

HDMI 2.0 Test Generator-Analyzer

User Manual

Thank you for purchasing this product

For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

Surge protection device recommended

This product contains sensitive electrical components that may be damaged by electrical spikes, surges, electric shock, lightning strikes, etc. Use of surge protection systems is highly recommended in order to protect and extend the service life of your equipment.

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1. Introduction

The HDMI 2.0 Test Generator-Analyzer is designed for the AV integration market to confirm HDMI 2.0 and HDCP 2.2 system at 18Gbps Level. It can generate and analyze HDMI signal for any HDMI systems to make it easy for system integration, project installation and debugging, cable manufactories, even for engineering and test laboratory.

2. Features

- ✧ HDMI 2.0b support, Maximum resolution 4K2K@50/60Hz(4:4:4) 18Gbps
- ✧ Up to 55 video resolutions and 31 patterns
- ✧ Color space supports RGB/YCbCr444/YCbCr422/YCbCr420
- ✧ Color depth supports 24, 30 and 36 bit per pixel
- ✧ Built-in HDMI 2.0b HDR (High-Dynamic Range) testing
- ✧ HDMI audio source can from internal, external S/PDIF or HDMI input audio
- ✧ Internal audio LPCM/2CH, sample rate 48kHz, bit width 16bits
- ✧ HDCP 2.2/1.4 Pass or Fail indicator
- ✧ EDID Read/Write functionality
- ✧ HDMI input Timing/Format/Info frame/HDCP analyzing
- ✧ CEC supports
- ✧ Control via on panel button or RS-232(3.5mm Mini-jack)
- ✧ Portable/Battery Operated 3000mAh

3. Package Contents

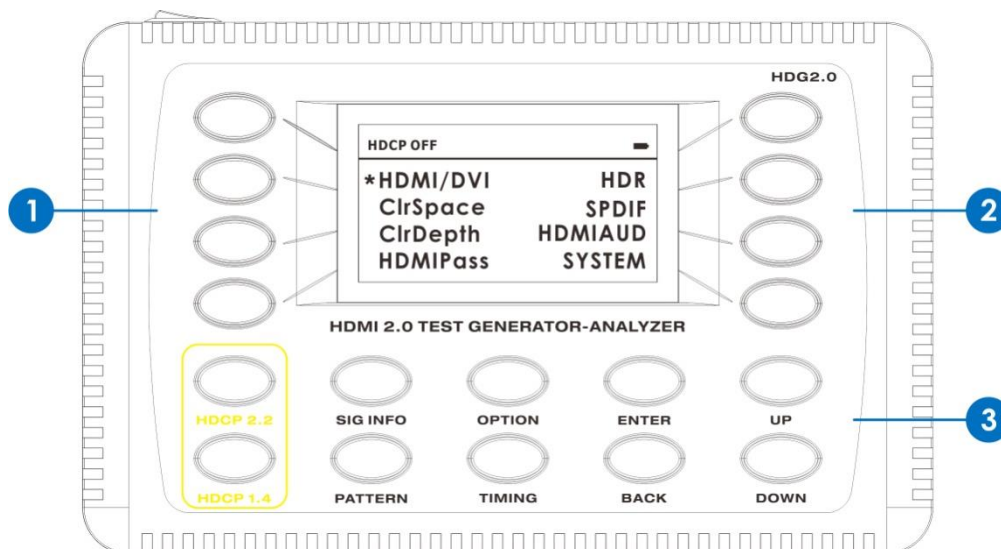
- ✧ 1 x HDMI 2.0 Test Generator and Analyzer
- ✧ 1 x 3.5mm to DB9 (Female) serial cable adapter (1 meter length)
- ✧ 1 x 5V/2A Power Adaptor
- ✧ 1 x User Manual

