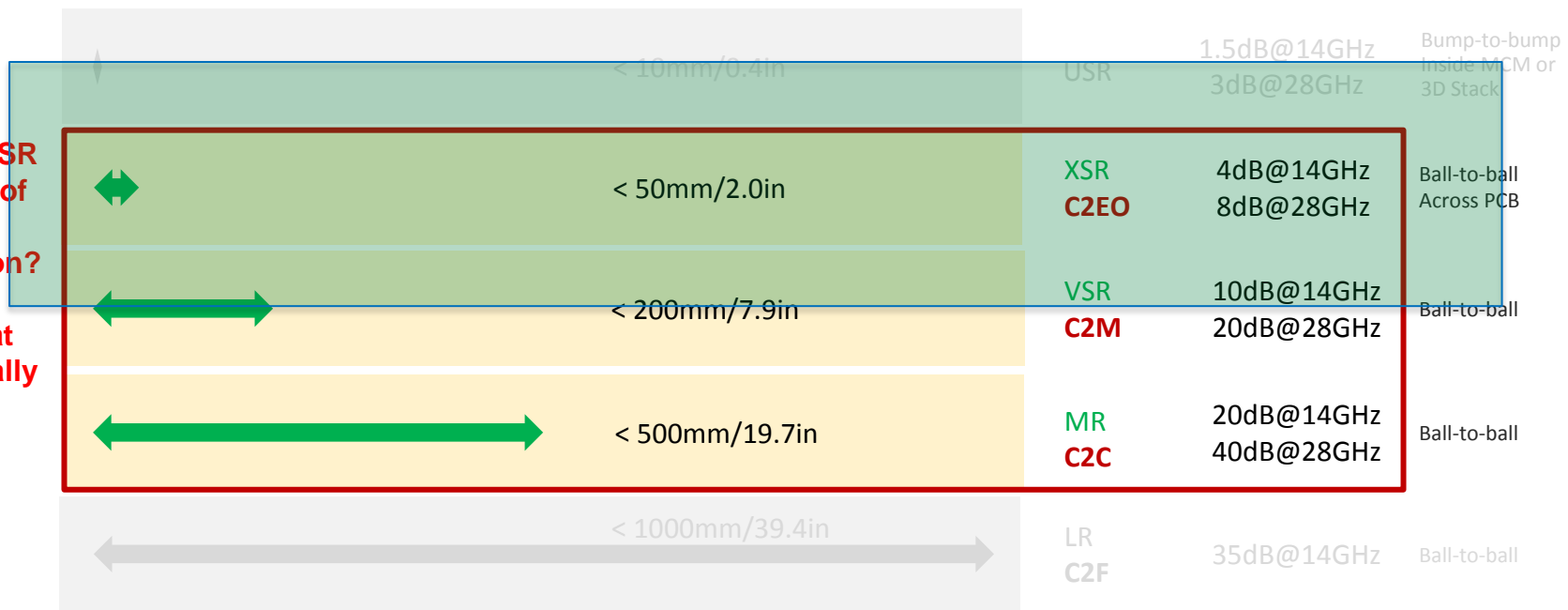
# Length, Loss & Applications:

Future: a single 50GB/s SERDES core to cover all these ranges

IL

Should XSR be a part of the discussion?

If so, what do we really call it?



# Length, Loss & Application: Technologies for 50Gb/s

These Values are under discussion

Application	Length	Loss	Modulation	pJ/bit	DFE?	FEC?
C2EO (XSR)	< 2in	<4dB@14GHz	PAM-4	TBD	TBD	TBD
		<8dB@28GHz	NRZ	TBD	TBD	TBD
C2M (VSR)	2-8in	4-10dB@14GHz	PAM-4	TBD	TBD	TBD
		8-20dB@28GHz	NRZ	TBD	TBD	TBD
C2C (MR)	8-20in	10-20dB@14GHz	PAM-4	TBD	TBD	TBD
		20-40dB@28GHz	NRZ	TBD	TBD	TBD

Knowing the reach definition allows us to begin understanding the next steps in the consensus building process

- System Architecture
- Channel Loss
- Modulation
- Equalization
- Error Correction
- Power

# Length, Loss & Application: Technologies for 50Gb/s

Application	Length	Loss	Modulation	pJ/bit	DFE?	FEC?
C2EO (XSR)	< 2in	<4dB@14GHz	PAM-4	Low	No	No
		<8dB@28GHz	NRZ	Low	No	No
C2M (VSR)	2-8in	4-10dB@14GHz	PAM-4	Low	No	Yes
		8-20dB@28GHz	NRZ	High	Yes	Yes
C2C (MR)	8-20in	10-20dB@14GHz	PAM-4	High	Yes	Yes
		20-40dB@28GHz	NRZ	V. High	Yes	Yes

