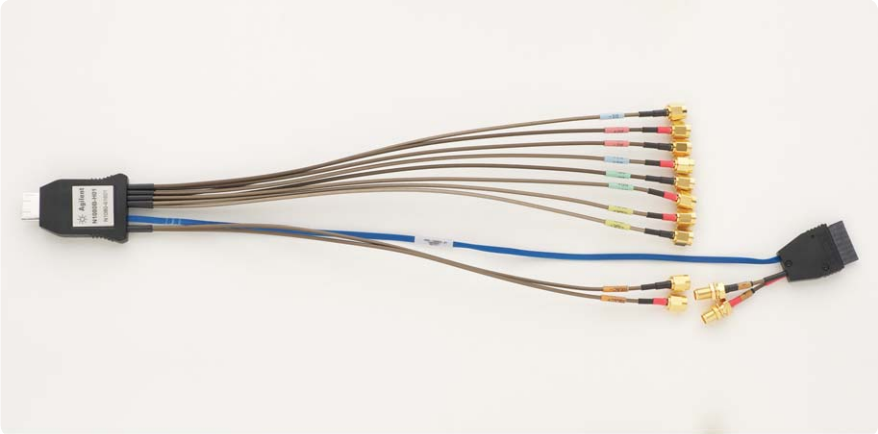
Agilent N1080B HDMI Test Point Access (TPA) Adapters

Highest Performance and Broadest Bandwidth

Supports the HDMI Specification Version 1.4

Emerging consumer and entertainment equipment provides much higher resolution for user enjoyment. Higher resolutions demand higher communication rates, which place new demands on the source, sink and channel. The N1080B HDMI Test Point Access Adapters provide unrivaled convenience and performance.

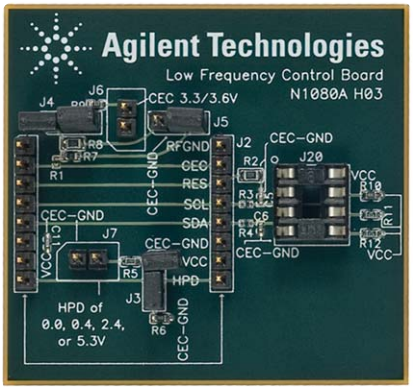


N1080B-H04 TPA with type A plug

HDMI Standard

The High Definition Multimedia Interface (HDMI) standard has evolved driven by demand for higher resolution. The low profile connector is ideal for crowded back panels and portable entertainment devices having limited space for connections and has been designed to accommodate requirements of higher resolutions. It is the primary interface for HDTVs, Set-top Boxes, DVRs and DVDs and may ultimately be used for Laptops.

The standard, currently at release 1.4, covers a wide range of high speed digital, low frequency, channel and protocol requirements.



N1080B-H06 TPA low-frequency and control board

Test Point Access Adapters

The user would like to have the test point access adapter (TPA) be as transparent as possible to each measurement, to connect to a wide range of product form factors, and to have the flexibility of measuring several parameters.

Agilent's N1080B HDMI Test Point Access Adapters provide the widest bandwidth and best performance on the market, thus enabling the user to see the nuances of their source eye diagrams, cable differential impedance, attenuation and sink performance.

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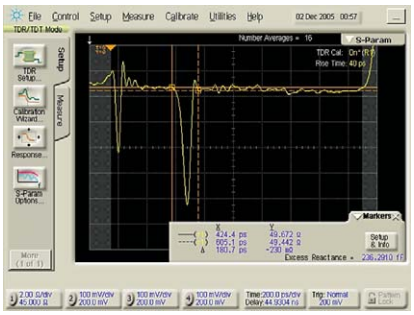
The N1080B TPA's have low loss, very good impedance and low intra-pair and inter-pair skew. These TPA's also have a small form factor and conveniently connect to the rear of DVD players, flat panel displays and other products that have the HDMI connector in tight spaces.



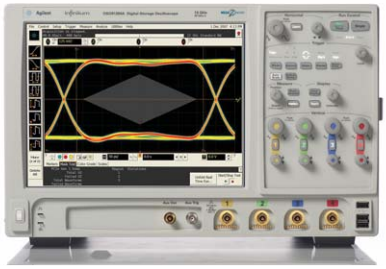
86100C/54754A TDR measurement

Cable Testing
The HDMI standard defines many performance characteristics for cable assemblies. When these TPA's are paired with the Agilent 86100C, 54754A TDR modules and Option 202 advanced impedance and S-parameter software, the user quickly and accurately measures all required parameters on cables including impedance, skew, attenuation, and crosstalk.

The user quickly sees the interaction between time and frequency domain, thus allowing quick troubleshooting and design improvements.

Source Testing
The HDMI specification covers the source tests such as voltage, skew, jitter, data eye, rise times and many other parameters.

When these TPA's are paired with Agilent's DSO90000 Infiniium oscilloscopes and the N5399B HDMI Compliance Test Software, the user will have uncompromized accuracy and unrivaled simplicity in characterizing their source design. The TPA's excellent performance enables the user to clearly see nuances in the transmitted pattern and determine how to improve the performance of the source and channel.



Infiniium DSO90000 oscilloscope

The N5399B HDMI Application automates the measurement of several parameters and provides the user a concise test report of how their devices are performing. This is particularly helpful before submitting the devices to the Authorized Testing Centers (ATC) for final approval.

Low Frequency Testing
The HDMI standard defines several low frequency tests such as DDC/CEC line capacitance, Hot Plug Detect, HPD output resistance, etc. The N1080B Low Frequency (option H06) board, used in conjunction with one of the N1080B TPA's, correctly configures the DUT for these low frequency measurements.

Sink Testing
Section 8 of the HDMI standard covers several tests for sinks such as swing tolerance, skew and jitter tolerance. These tests demand multiple channels and flexible capability for signal configuration. The Agilent ParBERT is well suited to these tasks providing a wide range of configurations and signal types. The ParBERT delivers these signals through the N1080B TPA's, enabling the user to quickly see the effect of different signal types on their sink.

HDMI Ethernet and Audio Channel Testing
The HDMI 1.4 standard defines new capabilities for the HDMI link that include networking capability with Ethernet protocol and return audio channel from a sink. The new capabilities are offered using newly defined signaling protocols over two existing lines already defined in the standard(Hot Plug Detect and Reserved lines). Testing for the Ethernet and audio channel are supported by signal access through the N1080B.

N1080B Configuration
The N1080B comes in three different configurations:
Option H04 is a TPA with a plug and is typically used, in conjunction with the low frequency board, for testing Sources and Sinks. Note that it does not include a probing interconnect solution.

Option H05 is a TPA with a receptacle, typically used in pairs for testing cables.
Note: For best accuracy a N1080B-H01 TPA plug and a N1024B TDR calibration kit are required as well

Option H06 is the low frequency board used for various tests on source modules.

81250 modular BERT platform (used for the E4887A, TMDS Generator)

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Product specifications and descriptions in this document subject to change without notice.

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