



NEWS RELEASE

Credo Unveils Bluebird 1.6T Optical DSP for Low-Power, High-Bandwidth, and Ultra-low Latency AI Networks

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SHENZHEN, China--(BUSINESS WIRE)-- **Credo Technology Group Holding Ltd** (Credo) (NASDAQ: CRDO), an innovator in providing secure, high-speed connectivity solutions that deliver improved reliability and energy efficiency for the next generation of AI driven applications, cloud computing, and hyperscale networks, today announced its high-performance, low-power Bluebird Digital Signal Processor (DSP) for 1.6Tbps optical transceivers. This breakthrough technology enables energy-efficient 224Gbps per lane PAM4 data transmission essential to unlocking the advanced computational power of state-of-the-art GPU silicon.

Next-generation AI networks require high-bandwidth, ultra-low latency, extreme reliability, and exceptional power efficiency. Many existing 1.6T transceivers suffer from high levels of power dissipation, constraining deployments due to the challenges with cooling and power delivery. This places limits on the widespread adoption of 1.6T technology. The Credo Bluebird DSP aims to address these challenges by leveraging advanced CMOS process technology and Credo's proprietary design techniques to deliver industry-leading power efficiency, allowing 1.6T transceivers to consume well under 20W.

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"The 1.6T Bluebird Optical DSP is engineered to deliver greater flexibility than existing solutions, enabling broader application support," said Chris Collins, VP of Optical Sales and Product Marketing at Credo. "This latest milestone exemplifies our commitment to driving innovation in the optical industry — offering unmatched performance and energy efficiency while prioritizing long-term value creation for our optical module partners."

Bluebird features four or eight lanes of 224Gbps PAM4 to support high density 800G, or high-capacity 1.6T optical transceivers. It is available in full DSP and Linear Receive Optics (LRO) variants to address a wide variety of networking architecture options for both scale-up and scale-out use cases.

To reduce bottlenecks in GPU-to-GPU communications, Bluebird has been carefully architected to maintain latency below 40ns in each direction. This ultra-low latency enhances computational efficiency and performance during large language model (LLM) training as well as inference. Bluebird also includes a suite of telemetry features to enable link monitoring and diagnostics, maximizing system uptime and reliability. These same features further assist with failure isolation, debug, and production testing.

For seamless optical transceiver integration, optical component selection and host ASIC interoperability, the Bluebird DSP integrates a strategically tailored suite of performance optimization features for both electrical and optical interfaces. These features can be dynamically enabled to maximize link margin in challenging environments or disabled to optimize energy consumption in dense clusters. Optional IEEE compliant inner and outer Forward Error Correction (FEC) are included to support fiber reaches of 500 m, 2 km and beyond, allowing customers to leverage a common design for different applications.

The Bluebird DSP is now available. For more information, contact your local Credo sales representative.

To learn more about Credo products, go to the product pages linked [here](#).

About Credo

Credo's mission is to advance high-speed connectivity solutions that deliver optimized performance, reliability, energy efficiency, and security for the next generation of AI driven applications, cloud computing, and hyperscale networks. Optimized for both optical and electrical applications, our solutions support port speeds up to 1.6Tb. At the core of our technology is our proprietary Serializer/Deserializer (SerDes) IP. Our diverse solutions portfolio includes system-level products such as Active Electrical Cables (AECs), a range of Integrated Circuits, including Retimers, Optical DSPs, SerDes chipsets, and SerDes IP Licensing.

For more information, please visit <https://www.credosemi.com>. Follow Credo on [LinkedIn](#).

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