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New Project Proposal: SFF-TA-1045

Presented: 8/29/25

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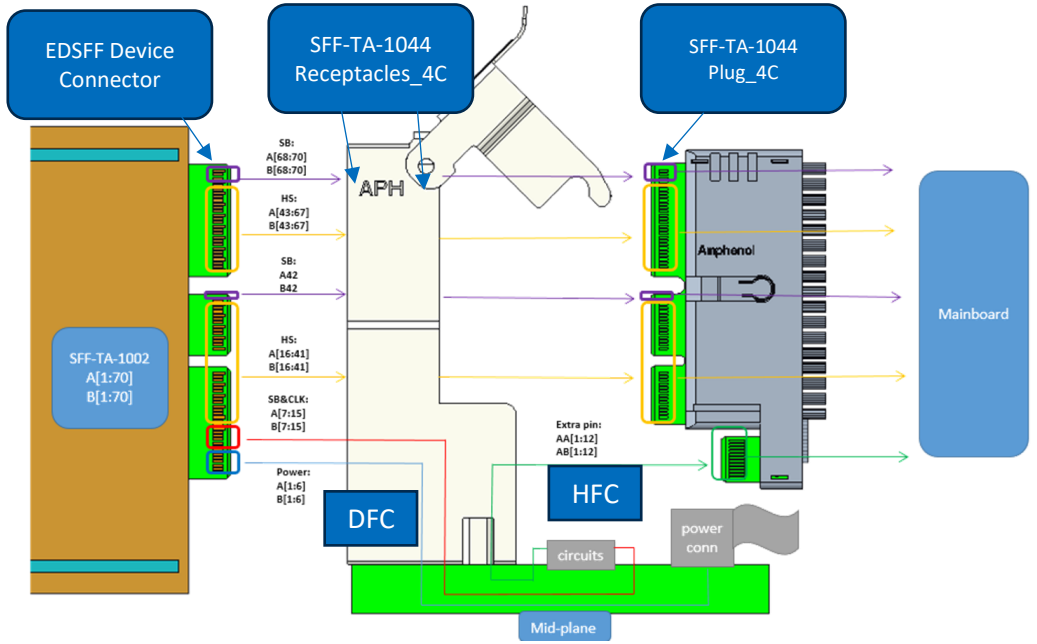
Supporters: Amphenol & Lotes

New Project Proposal: Document Number Needed

- Title: Pin and signal definition for Hybrid Orthogonal EDSFF Connector
- Provide the pin definition, both high speed and low speed, for Hybrid Orthogonal EDSFF Connector – SFF-TA-1044
- Editor: Jason Stuhlsatz/Josh Sinykin
- Supporters:
  1. Broadcom
  2. Amphenol
  3. Lotes

New Project Proposal: Document Number Needed

- Known Details
  - Hybrid Orthogonal EDSFF Connectors (SFF-TA-1044) provide benefits to traditional backplane designs, but those benefits require additional sideband information to ensure proper installation and access to backplane management.
  - Cable Examples include:
    - SFF-TA-1044 to SFF-TA-1016
    - SFF-TA-1044 to SFF-TA-1044
  - High speed lanes would directly connect the high-speed lanes in the EDSFF connector to the SFF-TA-1044 plug high speed lanes
  - Low speed lanes would consist of both standard sideband pass-thru and local connector-based signals
- Contents
  - DFC (EDSFF) signal mapping to HFC (cable receptacle)
  - Declaration of local based backplane management signals on the HFC side without impacting existing sideband signal definitions
    - Support for Dual Domain
    - Support for Cable Bifurcation or Single Lane access
- After establishment of this standard
  - Mapping would be referenced in a new SFF-9402 device column
  - Aligns with SFF-TA-1005 UBM CCC Process proposal
- IP Declaration (if applicable):
  - Any IP to declare? See SFF-TA-1044
- Timeline: Follows SFF-TA-1044 mechanical connector spec (ETA November 2025)



