

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 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
Agilent 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: AX1e



Software Information

The Agilent 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 an Agilent analyzer.

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



Figure 1. Agilent U4421 Protocol Analyzer.

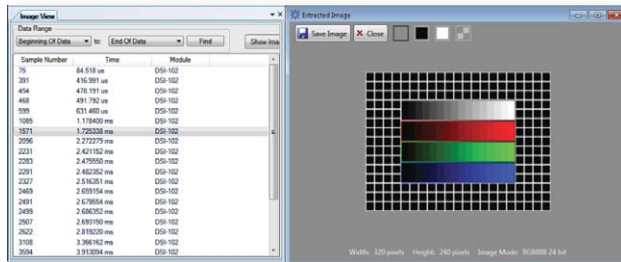


Figure 2. Analyze and Extract images.

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

Challenge the Boundaries of Test

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