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Ethernet Alliance 100GbE Challenges

Scott Kipp
President of Ethernet Alliance

Disclaimer

The views expressed in this presentation are the views of the Roadmap Subcommittee and the Ethernet Alliance.

Agenda

- Historic trends in Ethernet optics
- 100GbE Single Lambda Holy Cup
- 100GbE SFP+ Holy Grail

10G Recap – SFP+ Wins!

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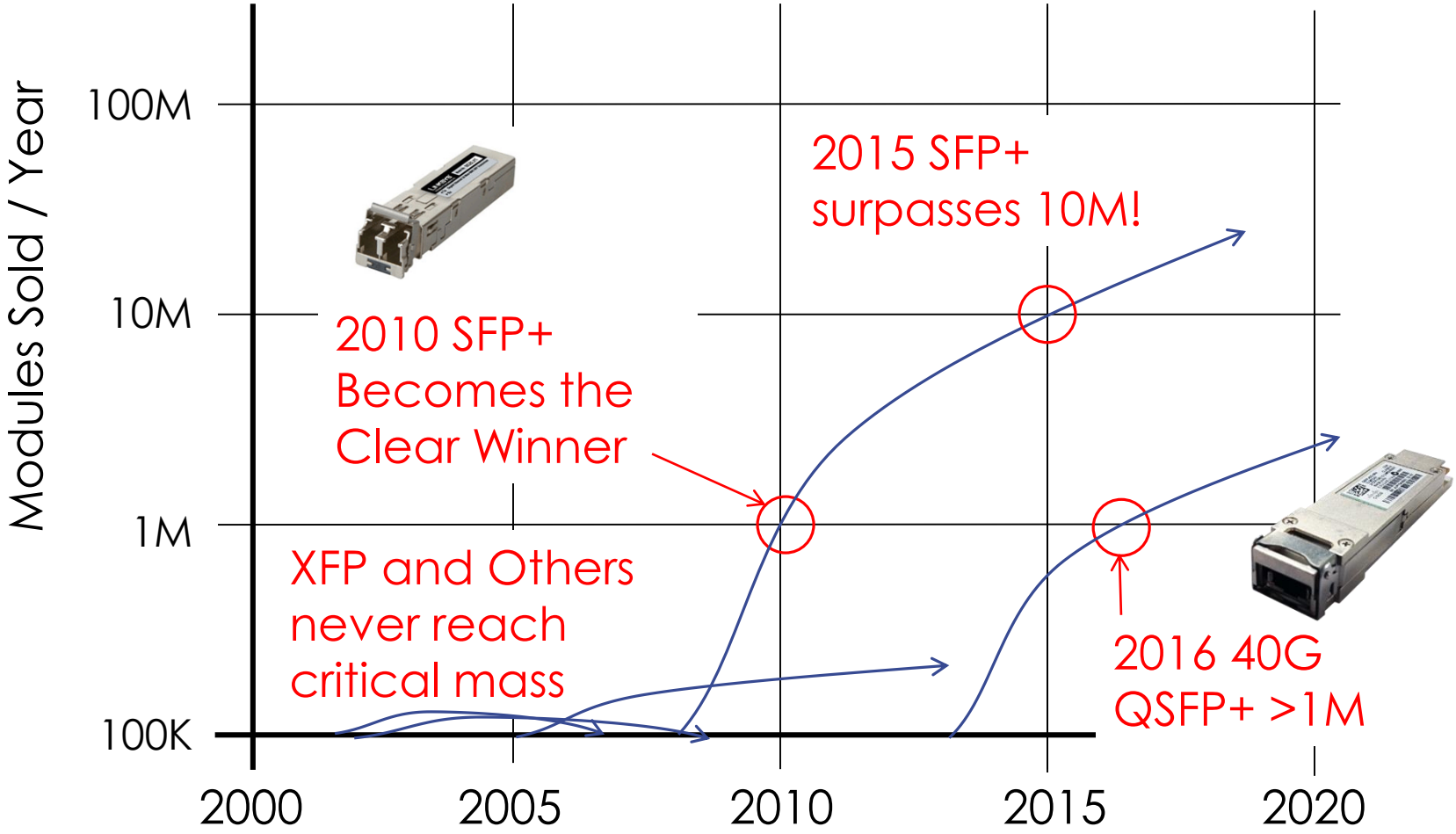

Based on LightCounting Forecasts

40G – QSFP+ to SFP+?