Reasons for Local Based Backplane Management Signals

- Hybrid Orthogonal EDSFF Connector keeps high speed signals off the backplane, which changes static slot association relationships and moves them to the cable leg installation. A proper installation is necessary for the Backplane Manager to maintain accurate slot to port mapping.
- Signals to SFF-TA-1005 (UBM) to inform it of:
  - The way the cable is divided (i.e., HS subdivisions/bifurcation)
  - The leg # (port #) of the cable connected to each HFC
  - Maximum # of legs in the cable
  - Confirmation of all legs connected to the same host connector

Thank You

SNIA SFF Chair Contact: sff-chair@snia.org

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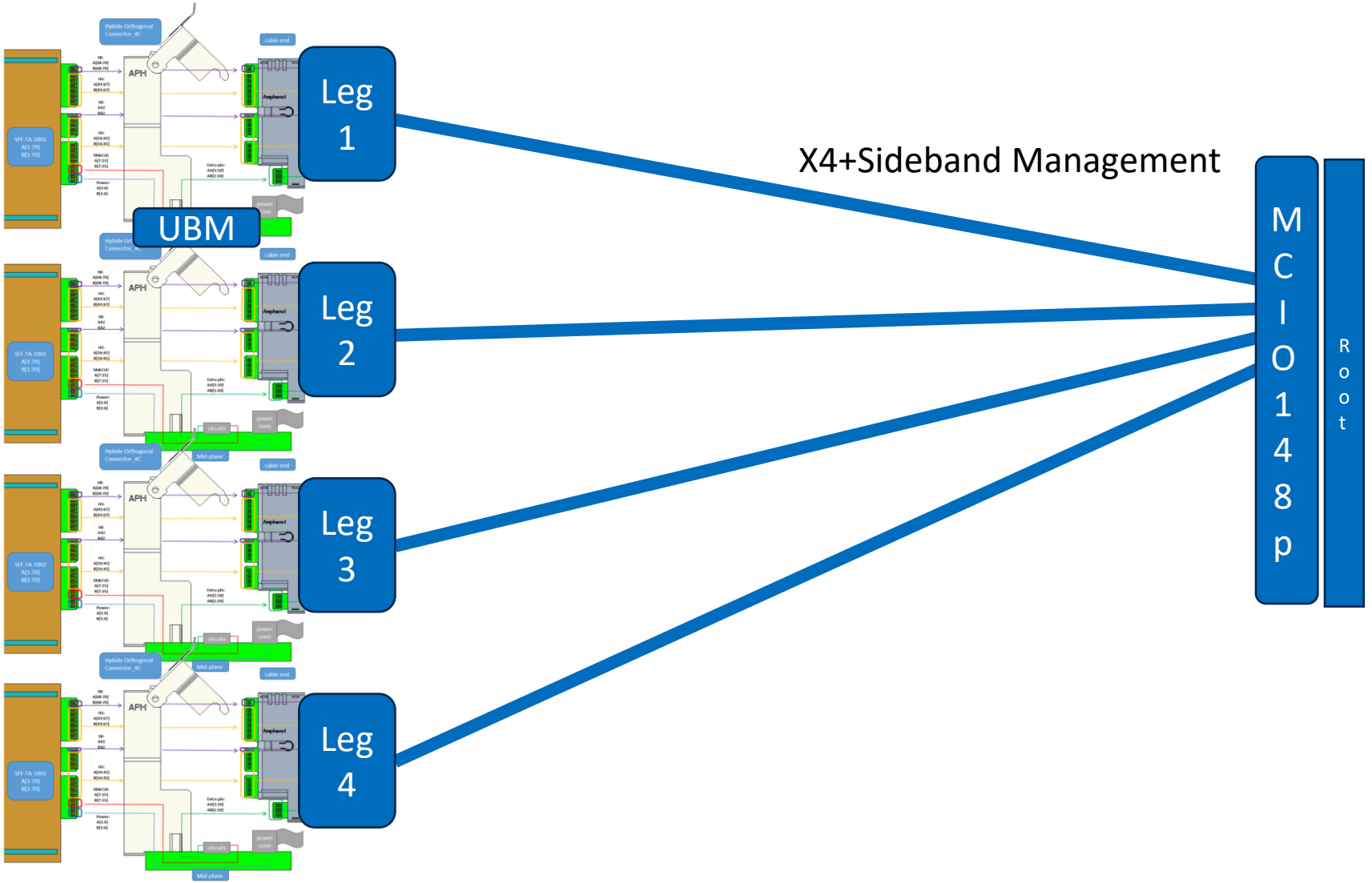
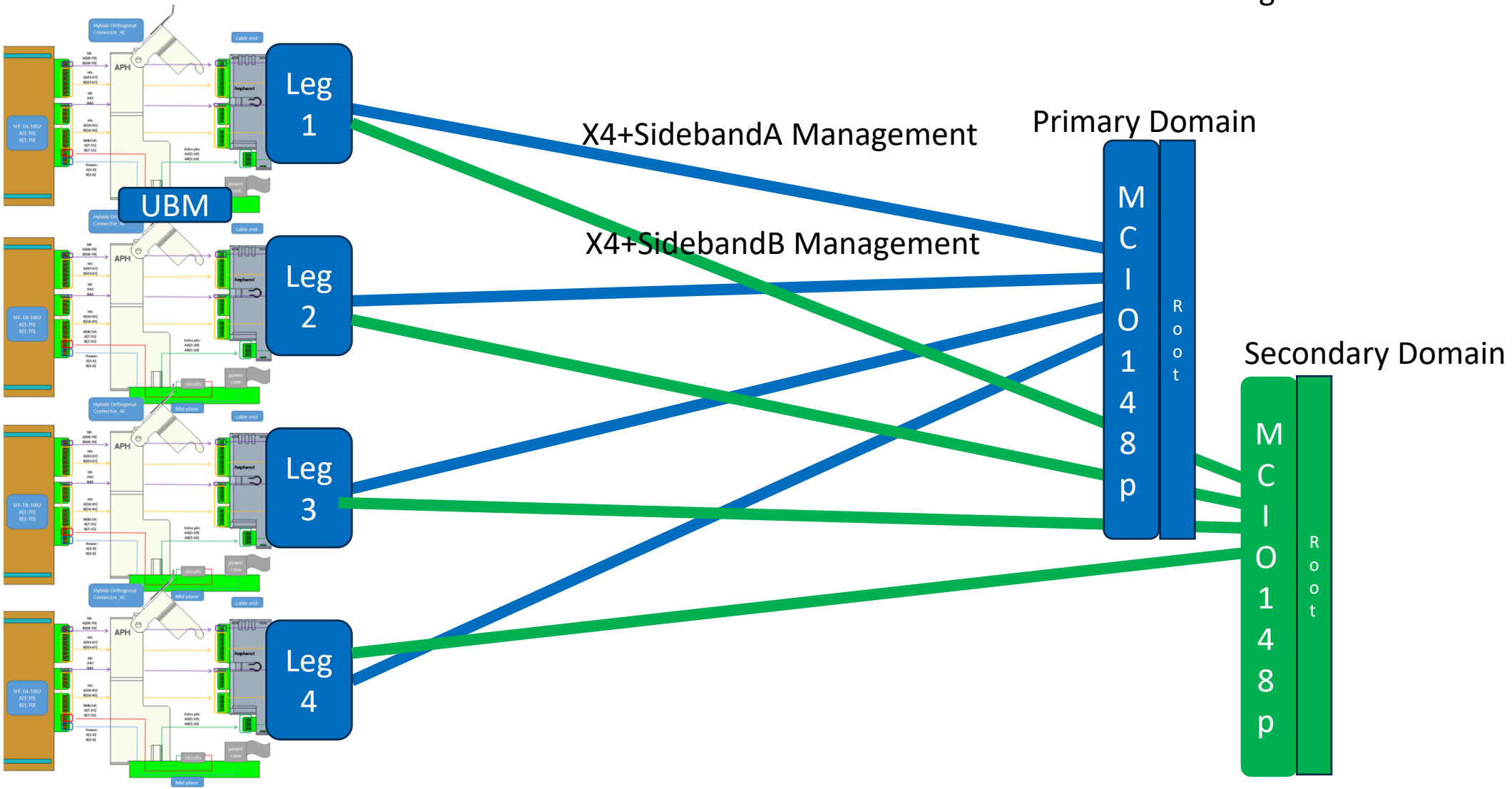
Examples: 4 drive Backplane



