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# 882E-DP DisplayPort Compliance Test Solutions

# Quantum Data – 882E-DP DisplayPort Solutions for S

## Agenda

Link Layer Compliance Test for Sinks

EDID Compliance Test for Sinks

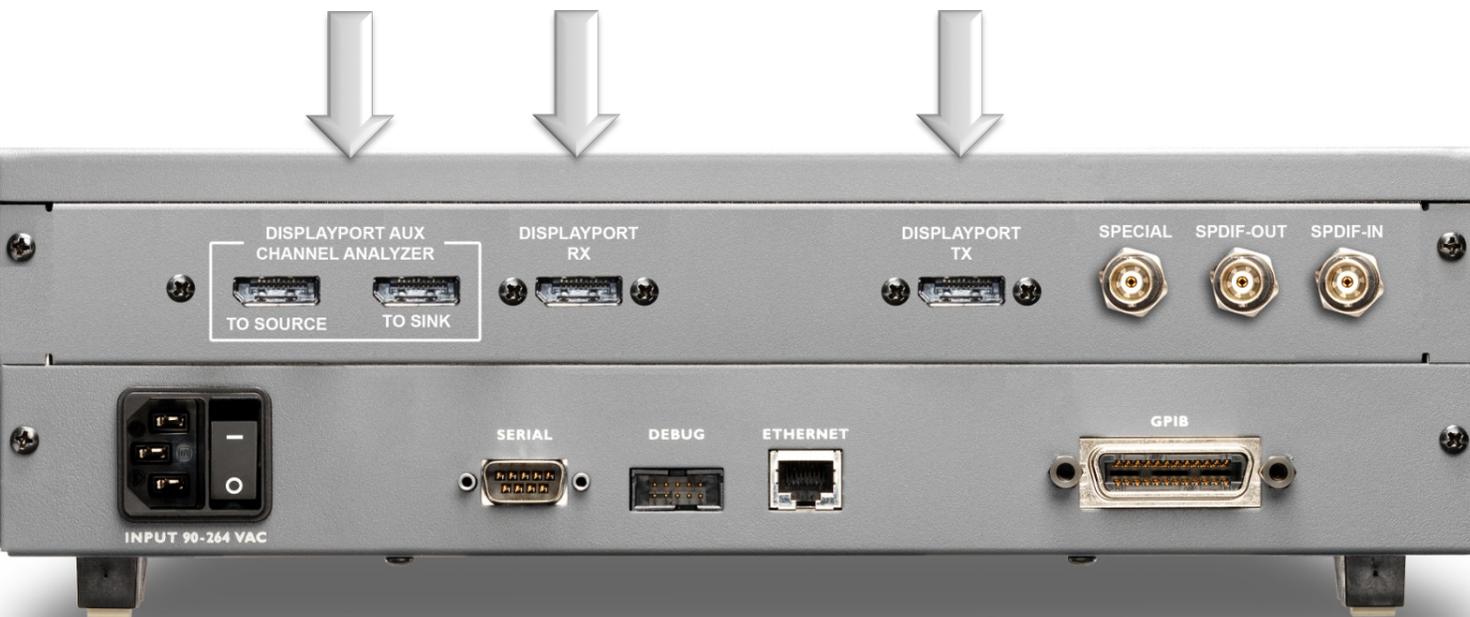
Monitor Link Layer Transactions during Compliance Test