4. Specifications

Technical	
HDMI Compliance	HDMI 2.0b
HDCP Compliance	HDCP 2.2
Video Bandwidth	18 Gbps
Video Resolutions	up to 4K2K@50/60Hz(YUV4:4:4)
Color Space	RGB, YCbCr 4:4:4, YCbCr 4:2:2
Color Depth	8-bit, 10-bit, 12-bit
HDMI Audio Formats	Internal: LPCM 2CH, 48kHz, 16bits External SPDIF: LPCM 2/5.1CH, Dolby Digital, DTS 5.1 HDMI Pass-through: LPCM 2/5.1/7.1CH, Dolby Digital, DTS 5.1, Dolby Digital+, Dolby TrueHD, DTS-HD Master Audio, Dolby Atmos, DTS:X
ESD Protection	Human body model — ±8kV (air-gap discharge) & ±4kV (contact discharge)
Connections	
Inputs	1x HDMI Type A [19-pin female] 1x SPDIF In [Optical] 1x RS-232 [3.5mm Mini-jack]
Outputs	1x HDMI Type A [19-pin female] 1x SPDIF Out [Optical]
Mechanical	
Housing	Plastic Enclosure
Color	Black
Dimensions	165mm [W] x 103mm [D] x 37.4mm [H]
Weight	363g
Power Supply	Input: AC100 - 240V 50/60Hz Output: DC 5V/2A (US/EU standards, CE/FCC/UL certified)
Power Consumption	2.5W
Operation Temperature	32 - 104°F / 0 - 40°C
Storage temperature	-4 - 140°F / -20 - 60°C
Relative Humidity	20 - 90% RH (no condensation)

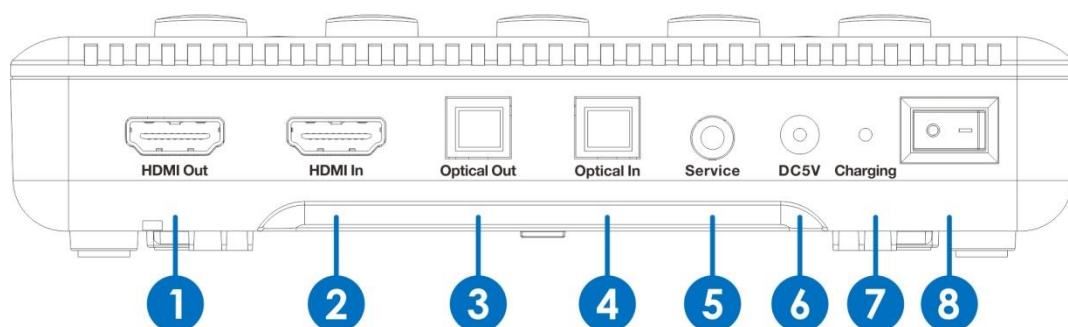
5. Operation Controls and Functions

5.1 Top Panel



- ① Left 1 ~ 4 keys: Select No.1 ~ 4 row of left screen correspondingly
- ② Right 1 ~ 4 keys: Select No.1 ~ 4 row of right screen correspondingly
- ③ Function keys:
 - HDCP 2.2: Enable HDCP 2.2 or None (No HDCP)
 - HDCP 1.4: Enable HDCP 1.4 or None (No HDCP)
 - Sig Info: HDMI signal analyzing status
 - Option: Parameter setting (HDMI mode, color space, color depth, HDMI bypass, HDR, SPDIF, HDMI audio and system)
 - Pattern: Pattern menu selection
 - Timing: Timing menu selection
 - Enter: Press to enter menu or confirm operation
 - Back: Go back or Exit menu
 - Up/Down: Scroll pages under pattern and timing menu.

5.2 Rear Panel



- 1 **HDMI Out:** Connect to an HDMI display device like TV or monitor.
- 2 **HDMI In:** Connect to an HDMI source device like DVD player.
- 3 **Optical Out:** Connect to an audio receiver device like audio amplifier.
- 4 **Optical In:** Connect to an audio source device like DVD player.
- 5 **Service:** Connect to PC RS-232 port via a 3.5mm to DB9 (Female) serial cable adapter.
- 6 **DC 5V:** Connect the 5V/2A adaptor in box to AC wall outlet for power charging
- 7 **Charging:** Battery charging indicator
- 8 **ON/OFF Switch:** Power on/off switch

6. Menu Instructions

6.1 Sig Info Menu

Sig Info includes below items:

