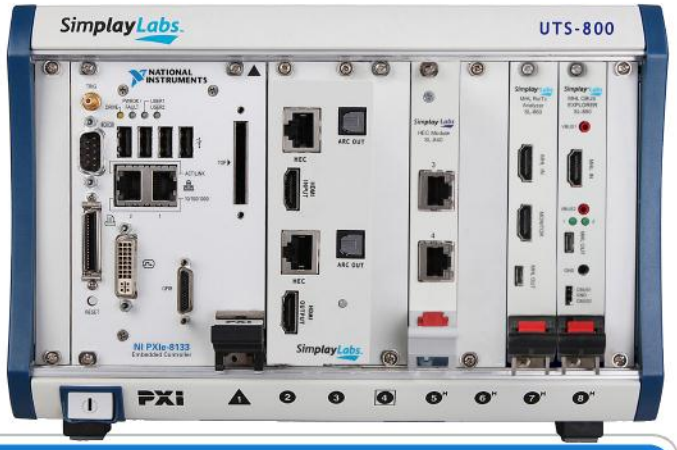
UTS-800
HD TEST PLATFORM



UTS-800 HD AUDIO/VIDEO SYSTEM-LEVEL TEST PLATFORM: Test System for HD Standards Compliance and System-Level Analysis

Simplay Labs' UTS-800 is the world's leading compliance test system for HD audio/video product development. Extensive use of ASIC and SoC technology has now shifted much of the engineering of HD devices to system-level, where UTS-800 makes designing with HDMI connections and MHL easier and faster. The UTS-800 multi-function HD video and audio signal analyzer and standards compliance tester helps reduce design cycles and avoid costly surprises.

HD STANDARDS AND SYSTEM-LEVEL TESTING

Today's sophisticated designers working with ASICs and SoCs must develop and test at the system-level. With HD video standards such as HDMI incorporated into so many HD devices, UTS-800 is an ideal R&D test solution for product development. It can capture and generate uncompressed HD audio/video test patterns and report on errors and key video parameters. UTS-800 also compares before/after A/V quality metrics using uncompressed HD A/V test patterns.

COMPLIANCE TESTING

With UTS-800 you'll save valuable time by catching compliance issues early on in the design process. Ensure that your products are in full compliance with the latest HD audio/video standards, Send your product to an ATC with confidence.

INTEROPERABILITY TESTING

Will a new product work properly with others? Today's stringent digital video and audio standards make answering this question crucial. UTS-800 incorporates profiles of numerous HD devices for interoperability testing, and tests remote control functions such as CEC (Consumer Electronics Control) and CBUS (Control Bus).

SPEEDING TIME TO MARKET

Waiting until certification or a plugfest to discover problems with compliance or interoperability is asking for delay. Why catch these issues at the end of the product creation process when you can find them earlier, so they can be inexpensively and quickly solved? UTS-800 speeds product development and helps eliminate time-consuming re-designs.

THE UTS-800 HD TEST PLATFORM

UTS-800 is a modular, expandable digital audio/video test system. A high speed backplane reliably handles multiple streams of HD video and 7.1 audio. Exclusive professional test and signal generation software developed by Simplay Labs runs in conjunction with connection-specific test modules for system-level connectivity to the device under test.

UTS-800 APPLICATIONS

Product Development
Today's CE products incorporate HD video that must conform to worldwide standards, requiring system level testing and analysis. Testing uncompressed video is an essential part of the R&D process. For creating innovative new CE devices with HD video utilizing HDMI or MHL connections, UTS-800 provides an essential tool to speed and simplify product development.

Production Line Testing
Quality control is crucial to a brand's reputation. With complex CE devices it can be challenging to thoroughly put a product through its paces. UTS-800 features automated testing across its full range of features. You can easily run spot checks or test the entire production line quickly and efficiently.

Interoperability Testing
Consumer frustration from owning two devices, each functioning fine on its own, but not together, diminishes the products' credibility and value. UTS-800 helps avoid interoperability issues by catching problems early. An ever-expanding library of CE device emulations enables engineers to reliably predict how new products will interact in the real world.

CE Product Categories
Use UTS-800 for many CE product categories including: Smartphones, Tablets, DTVs, Notebook PCs, Netbooks, STBs, eReaders, AVRs, Cameras, Blu-ray/DVD, Projectors, Portable Media Players, Game Consoles, Portable Games and Monitors, and to develop HD applications for these devices.