Other DisplayPort Compliance Test Solutions

# 82E-DP DisplayPort Video Test Generator / Analyzer



# 82E-DP Analyzer – DisplayPort Connectors

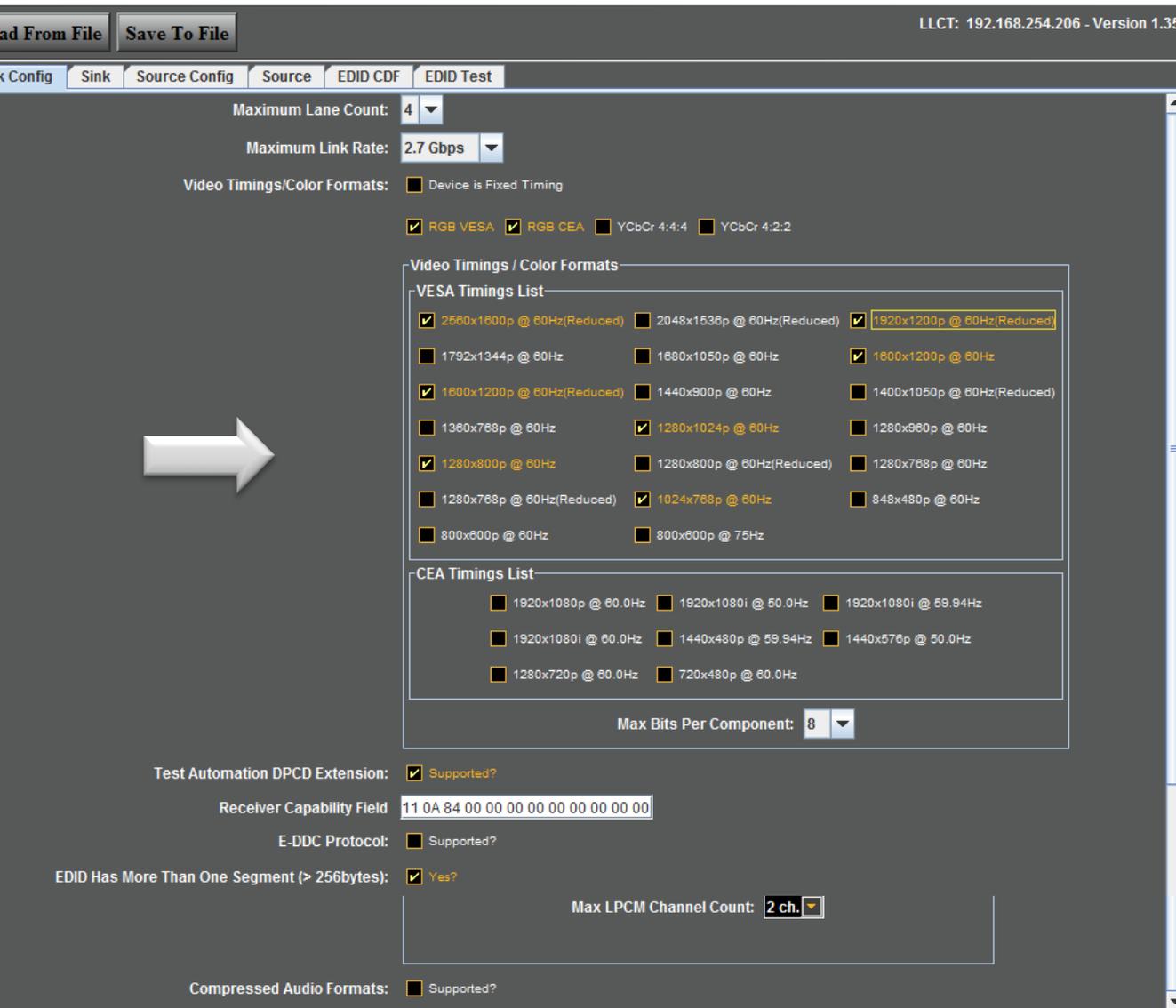


## DisplayPort Ports

- DisplayPort Tx port serves as a reference source to test DisplayPort sinks.
- DisplayPort Rx port serves as a reference sink to test DisplayPort sources.
- DisplayPort Aux Channel Analyzer enables monitoring of the Link Layer transactions (EDID, Link Training, H

# 882E-DP Link Layer Sink Compliance Testing

# 82 Sink Link Layer Compliance Test - Capabilities



The screenshot shows the 'EDID Test' tab in a software application. At the top right, it displays 'LLCT: 192.168.254.206 - Version 1.35'. The interface includes several configuration sections:

- Maximum Lane Count:** Set to 4.
- Maximum Link Rate:** Set to 2.7 Gbps.
- Video Timings/Color Formats:** Includes checkboxes for 'Device is Fixed Timing', 'RGB VESA', 'RGB CEA', 'YCbCr 4:4:4', and 'YCbCr 4:2:2'.
- Video Timings / Color Formats:** A detailed list of video modes under 'VESA Timings List' and 'CEA Timings List'. The 'VESA Timings List' includes options like '2560x1600p @ 60Hz(Reduced)', '1920x1200p @ 60Hz(Reduced)', '1600x1200p @ 60Hz', '1800x1200p @ 60Hz(Reduced)', '1440x900p @ 60Hz', '1400x1050p @ 60Hz(Reduced)', '1360x768p @ 60Hz', '1280x1024p @ 60Hz', '1280x960p @ 60Hz', '1280x800p @ 60Hz', '1280x800p @ 60Hz(Reduced)', '1280x768p @ 60Hz', '1280x768p @ 60Hz(Reduced)', '1024x768p @ 60Hz', '848x480p @ 60Hz', '800x600p @ 60Hz', and '800x600p @ 75Hz'. The 'CEA Timings List' includes options like '1920x1080p @ 60.0Hz', '1920x1080i @ 50.0Hz', '1920x1080i @ 59.94Hz', '1920x1080i @ 60.0Hz', '1440x480p @ 59.94Hz', '1440x576p @ 50.0Hz', '1280x720p @ 60.0Hz', and '720x480p @ 60.0Hz'.
- Max Bits Per Component:** Set to 8.
- Test Automation DPCD Extension:** Checked 'Supported?'
- Receiver Capability Field:** Displayed as '11 0A 84 00 00 00 00 00 00 00 00'.
- E-DDC Protocol:** Checked 'Supported?'
- EDID Has More Than One Segment (> 256bytes):** Checked 'Yes?'
- Max LPCM Channel Count:** Set to 2 ch.
- Compressed Audio Formats:** Checked 'Supported?'

