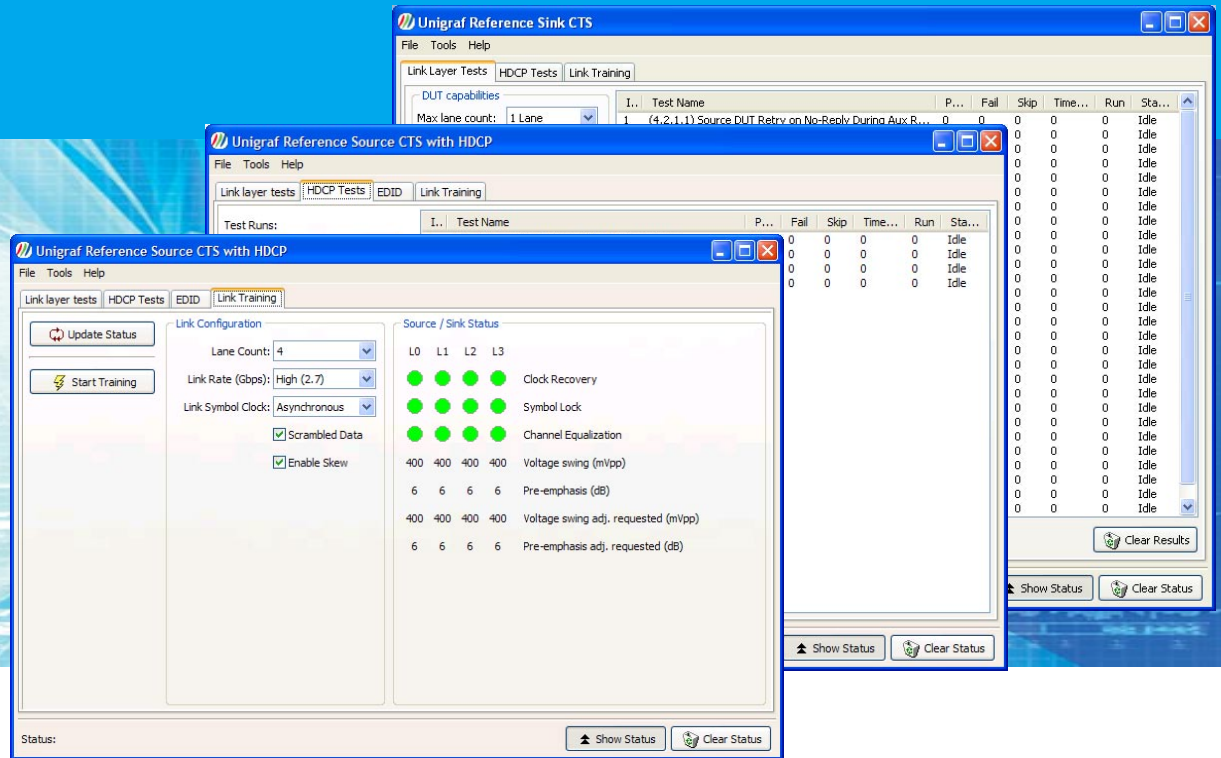


DP CTS Tools

DisplayPort™ compliance testing



Full DP Compatibility Validation

Unigraf DP CTS Tools enable the user to reliably evaluate the compatibility of his equipment with VESA DisplayPort™ Link Layer and HDCP standards. Unigraf DP CTS Tools provide more than only the pass / fail information. The on-screen and printable reports give a reliable and easy to understand explanation of the performance of the tested equipment on each step of the tests.

Shortened Development Cycle

Early diagnosis of compliance issues will help to make the product implementation sound. By using Unigraf CTS Tools the testing of the functionality of the DP design will be a timely operation without unnecessary delays. The use of Unigraf DPA-400 AUX Channel Monitor will accelerate even more the achievement of this goal.

