



Chronos Tech LLC

7310 Miramar Rd. #410, San Diego, CA 92109

Multi-Gigabit Fully Digital SerDes IP for HPC Switch

Chronos Digital SerDes is a high-performance, low-power and highly scalable SerDes PHY that supports all leading ARM AMBA or RISC-V standards, such as AXI, ACE, CHI, TileLink (or custom variation of those) and is fully deployable by standard digital tools and flows.

Features

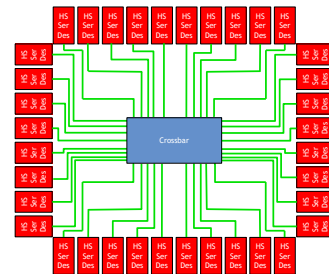
- **Digital Low-Latency Communication**
Safe and secure digital encoding with low EMI profile and high throughput
- **Clockless Serialization**
End-to-end protocol compatibility while enabling link width reduction. No high-speed clocks, PLL or DLL needed.
- **Soft IP**
Deployable by standard Digital tools and flows. No Analog blocks. Fully customizable. Automated netlist and constraints generation.
- **Embedded on-Die Telemetry**
Performance and margin measurement available on a sub-channel base.
- **Design Space**
Data Center/HPC, Automotive, Cloud AI, 3D-Interconnect (Hybrid Bonding TSV), Edge.

Benefits

- **Performance**
Best in Class end-to-end latency, (700ps/mm*). Low Power (0.05 pJ/bit/mm*, no Analog signaling), Scalable (not limited in distance). Bus width reduction up to 86%. Silicon Proven.
- **Resiliency**
Resilient to PVT. Designed for WC, but operates on TYP. Safe and Secure (low EMI, protected against DPA Attacks)
- **Ease of Use**
Easier timing closure. Insensitive to clock degradation. Standard Sign-off methodology. Automated deployment within standard tools.
- **Unmatched Testability**
Patented on-Die telemetry for on-chip measurement and tuning. Enables Power reduction.

Use Case: Advanced Networking Switch

- Allows automated deployment of long links with best-in-class latency.
- Replaces semi-custom Source Synchronous implementations.
- Per link on-chip telemetry.
- Ideal for reticle limited HPC switches.



About Chronos Tech LLC:

We are US based company developing game changing IPs to enable next-generation intelligent System-on-Chips (SoCs) targeting a wide range of applications, from cloud computing and AI to mobile and automotive.

<https://www.chronostech.com>



The Arm word and logo are trademarks of Arm Limited (or its subsidiaries) in the US and/or elsewhere. All rights reserved.

* Based on 7nm TSMC Silicon