MSA Preview

Open Eye MSA Executive Summary

- **Problem to Solve:** Data centers require lower cost modules with simplified but robust and repeatable compliance requirements

- **MSA Goal:** simplify and accelerate adoption of cost optimized 100Gbps, 200Gbps and 400Gbps optics in data center and enterprise
  - Phase 1: 53Gbps per lane single-mode optics
  - Phase 2: 53Gbps per lane multi-mode optics
  - Phase 3: 100Gbps per lane optics

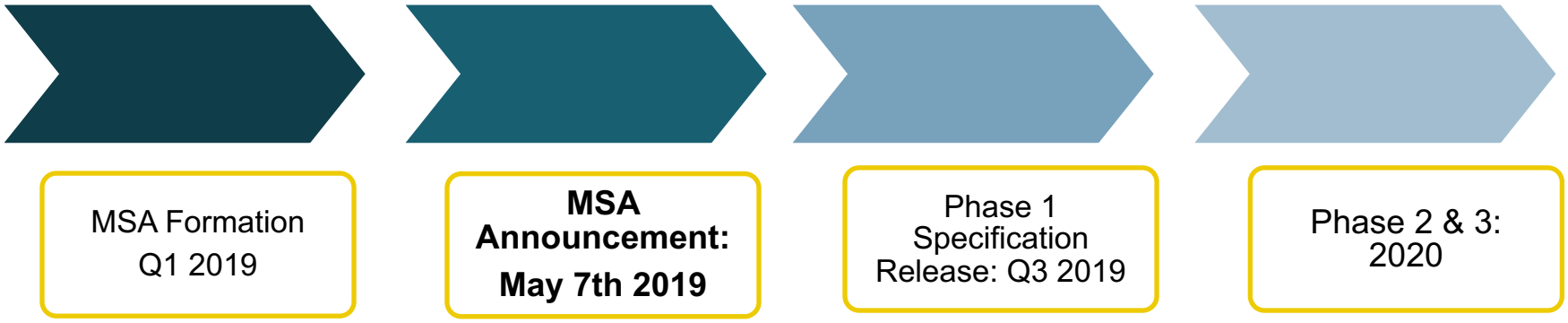
- **Key Benefits:**
  - Lower cost than IEEE standard based optics
  - Lower power
  - Lower latency
  - Supports existing fiber plant and host interface
  - Enables wider range of electronics technologies

- **Why Industry Needs this MSA:** Multiple optics, components and system companies focused on low cost are needed define an interoperability specification enabling multiple supply sources of all components

Open Eye MSA Benefits

- **Enables a wider range of technology options**
  - Enables implementations with low cost, low power and low latency electronics
- **Eliminates TDECQ test requirements**
  - TDECQ was invented to assess early versions of 100G serial optical transmitters
  - TDECQ Requires a DSP based receiver increasing complexity of design and module cost
  - TDECQ is not required for a broad range of existing 50G single mode transmitters
  - TDECQ should not be required with 2nd gen 100G optical transmitters with pre-equalization
- **Compatible with existing switches, routers and NICs**
  - Supports IEEE compliant nx50G PAM4 host electrical interface
- **Simplified optical manufacturing and compliance testing**
  - Leverages reliable optical compliance testing using traditional eye diagrams in place of TDECQ.
- **High link margin**
  - Results in higher manufacturing yield, low module cost, faster time to volume
- **Enables utilization of retimers**
  - Enables power implementations of low cost module form factors such as SFP, SFP-DD, QSFP, QSFP-DD, OSFP
  - Reduces latency in the optical module
  - Reduced design complexity enabled by simplified electronics

MSA Timeline



MSA Compliant Product Demonstration Expected at COIE and ECOC 2019