Benefits

- User friendly GUI
- Detailed HTML style reports
- Clear and precise error reporting
- EDID read / write
- DPCD read / write
- CTS LL and HDCP versions
- Test automation and manual modes
- Used by ATC Labs
- Use for Self Certification (upon approval)



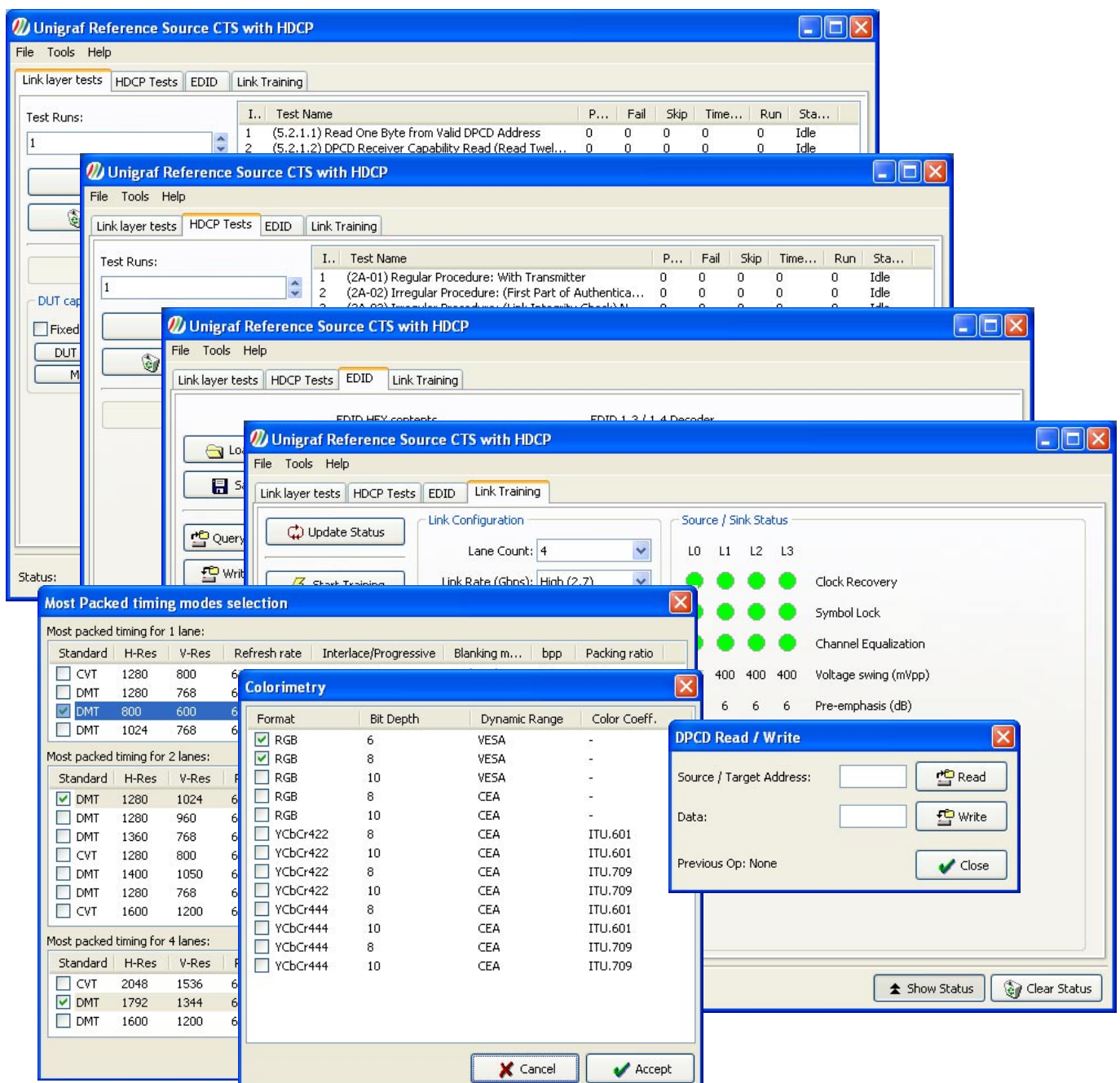
Reference Source CTS Tool

Unigraf's Reference Source CTS Tool can be used with VTG-5225 DP units.

The tool GUI consists of the following seven task oriented dialogs. They are accessible through tabs or pull-down menus from the main dialog. The PC with CTS software is connected to both devices by using a RS-232 port. A separate USB to serial conversion cable can be used if a RS-232 port is not available.

