

Keysight Technologies

U4421A Protocol Analyzer and Exerciser for MIPI™ D-PHY Interfaces

Industries and Applications

- Mobile chipset debug and test
- Mobile embedded systems
- MIPI™ D-PHY design protocol test
- CSI and DSI prototype debug
- D-PHY camera and display test



Product Description

The Keysight Technologies, Inc. U4421A MIPI D-PHY Analyzer/ Exerciser for CSI-2 and DSI provides deep insight into mobile computing designs. The U4421A MIPI D-PHY Exerciser option for CSI-2 and DSI provides the record length necessary to stimulate designs with high-definition images and video that best simulates traffic from a wide variety of device busses of varying signal performance.

Main Features and Benefits

Product features	Your benefit
MIPI D-PHY Exerciser	Simulate missing devices in your design, and test it to the corners of the specification
MIPI D-PHY protocol analyzer for DSI and CSI-2 traffic, including trigger and filters	Deep insight into your mobile computing designs
Flexible probing solution	Facilitate reliable capture of high speed MIPI D-PHY signals
Image level pattern generation and analysis	Simulate real world conditions
Deep memory	Record and generate long duration events
Change signal data rate Slew rate and lane timing	Bring the "plug fest" experience to your bench

*Challenge the Boundaries of Test
Keysight Modular Products*

Specifications and Characteristics

Hardware	
Lane Width	Up to 4 lanes
Max Bit rate (High speed mode)	1.5 Gbps data rate
Min Bit rate (High speed mode)	80 Mbps
Max Bit rate (Low power mode)	10 Mbps
Max Bit rate (Low Power mode)	800 Kbps
Memory Depth	Up to 16 GB (4GB standard)
Display Protocol Support	Display Serial Interface (DSI) v1.1 Display Serial Interface (DSI) v1.02.00 Display Serial Interface Version 1.01.00 Display Command Set (DCS) v1.1 Display Command Set (DCS) v1.02.00 Display Command Set v1.01.00 Stereoscopic Display Formats (SDF) v1.0
Camera Protocol Support	Camera Serial Interface 2 v1.01.00 Camera Serial Interface 2 v1.00 (CSI-2)
Chassis slot compatibility: AXIe	

Software Information

The Keysight U4421A comes complete with the protocol analysis and exerciser software—including raw bits to full packet level decoding and display for CSI-2 and DSI protocols optional image inserter and image extractor to enable image generation and visualization. The software only requires the U4421A module installed in a Keysight analyzer.

Supported operating systems	Microsoft Windows XP (32-bit) Microsoft Windows 7 (32/64-bit)
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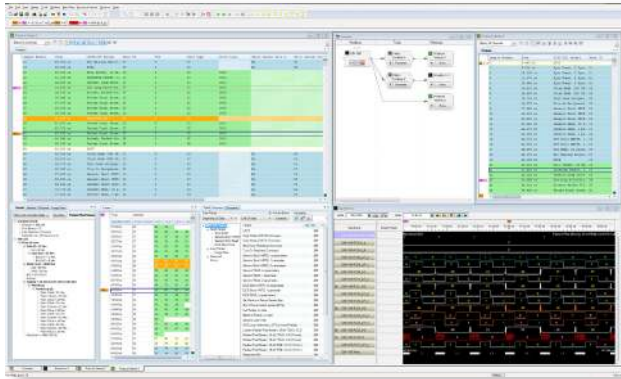


Figure 1. Keysight U4421 Protocol Analyzer.

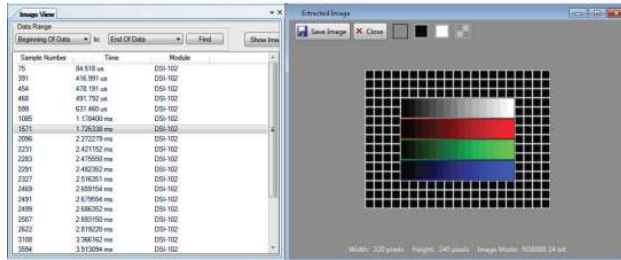


Figure 2. Analyze and Extract images.

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Ordering Information

Model	Description
U4421A	Exerciser/analyzer
U4421A-601	Analyzer only
U4421A-602	Exerciser only
U4421A-603	Analyzer/exerciser
U4421A-402	2-lane analysis/stimulus option
U4421A-404	4-lane analysis/stimulus option
U4421A-701	CSI-2 protocol
U4421A-702	DSI protocol
U4421A-703	CSI-2 and DSI protocol
U4421A-M04	4GB memory depth
U4421A-M16	16 GB memory depth
U4421A-001	Image extractor (requires option 601 or 603)
U4421A-002	Image inserter (requires option 602)

Probing and Accessories

Cables

U4201A	Analyzer logic cable (required)
E5381A	Analyzer flying lead adapter
E5405A	Analyzer soft touch adapter
U4422A	Exerciser SMA cable, MIPI D-PHY, 13 leads/1.5Gbps

Accessories

Cables

R-51B-001-3C	1 year return-to-Keysight warranty extended to 3 years
R-51B-001-5C	1 year return-to-Keysight warranty extended to 5 years

www.keysight.com/find/modular

www.keysight.com/find/dphy_analyzer

USA: (800) 829-4444

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: www.keysight.com/find/contactus.

This information is subject to change without notice.

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