



quantumdata

804/804A/804B Video Test Generators

The Model 804/804A/804B Video Test Generators...



...Quantum Data's solution for testing HDTVs in manufacturing

Key Features and Benefits

- **Four (4) HDMI outputs.** All active simultaneously.
- **Analog video outputs.** RGB, component and composite analog video outputs. 804 & 804A support analog RGB and component up to 80MHz pixel rate; 804B supports RGB analog up to 162MHz pixel rate.
- **Standard video timings and patterns.** Supports standard video timings and test patterns including 3D test patterns.
- **HDMI protocol tests.** Run quick pass/fail functional tests on HDMI protocols such as HDCP (1.4), EDID and CEC. 804B supports HDCP 1.4 & HDCP 2.2 functional tests.
- **HDMI and analog audio outputs.** Supports testing of HDMI uncompressed, compressed and lossless compressed audio formats.
- **Rack mountable.** Fits in a standard 19" relay rack. Occupies two rack units.
- **Color touch display.** Provides color touch display for control and status monitoring.
- **Serial command line interface.** RS-232 interface for control through automated test system.
- **Attachable Keyboard.** Connect keyboard to RS-232 or USB host interface.

Key Features and Benefits – Four (4) HDMI Outputs

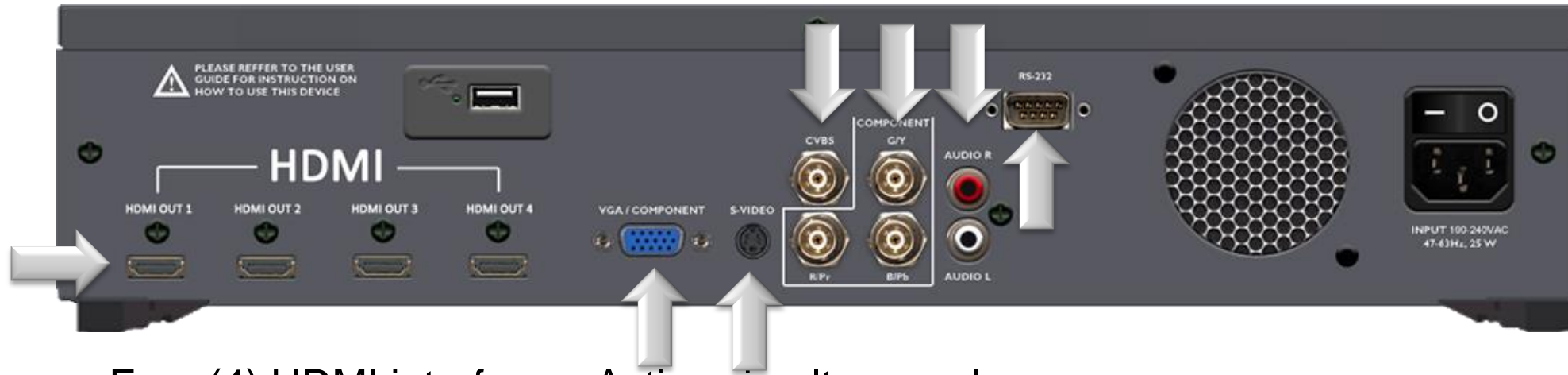
- **804 HDMI output specs**
 - **Max pixel clock with 24 bit/pixel color:** 165MHz; e.g. 1080p at 60Hz.
 - **Max TMDS clock with 36-bit/pixel deep color:** 225MHz (2.25Gb/s per channel); e.g. 1080p at 60Hz.
- **804A 300MHz HDMI output specs**
 - **Max TMDS/pixel clock with 24 bit/pixel color:** 300MHz; e.g. 4K x 2K at 30Hz and 4K x 2K 50/69Hz with HDMI 2.0 4:2:0 pixel encoding; 21:9 resolutions.
 - **Max TMDS clock with 36 bit/pixel color:** 225MHz (2.25Gb/s per channel); e.g. 1080p at 60Hz.
- **804B 600MHz HDMI 2.0 for testing Ultra HD displays**
 - **Max TMDS/pixel clock with 24 bit/pixel color:** 600MHz; e.g. 4K x 2K at 50/60Hz with 4:4:4 encoding; 21:9 resolutions.
 - **Max TMDS clock with 36 bit/pixel color:** 225MHz (2.25Gb/s per channel); e.g. 1080p at 60Hz.

