

MODEL 2403

KEY FEATURES

- Modular design
- HDMI 2.0 Signal module (Option)
 - Comply with HDMI 2.0 standard
 - 4K x 2K 60/50Hz
 - Pixel rate support up to 600MHz (6Gbps TMDS rate)
 - RGB 4:4:4 / YCbCr 4:4:4 or 4:2:2 or 4:2:0
 - HDCP 1.4 / 2.2
 - CEA-861-F timing
 - 24 / 30 / 36 color depth
 - ARC (Audio Return Channel)
 - sYCC601 / Adobe RGB / Adobe YCC601 / xvYCC / ITU-R BT.2020
 - HDR (High Dynamic Range) Test Function (HDR Infoframe & Metadata / EOTF / Wide Color Gamut)
 - SCDC (Status & Control Data Channel) Read Function
- DisplayPort Signal module (Option)
 - Comply with DisplayPort 1.2a standard
 - 4K x 2K 60/50Hz
 - Pixel rate support up to 600MHz
 - 1.62 / 2.7 / 5.4Gbps per lane
 - 1 / 2 / 4 Link
 - 2 Channel (L-PCM)
 - DPCD (Display Port Configuration Data) Read Function
- EDID Read / Write / Compare / Analyze
- Scrolling function
- Built in 4K/HDR/3D/China high-definition test patterns
- User Define Key(32 Key max.)
- One-touch function keys
- Front panel USB and control interface
- Graphical software user interface
- ESD protection circuit
- BMP file format support



VIDEO PATTERN GENERATOR MODEL 2403

Chroma 2403 programmable video pattern generator is the perfect instrument for digital video signal interface testing. It provides users with a high performance low-cost test solution. The built-in high speed graphic engine is able to provide standard test signals and patterns for display devices, with various resolutions to meet the requirements of multimedia display industries today, and in the future for R&D and test applications.

The Video Pattern Generator supports the up to date high resolution multimedia digital audio and video transmission interface HDMI and DisplayPort specification with the following features:

Supports 4K x 2K 60Hz

2403 is built-in with a high speed graphic engine. The output signal can reach up to 600MHz. It supports UHD(Ultra High Definition) 4K x 2K@60Hz ultra high resolution display testing.

Modulized Signal Interface Design

The modulized design output interface has 2 signal module terminals for users to choose from based on their testing needs. The modules support multi-signal terminal synchronized output capability which meet the multi-input terminals displays testing.

HDMI 2.0 Testing Function (HDMI module)

The 2403 supports HDMI 2.0 standard 6Gbps TMDS signal output (TMDS rate), 24 / 30 / 36 bits color depth (RGB / YCbCr), HDMI 2.0 standard YCbCr 4:2:0 sampling format output and at the same time provides high resolution color standard ITU-R BT2020 and HDCP 2.2 & 1.4 / ARC / CEC / EDID / SCDC (Status & Control Data Channel) / HDR (High Dynamic Range) testing functions.

DisplayPort 1.2a Testing Function (DP module)

Supports DisplayPort 1.2 standard HBR2 (High Bit Rate 2, 5.4Gbps) bandwidth transmission up to 4Kx2K 60Hz. Also supports audio transmission and 3D/EDID/DPCD (Display Port Configuration Data) testing functions

Hot Key Function

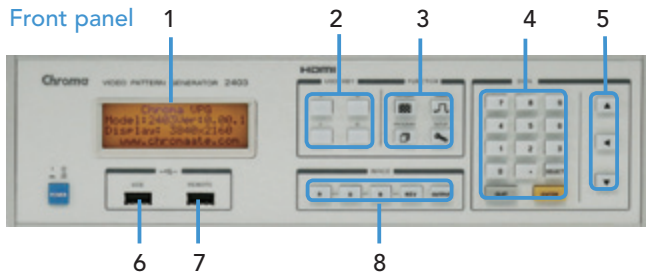
The default or user-defined testing program can help to increase manufacturing efficiency. The Chroma 2403 is built with abundant timing and pattern, including standard static, motion and scrolling pattern. It supports the testing of the displays' performance. The modulized signal interface design allows flexibility of choice based on the testing application. The VPG Master supports programmable timing, pattern and program. Its user-friendly interface is suitable for R&D, production and QA verification.



