



quantumdata

804A VIDEO TEST GENERATOR

Introducing the 804A Video Test Generator supporting HDMI 297MHz capability for testing HDTVs with 4K x 2K resolutions. The rack mountable 804A is optimized for testing modern HDMI flat panel TVs on a production line. It features four (4) HDMI outputs—all active simultaneously—for testing HDTVs with multiple HDMI inputs. This eliminates the need for splitters often required for testing each HDMI input on an HDTV. The 804A can also output component analog and composite analog for testing an HDTVs analog video outputs. The 804A is equipped with all the standard video timings up to 297 MHz and test patterns including 3D patterns and tests for HDMI protocols such as HDCP, EDID and CEC.

The 804A tests compressed and uncompressed HDMI audio formats using a variety of audio test signals. An HDTV's analog audio inputs can also be tested using the 804A's programmable analog audio outputs.



KEY FEATURES + BENEFITS

Four (4) HDMI outputs

Max pixel clock 24 bit color: 297MHz; e.g. 4Kx2K 30Hz.
Max pixel clock 36 bit color: 165MHz; e.g. 1080p60
Max TMDS rate 297MHz; 2.97Gb/s per channel.

Analog video outputs

Test HDTVs analog component and composite video inputs.

Standard video timings and patterns

Supports standard video timings and test patterns, including HDMI 3D test images as specified by the HDMI 1.4a specification.

HDMI and analog audio outputs

Support HDMI compressed and uncompressed audio formats. Various patterns with programmable amplitude, sampling rate and bit depths.

Serial command line interface

RS-232 and USB interface for command line control or for automated test system.

Rack mountable

Fits in a standard 19" relay rack. Occupies two rack units.

Color touch display

Monitor the status of the test on the color display. Configure the 804A through the touch interface.

USB host interface (Optional)

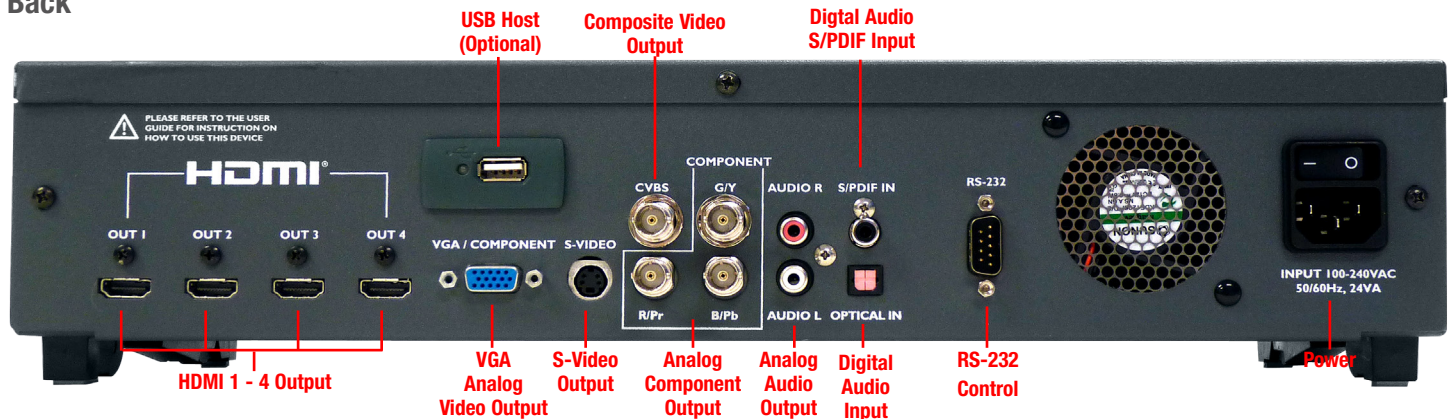
Attach a keypad for simplified testing

804A

Front



Back



SPECIFICATION

Formats (timing)

Formats	Over 110 standard timings for Consumer Electronics, Computer
---------	--

Test Patterns

Patterns	Over 35 standard test patterns add custom bitmaps
----------	---

Moving pattern	ZonePlate, PGCrwb, imported bitmap
----------------	------------------------------------

HDMI 3D	3D images; add 3D bitmap images
---------	---------------------------------

3D Formats	Top-and-Bottom, Side-by-Side, Frame Packing
------------	---

Special test patterns	Functions
-----------------------	-----------

HDCPprod	HDCP
----------	------

EDIDTest	EDID
----------	------

CEC	CEC Ping
-----	----------

HDMI (DVI)