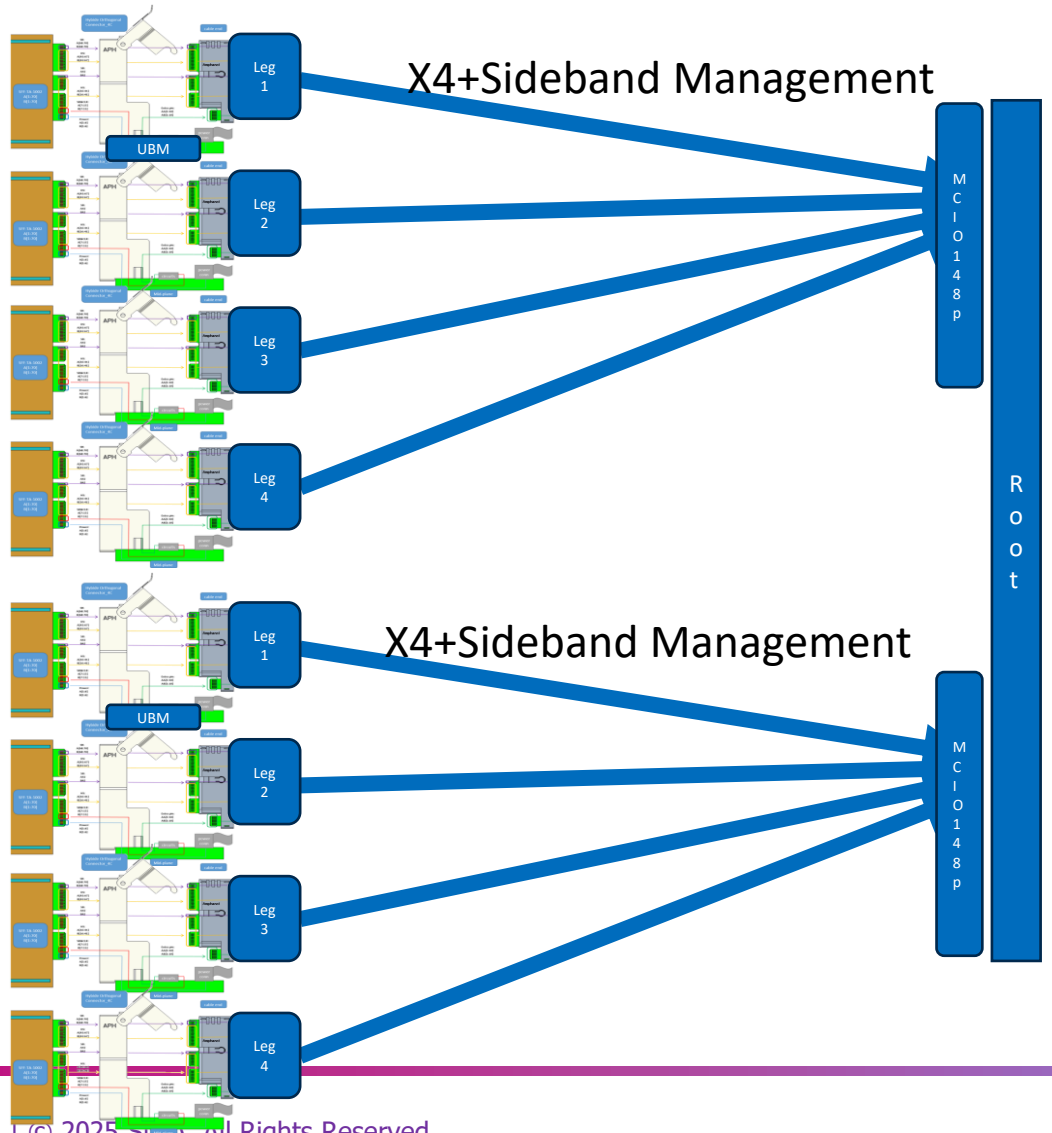
Straight wired Cable
Max Leg Count is 4

Examples: 4 drive Backplane

Device Dual Domain
Max Leg Count is 4 for each domain

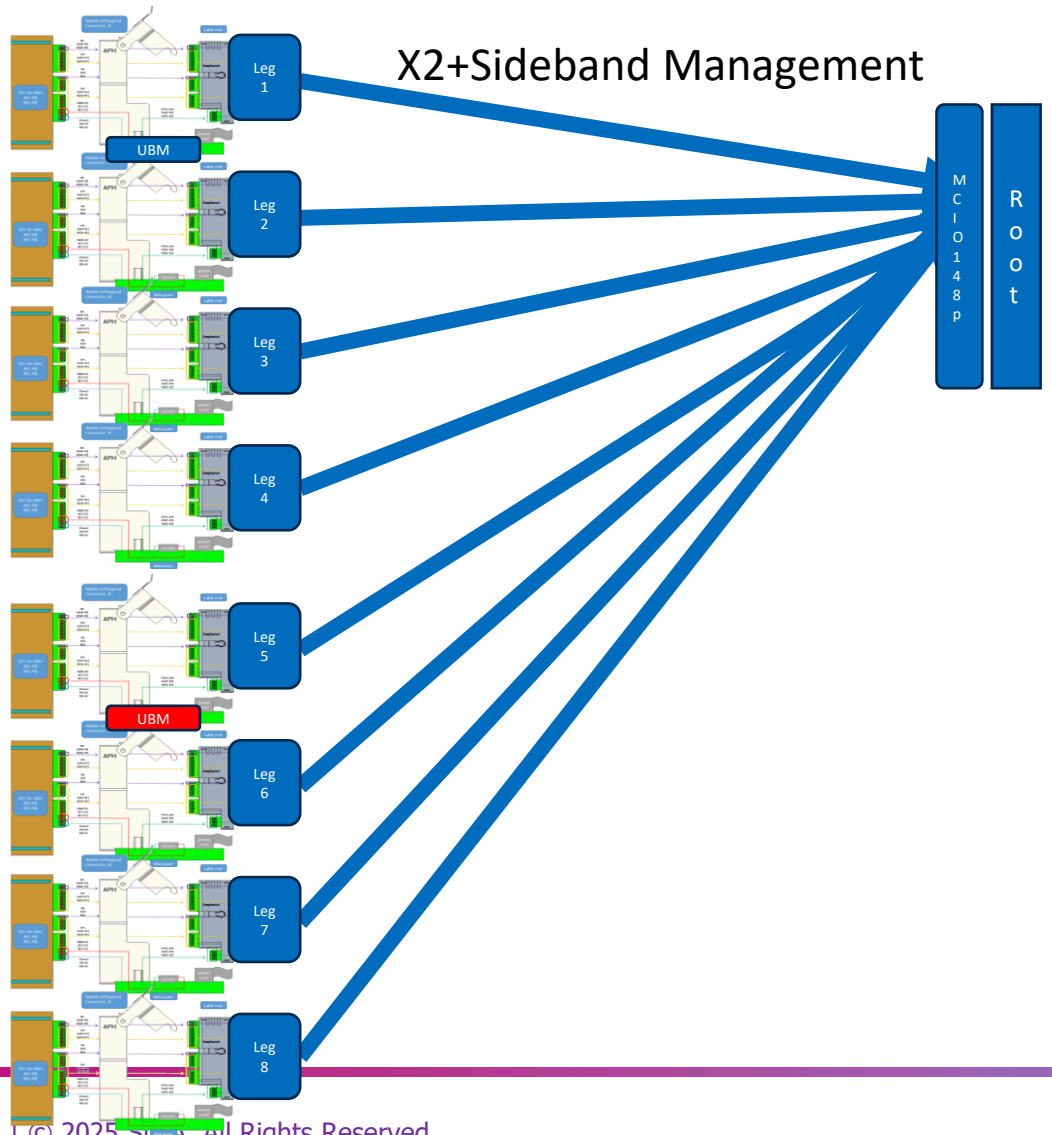