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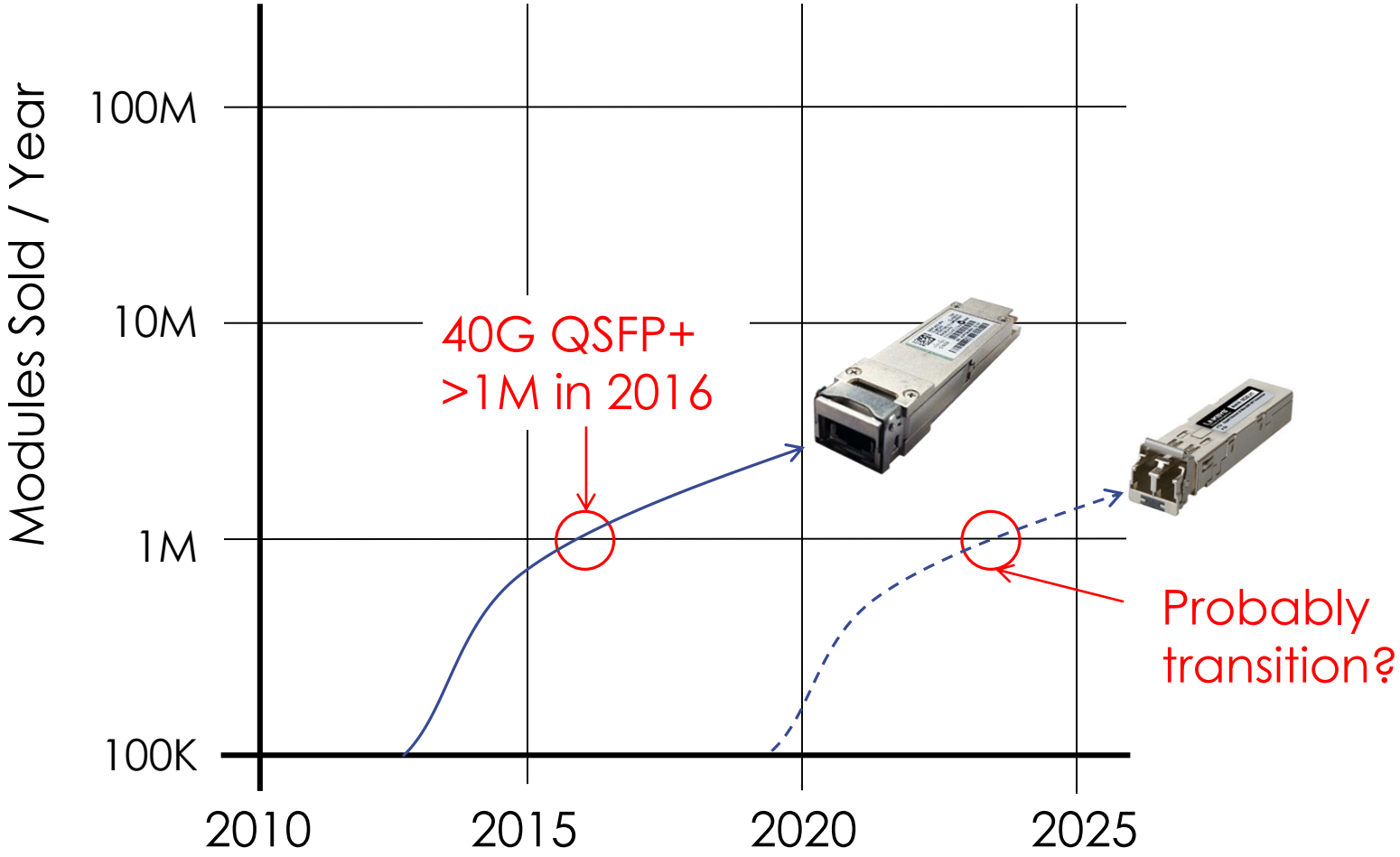
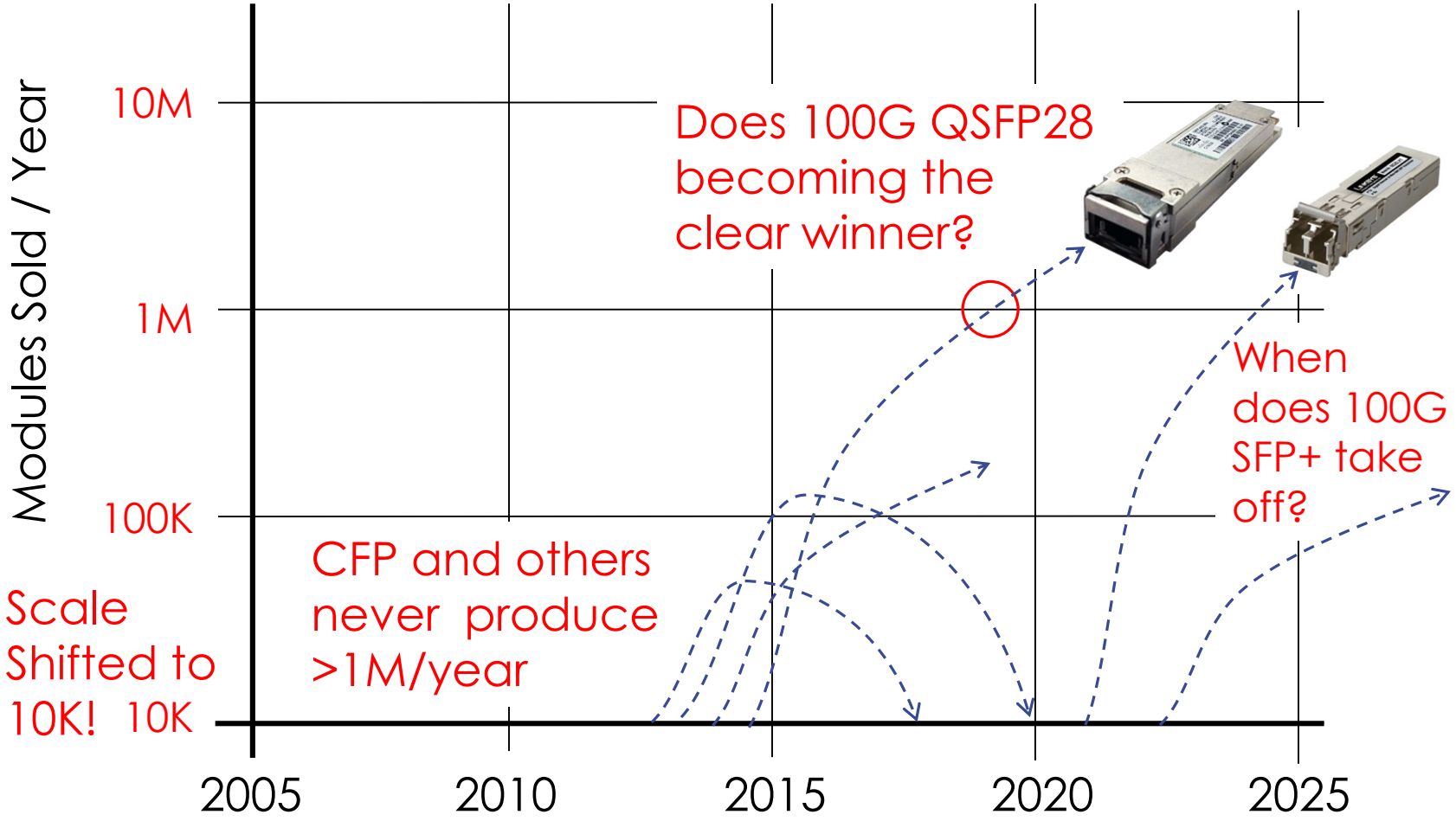