Connector (4) HDMI	Type A
--------------------	--------

Video	
-------	--

Pixel rate	up to 297 MHz
------------	---------------

TMDS clock rate	up to 297MHz (2.97 Gb/s per channel)
-----------------	--------------------------------------

Max resolution	4K x 2K at 30Hz
----------------	-----------------

Encoding (HDMI)	RGB / YCbCr
-----------------	-------------

Encoding (DVI)	RGB
----------------	-----

Sampling mode (HDMI)	4:4:4 / 4:2:2
----------------------	---------------

Sampling mode (DVI)	4:4:4
---------------------	-------

Color depth (HDMI)	24, 30 & 36 bits per pixel
--------------------	----------------------------

Max TMDS clock rate with deep color	225MHz
-------------------------------------	--------

Color depth (DVI)	24 bits per pixel
-------------------	-------------------

Color space	ITU BT.601 & BT.709
-------------	---------------------

Audio	
-------	--

Sampling rates (kHz)	32.0, 44.1, 48, 88.2, 96, 176.4, 192.0
----------------------	--

Number of channels	2 to 8
--------------------	--------

Audio content	FL, FR, LFE, RL, RR, RC, FLC, FRC, RLC
---------------	--

Bits per sample	16, 20, 24
-----------------	------------

Audio formats	LPCM, Dolby Digital, DD+, DTS-ES
---------------	----------------------------------

Frequency range (sine wave LPCM)	10Hz to 20kHz in 1Hz increments
----------------------------------	---------------------------------

Amplitude	-99dB to 0dB in 1dB increments
-----------	--------------------------------

YPbPr Component Analog Video output

Connector	Component analog (3) BNC
-----------	--------------------------

Video	
-------	--

Bit depth	24 bit color
-----------	--------------

Pixel rate	Up to 80MHz (resolutions above 80MHz are supported through pixel doubling).
------------	---

Colorimetry	YPbPr
-------------	-------

Sync type	Composite
-----------	-----------

RGB Component Video output

Connector	VGA
-----------	-----

Video	D-Sub
-------	-------

Bit depth	24 bit color
-----------	--------------

Pixel rate	Up to 80MHz (resolutions above 80MHz are supported through pixel doubling).
------------	---

Colorimetry	RGB, YPbPr
-------------	------------

Sync Type	Separate and Composite
-----------	------------------------

Analog Composite Video output

Connector	CVBS
-----------	------

Video	(1) BNC
-------	---------

Encoding	S-Video
----------	---------

Pixel Rate range	13.5 - 13.52mHz
------------------	-----------------

Sync Type	Composite
-----------	-----------

Analog Audio Output

Connector	(2) RCA
-----------	---------

Audio parameters	
------------------	--

Audio channels	2 (L R)
----------------	---------

Audio signal	Sine wave
--------------	-----------

Frequency range	10Hz to 20kHz in 1Hz increments
-----------------	---------------------------------

Amplitude	-99dB to 0dB in 1dB increments
-----------	--------------------------------

Digital Audio Input

Connector	Optical, S/PDIF
-----------	-----------------

Color Touch Display

Screen Size	480(H) x 272(V)
-------------	-----------------

Color	24 bit RGB
-------	------------

Administration

Interfaces	
------------	--

RS-232	Automated command line control
--------	--------------------------------

USB host - back	Attachable keypad
-----------------	-------------------

USB peripheral - front	Updating firmware / gateway and command line
------------------------	--

SD Card - front	Updating firmware / gateway
-----------------	-----------------------------

Dimensions / Weight

Dimensions	
------------	--

Height	3.25 inches; 8.3 cm
--------	---------------------

Width	16.5 inches; 41.9 cm
-------	----------------------

Depth	6.1 inches; 15.5 cm
-------	---------------------

Weight	6.62 lbs; 3.0 kg
--------	------------------

Power

Voltage range	100 - 240 -VAC
---------------	----------------

Frequency	50 - 60 Hz
-----------	------------

Power	24 VA
-------	-------

Environmental

Humidity	30% to 80% RH non-condensing
----------	------------------------------

Temperature	32 - 104 Deg F; 0 - 40 deg C
-------------	------------------------------

Specifications are based on hardware and firmware revisions available as of November 2012, and are subject to change without notice. HDMI, the HDMI logo and High-Definition Multimedia interface are trademarks or registered trademarks of HDMI Licensing LLC.

Revised 11/15/12