



# 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

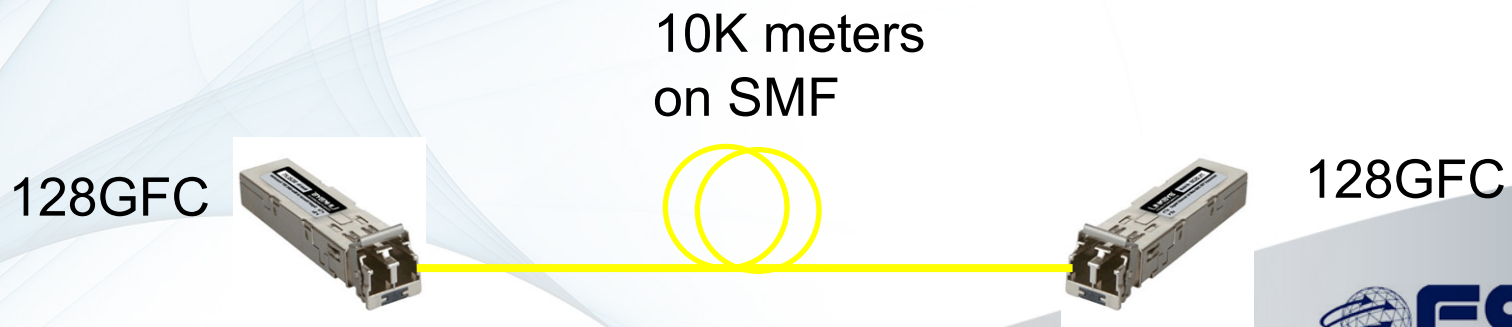
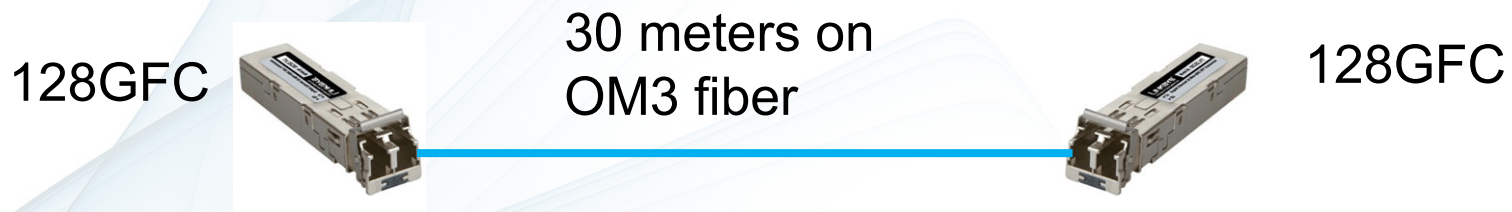
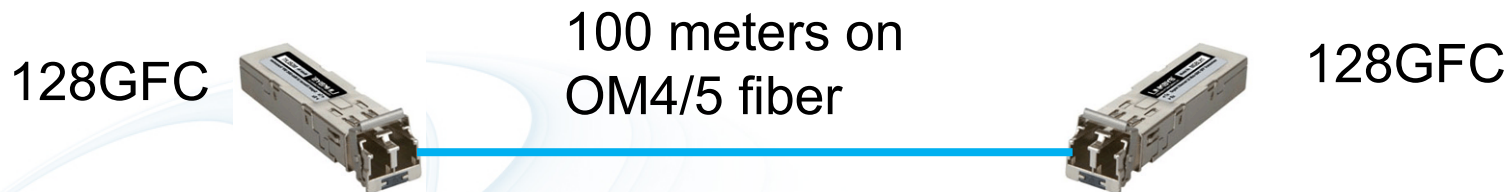
Allow a 128GFC "capable" product, such as a switch or HBA, to be plugged into vast majority of its current (the time it is plugged) environment/infrastructure with zero changes, no user intervention, and product availability in the 2022 timeframe.

# FC-PI-8 FIBRE CHANNEL DRAFT MRD

- 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

# 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 10km on SMF cables for 128GFC



# FC-PI-8 FIBRE CHANNEL DRAFT MRD

- 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~~

# FC-PI-8 FIBRE CHANNEL DRAFT MRD

- 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 Active Direct Attach Cables {Need to define better what an Active Direct Attach cable is}
- 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