804/804A/804B Front Panel Interfaces



- 480 x 272 color touch display provides instrument status and user control.
- LED indicators for RS-232 interface.
- USB Host interface for optional attachable keypad.
- Can be rack mounted or placed on a bench top or cabinet.

804/804A/804B Rear Panel Interfaces



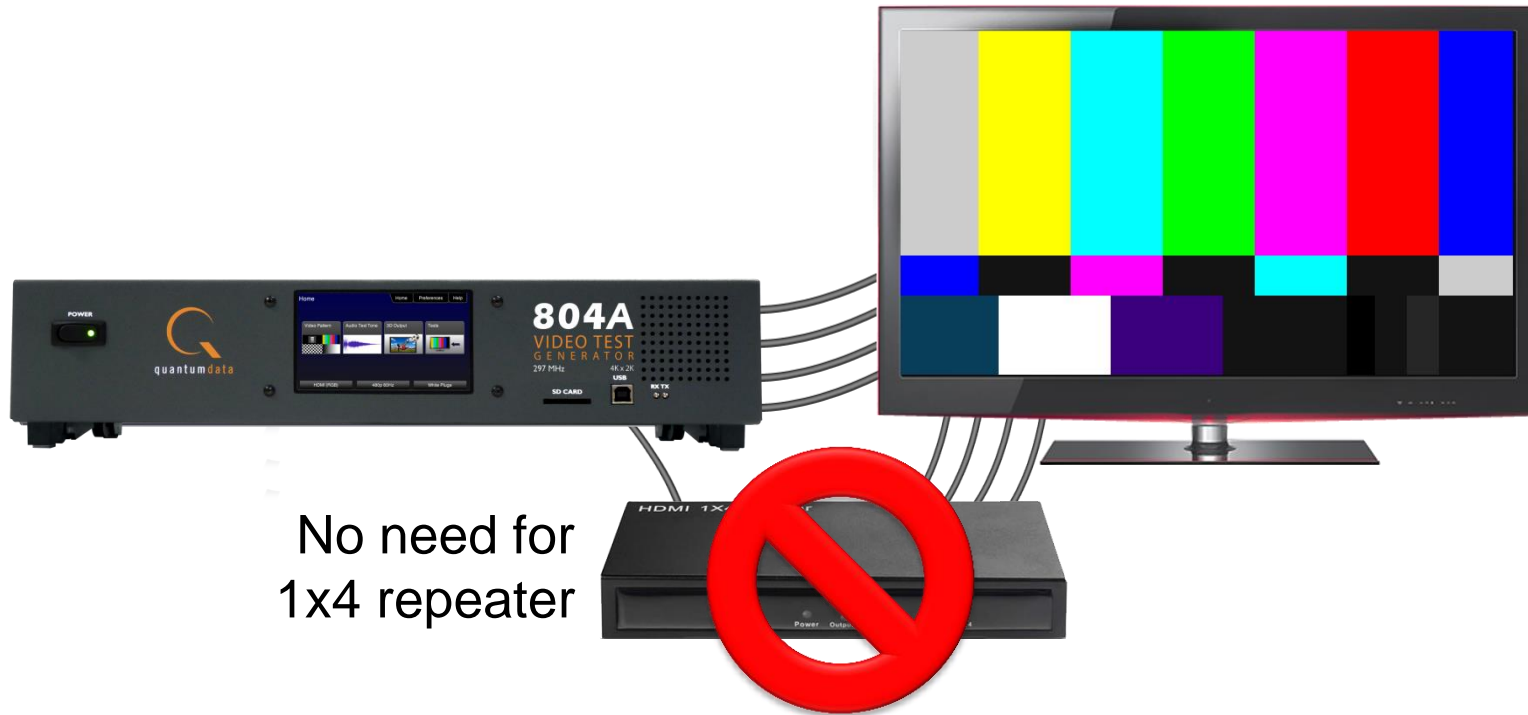
- Four (4) HDMI interfaces. Active simultaneously.
- CVBS and S-VIDEO outputs for testing TV composite & Y/C video inputs (NTSC and PAL).
- VGA / Component output for testing HDTV analog inputs up to 80MHz (higher resolutions supported through pixel doubling). 804B supports pixel rates on the RGB interface up to 162MHz.
- (3) BNC component outputs for testing HDTV analog component video inputs up to 80MHz (higher resolutions supported through pixel doubling).
- (2) Analog audio outputs for testing HDTV analog audio inputs.
- RS-232 interface for controlling 804 series with commands through automated test systems.

