Comparison of CTLE+DFE vs TDECQ/FFE Reference Receivers for 802.3ck TP1a/TP4 Compliance of Chip-to-Module Electrical Interface

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Ref. Receiver for TP1a and TP4: DFE vs. TDECQ/FFE for 802.3ck C2M

Proposal	DFE		TDECQ/FFE	
	Hr(BT/BW) + CTLE + DFE4		FFE5 (Hr=BT, no CTLE)	
Alignment with existing standards infrastructure such as COM, C2C, BP, CR	+	Good alignment	-	FFE is used only for TDECQ for optical
Adaptation algorithm	+	Well established in the standards	-	TDECQ does not specify how to find the FFE coefficients
Alignment/consistency with whole link performance	+	DFE4 or DFE5 will make the link work	-	Whole link RX seems very different from FFE5, potential interoperability issue.
ERL	+	DFE used for 802.3cd, 802.3ck C2C, BP, CR	-	New methodology needs to be developed and validated
Reference receiver at TP1a and TP4/TP5	+	Same ref RX for both	-	Ref FFE for TP4/TP5 not consistent with 802.3ck C2C, BP, CR ref RX

Thank You !