This presentation covers how Gen-Z can be deployed using existing mechanical form factors.
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http://genzconsortium.org/
To balance time-to-market pressure and performance, the Gen-Z consortium is focused on deploying media in multiple phases.

1. **Phase 1**: Enable Legacy Form Factors
   - Storage: SFF-8201/8639 based modules – 2.5” and Compact 2.5”
   - I/O: USB3, U3H-U3, U3H etc.
   - PCIe® cards with Gen-Z Bridges
   - Specifications to be published Q3 2017

2. **Phase 2**: Augmented Form Factors
   - New Gen-Z high speed connector (Specification published July 2017) deployed on:
     - PCIe Cards
     - DIMMs
     - Storage Drives

3. **Phase 3**: High Performance Modules
   - New Gen-Z Scalable Connector
   - New Gen-Z-optimized form factors – Specification to be published Q1 2018
   - Currently under development in Gen-Z Consortium Mechanical Workgroup

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Deploying Gen-Z Attached Media

**Multiple phases to balance Time-to-Market pressures and Performance**

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The Gen-Z Consortium has published specifications that enable Gen-Z in 2.5” SSD form factors with the U.3 SFF-8639 connector. The layouts shown here are conceptual to show the different media support capabilities. In addition, the form factor could support accelerators, FPGAs or Gen-Z bridges and gateways.
The 2.5” compact form factor shown here, is a truncated 2.5” form factor that can be deployed in both internal and front pluggable implementations. The same PCA can be mounted in a carrier for front pluggable applications or placed internally to a 2U server.
The compact form factor can support multiple media, just as the 2.5” form factor, and also leverages the SFF-8639 U.3 connector. Additional mechanical details are shown here.
Shown here, is the U.3 SFF-8639 with a modified pinout to support 8 differential pairs of Gen-Z. Pins S1 through S14 and S16 through S28 support the Gen-Z data signals, while E23 and 24 support the management signals. Please refer to the SFF-9639 specification for the latest definitions of the remaining pins.
To enable Gen-Z connectivity, a Gen-Z I/O component can be deployed in a PCIe card form factor. The I/O component supports one or more Logical PCI Devices (LPDs) which surface PCI or PCIe functions. Shown here is an example of the Gen-Z I/O component in a PCIe card form factor. In this example, the Gen-Z signals are cabled to a U.3 enabled backplane from the PCIe card.
For the full SFF-8639 based Gen-Z specifications, please refer to the Gen-Z consortium’s specification page. For news and the latest updates, please refer to the consortium’s website where new papers, educational materials, draft and final specifications, and much more is published on a regular basis.
Thank you

This concludes this presentation. Thank you.