Mounting Options



- Occupies 2 rack units in a standard 19" relay rack.
- Or place on desk top or in cabinet.

Four (4) HDMI Outputs



No need for
1x4 repeater

- All HDMI outputs active simultaneously.
- Fast switching between standard timings and patterns.
- Supports DeepColor up to 36-bit/pixel (12-bit/component) at pixel rates up to 165MHz (225MHz TMDS clock (e.g. 1080p60)).

Four (4) HDMI Outputs



No need for
1x4 repeater

- Over 35 standard test patterns including 3D test patterns. Add your own bitmap patterns.
- 3D formats—side-by-side, top-and-bottom & frame packing.

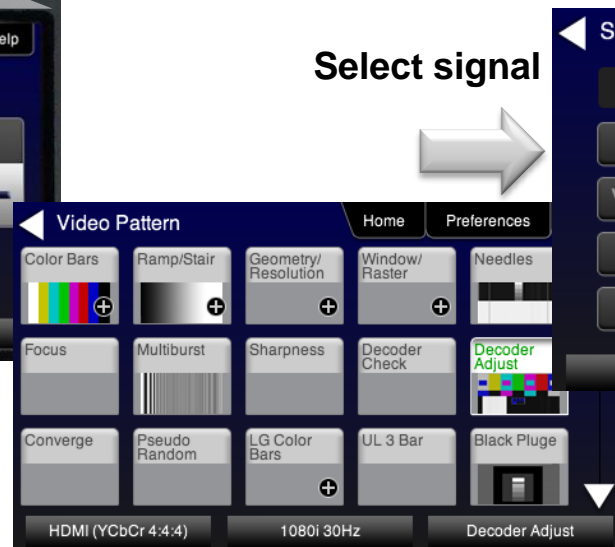
Touch Screen Operation



- 480 x 272 color touch screen for basic operation.
- Select patterns, output, timings, etc.



