

Taurus 3.2T Smart Signal Conditioners

Family Brief

***Industry-first OCP Signal Conditioner Standard Footprint compatible 200G/lane
PAM4 Smart Retimers and Smart Redrivers for on-board applications***

Overview

Taurus 3.2T Smart Signal Conditioner family includes 16-lane, 212.5 Gbps PAM4 Smart Retimers and Smart Redrivers designed for next-generation AI and high-performance computing interconnects. Optimized for on-board Ethernet, UALink, and ESUN scale-up and scale-out connectivity, Taurus provides system designers with maximum flexibility to optimize reach, latency, and power consumption. Both Taurus Smart Retimers and Smart Redrivers are compatible with OCP Signal Conditioner Standard Footprint, enabling *Smart Swap* capability - seamless interchangeability between Retimer and Redriver with simple BoM options.

Unlike traditional redrivers, Taurus Smart Redriver integrates advanced features, including temperature-compensating equalization (EQ), channel estimation, and eye monitoring to optimize link performance across varying operating conditions. The unified COSMOS software development kit (SDK) provides valuable telemetry data through user-friendly APIs, simplifying fabric performance monitoring and optimization across both devices.

For detailed device capabilities, feature sets, and electrical specifications, refer to the individual Taurus product briefs.

Key Features

Taurus 3.2T Smart Signal Conditioner feature set comparison:

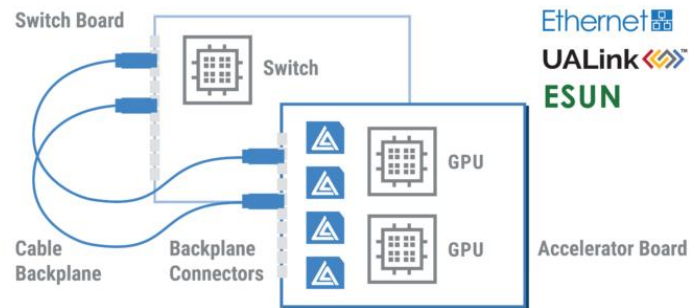
	Taurus 3.2T Smart Retimer	Taurus 3.2T Smart Redriver
Function	Full clock and data recovery (CDR), equalization, and retransmission	Analog equalization to compensate for channel losses with advanced features
Reach extension	40 dB+	23 dB
Latency	< 24 ns	< 50 ps
Diagnostics	Eye monitoring, PRBS, loopback, FEC monitoring, temperature, and voltage monitoring, etc.	Temperature-compensating EQ, channel estimation, eye monitoring, temperature, and voltage monitoring, etc.

Product Family Information

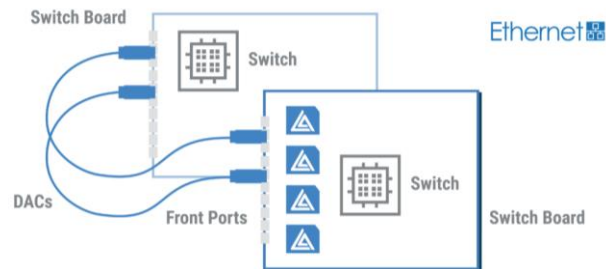
Part #	Max Line Rate	Form Factor	Max Data Rate	Function
ET7161L	212.5 Gbps PAM4	x16 Bi-Directional	3.2T	Smart Retimer
ED7161L	212.5 Gbps PAM4	x16 Bi-Directional	3.2T	Smart Redriver

Target Applications

- Cabled-backplane reach extension for scale-up interconnects
- Front-port reach extension for scale-out application



Taurus Smart Signal Conditioner in a scale-up application



Taurus Smart Signal Conditioner in a front-port reach extension application for scale-out