quantumdata

804A VIDEO TEST GENERATOR

The 804A Video Test Generator supports pixel rates up to 300 MHz on its HDMI outputs. This enables testing of high end HDTVs with 4K ultra High Def capability including **NEW!** tests for 4K at 50/60Hz using HDMI 2.0 4:2:0 pixel encoding. The instrument also supports testing of 21:9 format resolutions at or below 300MHz pixel rate.

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 300 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: 300MHz; e.g. 4Kx2K 30Hz.
4K 50/60Hz with 4:2:0 pixel encoding per HDMI 2.0
Max pixel clock 36 bit color: 165MHz; e.g. 1080p60
Max TMDS rate 300MHz; 3.00Gb/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.
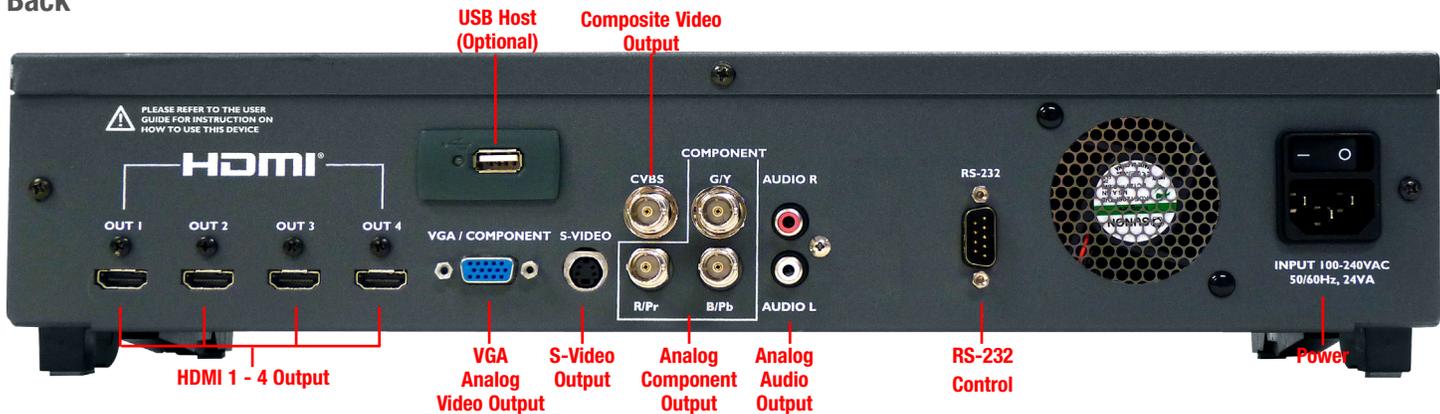
USB host interface (Optional)
Attach a keypad for simplified testing

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Front

- Power Switch
- Color Touch Display
- SD Card Slot
- USB Device Interface
- LEDs

Back

- USB Host (Optional)
- Composite Video Output
- HDMI 1 - 4 Output
- VGA Analog Video Output
- S-Video Output
- Analog Component Output
- Analog Audio Output
- RS-232 Control
- Power

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, PGCwrgb, 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 300 MHz
TMDS clock rate	up to 300 MHz (3.00 Gb/s per channel)
Max resolution	4K x 2K at 30Hz; 4K UHD at 50/60Hz with HDMI 2.0 4:2:0 pixel encoding
Encoding (HDMI)	RGB / YCbCr
Encoding (DVI)	RGB
Sampling mode (HDMI)	4:4:4 / 4:2:2 / 4:2:0 (per HDMI 2.0)
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	D-Sub

Video

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	(1) BNC
Y/C	S-Video

Video

Encoding	NTSC, PAL
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

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 / gateware and command line
SD Card - front	Updating firmware / gateware

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 March 2015, 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.

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