

Host Budget Consensus Building



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Consensus Building Summary

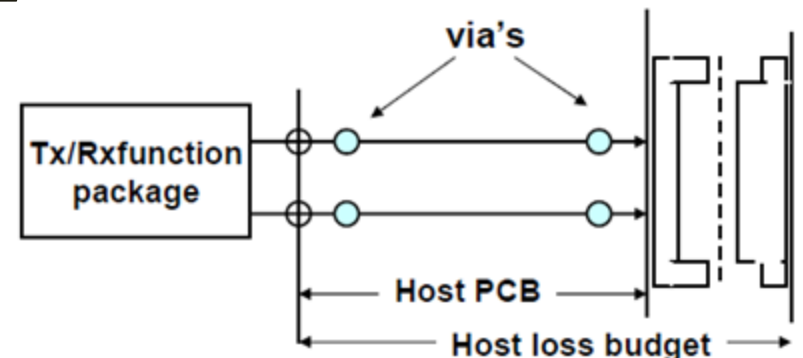
- Leveraging input from Material Loss Proposal (kochuparambil_01_0112), host loss consensus group was able to add context around the loss assumptions used in CEI-28G-VSR and diminico_01_1111
 - VSR: 1.7dB/inch @ 14GHz
 - DiMinico: 1.27dB/inch @ 14GHz
 - Material Loss Proposal:
 - Meg6_HighSR-narrow: 1.7dB/in @14G
 - ImpFR4_LowSR-narrow: 1.55dB/in @14G
- Group agreed that VSR target for host board + 5m passive copper cable would be greater than the 30dB link budget (without FEC)
- To preserve the potential for commonality between optics (VSR budget) and copper (5m), FEC would be needed to make up for the ~3dB difference at 12.89GHz
 - Strong need to be able to turn off FEC for shorter reach cases (1m and 3m for example)

Recommendation

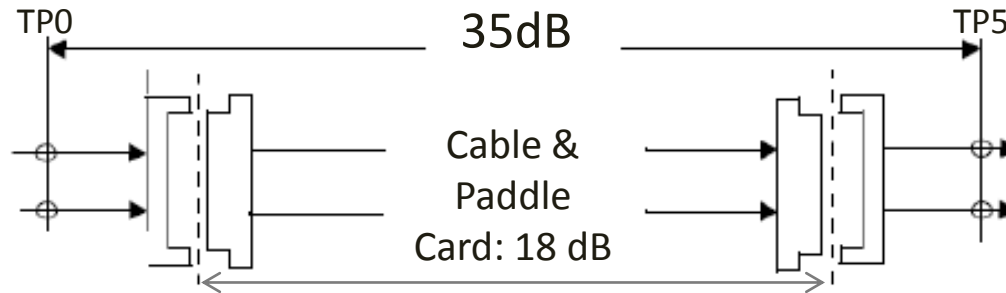
- Budget host loss assuming FEC is used to meet 5m reach
 - Ensures adequate loss for hosts
 - Enables compatibility with optical ports
- Task force to study how FEC can be turned on/off for low loss latency sensitive applications

- Host Loss Budget: 8.5dB at 12.89GHz

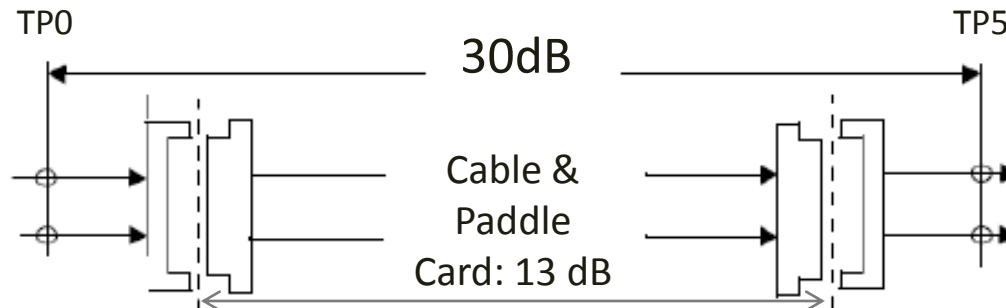
- includes PCB loss, two sets of vias and mated connector



Copper Cable Link Budget



5 m cable assembly link budget example with 8.5 dB host loss: 35 dB @12.89 GHz (FEC Required)



3.5 m cable assembly link budget example with 8.5 dB host loss: 30 dB @12.89 GHz (FEC not Required)

Next Gen Optical Budget