HDCP OFF ■	
* TxEDID	RxFMT
TxFMT	RxPKT
TxPKT	RxAUD
TxAUD	CEC

TxEDID: Displaying and analyzing HDMI output downstream device's EDID, pressing Left 1 key to scroll pages. (Example below)

```
EDID Data:
00: 00 FF FF FF FF FF 00 20 A3 30 00 01 00 00 00
10: 23 14 01 03 80 73 41 78 0A CF 74 A3 57 4C B0 23
20: 09 48 4C 21 08 00 81 C0 81 40 81 80 01 01 01 01
30: 01 01 01 01 01 01 02 3A 80 18 71 38 2D 40 58 2C
40: 45 00 80 88 42 00 00 1E 1B 21 50 A0 51 00 1E 30
50: 48 88 35 00 44 4A 21 00 00 1C 00 00 00 FC 00 48
60: 44 4D 49 20 20 20 0A 20 20 20 20 20 20 00 00 FD
70: 00 32 4B 0F 45 0F 00 0A 20 20 20 20 20 01 6C
80: 02 03 29 71 48 01 02 04 05 90 14 1F 11 20 21 22
90: 23 09 07 07 83 01 00 00 70 03 0C 00 10 00 38 3C
A0: 20 A0 82 01 02 03 00 01 41 01 1D 80 D0 72 1C 16
B0: 20 10 2C 25 80 C4 8E 21 00 00 9E 01 1D 80 18 71
C0: 1C 16 20 58 2C 25 00 C4 8E 21 00 00 9E 01 1D 00
D0: 72 51 D0 1E 20 6E 28 55 00 C4 8E 21 00 00 18 00
E0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
F0: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 CC
PASS -> Block0 Header
PASS -> Block0 CheckSum
PASS -> Block1 CheckSum

Manufacture      : HEC
Product Code     : 3000
Serial Number    : 00000001
Manufacture W/Y  : 35,2010
Physical Address : 1000
Model Name       : HDMI
HDMI2.0 Supported: NO
HDR Supported    : NO
RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF
```

```
EDID Block0:
Established Timings I (VESA):
 640 x 480 @ 60Hz
 800 x 400 @ 60Hz

Established Timings II (VESA):
1024 x 768 @ 60Hz

Manufacturer's Timings (VESA):
NONE

Standard Timings (VESA):
1280x720 @ 60HZ      16:9
1280x960 @ 60HZ     4:3
1280x1024 @ 60HZ    5:4

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF
```

EDID Block0:

Detailed Timing 1:

Pixel Clock : 14850
H_Active : 1920
V_Active : 1080
V_Freq : 60
Interlaced : P

Detailed Timing 2:

Pixel Clock : 8475
H_Active : 1360
V_Active : 768
V_Freq : 60
Interlaced : P

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF

EDID Block1:

Tag: 2 Version: 3
UnderScan: not supported
Basic Audio: supported
RGB and YCbCr4:4:4: supported
RGB and YCbCr4:2:2: supported

Video Data Block (CEA861-F):

VIC = 1	640x400p@60HZ	4:3
VIC = 2	720x480p@60HZ	4:3
VIC = 4	1280x720p@60HZ	16:9
VIC = 5	1920x1080i@60HZ	16:9
VIC = 16 (Native)	1920x1080p@60HZ	16:9
VIC = 20	1920x1080i@50HZ	16:9
VIC = 31	1920x1080p@50HZ	16:9
VIC = 17	720x576p@50HZ	4:3
VIC = 32	1920x1080p@24HZ	16:9
VIC = 33	1920x1080p@25HZ	16:9
VIC = 34	1920x1080p@30HZ	16:9

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF


```
EDID Block1:
Video Data Block (CEA861-F):
  VIC = 34          1920x1080p@30HZ      16:9

Audio Data Block (CEA861-F):
  Linear PCM:      (2ch) 32k 44.1k 48k
                  16bit,20bit,24bit

Speaker Data Block:
  FL/FR
```

```
RxCable: YES
RxSync:  YES
Rxhdcp:  OFF
Txhdcp:  OFF
```

```
EDID Block1:
Vendor Specific Data Block:
  CEC PA: 1000
  DC_Y444 DC_30bit DC_36bit
  TMDS clock: 300 MHz
  HDMI VIC: 4      3D VIC: 2
  3D: 3D_Structure_ALL_15..0 is present AND 3D_Mask_15..0 not present
```

```
Detailed Timing 1:
  Pixel Clock :      7425
  H_Active   :      1920
  V_Active   :        540
  V_Freq     :        50
  Interlaced :        I
```

```
Detailed Timing 2:
  Pixel Clock :      7425
  H_Active   :      1920
  V_Active   :        540
  V_Freq     :        60
  Interlaced :        I
```

```
Detailed Timing 3:
  Pixel Clock :      7425
  H_Active   :      1280
  V_Active   :        720
  V_Freq     :        60
  Interlaced :        P
```

```
RxCable: YES
RxSync:  YES
Rxhdcp:  OFF
Txhdcp:  OFF
```

