



quantumdata

TPA-MHL-8R

TEST POINT ADAPTER FOR MHL 1.2 DEVICES

Mobile High-Definition Link (MHL) is a video interface derived from HDMI but targeted to provide an interface from mobile devices like smart phones to TVs or other displays. The MHL standard is designed to connect to smart phones by reusing the existing 5 pin micro-USB connector that many phones have rather than requiring a separate 19 pin HDMI connector. The MHL cable is micro-USB on the source mobile device and HDMI Type A on the other end.

Quantum Data offers a comprehensive suite of test solutions for testing MHL 1.2 source, sink and dongle devices. The centerpiece of these solutions is the test point adapter (TPA-MHL-8R) that converts MHL 1.2 streams to HDMI and HDMI streams to MHL. The TPA-MHL-8R enables basic emulation, functional testing, protocol analysis as well as MHL compliance testing and HDCP compliance testing. Protocol analysis and MHL compliance testing requires the Quantum Data 980 Protocol Analyzer. HDCP compliance testing requires the Quantum Data 882EA.

Note: There is a new Test Point Adapter (TPA-MHL2-8R) for MHL 2.0 testing.



MHL 1.2 SOLUTIONS

Functional testing of MHL 1.2 sources

Conduct basic verification testing of MHL 1.2 source devices using the TPA-MHL-8R and a standard HDMI HDTV.

Basic Protocol Testing of MHL 1.2 sources

Conduct basic protocol testing of MHL 1.2 source devices using the TPA-MHL-8R and HDMI Protocol tester such as the Quantum Data 780 Handheld Test Instrument.

MHL protocol analysis for MHL 1.2 source devices

View details of MHL protocol data from MHL 1.2 source device. Monitor MHL metadata in real time or capture and store for analysis. Requires TPA-MHL-8R, Quantum Data 980 Protocol Analyzer 297MHz "Gen 3".

HDCP compliance testing for MHL 1.2 source devices

Run HDCP compliance tests on MHL 1.2 source device in accordance with the HDCP 1.2 Compliance Test Specification. Requires TPA-MHL-8R, Quantum Data 882EA, and HDCP compliance option.

MHL compliance testing for MHL 1.2 source devices

Run MHL compliance tests on MHL 1.2 source devices in accordance with Section 3 of the MHL compliance Test Specification. Requires TPA-MHL-8R, Quantum Data 980 Protocol Analyzer 297MHz "Gen 3", and MHL source compliance option.

MHL C-Bus monitoring between MHL 1.2 source and sink devices

View details of MHL C-Bus transactions. Monitor in real time or capture and store for analysis. Requires TPA-MHL-8R, Quantum Data 980 Protocol Analyzer 297MHz "Gen 3".

Functional testing of MHL 1.2 sink devices

Conduct basic verification testing of MHL-capable display devices using the TPA-MHL-8R and a standard HDMI source such as Quantum Data 882E or 780 Handheld Test Instrument.

MHL compliance testing for MHL 1.2 sink/dongle devices

Run MHL compliance tests on MHL 1.2 sink/dongle devices in accordance with Sections 4 and 5 of the MHL compliance Test Specification. Requires TPA-MHL-8R, Quantum Data 882EA, and MHL sink compliance option.

HDCP compliance testing for MHL 1.2 sink/dongle devices

Run HDCP compliance tests on MHL 1.2 sink/dongle devices in accordance with the HDCP 1.2 Compliance Test Specification. Requires TPA-MHL-8R, Quantum Data 882EA, and HDCP compliance option.

General Specifications

Size (mm) Width: 8-1/2 in (21.59cm)
 Depth: 3-7/8in (9.82cm)
 Height: 1-7/8in (4.76cm)
 Weight (kg) 1.58lbs (718 grams)
 Humidity 30% to 80% RH non condensing

Power
 AC Mains
 Frequency 50 to 60Hz
 Voltage 100 to 240VAC → 12VDC output



TPA-MHL-8R Rear Section	Connector Label	Applications	Connection
980 CONNECTIONS SOURCE DUT	OUT TO 980 PORT 1	Protocol Analysis for MHL 1.2 source devices. Uses 980 Protocol Analyzer.	Connect MHL cable to MHL mobile device (MHL source).
	MHL IN FROM DUT	Protocol compliance testing for MHL 1.2 source devices. Uses 980 Protocol Analyzer.	Connect HDMI cable to the Rx port on 980 MHL Protocol Analyzer.
882 CONNECTIONS SOURCE DUT	HDMI OUT	Basic functional testing of an MHL source - An HDMI cable is connected to the HDMI IN port on an HDTV to monitor the video and audio. Basic protocol testing of an MHL source. Uses the 882EA or 780 to check the timing and protocol data or to check the response to various EDIDs. HDCP compliance testing of an MHL 1.2 source. Uses 882EA and EST device.	This is an HDMI output. The device it gets connected to depends on the source test application. <ul style="list-style-type: none"> For basic functional testing of an MHL source - An HDMI cable is connected to the HDMI IN port on an HDTV to monitor the video and audio. For basic protocol testing of an MHL source – An HDMI cable is connected to an HDMI input on the 882EA or 780 to check the timing and protocol data or to check the response to various EDIDs. For HDCP compliance testing of an MHL source – An HDMI cable is connected to a port on the Encryption Status Tester (EST).
	MHL IN FROM DUT		Connect MHL cable from MHL source device under test, e.g. mobile phone.
882 CONNECTIONS SINK DUT	HDMI IN	HDCP compliance testing of an MHL 1.2 sink. Uses Quantum Data 882EA and EST device.	Connect HDMI cable from HDMI out of 882EA and EST device.
	MHL OUT TO DUT	Protocol compliance test of an MHL 1.2 sink. Uses 882EA and 980 Protocol Analyzer.	Connect MHL cable to the MHL 1.2 sink device under test, e.g. HDTV.
980 CONNECTIONS CBUS ANALYSIS	MHL IN FROM SOURCE	CBUS Passive monitoring with 980 Protocol Analyzer.	Connect MHL cable from MHL 1.2 source device under test, e.g. mobile phone.
	MHL OUT TO SINK		Connect MHL cable to the MHL 1.2 sink device under test, e.g. HDTV.
	TO 980 TRIGGER IN CBUS		Connect coax cable to TRIG IN port on 980 Protocol Analyzer.
DC POWER 12V		Not applicable	Connects to 12V DC power adapter.