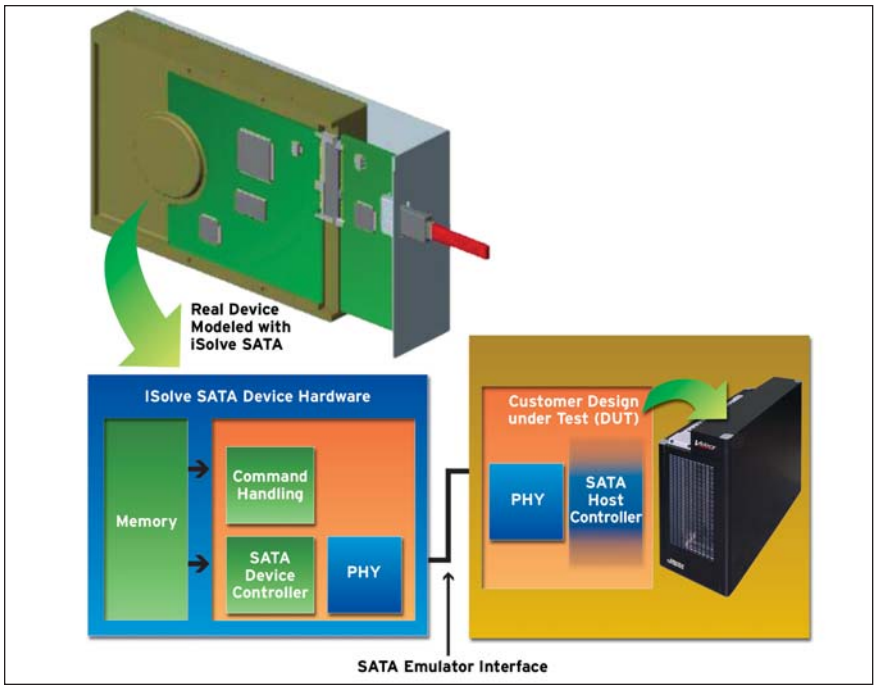
iSolve SATA

Hardware-Based Functional Verification

D A T A S H E E T



iSolve SATA from Mentor Graphics is a high-performance emulation solution to model Serial ATA devices.

Advanced Verification for SoC Designs Containing a SATA Host Controller

Mentor Graphics® iSolve™ SATA provides a high-speed solution for the verification of System-on-Chip (SoC) designs containing a serial ATA (SATA) host controller that communicates with a SATA device, such as a hard-disk drive or optical CD/DVD drive. Together with a hardware-assisted verification platform such as Mentor's Veloce™ emulator, iSolve SATA increases the overall productivity of your system-level verification by providing a solution that accurately models a real disk-drive device connected to your design.

To achieve the speed required to upload and download the multiple-GBytes of data between your design and disk-drive device, iSolve SATA uses a novel approach of a "side door" access method to load or unload the data contents without having to run emulation clock cycles. In this way, the user is able to efficiently run emulations in minutes that would otherwise take hours to run.

Easy-to-Use Graphical Interface

iSolve SATA's graphical user interface (GUI) provides you with an easy-to-use environment for configuring your external SATA disk-drive device. Running the GUI on a Linux workstation allows you to specify typical disk-drive parameters such as model number, command set, number of cylinders, heads, sectors/track and capacity – plus a number of other characteristics associated with the SATA drive

Product features and benefits:

- External solution for SATA devices such as hard-disk drives and CD/DVD drives
- 4GByte capacity per unit provides storage for data transfers to the SATA device
- High-speed data upload and download capabilities (through the iSolve SATA host interface at 1 to 2 minutes per GByte) increases overall verification productivity
- Flexible, easy-to-use graphical user interface provides control over setup, initialization, data upload/download, and disk identity including common characteristics and features of the disk drive
- Batch-mode operation of the commands supported for increased efficiency and address the needs of "power users"

Product specifications:

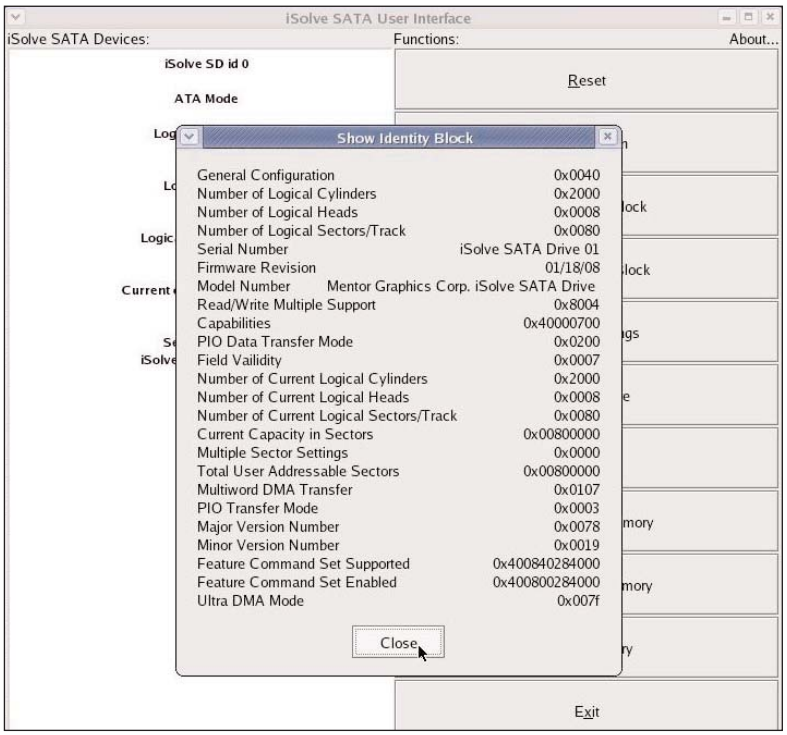
- Host interface support: Linux Red Hat Enterprise 4.0, SuSE SLES 9.1
- Complies with SATA 2.6 standard with ATA, and ATAPI command support
- Platforms: Veloce Solo, Veloce Quattro
- Performance: Up to 1.5 MHz in emulation

Mentor Graphics®

The GUI also contains trigger and trace capabilities for data within the SATA device controller itself. This provides the user with a trace of command, transaction, and link-layer state transactions and assists with functional verification of their host controller operation.

Batch-Mode Scripting Language

For added flexibility, iSolve SATA also provides the user with batch-mode scripting language for control. iSolve SATA provides simple connections to the hardware emulator and host workstation for plug-and-play use. Easy set-up and emulation debug are provided through the iSolve SATA host application, which can handle the GBytes of data upload and download in minutes, leading to high-performance emulation and increased productivity.



iSolve SATA models a hard-disk drive or CD/DVD drive in a Veloce emulation environment.

Visit our website at www.mentor.com/emulation for more information.

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