



## Astera Labs Launches Industry's First Smart Cable Modules to Overcome 400/800G Ethernet Connectivity Bottlenecks in Data Centers

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*New Taurus Smart Cable Modules™ Enables Ecosystem of Cost-Effective, Copper-Based Smart Electrical Cables for up to 100G/Lane Ethernet in Switch-to-Switch and Switch-to-Server Interconnects*

SANTA CLARA, Calif.--(BUSINESS WIRE)--Astera Labs, a pioneer in connectivity solutions for intelligent systems, today announces its new [Taurus Smart Cable Module™ \(Taurus SCM™\) portfolio](#) to overcome performance bottlenecks in data center Switch-to-Switch and Switch-to-Server interconnects running up to 100G/Lane for 200/400/800 GbE. The Taurus SCM enables cloud system integrators and cable assembly vendors to rapidly develop and deploy cost-effective, copper-based Smart Electrical Cables (SEC) with purpose-built intelligence capabilities to reliably address reach, signal integrity, security, fleet management, and bandwidth utilization issues in hyperscale data centers.

"Our new Taurus Smart Cable Module solution tackles hyperscalers' emerging 50G and 100G/Lane Ethernet design challenges, which impact reach, signal integrity, physical constraints, power budgets and bandwidth utilization," said Sanjay Gajendra, CBO, Astera Labs. "The Taurus modular approach reduces barriers of adoption in the industry by enabling established cable OEMs to rapidly develop multiple Ethernet solutions for various speed generations, while also allowing cloud service providers to maintain a flexible supply chain of interconnects."

### Taurus Smart Cable Module Portfolio – Key Features

- Supports 100G PAM4 (106.25 Gbps), 50G PAM4 (53.125 Gbps), 25G NRZ (26.5625 Gbps and 25.78125 Gbps), and other Ethernet line rates.
- Resolves rate mismatch between NICs and Switches with 50G-to-100G PAM4 & 25G-NRZ-to-50G-PAM4 Aggregation and Disaggregation with gearbox capabilities.
- Enables 36-dB reach extension for 3-meter reach over thin (up to 34AWG) copper cables, ensuring sufficient cable length and flexibility.
- Ultra-Low-Latency.
- Advanced fleet management capabilities with full CMIS features, security, and deep diagnostics.
- Qualified with leading cable vendors to enable Smart Electrical Cables (SECs) in QSFP-DD and OSFP form factors.

### Built for Real-World Cloud Requirements

Unlike general-purpose Active Electrical Cables, the Taurus Smart Cable Module portfolio enables cable OEMs to deliver unmatched advanced fleet management and deep diagnostic capabilities, including enhanced security options, quick debug tools, and flexible firmware upgrades, which are critical for ensuring high reliability and up-time in enterprise cloud networks.

"Advanced PAM-4 100G/Lane Ethernet connectivity solutions must overcome complex design challenges such as reach, latency and power efficiency while keeping the cost per bit low to accelerate 400GbE and 800GbE deployments in data centers," said Alan Weckel, Founder and Technology Analyst at the 650 Group. "Astera Labs Taurus Smart Cables™ play an important role in enabling intra rack connectivity based on active copper cables for the 800GbE interconnect ecosystem."

Furthermore, Taurus SCMs enable a flexible supply chain of Smart Electrical Cables by qualifying with leading cable vendors to support SECs in QSFP-DD and OSFP form factors, allowing any cable OEM to integrate intelligent Taurus capabilities into their 200/400/800GbE solutions.

The company's breakthrough solution portfolio now encompasses several complimentary product families that enable connectivity for modern data-centric systems based on complex heterogeneous compute architectures and composable disaggregation topologies.

Visit [www.AsteraLabs.com](http://www.AsteraLabs.com) or contact [info@AsteraLabs.com](mailto:info@AsteraLabs.com) for more information on connectivity solutions for 200/400/800GbE.

### Availability:

The Taurus Smart Cable Module portfolio is available now for limited sampling in the following data rates and form factors:

- EM200-QDX-A (200G QSFP-DD)
- EM400-QDX-A (400G QSFP-DD)
- EM400-EPS-A (400G OSFP)
- EM800-EPS-A (800G OSFP)

### Resources:

- Taurus Smart Cable Module™: “Active” + “Smart” 100G/Lane Ethernet Connectivity ( [VIDEO](#))
- Taurus Smart Cable Module™: First Look at Purpose-Built 100GbE/Lane Connectivity ([VIDEO](#))
- Taurus Smart Cable Module™ 400GbE PAM4 Connectivity Demonstration [VIDEO](#))
- Taurus Smart Cables Modules™: An Active + Smart Approach to 200/400/800GbE [PAPER](#))
- Data Center Resource Disaggregation Drives Need for Cost-Effective 400/800GbE Interconnects ([PAPER](#))

#### **About Astera Labs**

Astera Labs Inc., a fabless semiconductor company headquartered in the heart of California's Silicon Valley, is a leader in purpose-built connectivity solutions for data-centric systems throughout the data center. The company's product portfolio includes system-aware semiconductor integrated circuits, boards, and services to enable robust CXL, PCIe, and Ethernet connectivity. For more information about Astera Labs including open positions, visit [www.AsteraLabs.com](http://www.AsteraLabs.com).

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