PRODUCT BRIEF > OMNICONNECT

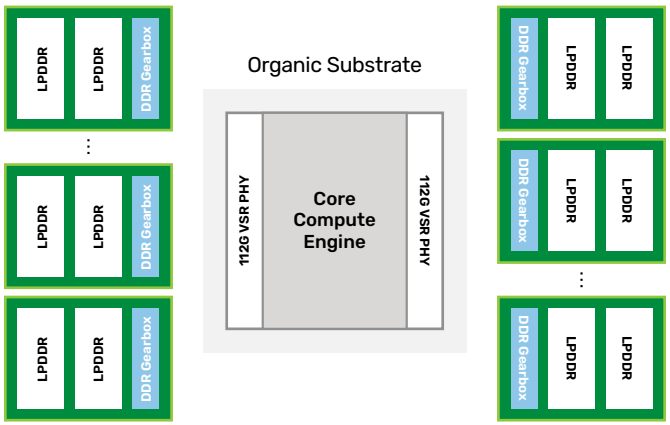
OmniConnect
Solutions for AI Scale Up and Scale Out

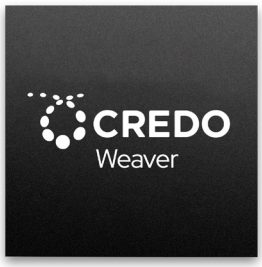
Weaver, Memory Fanout Gearbox for Scalable, High-Bandwidth AI Inference Workloads

Weaver is the first member of the OmniConnect family. This LPDDR5X memory fanout gearbox is a scalable, high-bandwidth memory connectivity solution designed to eliminate bottlenecks in AI and data center workloads. Leveraging Credo's advanced 112G very short reach (VSR) SerDes and proprietary architecture, Weaver delivers industry-leading beachfront I/O density, high memory capacity with flexible DRAM packaging, and seamless migration to future memory protocols.

Weaver incorporates 112G VSR SerDes, a lightweight framer, an LPDDR5X PHY and robust telemetry for reliability and uptime. It enables late binding of DRAM for XPU vendors and supports a chiplet-ready design.

Weaver is designed to boost I/O density by up to 10x, enabling up to 6.4TB of memory and 16TB/s bandwidth using LPDDR5X—far surpassing conventional architectures.





Applications

- AI inference accelerators
- Data center servers
- Cloud infrastructure
- Automotive

Key Parameters

- Memory bandwidth: up to 8TB/s per edge
- Memory capacity: up to 3.2TB per edge
- Supported DRAM: LPDDR5X
- Interface: 112G VSR SerDes, chiplet-ready
- Operating temperature range: 0° to 85°C
- TSMC

Key Features

- Scalable bandwidth and beachfront density
- Flexible DRAM packaging and late binding
- Integrated telemetry and diagnostics
- Seamless migration to future memory protocols
- Ready for custom silicon integration
- Lightweight Framer / FEC follows PCIe6 FLIT
  - Credit based flow control
  - FEC / CRC from PCIe6 FLIT
  - 40ns RTT latency
  - Full control over LPDDR5X PHYs (page status / refresh / etc.)
- LPDDR5X PHY (9.6 GT/s)
- Low-power dissipation

Supported Standards and Interfaces

- LPDDR5X
- 112G VSR SerDes
- Advanced eXtensible Interface (AXI)
- Chiplet interconnect protocols

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 **www.credosemi.com**
or email **sales@credosemi.com**

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