A large white arrow points from the left towards the 'Sink' configuration area.

- Workflow – Configure Sink Layer Capabilities (left)**
- Access Sink Configuration
  - Use pull-downs and checkboxes to configure.
  - Set video parameters.

# 82E-DP Sink Link Layer Compliance Test – Capabilities

ad From File Save To File LLCT: 192.168.254.206 - Version 1.35

Sink Config Sink Source Config Source EDID CDF EDID Test

Maximum Lane Count: 4

Maximum Link Rate: 2.7 Gbps

Video Timings/Color Formats:  Device is Fixed Timing

RGB VESA  RGB CEA  YCbCr 4:4:4  YCbCr 4:2:2

Video Timings / Color Formats

VESA Timings List

<input checked="" type="checkbox"/> 2560x1600p @ 60Hz(Reduced)	<input type="checkbox"/> 2048x1536p @ 60Hz(Reduced)	<input checked="" type="checkbox"/> 1920x1200p @ 60Hz(Reduced)
<input type="checkbox"/> 1792x1344p @ 60Hz	<input type="checkbox"/> 1680x1050p @ 60Hz	<input checked="" type="checkbox"/> 1600x1200p @ 60Hz
<input checked="" type="checkbox"/> 1600x1200p @ 60Hz(Reduced)	<input type="checkbox"/> 1440x900p @ 60Hz	<input type="checkbox"/> 1400x1050p @ 60Hz(Reduced)
<input type="checkbox"/> 1360x768p @ 60Hz	<input checked="" type="checkbox"/> 1280x1024p @ 60Hz	<input type="checkbox"/> 1280x960p @ 60Hz
<input checked="" type="checkbox"/> 1280x800p @ 60Hz	<input type="checkbox"/> 1280x800p @ 60Hz(Reduced)	<input type="checkbox"/> 1280x768p @ 60Hz
<input type="checkbox"/> 1280x768p @ 60Hz(Reduced)	<input checked="" type="checkbox"/> 1024x768p @ 60Hz	<input type="checkbox"/> 848x480p @ 60Hz

Test Automation DPCD Extension:  Supported?

Receiver Capability Field: 11 0A 84 00 00 00 00 00 00 00 00

E-DDC Protocol:  Supported?

EDID Has More Than One Segment (> 256bytes):  Yes?

Audio Reception:  Supported?

Audio Support Parameters

Audio Sample Rates

<input type="checkbox"/> 32kHz	<input type="checkbox"/> 44.1kHz	<input checked="" type="checkbox"/> 48kHz	<input type="checkbox"/> 88.2kHz	<input type="checkbox"/> 96kHz	<input type="checkbox"/> 176.4kHz	<input type="checkbox"/> 192kHz
--------------------------------	----------------------------------	---	----------------------------------	--------------------------------	-----------------------------------	---------------------------------

Audio Sample Sizes

<input checked="" type="checkbox"/> 16 bit	<input checked="" type="checkbox"/> 20 bit	<input checked="" type="checkbox"/> 24 bit
--	--	--

Max LPCM Channel Count: 2 ch.

Compressed Audio Formats:  Supported?

Workflow – Configure Layer Capabilities (left)

- Set audio parameters.

