

Keysight Technologies U4998A HDMI 1.4b Protocol Analyzer and Generator Module

Product Fact Sheet

Industries and Applications

- HDMI Authorized Test Centers (ATCs)
- HDMI chipset debug and validation
- Consumer computer video devices incorporating HDMI debug and validation

Product Description

The Keysight Technologies, Inc. U4998A HDMI 1.4b Protocol Audio Video analyzer and generator module enables you to test your devices to ensure they are HDMI 1.4b CTS compliant. The module supports source and sink compliance testing of video formats, including 4K x 2K, 3D, and deep color, up to the maximum data rate of 3.4 Gbps. The U4998A's wide range of capabilities enable you to test legal codes, basic protocol, packet type, pixel encoding, video format timing, AVI Infoframe, ACR, audio sample packet jitter, deep color, 3D video format and more.

Models	
U4998A	HDMI 1.4b Analyzer/Generator module

Main Features and Benefits

Product features	Your benefit
Maximum data rate of 3.4 Gbps	Most complete coverage of HDMI data rates. Supports 4K x 2K, 3D and deep color video formats
HDMI 1.4b capture and generation with compliance tests	Gain confidence in obtaining CTS certification of HDMI source and sink devices
Passive monitoring with pass-through and mirror capabilities (optional)	Monitor the output of a source device so you can debug and troubleshoot source and sink issues.
Remote control via COM commands	Automate your HDMI testing and remotely control the U4998A using the COM server embedded in the application software



Specifications and Characteristics

Hardware	
Size	1-slot AXIe module
Maximum data rate	3.4 Gbps
Memory depth	4 GB
HDMI 1.4b compliance test support	Source Tests: 7-16 through 7-19, 7-23 through 7-40 Sink Tests: 8-16, 8-21, 8-23, 8-25*, 8-29, 8-30*, 8,31, (*with E4887A Signal Generator)
HPD (Hot Plug Detect)	Emulate removal and connection of HDMI cable between tests
Internal frequency counter	Automatically detects clock frequency without external equipment
Operating modes	Capture/compliance Generate/compliance Passive Monitoring (pass-through/mirror)

Chassis compatibility:	
AXIe	

Software Information

U4998A module's graphical user interface is included in the U4000 Series application software. The software is downloadable from the product's web page on Keysight.com. The software requires that only U4000A Series modules are installed in the AXIe chassis.

Operating systems	Microsoft Windows XP Microsoft Windows Vista (32/64-bit) Microsoft Windows 7 (32/64-bit)
Keysight IO Libraries	N/A
Application software	U4000 Series Application Software (includes embedded COM server) HDMI 1.4a Evaluator Software

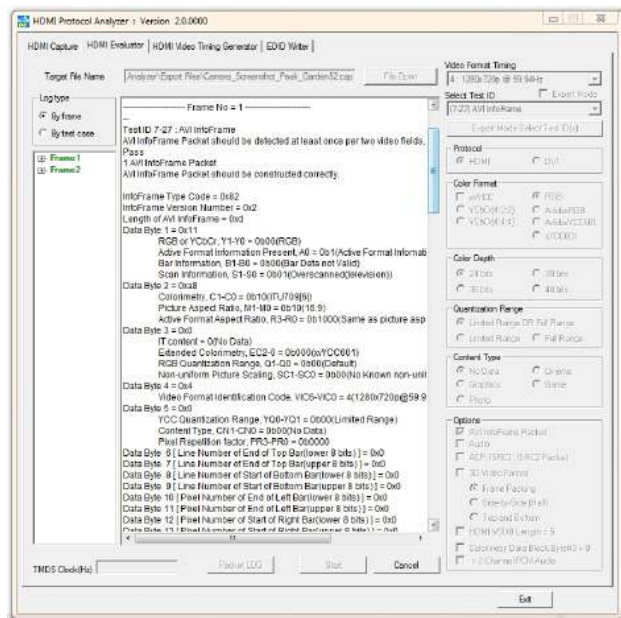


Figure 1. Review the evaluation results and get PASS/FAIL confirmation.

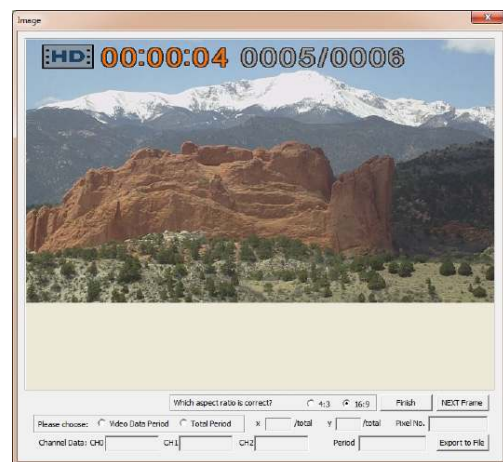


Figure 2. The video image window allows you to visually inspect the video image.



Typical Product Configuration

Model	Description
U4998A	HDMI 1.4b Protocol Analyzer & Generator Module
U4998A-PSV	Passive monitoring (pass through/mirror)
M9502A	2-slot AXIe chassis (Requires either external host PC or M9536A AXIe embedded PC controller)
M9045B	Connection to Laptop
Y1200B	PCIe ExpressCard adaptor: Gen 1 PCIe cable: x4 to x8, 2.0m

Ordering Information

Related Products

M9536A	AXIe embedded PC controller
M9047A	Connection to Desktop
Y1202A	PCIe desktop PC adapter: Gen2, x8 PCIe cable: x8, 2.0m
N5998U-DBG	Software license. Export HDMI captured data for further evaluation/analysis

Advantage Services: Calibration and Warranty

Keysight Advantage Services is committed to your success throughout your equipment's lifetime.

R-51B-001-5C Return to Keysight Warranty - 5 years

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Published in USA, August 1, 2014
5990-9446EN
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