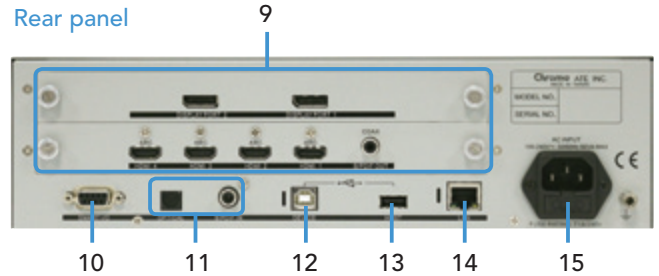
Chroma



PANEL DESCRIPTION

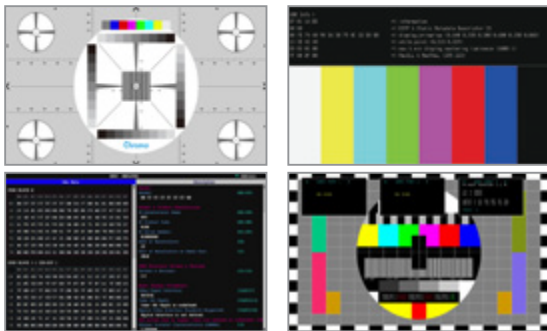


- 1. LCD Display
- 2. User Key
- 3. Function Group
- 4. Data Group
- 5. Direction Key
- 6. USB Port
- 7. Remote for Chroma optional
- 8. Image Group for signal on/off select



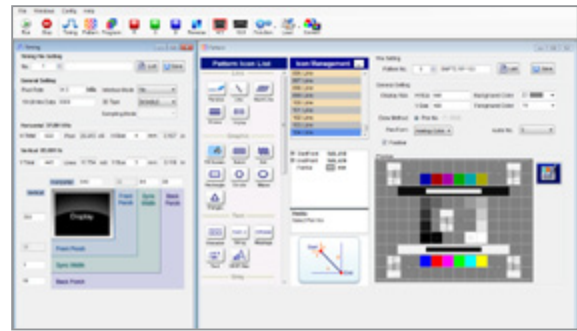
- 9. Video Signal Module
- 10. Smart I/O Control
- 11. Digital Audio Input (Optical & Coaxial)
- 12. Device USB Interface
- 13. Host USB Interface
- 14. Ethernet Interface
- 15. AC Power Input

PATTERNS AND VPG MASTER SOFTWARE



All Kinds of Test Pattern Support

- 4K/HDR/3D/China High Definition TV test pattern
- EDID/HDCP/DPCD INFO test pattern
- BMP filename can be imported



VPG Master Software

- Easy for Timing/Pattern/Program Editing
- Graphic User Interface
- Support Font/Audio/EDID/InfoFrame/HEAC Function

SPECIFICATIONS

2403 Main Frame	
Display Size	4096 x 2160
Horizontal Timing	
Total pixel	32~8192 pixels / 1 pixels resolution
Vertical Timing	
Total line	4~4096 lines (non-interlace) / 1 line programmable 4~2048 lines (interlace) / 1 line programmable

Data Storage Device	
Default	1000 timings+1000 patterns (depend on signal module)
Internal Memory	1000 timings + 1000 patterns + 500 programs
External Memory	USB Host interface
Others	
AC Input	100-240V, 50~60Hz, 1A Maximum
Operation/Storage Temperature	+5~+40 deg.C / -20~+60 deg.C
Humidity	20~90 %
2403 (HxWxD)	320x240mm / 3.46x12.6x9.45inch
Weight	3.1kg / 6.83 lbs

HDMI Signal Module A240002	
Version	HDMI 2.0 x 4ch (3D/ARC/CEC/HDR/SCDC)
Pixel Rate Range	25 ~ 600 MHz (TMDS rate 600 MHz)
Support HDMI Timing	125 Timing (CEA-861F)
Sampling Mode	RGB 4:4:4 / YCbCr 4:4:4 or 4:2:2 or 4:2:0
Color depth	24 / 30 / 36 bits per pixel
Color Space	RGB / ITU-R BT.601 / ITU-R BT.709 / xvYcc / sYcc601 / Adobe RGB / Adobe sYcc601 / ITU-R BT.2020
EDID	Read / Write / Compare / Edit / Analysis
HDCP	HDCP 2.2 / 1.4 (Automatic selection)
Audio	8 Channel (16 / 24 bit)

DisplayPort Signal Module A240003	
Version	DisplayPort 1.2a (3D/DPCD) x 2
Pixel Rate Range	25 ~ 600 MHz
Main Link Data Rate	1.62 / 2.7 / 5.4Gbps per lane
Lane Count	1 / 2 / 4 Lanes
Sampling Mode	RGB 4:4:4 / YCbCr 4:4:4 or 4:2:2
Color depth	6 / 8 / 10 / 12 bits per component
HDCP	HDCP 1.3
Audio	2 Channel (16 / 24 bit)
MST	FHD (1920 x 1080P @ 60) x 4 max. (Simple/Split mode)

* All specifications are subject to change without notice.
Please visit our website for the most up to date specifications.

ORDERING INFORMATION

2403 : Video Pattern Generator
A240001 : Remote Controller
A240002 : HDMI Signal Module
A240003 : DisplayPort Signal module

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