UCD-422

HDMI 2.1 Video Generator & Analyzer

8K UHD

10K UHD

10K Video Generator & Analyzer

UCD-422 is a video generator and analyzer for testing HDMI 2.1 interface up to 10K video modes and supports advanced resolutions such as 4K@120Hz, 8K@60Hz and 10K@30Hz with uncompressed video. UCD-422 offers support for FEC, DSC, eARC and HDCP 1.4/2.3. Any video format, audio format, frame rate, video timing, and InfoFrames etc. including timestamps can be generated in any sequence, allowing the UCD-422 to generate nearly endless combination of test scenarios.

UCD Console GUI & API

UCD Console is Unigraf's common Graphical User Interface (GUI) for all UCD series products. UCD Console enables users to access all features of the UCD-422 by providing a flexible way of navigating between both Sink and Source roles and all the functionalities of each role. Some of the available functionalities include preview windows pattern generator and received video/audio, data logger for all packets including I2C, SDCD, CEC, metadata content, link, register monitoring and control dialogs, EDID editor, HDCP status and control functions and much more.
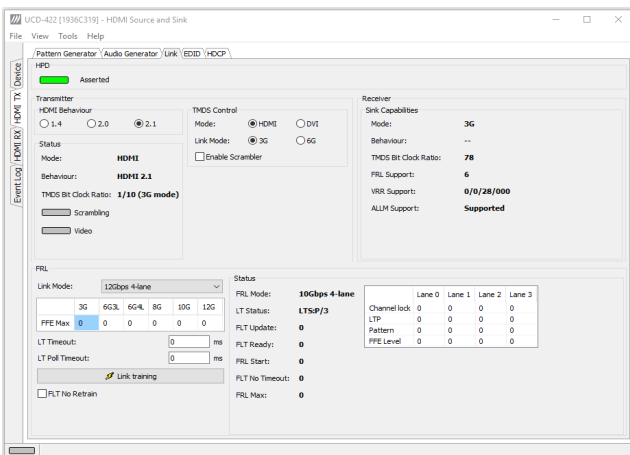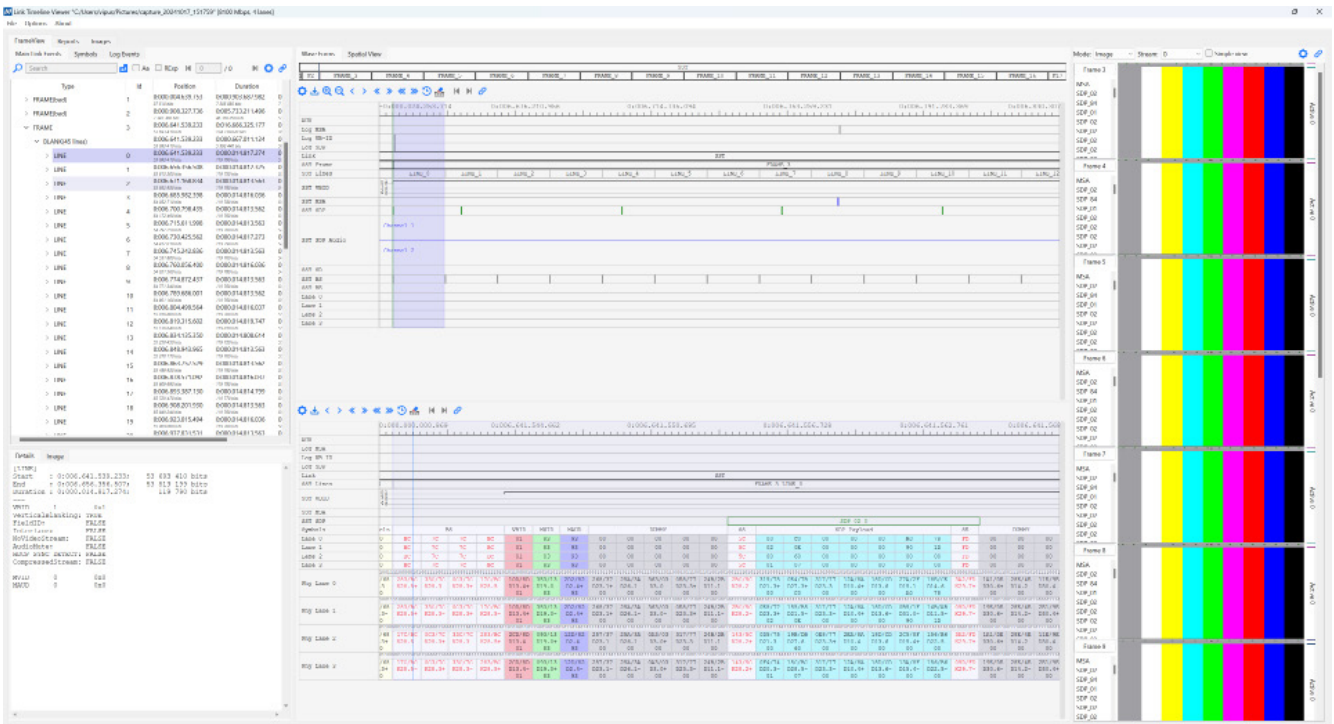
Additionally, all the functionality of the UCD-422 is available via API for creating test automation.

Highlights

- HDMI 2.1 Test Equipment (FRL/TMDS)
- Variable Refresh Rate (VRR)
- Quick Media Switching (QMS)
- Auto Low Latency Mode (ALLM)
- Forward Error Correction (FEC)
- HDCP 1.4/2.3 Support
- 10K@30Hz Support (w/o DSC)
- 8K@60Hz Support (YCbCr 4:2:0, w/o DSC)
- CEC 1.4b & 2.x Support
- eARC Support
- DSC Support
- Custom Playback/Scenario support
- Full API support for test automation
- Support for Windows, Linux & macOS

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Link Analyzer

HDMI Link Analyzer is a tool for capturing Main-link Data Events and I2C Transactions. For each bulk capture, the data is parsed in a timeline view presenting the captured frames. Within each frame, users can have a deep view of the events and metadata that occurs in each line. Measure distances in nanoseconds and symbol size to identify the length of problems in between events. Observe descrambled and scrambled symbols in hexadecimal format in each of the active lanes.

Fixed Rate Linked (FRL)

Fixed Rate Link (FRL) is the new video transport method in HDMI 2.1. The UCD-422 can identify interoperability issues on FRL capable Sink and Source. Users can verify if an image is captured correctly on the UCD Console when testing Source devices using different FRL modes.

Specifications

Input (HDMI Rx)	HDMI 2.1b (10K@30Hz, w/o DSC)
Output (HDMI Tx)	HDMI 2.1b (10K@30Hz, w/o DSC)
HDMI 2.1 Features	FRL, TMDS, ALLM, VRR, QMS
Content Protection	HDCP 1.4 & 2.3
Additional features	eARC, DSC, FEC, CEC
Computer Interface	USB 3.0 (Type-A Connector)
Operating System	Windows, Linux, macOS
Software	UCD Console GUI TSI API with interface specific Test Sets
Power Input	AC/DC Power supply
	100 to 240 Vac 50/60 Hz input, +12 Vdc output
Module Size	311 x 197 x 65 mm
Weight	1.2 kg w/o power supply