Select pattern



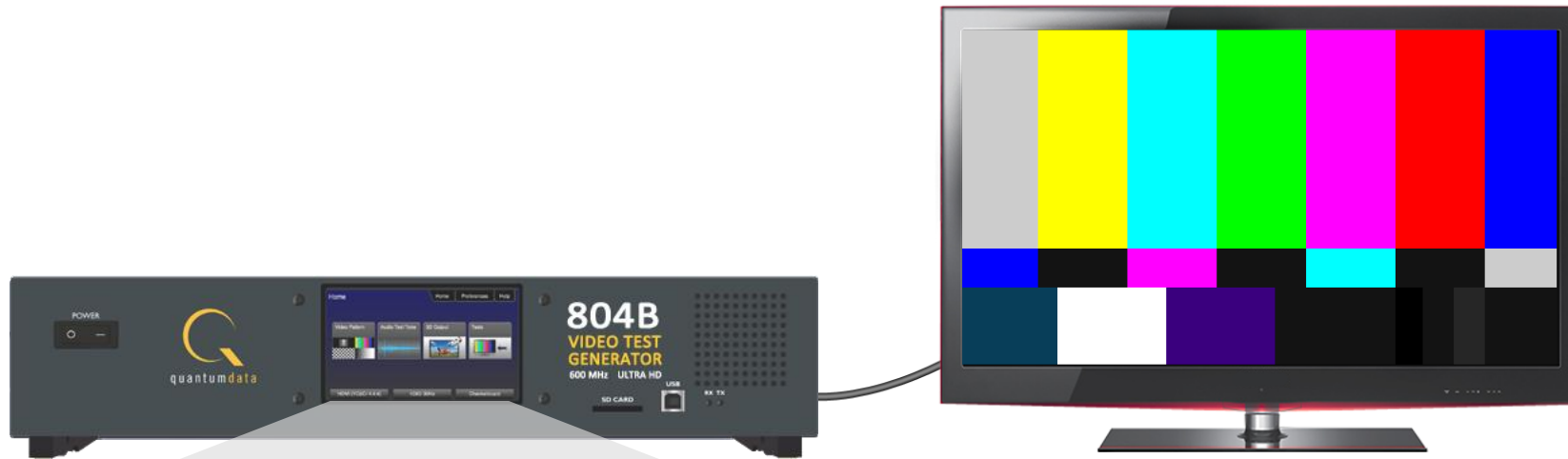
Select signal



Select timing
e.g. 804A



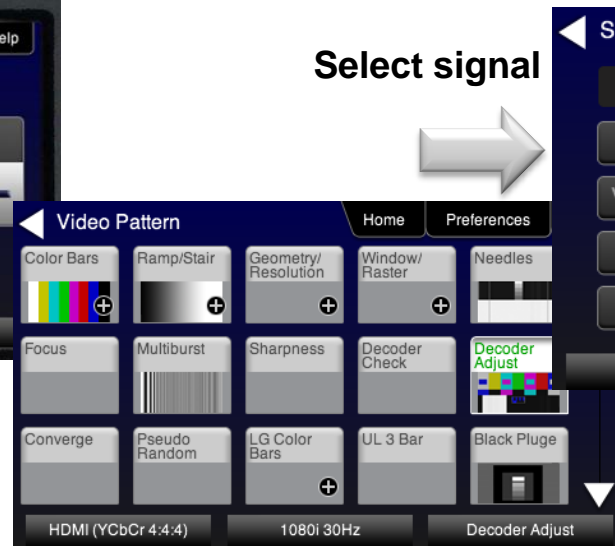
Touch Screen Operation



- 480 x 272 color touch screen for basic operation.
- Select patterns, output, timings, etc.



Select pattern



Select signal



Select timing
e.g. 804B



Touch Screen Provides Status for Command Operation



- Status mode for monitoring the output, timings and patterns.
- Display shows status when 804/804A/804B is controlled through command line, keypad or automated test system.
- Command syntax compatible with Quantum Data 802 series test generators.

MLT Status

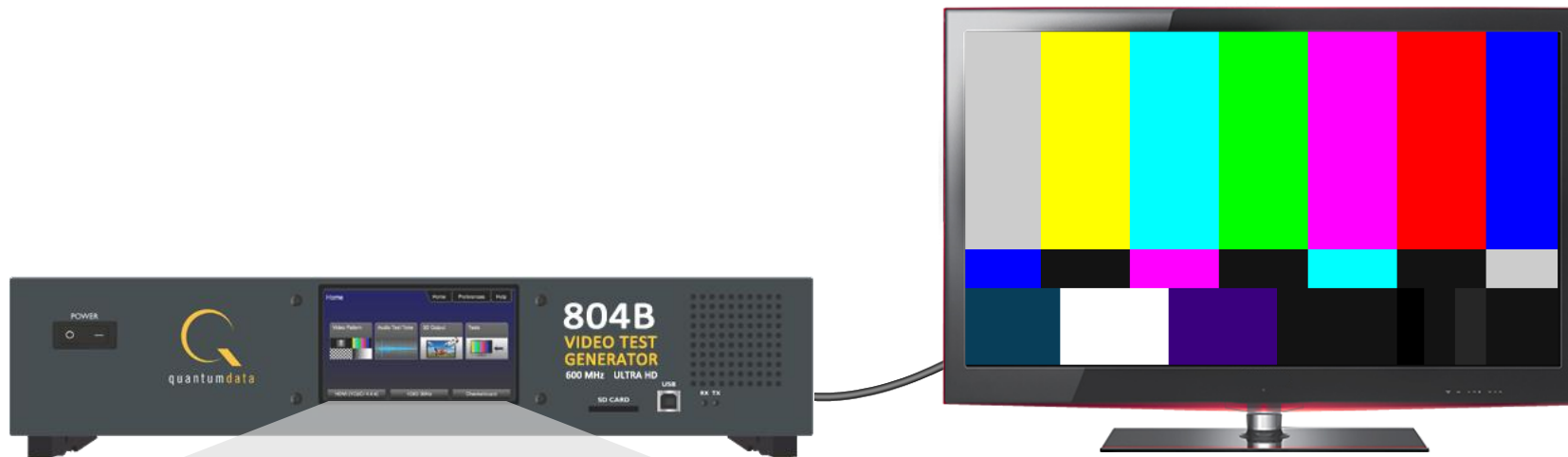
Current Format: 720p 60Hz (720p60)
Current Image: Ramp/Stair (Ramp)
Current Interface: HDMI

RS-232 Baud: 9600
SW: 10052653, FPGA: 10051903

View signal (arrow pointing to Current Interface)
View pattern (arrow pointing to Current Image)
View format (arrow pointing to Current Format)

```
XVSI 4 (HDMI)
FMLT 720p60
IMGL Ramp
ALLU
```