# 82 Sink Link Layer Compliance Test – Select Tests

LLCT: 192.168.254.206 - Version 1.35

Load From File Save To File

Sink Config Sink Source Config Source EDID CDF EDID Test

Select All Deselect All Start Test End Tests

TESTS

- 5.2.1.1 - Read one byte from valid DPCD address
- 5.2.1.2 - Read twelve bytes from valid DPCD address
- 5.2.1.3 - Write one byte to valid DPCD address
- 5.2.1.4 - Write nine bytes to valid DPCD addresses
- 5.2.1.5 - Write EDID offset (one byte I2C-over-Aux write)
- 5.2.1.6 - Read one EDID byte (one byte I2C-over-Aux read)
- 5.2.1.7 - EDID read (1 byte I2C-over-Aux segment write, 1 byte I2C-over-Aux offset write, 128 byte I2C-over-Aux read)
- 5.2.1.8 - Illegal aux request syntax
- 5.2.1.9 - Glitch Rejection
- 5.2.1.10 - Interleaved EDID and DPCD Receiver Capability Read
- 5.2.1.11 - Downstream Stop on MOT Reset
- 5.2.1.12 - Downstream Stop on Timeout
- 5.3.1.1 - Successful link training at all supported lane counts and link speeds
- 5.3.1.2 - Successful link training with request of higher differential voltage swing during clock recovery sequence
- 5.3.1.3 - Successful link training to a lower link rate due to clock recovery lock failure during clock recovery sequence
- 5.3.1.4 - Successful link training with request of a change to pre-emphasis and/or voltage swing setting during channel equalization sequence
- 5.3.1.5 - Successful link training at lower link rate due to loss of symbol lock during channel equalization sequence
- 5.3.1.6 - Lane count reduction
- 5.3.1.7 - Lane count increase
- 5.3.2.1 - IRQ\_HPD pulse due to loss of symbol lock and clock recovery lock
- 5.3.2.2 - IRQ\_HPD pulse due to loss of inter-lane alignment lock
- 5.4.1.1 - Pixel data reconstruction
- 5.4.1.2 - Main stream data unpacking and unstuffing - least packed TU
- 5.4.1.3 - Main stream data unpacking and unstuffing - most packed TU

Time Between Tests (sec) 4

Show Report

## Workflow – Select Tests

- Access **Sink** tab.
- Use check boxes to select specific tests.
- Deselect all or Select all.
- Specify time between tests to ensure device and test equipment is reset properly.
- Save for later use.
- Recall to save time of entering data.



# 882 Sink Link Layer Compliance Test – Test Report

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HOME

DisplayPort Link Layer Compliance Report

Apr 24 2012 [21:21:31]

### GENERATOR INFORMATION

Model = 882E  
Unit Revision = A  
Unit SN = 11040005  
Generator Build Date = 04062011  
Firmware = 20.1887741  
GW 1 = 451C,5,11182010  
GW 2 = 451A,17,10092008  
GW 3 = 451B,2,3162011  
Tx IROM/OCM FW/IC Version = 2.3.32/2.25.5/CG  
Rx IROM/OCM FW/IC Version = 2.3.32/2.25.7/CG  
DisplayPort Link Layer CTS Version = 1.2 Core

### DUT-SPECIFIC INFORMATION

Wait Time Between Tests = 4 sec  
Lane Count = 4  
Link Rate = 2.7 Gbps  
Fixed Timing Device = NO  
Supports RGB VESA = YES  
Supports RGB CEA = YES  
Supports YCbCr 4:2:2 = NO  
Supports YCbCr 4:4:4 = NO  
CVT 1280x800p @ 60Hz(Reduced) = NO  
DMT 1280x768p @ 60Hz(Reduced) = NO  
DMT 800x600p @ 60Hz = NO  
DMT 1024x768p @ 60Hz = YES

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## Workflow – View Test Report (left)

- 882E Home Page and Generated Reports.
- Report shows 882E information.
- Report shows capabilities.
- Disseminate test results to colleagues, subject matter experts and Quantum Data analysis.

