



# TE Connectivity

Visit us at booth 479



## 8x112 Gbps OSFP and QSFP-DD Connector Demonstrations

**Document: draft CEI-112G-VSR-PAM4 and released CEI-112G-LR-PAM4**

TE Connectivity (TE) is demonstrating the octal small form-factor pluggable (OSFP) input/output (I/O) connector and cage in a VSR (chip-to-module) application at 8x112 Gbps on a PCB-based module compliance board (MCB) and the quad small form factor double density (QSFP-DD) 800G connector and cage configuration in the form of an MCB which is demonstrated in a CEI-112G-LR passive copper cable architecture.



TE is an active participant in the OIF's CEI-112G-VSR-PAM4 chip-to-module development project by providing measured channel data for the working group's analysis.

TE's OSFP and QSFP-DD connectors were initially developed for 400 Gbps applications using CEI-56G-VSR-PAM4 8x56 Gbps signaling. This 112 Gbps per channel development work shared with the OIF demonstrates TE's ability to enable next generation solutions. TE's QSFP-DD 800G ports are available with TE's high performance heat sinks to enable optical modules greater than 20W of power dissipation.

Learn more about [OSFP Interconnects](#) and [QSFP-DD Interconnects](#)

## 8X112 Gbps OSFP and QSFP-DD Direct Attach Copper Cable Demonstrations

**Document: draft CEI-112G-VSR-PAM4 and released CEI-112G-LR-PAM4**

As shown here at ECOC 2022, TE is demonstrating 8x112 Gbps PAM4 links with a QSFP-DD passive direct attach copper cable assembly with 28AWG cable and a 2m OSFP passive direct attach copper cable assembly with 26AWG cable.

TE is participating in the OIF's CEI-112G-LR development effort while developing low-cost methods to implement high performance 112 Gbps architectures. Bulk raw cable and integrated cable assemblies will be a key part of those 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 as well to enable easy host to module communication and control.



Learn more about TE's 800G solutions at: <https://www.te.com/usa-en/campaigns/consumer-solutions/112g.html>

## 8X112 Gbps QSFP-DD Active Electrical Copper Cable Demonstration

**Document: draft CEI-112G-VSR-PAM4 and released CEI-112G-MR-PAM4**

TE's active electrical copper cable demonstrates how OIF's VSR and MR channel definitions can be leveraged to deliver extended reach solutions based on low cost copper cable transmission media. In this demo a splitter cable is used to take two 400 Gbps signals from a high density 2x400G QSFP-DD port and deliver 400 Gbps to two separate ports using the QSFP-DD form factor. In addition to supporting OIF CEI channel specifications, the active electrical copper cable implements the OIF CMIS specification as well to enable easy host to module communication and control.



Learn more about TE's 800G solutions at: <https://www.te.com/usa-en/campaigns/consumer-solutions/112g.html>

## 8X112 Gbps QSFP-DD 70 Meter Active Optical Cable Demonstration

**Document: draft CEI-112G-VSR-PAM4**

TE is demonstrating its 800 Gbps, 70 meter QSFP-DD active optical cable assembly (AOC) in an OIF VSR chip to module demo.

TE's AOC cables provide longer reach and improved flexibility compared to passive copper cable solutions and the emerging active copper cable solutions, supporting high performance computing, data center and networking applications. In this demo OIF's power optimized VSR channel definition is able to drive the TE AOC cable assembly, enabling 800 Gbps operation over a 70 meter reach. In addition to supporting OIF CEI channel specifications, the active optical cable implements the OIF CMIS specification as well to enable easy host to module communication and control.



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>



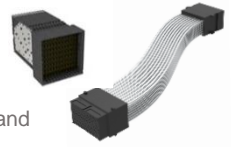
[www.oiforum.com](http://www.oiforum.com)

## 112 Gbps STRADA Whisper Absolute Cabled Backplane Demonstration

**Document:** released CEI-112G-LR-PAM4

CEI-112G-LR-PAM4 provides a channel definition for backplane applications and TE has provided its STRADA Whisper absolute cabled backplane solution to demonstrate multiple silicon providers interoperating over a 1 meter 112 Gbps capable cabled backplane platform.

TE has been an active participant in the development of the CEI-112G-LR-PAM4 specification by providing channel models and other contributions.



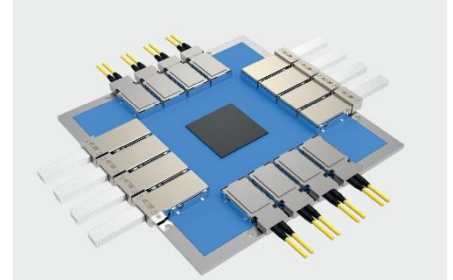
Learn more about TE's 800G solutions at: <https://www.te.com/usa-en/campaigns/consumer-solutions/112g.html>

## Co-Packaging Socket and Co-Package Copper Cable Products for OIF 3.2T Module Project Demonstration

**Document:** draft 3.2T Co-Packaging Module

TE is showing its micro land grid array (microLGA) socket technology in the OIF 3.2T Module form factor. This 0.6x0.6mm pitch metal contact socket product enables a separable mating interface for both optical modules and copper cables aligning to the OIF draft module documentation. Electrical performance is fully capable of supporting 112 Gbps signaling and has a roadmap to 224 Gbps.

In the same display, TE is also showing a co-package copper cable assembly aligned to the OIF draft specification capable of interoperating with the optical module form factor. An interoperable copper cable assembly can enable both pluggable optical modules at the face plate as well as cabled backplane modular chassis.



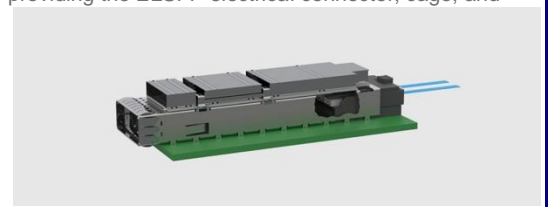
Learn more about TE's 800G solutions at: <https://www.te.com/usa-en/videos/consumer/co-packaging-socket-technology-overview.html>

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

**Document:** draft External Laser Project

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/campaigns/consumer-solutions/112g.html>



## 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](http://www.te.com) and on LinkedIn, Facebook, WeChat and Twitter.

**To view and learn more about TE Connectivity's innovative solutions for your next-generation architectures, visit us at booth 479**

© 2022 TE Connectivity. All Rights Reserved.

STRADA Whisper, TE Connectivity, TE Connectivity (logo), TE and EVERY CONNECTION COUNTS are trademarks owned or licensed by the TE Connectivity Ltd. family of companies. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.



[www.oiforum.com](http://www.oiforum.com)