CREDO PILOT

PILOT: Predictive Integrity Link Optimization and Telemetry

Software Development Kit and Debug Tool

Credo's PILOT environment is a powerful SDK that enables rapid system bring-up, deep visibility into PCIe link behavior, and predictive insight into signal integrity issues—before they become system-level failures. More than a debug tool, PILOT can also run on a baseboard management controller stack like OpenBMC, and empowers designers with a rich telemetry platform purpose-built for next-generation data center interconnects. PILOT enables fast time to market and deployment at scale.
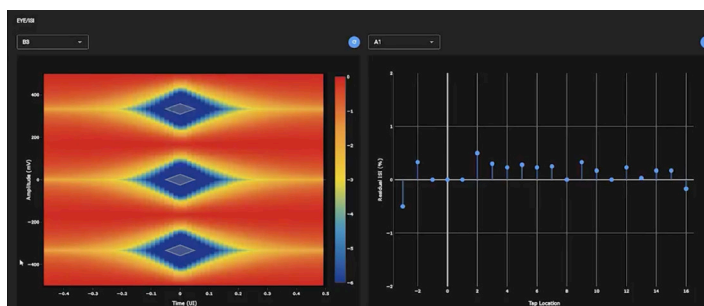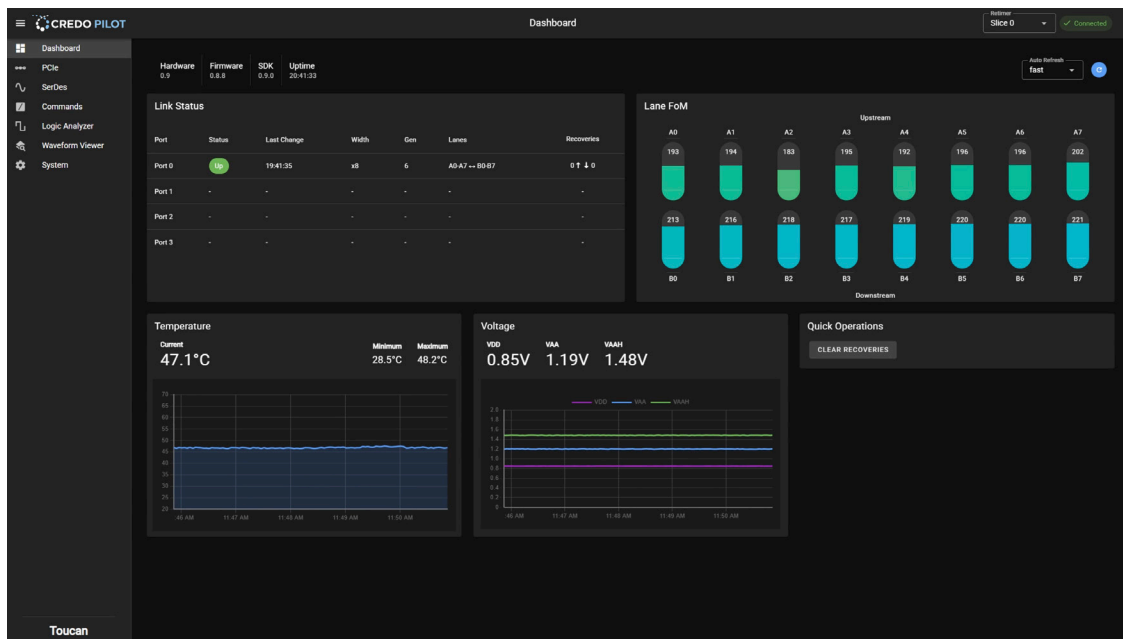
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Key Benefits

Faster System Bring-Up & Interoperability
PILOT accelerates time-to-market by giving system teams access to configuration parameters, link training status, equalization parameters, SNR, FOM, BER, eye and ISI plots, logic analyzer functionality, a waveform viewer and more—reducing the dependance on expensive protocol analyzers.

Built-In Intelligence for Predictive Debug
With built-in diagnostics, analytics and real-time alerts, PILOT detects early signs of link degradation, signal margin erosion, or configuration mismatches. Engineers can now pinpoint root causes before link failures disrupt critical workloads and maximize link performance and reliability.

Comprehensive Link Telemetry SDK
PILOT isn't just a monitoring dashboard—it's a robust set of software tools that allow integrators and system architects to customize data collection, automate testing, and plug into larger validation frameworks via industry-standard APIs.

Seamless Integration with Credo Retimers and AECs
Whether you're deploying PCIe Gen5/6 retimers on GPU and CPU trays or high-performance Active Electrical Cables (AECs), PILOT gives full access to device-level diagnostics and performance tuning knobs, all accessible remotely via SMBus, I2C, or I3C.

By combining best in class debug tools and a telemetry-driven C/Python SDK, PILOT gives system designers the tools they need to confidently scale PCIe and CXL deployments in complex, high-density AI and cloud environments.

Use Cases

- OEM & Hyperscaler Design Validation: Enable deeper insight into system behavior during early platform development.

- Manufacturing Test Optimization: Reduce RMA rates with intelligent production diagnostics and post-test analytics.

- Fleet Monitoring & Field Deployment: Track long-term link reliability and system uptime trends using embedded telemetry and predictive alerts.

PILOT is currently available for Credo's PCIe product line and will be available for Ethernet products later this year.

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**
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