# TE Connectivity

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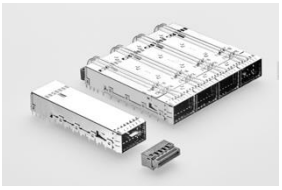
## 8x224 Gbps, 1.6T OSFP Connector Demonstration



**Document: draft CEI-224G-VSR-PAM4**
TE Connectivity (TE) is demonstrating a prototype of its octal small form-factor pluggable (OSFP) input/output (I/O) connector in the form of two MCB connector module cable test boards, demonstrated in a CEI-224G channel.

Developing and delivering 224G PAM4 based channel definitions is a challenging task for the OIF and TE is at the forefront of supporting those efforts by providing simulations and measurements such as those shown in this demo.

Learn more at: **https://www.te.com/usa-en/industries/data-centers-ai/technologies/224g-gigabit-ethernet-solution.html**

## 8x224 Gbps 1.6T Direct Attach Copper Cable and 1.6T Active Copper Cable (ACC) Linear Demonstrations

**Document: draft CEI-224G-LR-PAM4**
As show here at OFC 2024, TE is demonstrating 8x224 Gbps PAM4 links with a 1 meter 1.6T OSFP passive direct attach copper cable assembly and a 3 meter 1.6T OSFP active copper cable (ACC) linear cable assembly. TE Is participating in the OIF's CEI-224G-LR development effort, while developing low-cost methods to implement high performance 224 Gbps architectures. Bulk raw cable and integrated active and passive cable assemblies are a key component of systems. These cable assemblies feature TE's own TurboTwin parallel pair bulk cable with optimized construction, which minimizes insertion loss, cross talk, and skew.

In addition to supporting OIF CEI channel specifications, the passive copper cables implement the OIF CMIS specification to enable easy host to module communication and control, similar 112Gbps based QSFP-DD cables with CMIS capability can be seen in the CMIS demo here at OFC 2024.

Learn more about TE's 200G/lane 1.6T solutions at: **https://www.te.com/usa-en/industries/data-centers-ai/technologies/112g-gigabit-ethernet-solution.html**

## 8x112 Gbps OSFP 10 Meter Linear Active Optical Cable Demonstration (LPO)

**Document: draft CEI-112G-Linear-PAM4**
TE is demonstrating its 800 Gbps, 10 meter OSFP linear active optical cable assembly (AOC) in an OIF linear pluggable optics (LPO) demo. TE's linear AOC cables provide reduced operational power requirements compared to conventional retimed optical links, while also providing longer reach and improved flexibility compared to passive copper cable solutions and the emerging active copper cable solutions, supporting high performance computing, and data center and networking applications. In this demo, OIF's power optimized linear channel definition is able to drive the TE linear AOC cable assembly, enabling 800 Gbps operation over a 10 meter reach at lower power levels.

In addition to supporting OIF linear and VSR channel specifications, TE's active optical cable implements the OIF CMIS specification to enable easy host to module communication and control, similar 112Gbps based QSFP-DD AOC cables with CMIS capability can be seen in the CMIS demo here at OFC 2024.

Learn more about TE's active optical cables at: **https://www.te.com/usa-en/products/fiber-optics/fiber-optic-cable-assemblies/active-optics.html**

## 224 Gbps Near Chip Cabling and Cabled Backplane Solutions

**Document: draft CEI-224G-LR-PAM4**
At OFC 2024, TE is demonstrating 224G PAM4 links to enable chassis based architectures, such as those required by AI/ML applications. In the CEI-224G-LR live demo, TE is utilizing a cabled backplane architecture plus over-the-board (OTB) and near-chip connectivity, utilizing interconnects specifically developed for 224 Gbps; AdrenaLINE Catapult near-chip connector and AdrenaLINE Slingshot cabled backplane connectors (cable-to-cable and cable-to-right angle-PCB connector systems), to demonstrate that reach greater than 1 meter is possible with excellent BERs. The TE Catapult interconnect is also shown in OIF's EEI demo where it helps enable low power, low latency electrical links for AI/ML architectures.