RefSource Dialogs

- Link layer tests: LL test grid with result reporting
- HDCP tests: HDCP test grid with result reporting
- EDID: EDID view in HEX or decoded
- Link Training: Link training status and link configuration
- DPCD Read / Write: Access to DPCD register values
- Most Packed Timing: Selection of tested video timings
- Colorimetry: Definition of used video color formats



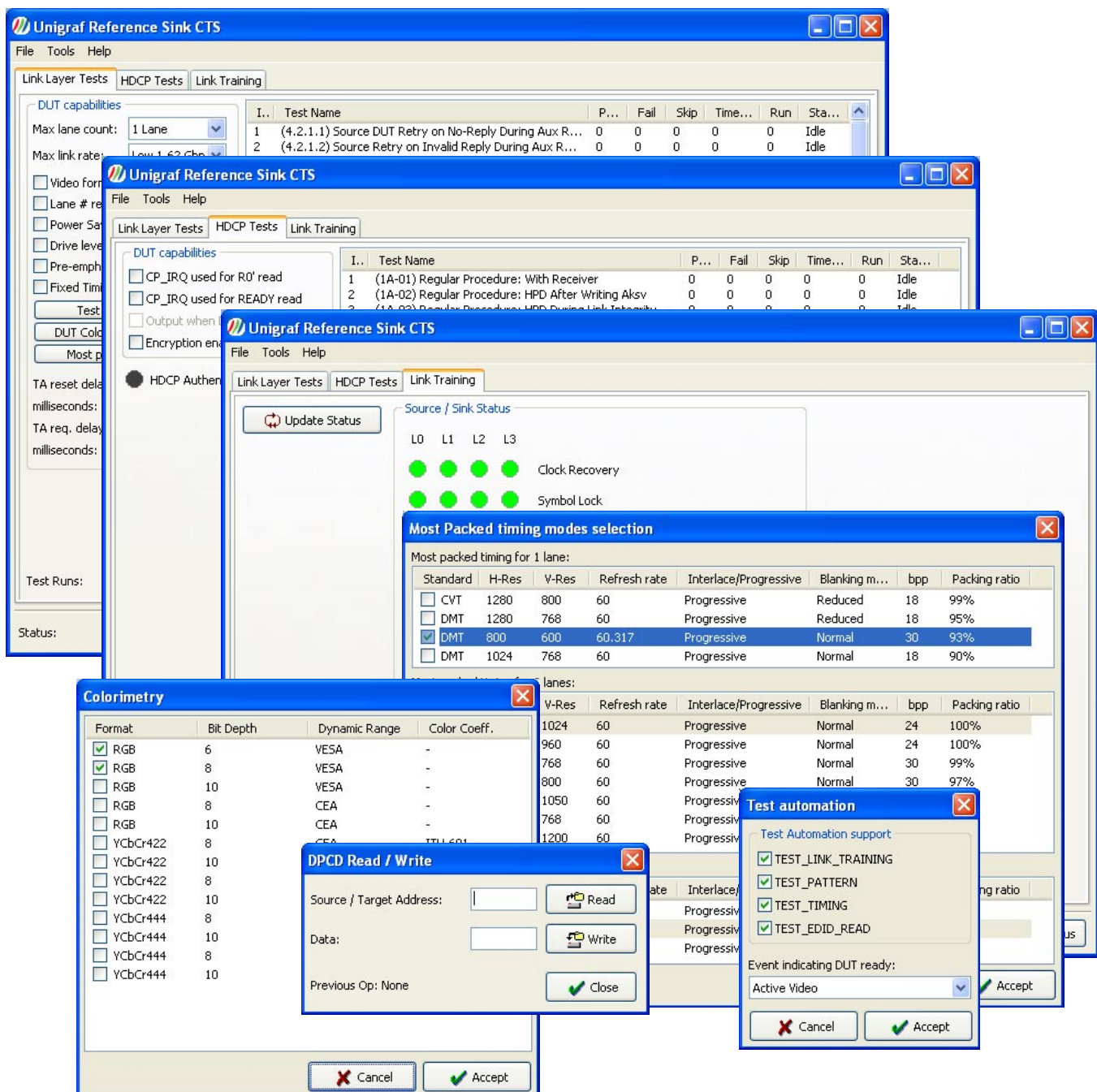
Reference Sink CTS Tool

Unigraf's Reference Sink CTS Tool can be used with either the DPR-100 or the UFG 04 DP frame grabber. The functionality of the CTS tool is identical between the two devices.