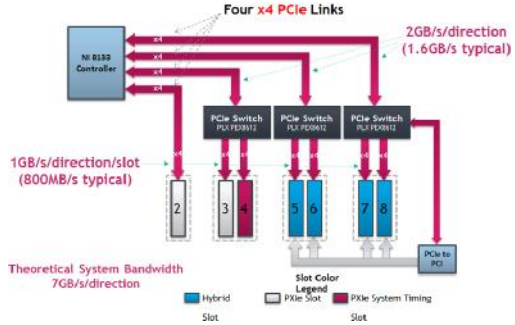
UTS-800 FEATURES HIGHLIGHTS

- MHL HD Audio/Video Generator, Processor & Analyzer
- Official MHL Compliance Test Specification Test Platform
- Multi-HD Interoperability Tester with stored pre-programmed library of A/V models for InterOp testing
- Automated Testing
- Verify image format & InfoFrames match
- Verify timing details in a time stamped Video Status log
- Compare timing of A-V for lip synch
- View & Edit EDID contents

HIGH BANDWIDTH BACKPLANE

Testing HD video requires serious bandwidth. UTS-800 has the bandwidth needed to handle today's and tomorrow's HD signals. Four x4 PCIe Links with 14-Gigabytes/second (112 Gbits/sec) Total Backplane Bandwidth (both directions combined) can simultaneously carry multiple uncompressed 1080p/60 HD video signals with 7.1 audio.

Typical uncompressed video bandwidth requirements:
- 1080p60 (8-bit color) = 360 MB/sec (2.9 Gbits/sec)
- 1080p60 (10-bit color) = 480 MB/sec (3.8 Gbits/sec)
- 4K (4096x2160p60, 10bits) = 2.2 GB/sec (17.6 Gbits/sec)



MULTI-HD INTERFACE TEST PLATFORM

With today's HDMI and MHL interfaces, and more to come as standards evolve, UTS-800 accommodates a wide variety of HD and SD video formats, including all standard broadcast and cable/satellite formats, and 3D. UTS-800 analyzes uncompressed "raw" video, which is essential for evaluating HD video processing, performance, and quality of experience.

EXPANDABLE MODULAR ARCHITECTURE

UTS-800 is designed to grow. The backplane accommodates up to 7 plug-in test modules. Each module and its software can be updated for compliance with newer specs. Current modules include MHL-CBUS, MHL Rx-Tx System testers, and more are in the works. *(Coming soon: HDCP 2.x Compliance Test Module)*

MHL-CBUS EXPLORER TEST MODULE SL-850

The CBUS protocol for sending remote control commands over the MHL interface equips end-users to remote contol MHL-enabled smartphones and tablets.

The SL-850 MHL-CBUS Explorer Test Module provides hardware interface and exclusive Simplay Labs CBUS Explorer software to fully test CBUS functionality for MHL-enabled product development and testing.

- Perform all CBUS MHL-ATC tests automatically
- Monitor & Parse CBUS activities
- Generate CBUS frames
- Emulate all MHL device types
- Includes all features of Simplay Labs standalone CBUS Test System
- Integrates with other UTS modules

MHL Rx/Tx SYSTEM ANALYZER TEST MODULE SL-860/861

MHL (Mobile High-Definition Link) links portable devices to other HD devices (DTVs, projectors, AVRs, etc.) with existing connectors and uncompressed HD signals.

The SL-860 MHL Rx/Tx System Analyzer is an essential test tool for developing source and/or sink products enabled with MHL.

- MHL Input Stream Capture
- Analyze AVI InfoFrame & Audio InfoFrame
- Generate MHL A/V Test Patterns
  - Analyze & re-encode to HDMI compliant output
- Analyze A/V format, pixel encoding, pixel repetition & quantization range
- Build in 2 and 4 blocks EDID & monitor EDID access for source DUT test
- Read and Analyze Sink DUT EDID
- Transmit & Receive MHL-RCP commands & Opcodes
- Measure A/V timing
- Read and Analyze MHL device capability registers
- Handshake with DUT for discovery in TMDS electrical test

TEST GEAR FROM HD TESTING EXPERTS: SIMPLAY LABS

Simplay Labs is the world leader in HD Compliance and InterOp testing and consulting, and the world pioneer in branded consumer electronics interoperability testing. UTS-800 is based on years of experience developing test protocols and methodologies for compatibility and interoperability testing. The protocol test drivers in UTS-800 were developed for Simplay's own testing services. Simplay Labs' parent company, Silicon Image, Inc., is a founding member of the HDMI and MHL Consortiums and the world leader in providing silicon solutions for HDMI, MHL, and other cutting edge technologies. When it comes to HD, our pedigree is impeccable.

UTS-800 is a member of Simplay Labs' line of test equipment and standards certification services, which also include the Simplay Labs CEC Explorer, above.

For additional test equipment and platform information, please visit www.simplaylabs.com

SimplayLabs

Customer Support Information

email: info@simplaylabs.com
phone: 1-888-436-4411
web site: www.simplaylabs.com
Check the web site for news and updates for your UTS-800 Test System
Simplay Labs, LLC | 1140 E. Arques Ave. Suite 700
Sunnyvale, CA 94085

Product Name: UTS-800 Multi-Function HD Audio/Video Test Platform
Manufacturer: Simplay Labs LLC
Brand Name: Simplay Labs
Model Number: UTS-800
Dimensions: 6.97 in. (177.1 mm) H x 10.68 in. (271.4 mm) W x 15.61 in. (396.5 mm) D

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