TE is participating in the OIF's CEI-224G-LR development effort while developing low-cost methods to implement high performance 224 Gbps architectures. New bulk cable and highly optimized interconnect systems are key elements of those channels. The cabled backplane and near-chip cable assemblies feature TE's own TurboTwin parallel pair bulk cable with optimized construction, which minimizes insertion loss, cross talk, and skew.

OIF
PLL INTEROP DEMO
OFC 2024
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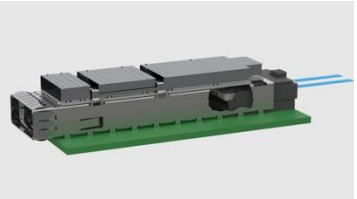
Learn more about TE's 200G/lane solutions at: **https://www.te.com/usa-en/industries/data-centers-ai/portfolio/otb-datacenter-ai.html**

## Co-Packaging ELSFP Connector and Cage for OIF External Laser Project Demonstration



**Document: released OIF-ELSFP-01.0 External Laser Small Form Factor Pluggable (ELSFP) IA**
TE is participating in the operating external laser small form factor pluggable (ELSFP) demo by providing the ELSFP electrical connector, cage, and heat sink prototype hardware. The ELSFP port and module enables face plate pluggable laser modules via a blind mate electrical and optical interface. Co-package optical architectures can require external laser sources to drive co-package optical engines and the ELSFP pluggable laser form factor can provide a field serviceable solution that has features enabling it to address a wide range of architectural needs, including multiple optical ferrules and a wide power envelope.

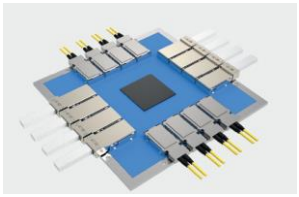
Learn more about TE's 800G solutions at: **https://www.te.com/usa-en/videos/consumer/co-packaging-socket-technology-overview.html**

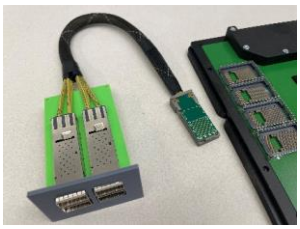
## Co-Packaging Sockets & Co-Package Copper Cables for OIF 3.2T Module Project Demonstration

**Document: released 3.2T Co-Packaging Module-01.0**
In the NPO 50T switch demo, TE is showcasing its micro land grid array (microLGA) socket technology as indicated in the OIF 3.2T module form factor. This 0.6 x 0.6 mm pitch metal contact socket product enables a separable mating interface for both optical modules and copper cables, aligning to the OIF co-packaging 3.2T module implementation agreement. Electrical performance is fully capable of supporting 112 Gbps signaling and has a roadmap to 224 Gbps.

In the same NPO Switch demo, TE is also providing a live co-package copper cable assembly to the OIF specification capable of interoperating with the 3.2T optical module form factor. An interoperable copper cable assembly can enable both pluggable optical modules at the faceplate, as well as cabled backplane modular chassis.

Learn more about TE's 800G solutions at: **https://www.te.com/usa-en/industries/data-centers-ai/technologies/112g-gigabit-ethernet-solution.html**





**To view and learn more about TE Connectivity's innovative solutions for your next-generation architectures, visit us at Booth 1311.**

### ABOUT TE CONNECTIVITY

TE Connectivity is a global industrial technology leader creating a safer, sustainable, productive, and connected future. Our broad range of connectivity and sensor solutions, proven in the harshest environments, enable advancements in transportation, industrial applications, medical technology, energy, data communications, and the home. With more than 85,000 employees, including over 8,000 engineers, working alongside customers in approximately 140 countries, TE ensures that EVERY CONNECTION COUNTS. Learn more at www.te.com and on LinkedIn, Facebook, WeChat and Twitter.