Knowing the reach definition allows us to begin understanding the next steps in the consensus building process

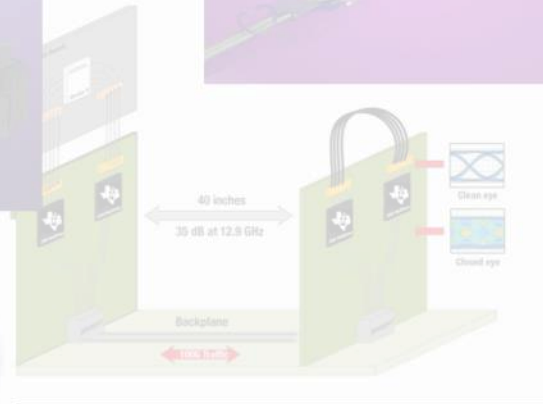
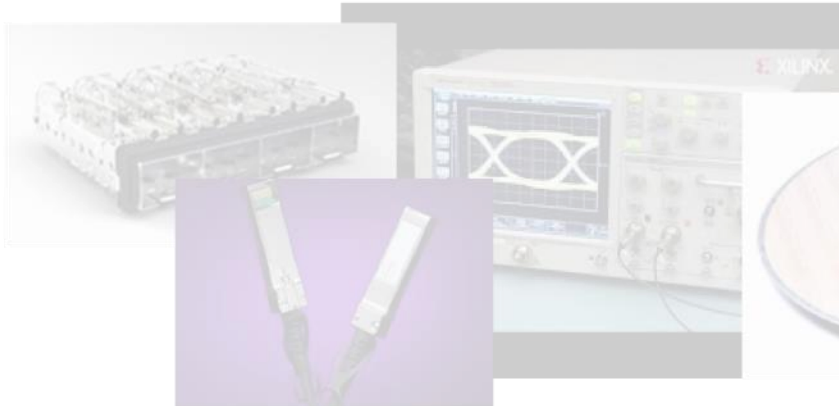
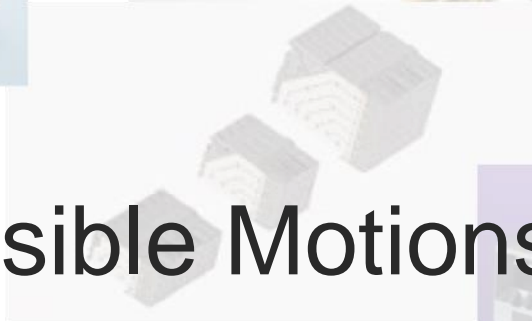
- System Architecture
- Channel Loss
- Modulation
- Equalization
- Error Correction
- Power

# ***Credo Semiconductor Thoughts on the Table***

## **56G: Length, Loss, Application, and Power**

<b>Application</b>	<b>Length</b>	<b>Loss</b>	<b>Modulation</b>	<b>DFE</b>	<b>FEC</b>	<b>mW/ch</b>	<b>pJ/bit</b>
C2EO	<2 in	<6dB@28GHz	NRZ	1 tap	No	90	1.6
		<4dB@14GHz	PAM-4 Analog	No	No	150	2.7
C2M	2-8 in	6-20dB@28GHz	NRZ	1 tap	No	90	1.6
		4-10dB@14GHz	PAM-4 Analog	No	Yes	150	2.7
C2C	8-16 in	20dB-35dB@28GHz	NRZ	Multi-tap	No	175	3.1
		10dB-18dB@14GHz	PAM-4 DSP	No	Yes	450	8
C2F	16-40 in	35-50dB@28GHz	NRZ	na	na	na	na
		18dB-35dB@14GHz	PAM-4 DSP	No	Yes	450	8

# Possible Motions



# Potential Motion #1

Create 1) 25 Gb/s by 16 lane C2C and C2M electrical interfaces and 2) 50 Gb/s by 8 lane C2C and C2M electrical interfaces, with parameters TBD.

IMPORTANT ONE

## Potential Motion #2

Adopt 25 Gb/s by 16 lane electrical C2C and C2M interfaces using the P802.3bm specifications **with current values** (except that the BER requirement is TBD) as a baseline **that could be for use with CDXI and CDAUI.**





# Thank you!

From:

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