# 82 Sink Link Layer Compliance Test – Test Report

```
CVT 1280x800p @ 60Hz(Reduced) = NO
DMT 1280x768p @ 60Hz(Reduced) = NO
  DMT 800x600p @ 60Hz = NO
  DMT 1024x768p @ 60Hz = YES
  DMT 1280x1024p @ 60Hz = YES
  DMT 1280x960p @ 60Hz = NO
  DMT 1360x768p @ 60Hz = NO
  CVT 1280x800p @ 60Hz = YES
DMT 1400x1050p @ 60Hz(Reduced) = NO
  DMT 1280x768p @ 60Hz = NO
CVT 1600x1200p @ 60Hz(Reduced) = YES
CVT 2048x1536p @ 60Hz(Reduced) = NO
  DMT 1792x1344p @ 60Hz = NO
  DMT 1600x1200p @ 60Hz = YES
CEA 1440x480p @ 59.94Hz = NO
  CEA 1440x576p @ 50Hz = NO
  CEA 1920x1080i @ 50Hz = NO
  CEA 1920x1080i @ 59.94Hz = NO
  CEA 1920x1080i @ 60Hz = NO
  CEA 1920x1080p @ 60Hz = NO
  CEA 1280x720p @ 60Hz = NO
  CEA 720x480p @ 60Hz = NO
CVT 2560x1600p @ 60Hz(Reduced) = YES
CVT 1920x1200p @ 60Hz(Reduced) = YES
  CVT 1680x1050p @ 60Hz = NO
  CVT 1440x900p @ 60Hz = NO
  CVT 848x480p @ 60Hz = NO
  CVT 800x600p @ 75Hz = NO
Maximum Number of Bits per Component = 8
Supports Test Automation = YES
Receiver Capability Field = 110A84000000000000000000
Supports the E-DDC Protocol = NO
EDID Occupies Greater Than One E-DDC Segment (>256 bytes) = YES
Supports Audio Reception = YES
Audio Sample Rates Supported:
```

## Workflow – View Test Report (left)

- 882E Home Page and Generated Reports.
- Report shows 882E information.
- Report shows capabilities.
- Disseminate test results to colleagues, subject matter experts and Quantum Data analysis.

# 82 Sink Link Layer Compliance Test – Test Report

```
SINK TEST SUMMARY

PASS 5.3.1.1 Successful link training at all supported lane counts and link speeds

SINK TEST DETAILS

5.3.1.1 - Successful link training at all supported lane counts and link speeds

Link Training #1

• PASS -> Link Bit Rate = 1.62 Gbps ( Valid Bitrate )
• PASS -> Lane Count = 1 ( Valid Lane Count )

• INFO -> Number of Clock Recovery Iterations = 2

Clock Recovery Iteration 1
  Lane 0
    CurrentLevel = 0 Not Max Current Level
    Without Pre-emphasis (Not at Max Pre-emphasis)
    Clock Recovery Not Done
    Channel Equalization Not Done
    Link Symbol Not Locked

Clock Recovery Iteration 2
  Lane 0
    CurrentLevel = 0 Not Max Current Level
    Pre-emphasis level = 3 (Reached Max Pre-emphasis)
    Clock Recovery Done
    Channel Equalization Not Done
    Link Symbol Not Locked

• INFO -> Clock Recovery succeeded on all active lanes
```



## Workflow – View Test Report (left)

- Report shows summary of test results.
- Report shows Pass/Fail of each distinct sub-test.
- Report shows detail log of each step. Ideal for isolating root cause of failures.
- Disseminate test results to colleagues, subject matter experts and Quantum Data analysis.

# 82 Sink Link Layer Compliance Test – Test Report

Symbol Lock Iteration 5

Lane 0

```
CurrentLevel = 0 Not Max Current Level
Pre-emphasis level = 2 (Not at Max Pre-emphasis)
Clock Recovery Done
Channel Equalization Done
Link Symbol Locked
```

Lane 1

```
CurrentLevel = 0 Not Max Current Level
Pre-emphasis level = 2 (Not at Max Pre-emphasis)
Clock Recovery Done
Channel Equalization Done
Link Symbol Locked
```

Lane 2

```
CurrentLevel = 0 Not Max Current Level
Pre-emphasis level = 2 (Not at Max Pre-emphasis)
Clock Recovery Done
Channel Equalization Done
Link Symbol Locked
```

Lane 3

```
CurrentLevel = 0 Not Max Current Level
Pre-emphasis level = 2 (Not at Max Pre-emphasis)
Clock Recovery Done
Channel Equalization Done
Link Symbol Locked
```

■ INFO -> Interlane Align Done

- INFO -> Equalization succeeded on all active lanes
- INFO -> Symbol Lock succeeded on all active lanes
- WARNING -> Link Train Time = 16 ms ( Link Training Timer > 10 ms )

## Workflow – View Test Results (left)

- Report shows important information at end of each iteration
- Disseminate test results to colleagues, subject matter experts and Quantum Data analysis.