QSFP+ Up to 2016 Based on LightCounting Forecasts

100G – An Odd Twist on 10G?



Based on General Trends

Two Key 100GbE Technologies

- 100GbE Optics solutions
  - Topic of 100GbE Single Lambda Workshop
    - http://www.ethernetalliance.org/100gbe-per-lambda-for-data-center-workshop/
  - Should lead to low cost 100GbE and TbE
- 100GbE Electrical solutions
  - Emerging technologies are CAUI-4 (4X25Gb/s)
  - Next gen could be CAUI-2 (2X50Gb/s)
  - Goal is CAUI-1 (1X100Gb/s)
- The Ethernet Alliance is challenging the industry to publicly demonstrate solutions based on these technologies

The Holy Cup of 100GbE Lambda

- The first company to publicly demonstrate a 100GbE Single Lambda in a 3.5W QSFP28 will win the Holy Cup*

*See details on next page

Requirements for the Holy Cup of 100GbE Lambda

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- Publicly demonstration at a major conference
- Housed in 3.5W QSFP28 with CAUI
- Uses a single wavelength of light
- Supported distance could be:
  - 2km over duplex SMF with a 4.0dB insertion loss or
  - 100m over duplex MMF with a 2.0dB insertion loss
- Winner will be recognized by the Ethernet Alliance publicly
- The Ethernet Alliance Board determines the winner

The Holy Grail of 100GbE SFP+

- The first company to publicly demonstrate a 100GbE SFP+ under 1.5W will win the Holy Grail*

*See details on next slide

Requirements for the Holy Grail of 100GbE SFP+

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- Publicly demonstration at a major conference
- Housed in 1.5W SFP+ with CAUI
- Uses a single wavelength of light
- Supported distance could be:
  - 2km over duplex SMF with a 4.0dB insertion loss or
  - 100m over duplex MMF with a 2.0dB insertion loss
- Winner will be recognized by the Ethernet Alliance publicly
- The Ethernet Alliance Board determines the winner

100GbE Challenges

- The Ethernet Alliance is challenging the industry to demonstrate:
  - 100GbE Lambda
  - 100GbE SFP+
- Contact the President of the Ethernet Alliance at president@ethernetalliance.org with any questions