TxFMT: Displaying HDMI output mode, color depth and timing format information. (Example below)

```
Transmitted Video Type:
  HDMI MODE   (Color Depth: 8-Bit)

Transmitted Video Measurements:
  Pixel Rate: 295989472 Hz
  Horizontal Total: 4400
  Horizontal Active: 3840
  Horizontal Pluse Delay: 176
  Horizontal Pluse Width: 88
  Horizontal Pulse Polarity: Negative
  Vertical Total: 2250
  Vertical Active: 2160
  Vertical Pluse Delay: 10
  Vertical Pluse Width: 176
  Vertical Pulse Polarity: Negative
  Vertical Rate: 30 Hz
  Scan Type: Progressive

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF
```

TxPKT: Displaying HDMI output mode, color depth and AVI/VSIF/HDR Info frames, pressing Left 3 key to scroll pages. (Example below)

```
Transmitted Video Type:
  HDMI MODE   (Color Depth: 8-Bit)

Transmitted AVI Infoframe:
  Packet Type: 0x82
  Version: 0x2
  Length: 13
  Checksum: 0xE7
  Scan information: Reserved
  Bar information: Vert. Bar Info present
  Active information present: No Active Information
  RGB or YCbCr: RGB
  Active aspect ratio: Sames As Pitcure Ratio
  Picture aspect ratio: No Data
  Colorimetry: ITU BT709
  Non-uniform picture scaling: No Known non-uniform Scaling
  Extended Colorimetry: xvYCC601
  RGB Quantization Range: Depends on Video Format
  IT Content: IT content
  Video identification code: No Data          (VIC=0)
  Pixel repetition: 0

Transmitted AVI Infoframe Data(Hex):
  82 02 0D E7 00 88 00 00 00 00 00 00 00 00 00

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF
```

```

Transmitted Video Type:
  HDMI MODE   (Color Depth: 8-Bit)

Transmitted VSIF Infoframe:
  Packet Type: 0x81
  Version: 0x01
  Length: 5
  Checksum: 0x49
  24bit IEEE Identifier: 0x000C03
  HDMI_Video_Format: Extend resolution format present
  HDMI_VIC: 1 (3840x2160@30Hz)
  3D_Structure: No Data

Transmitted VSIF Infoframe Data(Hex):
  81 01 05 49 03 0C 00 20 01 00 00 00 00 00 00

Transmitted HDR Infoframe:
  Packet Type: 0x00
  Version: 0x00
  Length: 0
  EOTF: No Data
  Static_Metadata_Descriptor: No Data

Transmitted HDR Infoframe Data(Hex):
  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  00 00 00 00 00 00 00 00 00 00 00 00 00 00

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF

```

TxAUD: Displaying HDMI output mode, color depth and Audio Info frame and Audio Channel status. (Example below)

```

Transmitted Video Type:
  HDMI MODE   (Color Depth: 8-Bit)

TX Audio InfoFrame:
  Packet Type: 0x84
  Version: 0x1
  Length: 10
  Checksum: 0x70
  Audio Channel Count(CC): 2 ch
  Audio Coding Type(CT): Refer to stream header
  Audio Sample Size(SS): Refer to stream header
  Audio Sampling Frequency(SF): Refer to stream header
  Channel allocation(CA): -- -- -- -- -- -- -- FR FL

Transmitted AIF Infoframe Data(Hex):
  84 01 0A 70 01 00 00 00 00 00 00 00 00 00 00

TX Audio Channel Status (IEC 60958-3)
  Sampling Frequency: 48 kHz
  Sample Word Length: 24 bits
  Audio Sample Word: Linear PCM samples
  Audio Clock accuracy: Level II
  Audio Format: PCM Audio

Transmitted Audio Channel Status Data(Hex):
  04 00 00 02 0B 00 00

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF

