Virtual JTAG Debug Interface

For Lauterbach Trace32 Software Debuggers

Cadence's Virtual JTAG debug interface provides a "soft," no-physical-connection-required interface between the Cadence® Palladium® XP or XP II Verification Computing Platform and Lauterbach's Trace32 software debugger, enabling designers to remotely debug JTAG-enabled processors.

Overview

For hardware and software design debugging, bare-metal software and validation engineers require access to processors emulated in the Cadence Palladium XP or XP II platform. Most processors provide on-chip debug access via a Joint Test Action Group (JTAG) connection scheme. JTAG is an IEEE 1149.1-1990 standard for on-chip instrumentation using a dedicated serial communications interface for low-overhead access without requiring direct access to the system address and data buses.

Software debuggers, such as Lauterbach Trace32, provide the ability to access JTAG-enabled processors to perform debugging with capabilities such as single-step, read/write memory, read/write CPU registers, set breakpoints, and triggering.

Virtual JTAG interface

Cadence's Virtual JTAG interface provides a "soft," JTAG-based debug interface to Lauterbach's Trace32 software debugger, enabling software designers to interactively and remotely debug one or more processor(s) running in the Palladium XP or XP II platform. Unlike using physical JTAG, the Virtual JTAG interface does not require a physical connection. Essentially, the Virtual JTAG interface is a JTAG-based transactor, customized and optimized for use with Lauterbach Trace32 debugger software. See Figure 1.

Benefits

- Access designs in any hardware domain
- No hardware accessory needed for JTAG access
- Remotely accessible—connect from any remote workstation
- Enables more software engineers to debug their designs remotely

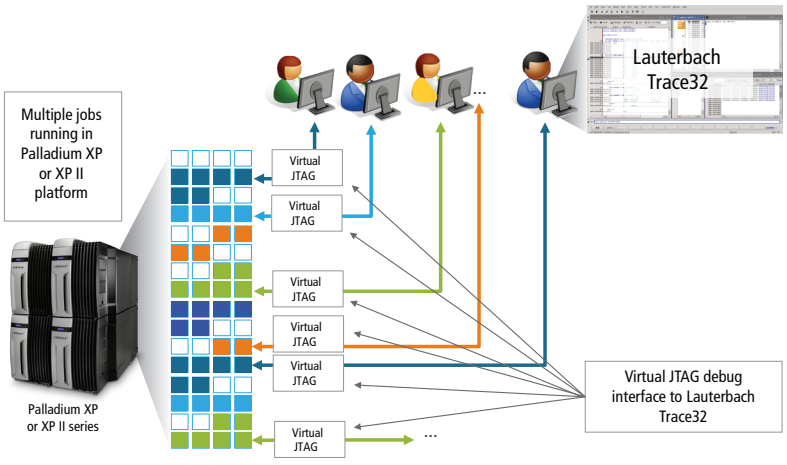

Figure 1: Virtual JTAG Interface

Features

- Soft (virtual) debug interface from JTAG-compatible processor running in Palladium XP or XPII Verification Computing Platform to Lauterbach Trace32 debugger
- Unified Xccelerator Emulator (UXE) IXCOM-based flow
- Transaction-based acceleration (TBA), in-circuit acceleration modes

Licensing

- One license per single Palladium job with any number of processors and cores
- To debug n parallel jobs, n licenses are required

Software Support

- Cadence: UXE, Cadence Incisive® Enterprise Simulator
- Lauterbach: Trace32

Ordering

- Product number: 39HUVJTAG4, 4-pack license

Cadence Services and Support

- Cadence application engineers can answer your technical questions by telephone, email, or Internet. They can also provide technical assistance and custom training.
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