Special Protocol Tests

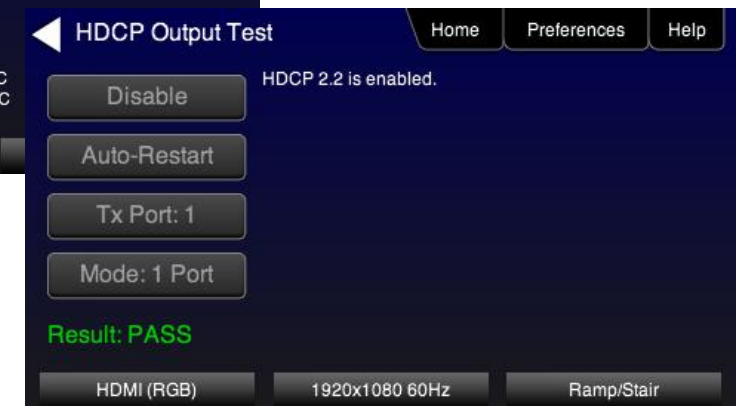
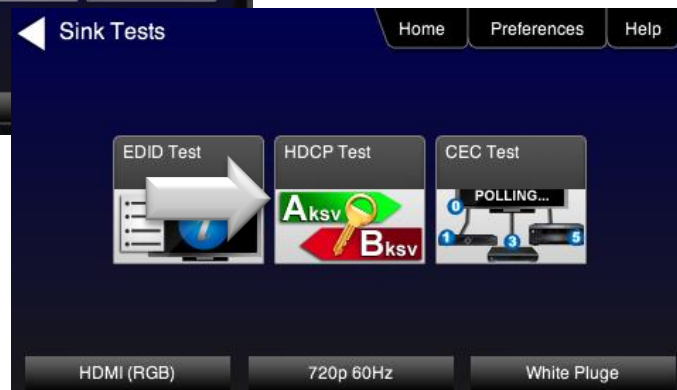


- Run HDCP, EDID and CEC protocol tests.
Note: 804B supports both HDCP 1.4 & 2.2 testing.
- Monitor status on 804/804A/804B front panel.

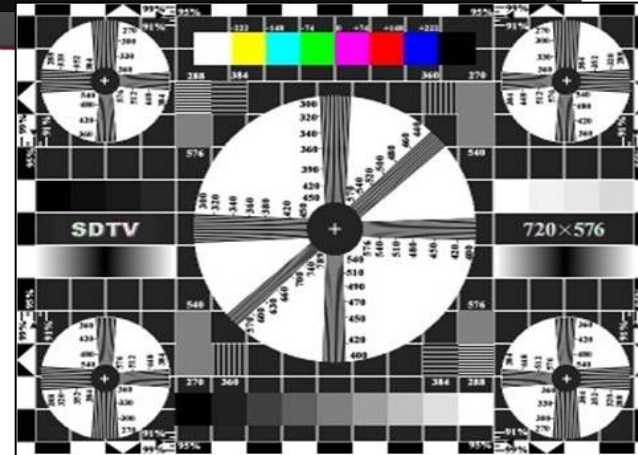
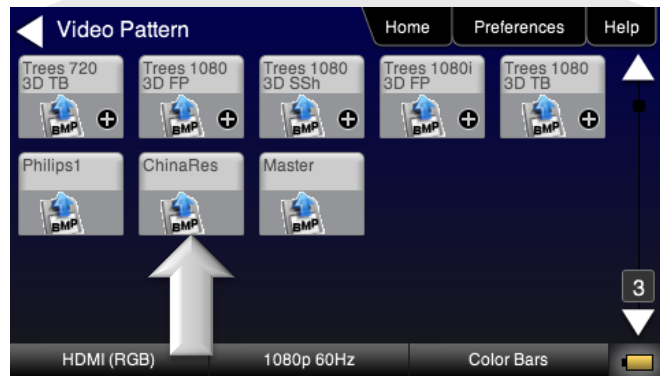


Select test
e.g. HDCP

Run test
Monitor status



Special Optional Test Patterns bitmaps



- THX Test Patterns - For calibrating the luminance and chrominance of high end 3D-capable HDTVs.
- China Res Test Pattern - Specified by the National Testing and Inspection Center for Radio and TV Products of China.

The Model 804/804A/804B Video Test Generators...



...Quantum Data's solution for testing HDTVs in manufacturing