UCD-340

4K USB-C DP Alt Mode Video Generator & Analyzer

HDCP 2.3 CTS

4K USB-C DP Alt Mode Test Tool

UCD-340 is a 4K USB-C DP Alt Mode video analyzer and generator. With UCD-340 you can verify USB-C DP Alt Mode Sinks and Sources up to 4K@60Hz resolution. UCD-340 features a versatile and reliable way of testing video, audio, DisplayPort Alt Mode features, power delivery functions and connector pins of the USB-C interface. UCD-340 is the only DCP LLC Approved Test Tool for HDCP 2.3 CTS testing on USB-C DP Alt Mode Transmitter and Receiver devices. UCD-340 is controlled via easy-to-use PC GUI called UCD Console. All tests can be automated for compliance testing, R&D debugging and production line testing.

For R&D Debugging & Test Automation

UCD-340 software supports both hands-on debugging and automated functionality tests either in R&D or for Production. UCD Console GUI is a preview and test application for dektop use. Each interface function has a well structured dialog for superior at-a-glance viewability.

Unigraf high level test software interface TSI (Test System Interface) provides a system integrator a set of reliable and short cycle time interface specific tests. TSI Test Cases readily implement the low level procedures needed for verifying the various functions of the tested interface and the required software integration is minimal.

Highlights

- Test DP over USB-C video and audio
- Test USB-C Power Delivery with DP Alt Mode
- DCP Apporved HDCP 2.3 CTS Tests
- Test USB-C Connector Pins soldering and assembly quality
- 4K@60 support
- HDCP 1.3 and HDCP 2.3 support
- Capture video and audio, monitor and control interface parameters
- USB signal pass-thru
- UCD Console GUI for debugging
- High level API for easy integration

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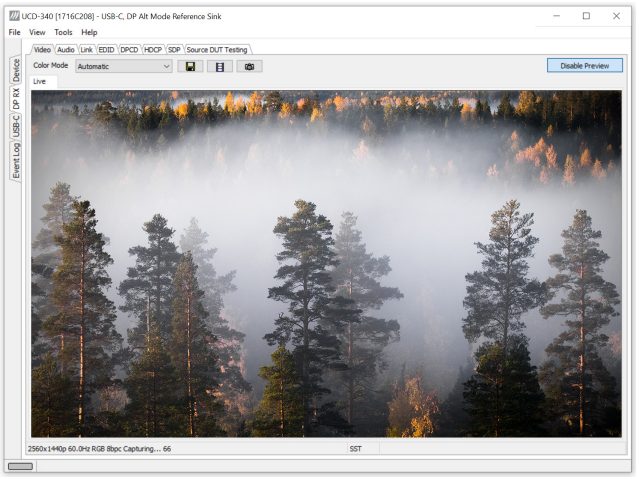
Test USB-C Connector Pins

One of the most common manufacturing defects on USB-C devices are poorly soldered connector pins. The USB-C connector is capable of delivering and receiving up to 100W of power. For safety purposes, it is essential to test that the USB-C connector pins are properly soldered into the circuit board. A poorly soldered USB-C connector can cause the cable or the device to overheat.

UCD-340 offers a unique solution for testing the continuity of USB-C connector pins. A built-in electrical test enables the testing of each connector pin. Additionally, thanks to a software-based cable flip, the electrical test enables testing of the USB-C connector with single cable insertion. In production, this saves valuable time as there is no need to insert the cable in both ways. Electrical test features ready-made tests for testing Vconn and Vbus voltage levels. All electrical tests can be automated for production line testing



UCD Console GUI

Unigraf's UCD Console is a common Graphical User Interface (GUI) for all UCD series test tools. It is an easy-to-use tool that features all necessary features you need to test USB-C interface. UCD Console adjusts based on the interface and the device under test (DUT). It supports everything from the simplest and most fast-paced test automation tests to the most complex compliance tests such as the DisplayPort Link Layer Compliance Tests.

USB-C specific control panel enables monitoring and controlling the status of different DisplayPort Alt Mode and USB-C Power Delivery roles and functionalities. With UCD Console you can enter the DP Alt Mode in a controlled manner. This allows analyzing of the device behavior when entering the DP Alt Mode.

Specifications

Test connections	USB Type-C (Dual role port) USB Type A (Device) pass-thru USB Type B (Host) pass-thru External Power Source / Sink connector
DP over USB-C	Resolution up to 4096×2160p60 Up to HBR2 rate in up to 4 lanes Color depth up to 48 bits Support HDCP 1.3 and 2.3
USB Over USB-C	USB 3.1 Gen1 (5 Gbps) and USB 2.0 pass-thru
USB Power Delivery	Sink and source 5 V up to 3.0 A, up to 20 V / 5 A with external power test unit (Optional)
Electrical Test	Verify functionality of USB Type-C interface signals (VBUS, GROUND, CC1/2, SBU1/2). (Optional)
Computer Interface	USB 3.0
Operating System	Windows 10, 8, 7 and XP
Software	UCD Console GUI TSI API with ready Test Cases
Environment	Operating temperature: 0 ... +40°C Storage temperature: -20 ... +60°C Relative humidity: 10 ... 80%
Power Input	+12 Vdc (AC/DC converter included)
Module Size	281×128×62 mm
Weight	900 g (w/o AC/DC converter)

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