```

RxFMT: Displaying HDMI input mode, color depth and timing format information. (Example below)

```
Received Video Type:
  HDMI MODE (Color Depth: 8-Bit )

Received Video Measurements:
  Pixel Rate: 296265664 Hz
  Horizontal Total: 5500
  Horizontal Active: 3840
  Horizontal Pluse Delay: 1276
  Horizontal Pluse Width: 88
  Horizontal Pulse Polarity: Postoive
  Vertical Total: 2250
  Vertical Active: 2160
  Vertical Pluse Delay: 8
  Vertical Pluse Width: 10
  Vertical Pulse Polarity: Postoive
  Vertical Rate: 24 Hz
  Scan Type: Progressive

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF
```

RxPKT: Displaying HDMI input mode, color depth and AVI/VSIF/HDR Info frames, pressing Right 2 key to scroll pages. (Example below)

```
Received Video Type:
  HDMI MODE (Color Depth: 8-Bit )

Received AVI Infoframe:
  Packet Type: 0x82
  Version: 0x2
  Length: 13
  Checksum: 0x77
  Scan information: Reserved
  Bar information: Vert. Bar Info present
  Active information present: Active (R3...R0) Information
  RGB or YCbCr: YCbCr4:4:4
  Active aspect ratio: Sames As Pitcure Ratio
  Picture aspect ratio: 16:9
  Colorimetry: ITU BT709
  Non-uniform picture scaling: No Known non-uniform Scaling
  Extended Colorimetry: ITU BT2020 YC
  RGB Quantization Range: Depends on Video Format
  IT Content: IT content
  Video identification code: No Data (VIC=0)
  Pixel repetition: 0

Received AVI Infoframe Data(Hex):
  82 02 0D 77 50 A8 00 00 00 00 00 00 48 00 00 00

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF
```

```

Received Video Type:
  HDMI MODE   (Color Depth: 8-Bit )

Received VSIF Infoframe:
  Packet Type: 0x81
  Version: 0x01
  Length: 5
  Checksum: 0x47
  24bit IEEE Identifier: 0x000C03
  HDMI_Video_Format: Extend resolution format present
  HDMI_VIC: 3 (3840x2160@24Hz)
  3D_Structure: No Data

Received VSIF Infoframe Data(Hex):
  81 01 05 47 03 0C 00 20 03 00 00 00 00 00 00

Received HDR Infoframe:
  Packet Type: 0x00
  Version: 0x00
  Length: 0
  EOTF: No Data
  Static_Metadata_Descriptor: No Data

Received HDR Infoframe Data(Hex):
  00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
  00 00 00 00 00 00 00 00 00 00 00 00 00 00

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF

```

RxAUD: Displaying HDMI input mode, color depth and Audio Info frame and Audio Channel status. (Example below)

```

Received Video Type:
  HDMI MODE   (Color Depth: 8-Bit )

Received Audio InfoFrame:
  Packet Type: 0x84
  Version: 0x01
  Length: 10
  Checksum: 0x70
  Audio Channel Count(CC): 2 ch
  Audio Coding Type(CT): Refer to stream header
  Audio Sample Size(SS): Refer to stream header
  Audio Sampling Frequency(SF): Refer to stream header
  Channel allocation(CA): -- -- -- -- -- -- FR FL

Received AIF Infoframe Data(Hex):
  84 01 0A 70 01 00 00 00 00 00 00 00 00 00 00

Received Audio Channel Status (IEC 60958-3)
  Sampling Frequency: 48 kHz
  Sample Word Length: 16 bits
  Audio Sample Word: Linear PCM samples
  Audio Clock accuracy: Level II
  Audio Format: PCM Audio

Received Audio Channel Status Data(Hex):
  00 00 00 02 22 00 00

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF

```

CEC: Discovering all HDMI CEC devices on the link. (Example below)

```
Transmitted Video Type:
  HDMI MODE (Color Depth: 8-Bit)

CEC Messages:
  CEC: Enable

CEC Sending Ping: No CEC Devices Acked

RxCable: YES
RxSync: YES
Rxhdcp: OFF
Txhdcp: OFF
```

6.2 Option Menu

Option includes below items, each item function is listed below.

```
HDCP OFF [REDACTED]
* HDMI/DVI HDR
  ClrSpace SPDIF
  ClrDepth HDMIAUD
  HDMIPass SYSTEM
```

HDMI/DVI includes HDMI, DVI and AUTO modes. AUTO mode depends on downstream device.

```
HDCP OFF [REDACTED]
* HDMI/DVI: HDMI*
              DVI
              AUTO
```

ClrSpace includes RGB, YCbCr 4:4:4 and YCbCr 4:2:2 modes. Note YCbCr 4:2:0 mode is listed in timing format separately.

HDCP OFF	<input checked="" type="checkbox"/>
* Color Space:	
* RGB	
YCbCr	4:4:4
	4:2:2

ClrDepth includes 8_bit, 10_bit and 12_bit modes.

HDCP OFF	<input checked="" type="checkbox"/>
* ClrDepth:	8_bit *
	10_bit
	12_bit

HDMI Pass has OFF and ON selections. OFF means output is internal pattern. ON means HDMI input pass through to HDMI output.

HDCP OFF	<input checked="" type="checkbox"/>
* HDMI PASS:	OFF *
	ON

HDR includes OFF, SDR_Range, HDR_Range and SMPT_2084.

HDCP OFF	<input checked="" type="checkbox"/>
* HDR:	OFF *
	SDR_Range
	HDR_Range
	SMPT_2084

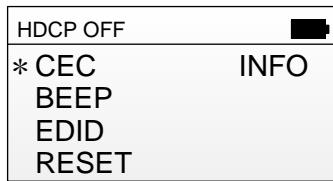
SPDIF selects the source of SPDIF output, it has INTR (internal audio), ARC, ExtHDMI (HDMI input audio) and OFF selections.

HDCP OFF	<input checked="" type="checkbox"/>
* SPDIF:	INTR *
	ARC
	ExtHDMI
	OFF

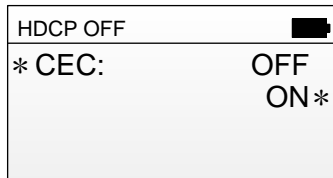
HDMI AUD selects the source of HDMI output audio, it has INTR (internal audio), ExtHDMI (HDMI input audio), ExtSPDIF (external SPDIF input) and OFF selections.

HDCP OFF	<input checked="" type="checkbox"/>
* HDMI AUD:	INTR *
	ExtHDMI
	ExtSPDIF
	OFF

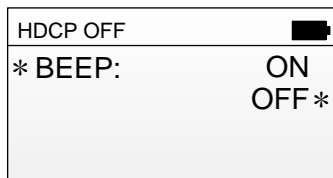
SYSTEM includes below items, each item function is listed below.



CEC function OFF and ON selections.



BEEP function ON and OFF selections.

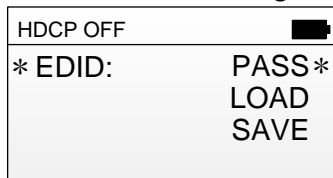


EDID includes PASS, LOAD and SAVE selections.

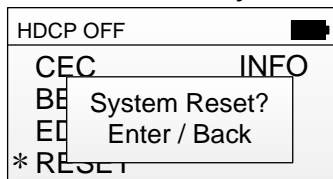
PASS means passing downstream EDID to HDMI input directly.

LOAD means loading current EDID being saved in MCU flash into HDMI input.

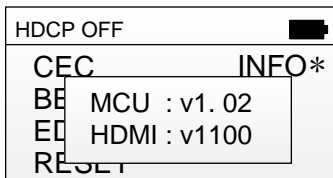
SAVE means saving downstream EDID into MCU flash.



RESET can do system reset operation real time.





INFO can show firmware version including MCU and HDMI chipset's.





