FC-PI-8 FIBRE CHANNEL MARKETING REQUIREMENTS DOCUMENT (MRD)
MAY 15, 2019
FCIA ROADMAP COMMITTEE
T11-2019-00111-V2
FC-PI-8 Fibre Channel “Elevator” Statement

Allow a 128GFC "capable" product, such as a switch or HBA, to be plugged into vast majority of its current (the time it is plugged) environment/infrastructure with zero changes, no user intervention, and product availability in the 2022 timeframe.
Backward compatibility to 64GFC and 32GFC is essential

- Maintain as minimum as possible changes to basic physical components such as ENDEC methodologies, and if changed maintain some ability for multi-function schema for components to act as a transition architecture to new methodologies.

- 128GFC capable products can also run at 64GFC and 32GFC
- FC-xx compliant (xx = GS3, PI-2, FS, FLA, PLDA, F and E port compatible to 64GFC and 32GFC)

Same external connectors as present connector

- LC and SFP+ for 128GFC
- QSFP? (Maybe defer to FC-PI-8P?)

Cage compatible

- SN, MDC and SFP-DD for 2X128GFC

Existing cable assemblies plug into 128GFC-capable products

- Existing 32GFC and 64GFC SFP modules should work with new 128GFC-capable cages
- Links shall support 4 in-line optical connectors (6 connectors for 2KM²)
SUPPORTED OPTICAL CABLE LENGTHS

- Cable length of 100m on OM4/5 cables for 128GFC
- Cable length of 30m on OM3 cables for 128GFC
- Cable length of 2km and 10km on SMF cables for 128GFC
• PI-8 shall double the throughput of 64GFC \{115.6 \text{ is double}, \ 112.2 \text{ is current work}, \ 106.25 \text{ is Ethernet}\}

• Support similar chassis and 1U switch topologies for electrical requirements

• 2021 Technical stability of standard

• 2022 products ship

• Cost targets at no more than a nominal premium over similar 64GFC devices and decreases over time similar to past FC speed migrations

• The cost of 128GFC links should be comparable to 100GbE at similar volumes
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• Leverage 100G technology from 100GbE (100G) when possible

• Corrected BER target of 1E-15

• Latency of 128GFC must be 20% less than the latency of 64GFC {How is this measured? Latency was never defined for 64GFC}

• 128GFC must support AOCs (active optical cables)/ACCs (active copper cables)

• A second electrical interface to embedded modules would be considered {Does this interface need to be backward compatible to existing modules?}

• Power goal at the port is within 10% of current 64GFC power/lane

• Speed-Negotiation down to 64GFC and 32GFC on a per lane basis