P802.3dj C2M Loss -- Starting Point

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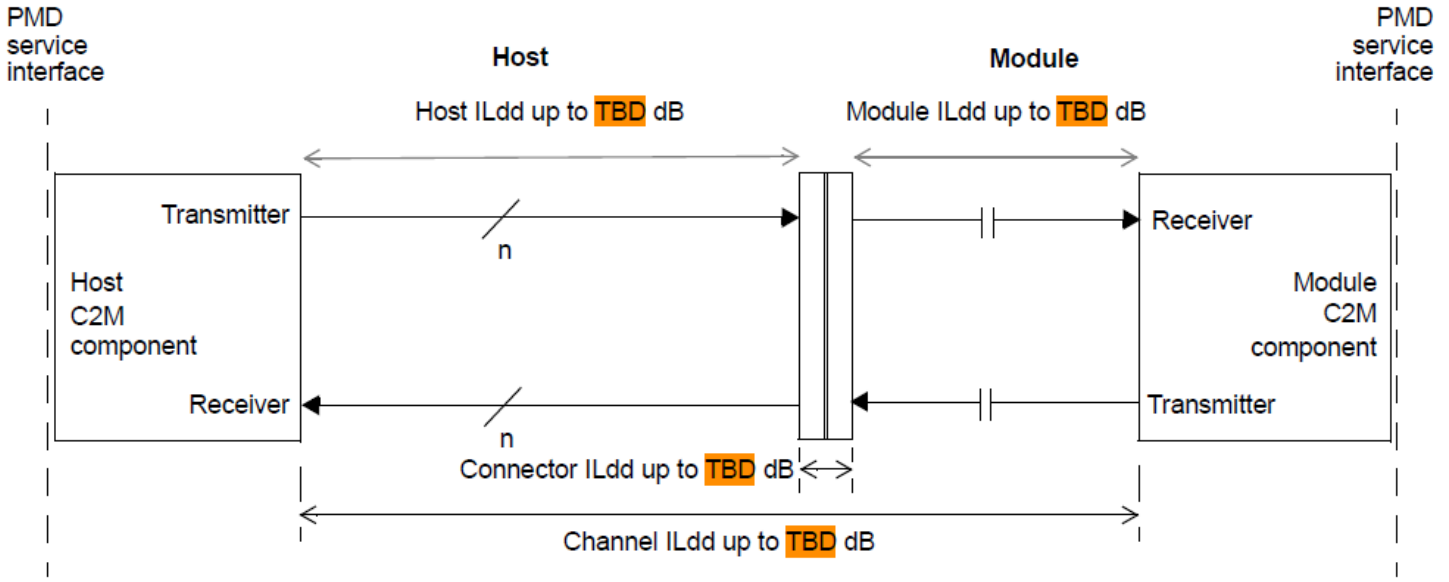
Preface

- The AUI C2M ILdd value has been under study for a long time
  - Many AUI C2M ILdd values were proposed over the last 12 months: 28-36 dB
- During D1.0 comment resolution, the CRG adopted many COM parameter values for AUI C2M analysis that clarified the reference receiver capability

Channel ILdd – (die-to-die)

- D1.0 comment #129 final response adds an editor's note that the losses in the diagram are intended to be die to die

Figure 176E–2 depicts a typical 200 Gb/s per lane AUI-C2M application and the associated ILdd budget at 53.125 GHz. This ILdd budget represents a minimum capability that components are expected to support. The recommended characteristics of the channel between the C2M components are provided in 176E.4.



NOTE—The number of lanes n is equal to 1 for 200GAUI-1, 2 for 400GAUI-2, 4 for 800GAUI-4, and 8 for 1.6TAUI-8.

Figure 176E–2—Components of a 200 Gb/s per lane AUI-C2M interface and insertion loss budget at 53.125 GHz

Parameter Values in Recent Contributions

Contribution	Ildd Recommendation
lusted_3dj_01a_2406 (slide 6)	~33dB for PCB host ~29dB for cabled host
ghiasi_3dj_01_2407	30dB 32dB with extra care

Observations

- Consensus seems to be forming around ILdd (die-die) = 33dB, based on offline discussions
- Viewpoints expressed on whether a different ILdd number is needed for PCB vs. cabled hosts
  - Two numbers or two figures or call-out in the specification
- Subdivision of the ILdd budget among the sub-parts may take more time
- Impact of “skew” on analysis and results is a turbulent topic
- Not all of the AUI C2M channels need to “pass”
  - In other words, poorly designed channels should “fail”

Next Steps

- Identify “top 10” C2M channels to focus analysis on
  - “Crawl, walk, run” strategy
  - Check the expanding channel space for pass vs. fail
- Choose an ILdd (die-die) number and refine it through the comment resolution process
  - Fill in the remaining sub-parts as consensus emerges

Thanks!