**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 HDTV’s 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 timing 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.
**SPECIFICATION**

### Formats (timing)
- **Formats**: Over 110 standard timings for Consumer Electronics, Computer.

### Test Patterns
- **Patterns**: Over 35 standard test patterns.
- **Moving pattern**: ZonePlate, PGO, rgb, imported bitmap.

### HDMI 3D
- **3D Formats**: Top-and-Bottom, Side-by-Side, Frame Packing.
- **Special test patterns**: Functions.

### HDMI (DVI)
- **Connector**: (4) HDMI Type A.
  - **Video**: 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.
  - **Encoding (HDMI)**: YCbCr.
  - **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**: 225MHz.
  - **Color depth (DVI)**: 24 bits per pixel.
  - **Color space**: ITU BT.601 & BT.709.

### Audio
- **Audio parameters**: 2 (L, R).
  - **Audio signal**: Sine wave.
  - **Frequency range**: 1kHz to 3kHz in 1kHz increments.
  - **Amplitude**: -99dB to 0dB in 1dB increments.

### Digital Audio Input
- **Connector**: Optical, S/PDIF input.

### RGB Component Analog Video output
- **Connector**: VGA D-Sub.
- **Video**: 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.
- **Video**: S-Video.
  - **Colorimetry**: YPbPr.
  - **Sync Type**: Composite.

### Analog Audio Output
- **Connector**: (2) RCA.

### YPbPr Component Analog Video output
- **Connector**: (3) BNC.
- **Video**: 24 bit color.
  - **Pixel rate**: Up to 80MHz; resolutions above 80MHz are supported through pixel doubling.
  - **Colorimetry**: YPbPr.
  - **Sync Type**: Composite.

### HDMI Video
- **Connector**: (4) HDMI Type A.
  - **Video**: 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.
  - **Encoding (HDMI)**: YCbCr.
  - **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.
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### Specifications are based on hardware and firmware revisions available as of March 2014, 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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