The tool GUI consists of the following seven task oriented dialogs. They are accessible through tabs or pull-down menus from the main dialog. The PC with CTS software is connected to the UFG 04 DP using a RS-232 port and to the DPR-100 through a USB port.

RefSink Dialogs

- Link layer tests: LL test grid with result reporting
- HDCP tests: HDCP test grid with result reporting
- Link Training: Link training status
- DPCD Read / Write: Access to DPCD register values
- Most Packed Timing: Selection of tested video timings
- Colorimetry: Definition of used video color formats
- Test automation: Definition of DUT capabilities



DP CTS Tools

DisplayPort™ compliance testing

DisplayPort Sink Compliance Test Report				
CONTENTS				
Test Summary General Information View all test details				
View details by test				
1 - (5.2.1.1) Read One Byte from Valid DPCD Address 2 - (5.2.1.2) DPCD Receiver Capability Read (Read Twelve Bytes from Valid DPCD Address) 3 - (5.2.1.3) Write One Byte to Valid DPCD Address 4 - (5.2.1.4) Write Nine Bytes to Valid DPCD Addresses 5 - (5.2.1.5) Write EDID Offset (One Byte I2C-Over-Aux Write) 6 - (5.2.1.6) Read One EDID Byte (One Byte I2C-Over-Aux Read) 7 - (5.2.1.7) EDID Read (1 Byte I2C-Over-Aux Segment Write, 1 Byte I2C-Over-Aux Offset Write, 128 Byte				
Printer Friendly				
TEST SUMMARY				
TEST	PASSED	FAILED	TIMED OUT	SKIPPED
1 - (5.2.1.1) Read One Byte from Valid DPCD Address	1	0	0	0
2 - (5.2.1.2) DPCD Receiver Capability Read (Read Twelve Bytes from Valid DPCD Address)	1	0	0	0
3 - (5.2.1.3) Write One Byte to Valid DPCD Address	1	0	0	0
4 - (5.2.1.4) Write Nine Bytes to Valid DPCD Addresses	1	1	0	0
5 - (5.2.1.5) Write EDID Offset (One Byte I2C-Over-Aux Write)	1	0	0	0
6 - (5.2.1.6) Read One EDID Byte (One Byte I2C-Over-Aux Read)	1	0	0	0
7 - (5.2.1.7) EDID Read (1 Byte I2C-Over-Aux Segment Write, 1 Byte I2C-Over-Aux Offset Write, 128 Byte	1	0	0	0

Tool Structure

Unigraf DP CTS Tools provide the functionality required for Unigraf Reference Sink or Reference Source Test Equipment to conduct the compliance tests of DisplayPort™ Link Layer and HDCP. They execute the full CTS test as required by VESA DisplayPort™ Link Layer Compliance Test Specification.

The DP CTS tools consist of two components: the Windows graphical user interface and the target firmware for the DisplayPort™ controller located on the Test Equipment. The actual tests are implemented by the firmware, while system control and status reporting are done by the user interface. The GUI and the FW are communicating using a serial interface. The firmware implements both the functions needed in the CTS tests and the normal functionality as DP video generator or frame grabber.

The tools can generate detailed HTML test reports and may include both Link Layer and HDCP compliance tests.

Specifications

Contents	Graphical User Interface and DP interface controller (DPTx or DPRx) Firmware
HW interface	STM gm 60028 (Tx), gm 68020 (Rx)
RefSource CTS	VTG-5225 DP pattern generator
RefSink CTS	UFG-04 DP frame grabber, DPR-100
Communication	RS-232C (VTG-5225 DP and UFG-04 DP), USB 2.0 (DPR-100)
Operating System	Windows XP
Standard	Certified for testing to VESA DisplayPort™ Link Layer Compliance Test Standard, Version 1.1



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