

SmartLynq+ Module

OVERVIEW

The SmartLynq+ module is built for high-speed debug and trace, primarily targeting designs using the Versal™ platform. Providing up to 28X faster configuration time via a high-speed debug port (HSDP), the SmartLynq+ module has much-improved configuration throughput performance to accelerate the development cycle. It supports both serial and parallel trace with up to 14GB of trace memory to capture a design execution history.

The SmartLynq+ module is compatible with Versal ACAP evaluation boards. Users have full visibility to the Versal™ architecture, including AI Engines, programmable network on chip (NoC), DDR memory controller, and 100G multirate Ethernet cores. Smart filtering with a software customizable built-in debugger enables remote access and sharing, making the SmartLynq+ module the most flexible debug product in the portfolio.

The SmartLynq+ module is an ideal debug and trace platform, enabling fast configuration, extensive trace capture, high visibility, and flexibility.

HIGHLIGHTS

Super-Fast Configuration Time

- > 28X faster download speed vs. SmartLynq Data Cable
- > Iterations reduced from minutes to seconds for the shorter debug cycle

High-Speed Trace with Enhanced Visibility

- > 100X faster egress data capture vs. JTAG
- > Industry's largest trace memory (up to 14GB)
- > Continuous debug & trace visibility during boot

Full Visibility for Heterogeneous Architecture

- > In-depth debug and trace for Versal architecture, including AI Engines, programmable NoC, DDR memory controller, and 100G multirate Ethernet cores
- > Cohesive and time-correlated debug of all subsystems
- > Daisy-chain mode to debug multiple devices on a single board

Flexible and Smart Debug Platform

- > Smart filtering with software programmable built-in debugger for remote access and sharing
- > A range of host and target connectivity options, including Ethernet, USB 3.0, HSDP (USB Type-C), GPIO, JTAG, and Mictor



TARGET USE CASES

- > High-speed Versal ACAP programming
- > High-speed flash memory programming
- > Hardware debug
- > Software debug
- > Performance analysis
- > Serial and parallel trace data capture

01



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03



- 01 SmartLynq+ Debug & Trace Module
- 02 JTAG Ribbon Boot
- 03 USB Cable
- 04 JTAG Flying Wire Adapter Cable
- 05 GPIO Flying Lead Cable
- 06 Ethernet Cable
- 07 Power Supply
- 08 USB Type-C Cable
- 09 Micro SD Card

04



05



06



07



08



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TAKE THE NEXT STEP

To learn more or purchase the SmartLynq+ module, visit www.xilinx.com/smartlynq-plus.

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