# 82 Sink Link Layer Transaction Monitoring

The screenshot displays a network monitoring tool interface. At the top, there are tabs for 'DDC', 'CEC', 'DisplayPort', 'Search', and 'Options'. Below these are buttons for 'Pause', 'ALL Packets', 'RX Trace', and 'DELTA mode'. A row of checkboxes includes 'EDID', 'MCCS', 'HDCP', 'LT', 'Events', and 'Others'. The main area is a table with columns for 'NUMBER', 'DELTA TIME', 'TYPE', and 'DETAILS'. The table lists various transactions, with the row '00:00:00.000050' selected and highlighted in blue. A large white arrow points to this row. Below the table, there is a 'Details' section showing 'Display Port Message Details' and a 'Data' section. The 'Data' section shows a hex dump of 9 bytes: '80 01 02 04 21 00 00 00 00'. A large white arrow points to the 'Data' section. At the bottom left, it says 'Connected' and at the bottom right, '78 packets (78 shown)'.

NUMBER	DELTA TIME	TYPE	DETAILS
	(HH:MM:SS:MICROS)		
	00:00:00.000000	REQUEST	NATIVE READ OF 2 BYTES FROM MAX LINK RATE [0x000001]
	00:00:00.000080	REPLY	AUX ACK [ 0x0A 0x84 ]
	00:00:00.000070	REQUEST	NATIVE WRITE OF 2 BYTES TO LINK BW SET [0x00100: 0x0A 0x81 ]
	00:00:00.000100	REPLY	AUX ACK
	00:00:00.000050	REQUEST	NATIVE WRITE OF 5 BYTES TO TRAINING PATTERN SET [0x00102: 0x21 0x00 0x00 0x00 0x00 ]
	00:00:00.000410	REPLY	AUX DEFER
	00:00:00.000060	REQUEST	NATIVE WRITE OF 5 BYTES TO TRAINING PATTERN SET [0x00102: 0x21 0x00 0x00 0x00 0x00 ]
	00:00:00.000120	REPLY	AUX ACK
	00:00:00.000050	REQUEST	NATIVE READ OF 6 BYTES FROM LANE0 1 STATUS [0x00202]
	00:00:00.000080	REPLY	AUX ACK [ 0x00 0x00 0x00 0x00 0xCC 0xCC ]
	00:00:00.000100	REQUEST	NATIVE WRITE OF 4 BYTES TO TRAINING LANE0 SET [0x00103: 0x38 0x00 0x00 0x00 ]
	00:00:00.000190	REPLY	AUX ACK
	00:00:00.000060	REQUEST	NATIVE READ OF 6 BYTES FROM LANE0 1 STATUS [0x00202]
	00:00:00.000070	REPLY	AUX ACK [ 0x01 0x00 0x00 0x00 0xCC 0xCC ]
	00:00:00.000110	REQUEST	NATIVE WRITE OF 5 BYTES TO TRAINING PATTERN SET [0x00102: 0x22 0x38 0x00 0x00 0x00 ]
	00:00:00.000410	REPLY	AUX DEFER
	00:00:00.000050	REQUEST	NATIVE WRITE OF 5 BYTES TO TRAINING PATTERN SET [0x00102: 0x22 0x38 0x00 0x00 0x00 ]
	00:00:00.000160	REPLY	AUX ACK
	00:00:00.000050	REQUEST	NATIVE READ OF 6 BYTES FROM LANE0 1 STATUS [0x00202]
	00:00:00.000080	REPLY	AUX ACK [ 0x01 0x00 0x00 0x00 0x88 0x88 ]

Details

Display Port Message Details

-----

TRAINING\_PATTERN\_SET:  
TRAINING\_PATTERN\_SET: Training Pattern 1  
LINK\_QUAL\_PATTERN\_SET: Link Quality Test Pattern Not Transmitted  
RECOVERED\_CLOCK\_OUT\_EN: Not Enabled  
SCRAMBLING\_DISABLE: Scrambler Disabled  
SYMBOL\_ERROR\_COUNT\_SEL: Disparity Error and Illegal Symbol Error  
TRAINING\_LANE0\_SET  
VOLTAGE\_SWING\_SET: Training Pattern 1 With Voltage Swing Level 0  
MAX\_SWING\_REACHED: Maximum Driven Current Setting Is NOT Reached  
PRE-EMPHASIS\_SET: Training Pattern 2 without pre-emphasis  
MAX\_PRE-EMPHASIS\_REACHED: Maximum Drive Current Setting Is NOT Reached

Data

Length: 9 bytes

Addr	Data Bytes (Hex)	ASCII Representation
0000	80 01 02 04 21 00 00 00	. . . ! . . .
0008	00	.

Connected 78 packets (78 shown)

## Workflow – Monitor Link Layer transactions during test

- Monitor transactions during test to identify Link Layer Compliance Test failures to investigate errors or warnings.
- Isolate root cause of compliance failures along with detailed information from compliance test logs.
- View all Link Layer transactions and details of each.
- Monitor passively between DUT and any source.
- Save transaction logs for dissemination to colleagues or subject matter experts and Quantum Data for analysis.

