



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.

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- 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

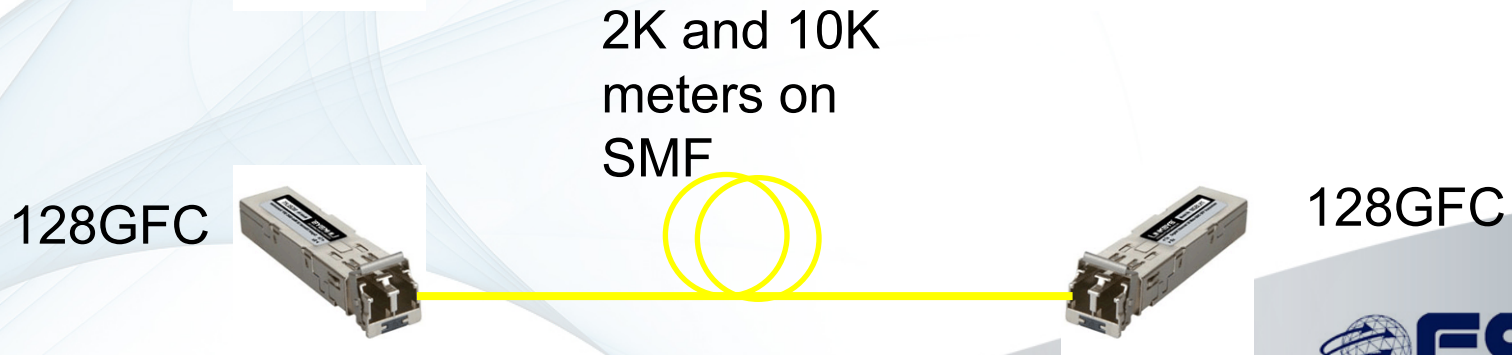
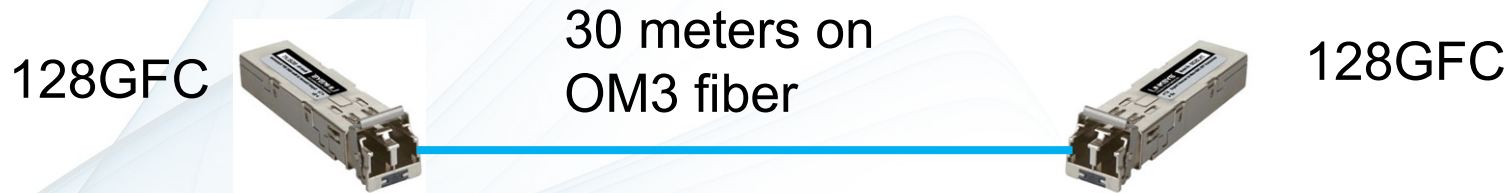
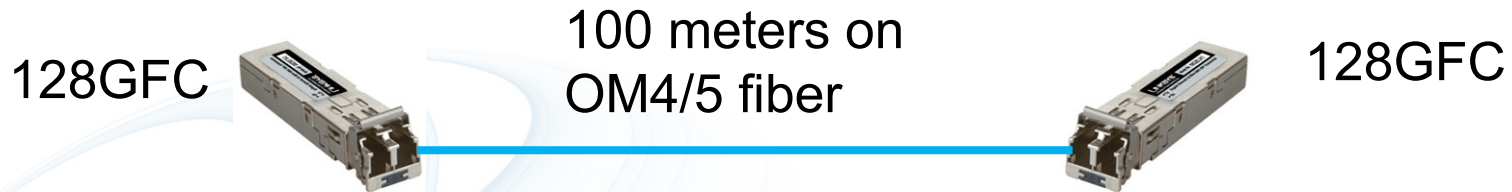
- SN, MDC and SFP-DD for 2X128GFC

- 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



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- PI-8 shall double the throughput of 64GFC {~~115.6 is double~~, 112.2 is current work, 106.25 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