CADENCE SPEEDBRIDGE SYSTEM FOR VIDEO AND AUDIO IN-CIRCUIT EMULATION SOLUTION

The Cadence® SpeedBridge® System for Video and Audio is an in-circuit emulation solution designed specifically for system-level testing and integration of ASICs with video and audio interfaces. Engineers can verify the emulated design in a real-world environment with the actual software/hardware to be used with the ASIC, ensuring device quality and sending products to market faster.

CADENCE SPEEDBRIDGE SYSTEM FOR VIDEO AND AUDIO

The Cadence SpeedBridge System for Video and Audio is a PC-based system designed to source and capture streams of video data or multi-channel audio data at emulation speeds. It provides stimulus and analysis capabilities to the emulated ASIC. For video, the SpeedBridge System concurrently displays the graphic while sourcing or capturing the data stream. It supports various video and audio formats, and it supports playback of captured data on disk.

The SpeedBridge System for Video and Audio consists of hardware and software that has been integrated into a single PC system with an easy-to-use GUI. It contains a data acquisition (DAQ) card and a PCI-based digital input/output card that can be used to stream data in/out of a PC. The video-audio software (video-audio capture and stream solution) runs on the Windows XP operating system.
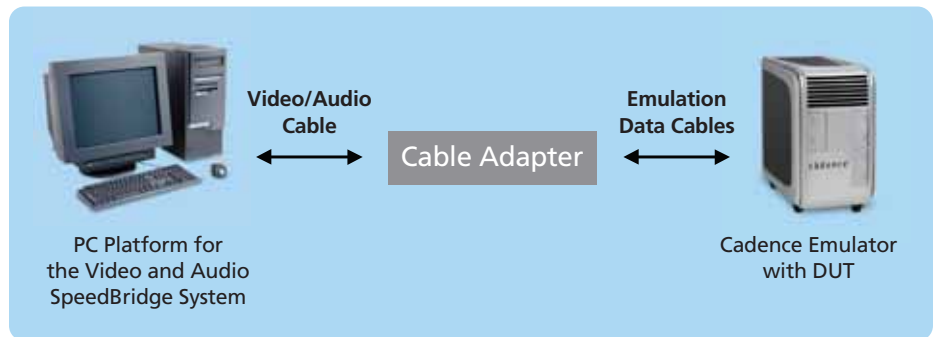

Figure 1: The Cadence SpeedBridge System for Video and Audio in an emulated environment

The SpeedBridge System for Video and Audio connects to a Cadence Incisive® Palladium® emulator to accelerate the source and capture of the video-audio stream. The SpeedBridge System is transparent to both the emulated design and the video-audio data stream (*see Figure 1*).

BENEFITS

- Enables rapid in-circuit emulation deployment, reducing time to market
- Enables verification IP reuse

  – Can be used from one project to another

  – Eliminates the need for every user to re-invent the solution

  – Delivers a complete PC-based solution

- Ensures device quality

  – Tested and verified by Cadence and many other user designs

  – Cadence-provided solution allows teams to verify their designs quickly and efficiently

cādence™

- Reduces system risk
  - Verifies the design in a real graphic and multimedia environment
  - Verifies the quality of the video and audio data stream
  - Runs real system software/drivers
- Performs advanced debugging
  - Leverages the advanced debugging capabilities of the Palladium system, including FullVision, instant trigger, dynamic target, and offline debug
  - Enables remote reset of the PC platform

FEATURES

- Offers a Windows-based GUI compatible with Windows XP
- Supports data streaming progress, monitoring, and statistics
- Operable with all Palladium emulators
- Runs at emulation speeds up to 1.5MHz

VIDEO

- Source speed: 0 to 900KHz
- Capture speed: 0 to 900KHz
- Source or capture streams up to 60GB

- Supports YcrCb 4:1:1, YcrCb 4:4:4, RGB, CCIR 656, and HDTV formats
- Interlaced or non-interlaced video
- Concurrent video display
- Video playback
- Supports monitor resolutions 640x480 to 2000x2000
- Supports custom image resolutions up to 2000x2000

AUDIO

- Supports protocol I2S
- Supports offline conversion formats such as WAVE (part of Microsoft's RIFF specification for multimedia storage)
- Supports audio playback

REQUIREMENTS

- Cadence SpeedBridge System for Video and Audio (PC-based)
- Cadence Incisive Palladium emulator
- Cadence NI-TIB adapter
- Cadence emulation I/O cables

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
- SourceLink® online customer support gives you answers to your technical questions—24 hours a day, 7 days a week—including the latest in quarterly software rollups, product release information, technical documentation, software updates, and more
- Cadence-certified instructors teach more than 80 courses and bring their real-world experience into the classroom
- More than 25 Internet Learning Series (iLS) online courses allow you the flexibility of training at your own computer via the Internet

For more information,
Email us at
info@cadence.com
or visit
www.cadence.com

cādence™

Cadence Design Systems, Inc.
CORPORATE HEADQUARTERS
2655 Seely Avenue
San Jose, CA 95134
P: +1.800.746.6223 *(within US)*
   +1.408.943.1234 *(outside US)*
F: +1.408.943.5001
www.cadence.com