# 2E-DP EDID DisplayPort Sink Compliance Testi

# 82 Sink EDID Compliance Test - Capabilities

The screenshot shows the 'EDID CDF' tab in a software interface. The top bar includes 'Load From File' and 'Save To File' buttons, and the version 'LLCT: 192.168.254.206 - Version 1.35'. The interface is divided into two main sections: 'Display Features' and 'VESA Video Timings'. A white arrow points from the left towards the 'Display Features' section.

**Display Features**

- Max Color Depth: 10bpc
- YCbCr 4:4:4, CEA, ITU-601: 8bpc max
- YCbCr 4:4:4, CEA, ITU-709: 8bpc max
- YCbCr 4:2:2, CEA, ITU-601: Unsupported
- YCbCr 4:2:2, CEA, ITU-709: Unsupported
- RGB, VESA: 10bpc max
- RGB, CEA: Unsupported
- Display is Continuous Frequency:  Yes
- Underscan IT formats (by default):  Yes
- Basic Audio:  Supported

**Audio Support**

Format	# Channels	Sampling Rate (kHz)						
		32.0	44.1	48.0	88.2	96.0	176.4	192.0
PCM	2ch	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AC-3	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MPEG1	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MP3	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MPEG2	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AAC LC	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DTS	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**VESA Video Timings**

- 800x600 60Hz
- 800x600 75Hz
- 1024x768 60Hz
- 1280x768 60Hz (Reduced Blanking)
- 1280x768 60Hz
- 1280x800 60Hz (Reduced Blanking)
- 1280x800 60Hz
- 1280x960 60Hz
- 1280x1024 60Hz
- 1360x768 60Hz
- 1440x900 60Hz
- 1400x1050 60Hz (Reduced Blanking)
- 1600x1200 60Hz (Reduced Blanking)
- 1600x1200 60Hz
- 1680x1050 60Hz
- 1792x1344 60Hz
- 1920x1200 60Hz (Reduced Blanking)
- 2048x1536 60Hz (Reduced Blanking)
- 2560x1600 60Hz (Reduced Blanking)

## Workflow – Configure Capabilities Declaration (left)

- Access EDID CDF tab.
- Use pull-downs and checkboxes to configure.
- Set video and audio parameters.
- Save for later use.
- Recall to save time of editing data.

# 82 Sink EDID Compliance Test – Test Status/Results

LLCT: 192.168.254.206 - Version 1.35

Load From File Save To File

Sink Config Sink Source Config Source EDID CDF EDID Test

Run Tests

Max Color Depth **PASS - CDF matches EDID (8bpc)**  
YCbCr 4:4:4 **FAIL - EDID claims no support but CDF claims supported**

Audio Test (PCM, 32.0kHz) - channel 2 test **PASS**  
Audio Test (PCM, 44.1kHz) - channel 2 test **PASS**  
Audio Test (PCM, 48.0kHz) - channel 2 test **PASS**

Max Color Depth Visual Test (720x400p (900x449 total) 70.085Hz@8bpc) **PASS**  
1280x768 60Hz **FAIL - Not in EDID**

640x480p (800x525 total) 60.0Hz **PASS**  
720x400p (900x449 total) 70.085Hz **PASS**  
640x480p (840x500 total) 75.0Hz **PASS**  
800x600p (1056x628 total) 60.316Hz **PASS**  
800x600p (1056x625 total) 75.0Hz **PASS**  
1024x768p (1344x806 total) 60.003Hz **PASS**  
1024x768p (1312x800 total) 75.028Hz **PASS**  
1280x1024p (1688x1066 total) 75.024Hz **PASS**  
1280x1024p (1688x1066 total) 60.019Hz **PASS**  
1600x1200p (2160x1250 total) 60.0Hz **PASS**  
1152x864p (1600x900 total) 75.0Hz **PASS**

## Workflow – Select Test

- Initiate tests from EDID tab.
- View Pass/Fail results.

