100G Single Lambda Optics
Disclaimer

The views expressed in this presentation are personal views and should not be considered the views or positions of the Ethernet Alliance.
100G Today: 4x25G λ NRZ

- SiP or InP Modulator w/ Driver (MD) are DML alternatives
- 3.5W Typical in CFP4 module
- CFP MSA sponsoring CFP4 Treasure Hunt
- Count CFP4s at OFC’14 to win an iPad
Ultimate 100G: 1x100G λ HOM Linear

- Similar architecture to 10GbE-LRM SFP+
- Will leverage CFP2 AOC development
- Supports 4x density increase over 4x25G
- Requires future CMOS technology
100G Alternatives Roadmap

- Each alternative as a step towards long term solution has advantages and disadvantages
- Next solution should be based on its merit

1x100G λ HOM Linear

1x100G λ PAM-4 RT

1x100G λ QAM/DMT RT

2x50G λ QAM / DMT RT

2x50G λ PAM-4 RT

2x50G λ NRZ Re-Timed

4x25G λ NRZ Re-Timed
Next 100G: 2x50G λ NRZ (Quad)

- \( \frac{1}{2} \) CW Laser and \(~2\text{W}\) per 100GbE channel
- Conventional, demonstrated NRZ Electronics & Optics
- Benchmark against which to compare more complex next step solutions.
Thank you!