

UCD-500 Gen3



DisplayPort 2.1 Video Generator & Analyzer

UCD-500 Gen3 is a video generator and analyzer unit with 16G capture memory. It supports testing DP Sinks and Sources with UHBR 20 Max Bit Rate Capability with both USB-C and DP connectors. 10, 13.5 and 20 Gbp/s lane rates and video modes up to 8K@60Hz and 16K@60 Hz (with DSC) are supported. DP 2.1 features such as Adaptive-Sync, Panel Replay, eDP test functions, DSC, FEC and LTTTPR are also supported.

Compliance Test Tool

UCD-500 Gen3 is a Compliance Test Tool for validating DP 2.1a & DP 1.4a Link Layer on DP Sinks and Sources. DP 2.1 MST, DisplayID/EDID, Adaptive-Syncs and LTTTPR CTS tests are also supported. Besides DP 2.1 Link Layer CTS tests, UCD-500 Gen2 also supports USB-4v1 DP tunneling CTS. UCD-500 Gen2 is also a Compliance Test Tool for HDCP 2.2/2.3 on DP Transmitters, Receivers and Repeaters.

Successor to UCD-500 Gen2

UCD-500 Gen3 continues Unigraf's flagship series of DP test tools. It adds GPIOs support in 4 SMA connectors. Further, the new enhanced cooling system with new fan architecture results in quieter operation. For UCD-500 Gen2 users, a special upgrade program is available.

Highlights

- 16K Video Generator & Analyzer
- DP and USB-C inputs and outputs
- 10, 13.5 and 20 Gbp/s lane rates
- 8K@60Hz without compression, 16K@60Hz with DSC
- DP 2.1 Link Layer CTS
- MST up to 4 streams
- DP 2.1 MST CTS for testing Source DUT
- Suitable for USB4 DP Tunneling CTS
- HDCP 2.3 CTS for receivers, transmitters and repeaters
- Link Analyzer
- DP Link Analyzer (Monitor)
- Adaptive-Sync
- DP 2.1 PanelReplay and ALPM
- eDP 1.5 support (PSR1/2, ALPM)
- Support for DSC, FEC and LTTTPR
- Color depth 6 to 16bpc
- Color formats: RGB, YCbCr 444, 422, 420
- Capture memory 16GB

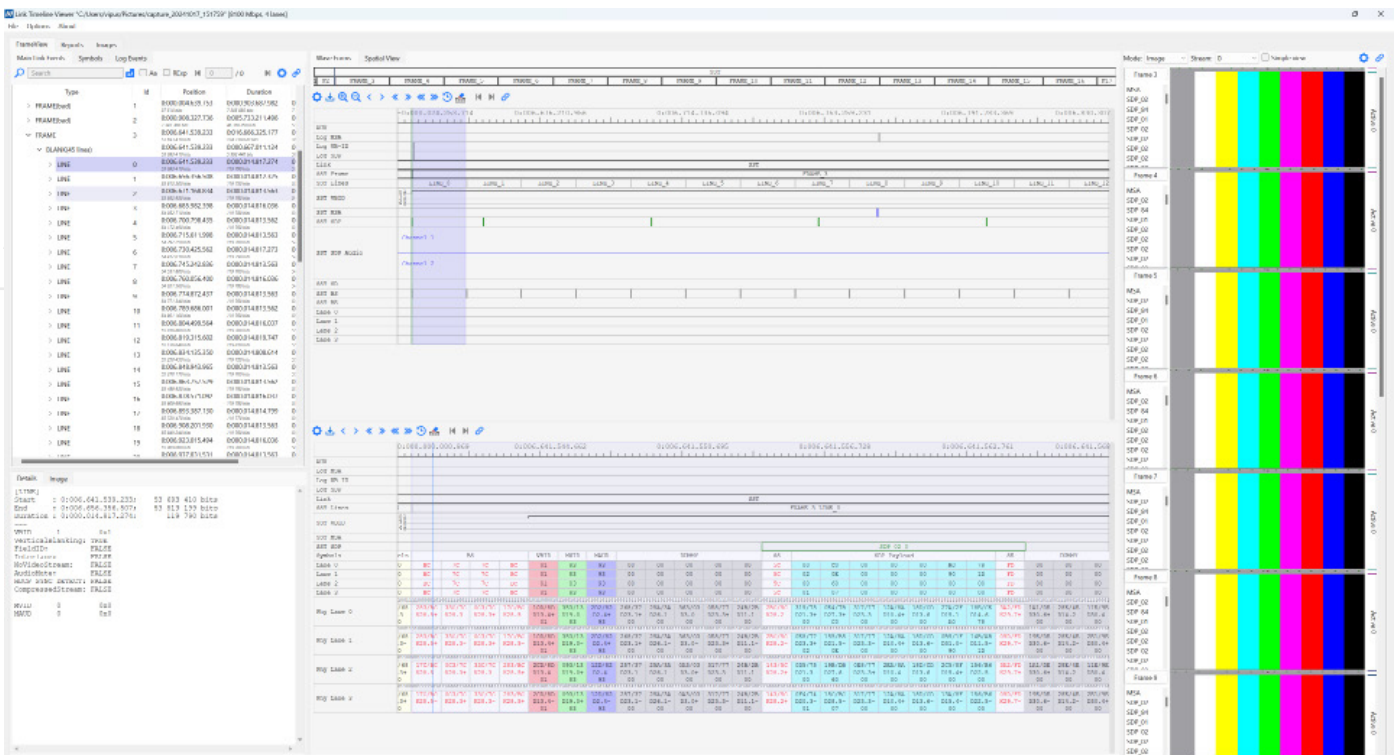


GPIO Connectors

The added GPIO connectors support bandwidth up to 30MHz. In four SMA connectors you have two inputs and two outputs. The DB15 connector holds 2 additional input signals and 6 additional output signals

DP Link Analyzer

DisplayPort Link Analyzer is a tool for capturing Main-link Data Events and AUX 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.



Link Timeline Viewer shown above, is a tool for evaluating the content and timing of data captured with Link Analyzer.

DP Link Analyzer (Monitor)

In this role the UCD-500 Gen3 is intended to be connected between a DisplayPort Source and a DisplayPort Sink. It passes the main link + AUX data received at its DPRX connector to its DPTX connector, analyzing it but not affecting the data stream. At the same time, main link + AUX data can be captured for offline inspection and analysis by UCD Console Event Logger and TimeLine Viewer.



Watch a demo video of DP Link Analyzer (Monitor)