Examples: 8 drive Backplane



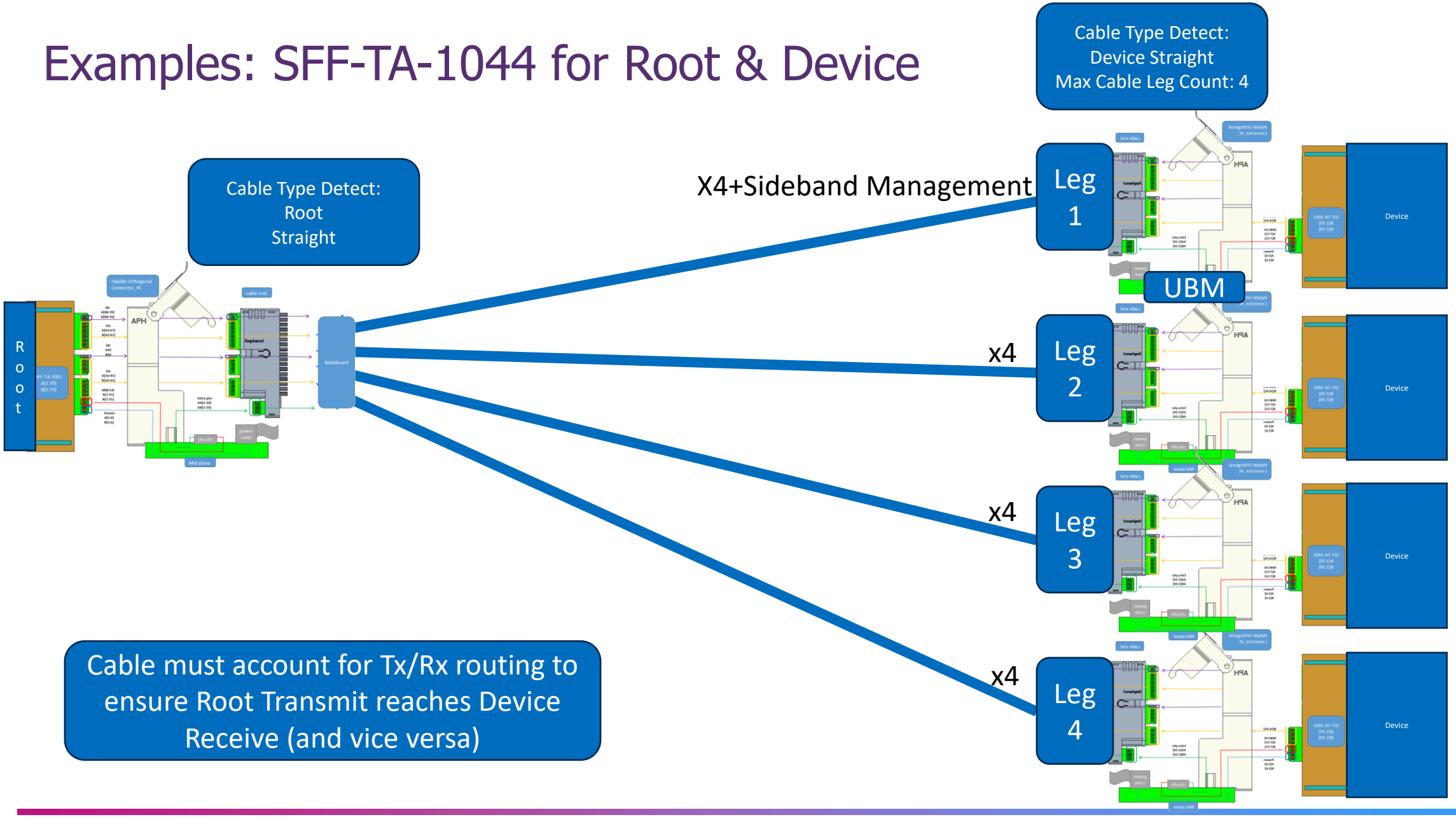
Straight wired Cable
Max Leg Count is 4

Examples: 8 drive Backplane - bifurcated



Bifurcated wired Cable
Max Leg Count is 8
Second UBM instance shown in red is optional.

Examples: SFF-TA-1044 for Root & Device



Cable must account for Tx/Rx routing to ensure Root Transmit reaches Device Receive (and vice versa)

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