# 82 Sink EDID Compliance Test – Test Report



DisplayPort EDID Compliance Report

Apr 26 2012 [03:57:56]

HOME

## Generator Information

Model = 882E  
Unit Revision = A  
Unit SN = 07080062  
Date = 12162008  
Firmware = 20.1887600

## PRODUCT ID

Manufacturer: QDI  
Model ID: 178  
Serial Number: 34862  
Week Made: 1  
Year Made: 2008

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00:	00	FF	FF	FF	FF	FF	FF	00	44	89	B2	00	2E	88	00	00
10:	01	12	01	04	B5	50	2D	78	1A	0D	C9	A0	57	47	98	27
20:	12	48	4C	FF	FF	80	01	01	01	01	01	01	01	01	01	01
30:	01	01	01	01	01	01	E2	68	00	A0	A0	40	2E	60	30	20

## Workflow – View Test Report (left)

- View HTML test report.
- View Product Information
- Disseminate test results to colleagues, subject matter experts and Quantum Data analysis.

# 82 Sink EDID Compliance Test

## DisplayPort EDID CTS Extensions for Sink

### ID 4.1.2.1.1 (Test for a Valid Video Input Definition)

```
PASS->Byte 14h bit 7 is set to 1
Test DUT for video at 10 bpc.
PASS->Video interface is properly described as DisplayPort.
```

### ID 4.1.2.1.2 (Verify YCbCr 4:4:4 and 4:2:2 Color Space Support)

```
Perform YCbCr 4:4:4 color space visual test.
Perform YCbCr 4:2:2 color space visual test.
```

### ID 4.1.2.2 (Test for Valid Established Timings I & II)

```
Verify that video is displayed correctly in all of the timings below:
  ◦ 720 x 400 @ 70Hz IBM0770H
  ◦ 720 x 400 @ 88Hz XGA2
  ◦ 640 x 480 @ 60Hz DMT0660
  ◦ 640 x 480 @ 67Hz APP0667
  ◦ 640 x 480 @ 72Hz DMT0672
  ◦ 640 x 480 @ 75Hz DMT0675
  ◦ 800 x 600 @ 56Hz DMT0856
  ◦ 800 x 600 @ 60Hz DMT0860
  ◦ 800 x 600 @ 72Hz DMT0872
  ◦ 800 x 600 @ 75Hz DMT0875
  ◦ 832 x 624 @ 75Hz APP0875
  ◦ 1024 x 768 @ 87Hz DMT1043
  ◦ 1024 x 768 @ 60Hz DMT1060
  ◦ 1024 x 768 @ 70Hz DMT1070
  ◦ 1024 x 768 @ 75Hz DMT1075
  ◦ 1280 x 1024 @ 75Hz DMT1275G
  ◦ 1152 x 870 @ 75Hz APP1175
```



## Workflow – View Test Results (left)

- View status and results of test per Test ID.
- View Pass/Fail results.
- Disseminate test results to colleagues, subject matter experts and Quantum Data analysis.

# 82E-DP Sink EDID Compliance Test

## ID 4.1.2.3 (Test for Valid Standard Timings)

No standard timings are used. Skip test.

## ID 4.1.2.4 (Tests for 18-byte Descriptors)

Verify that video is displayed correctly for all timings in the EDID Formats beginning with "Det". If video is properly displayed for all timings, 4.1.2.4.1 is PASS, otherwise FAIL.

## ID 4.1.2.4.7 (Test for Valid Extension Flag and Checksum)

PASS->Block 0 checksum  
PASS->Block 1 checksum

## ID 4.2.1.1 (CEA Extension Version Number)

PASS->CEA Revision Number is valid (1 or 3).

## ID 4.2.1.2 (Value of 18-byte Descriptor Offset 'd')

PASS->d points to a location after the data block collection.  
PASS->Padding area contains no value that is non-zero.

## ID 4.2.1.3 (Byte #3)

Basic audio support claimed by EDID. If basic audio is heard, PASS. Otherwise, FAIL.  
Output a known pattern in YCbCr 4:4:4. If the colors are displayed correctly, PASS. Otherwise, FAIL.  
Output a known pattern in YCbCr 4:2:2. If the colors are displayed correctly, PASS. Otherwise, FAIL.

## ID 4.2.2.1 (Data Block Type Validation)

PASS->Found zero errors.

## ID 4.2.2.2 (Short Video Descriptors)

PASS->No VIC greater than 59 found  
PASS->All VICs are non-zero  
PASS->No duplicate VIC found in SVD block.  
PASS->DTD matches an 861B format with VIC = 16  
PASS->SVD that matches the VIC of the 861 format is found

## Workflow – Select Test

- Initiate tests from EDID tab.
- View Pass/Fail results.
- Disseminate test results to colleagues, subject matter experts and Quantum Data analysis.

# Other 882 DisplayPort Compliance Test Solutions

Other DisplayPort Compliance Test Solutions:

Link Layer Compliance Testing for Sources

HDCP Compliance Testing – Sinks

**Thank You!**