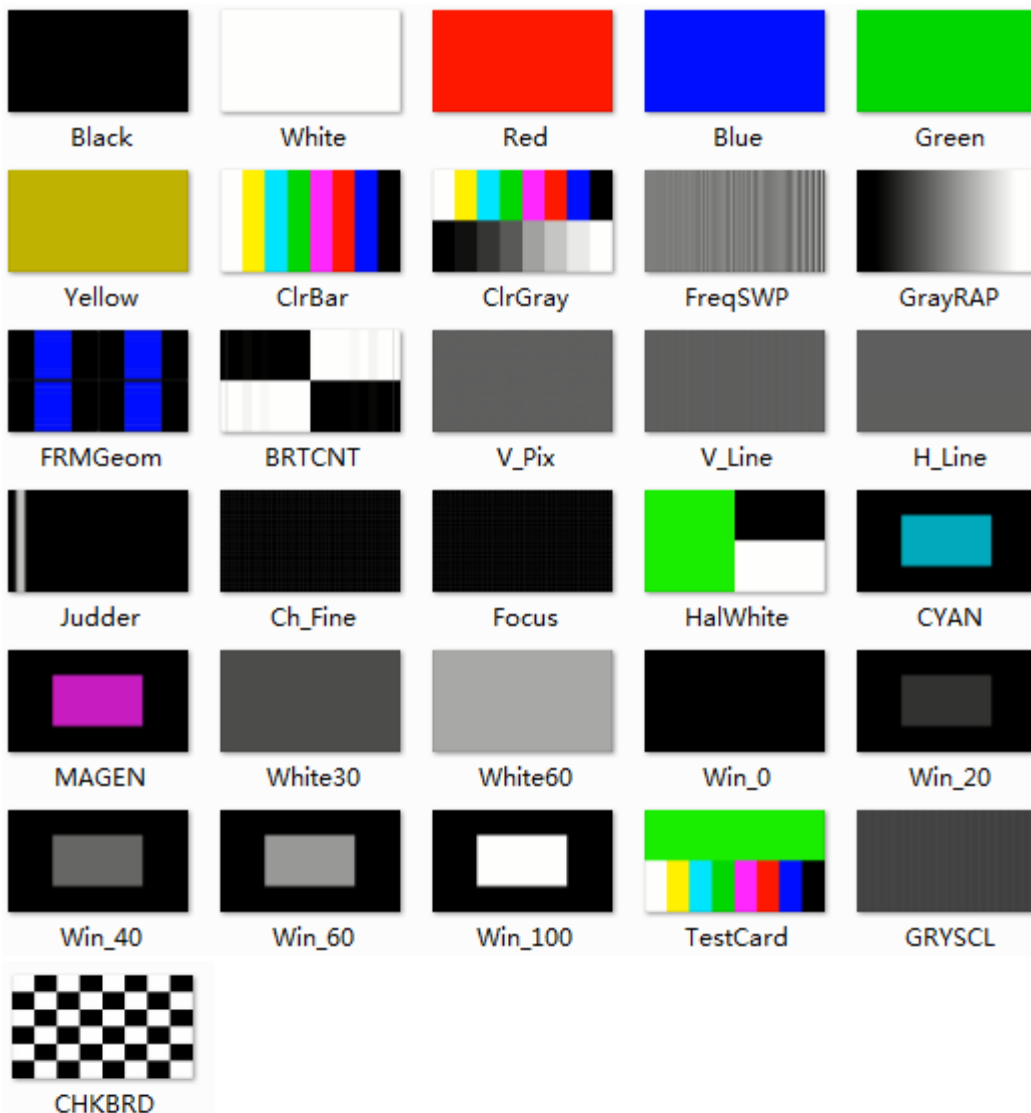
7. Pattern and Timing

7.1 Pattern List

The HDMI 2.0 Test Generator-Analyzer includes the following 31 patterns.




HDCP OFF 		HDCP OFF 	
* Black	Green	* FreqSWP	V_Pix
White	Yellow	GrayRAP	V_Line
Red	ClrBar	FRMGeom	H_Line
Blue	ClrGray	BRTCNT	Judder




HDCP OFF 		HDCP OFF 	
* Ch_Fine	MAGEN	* Win_20	TestCard
Focus	White30	Win_40	GRYSCL
HalWhite	White60	Win_60	CHKBRD
CYAN	Win_0	Win_100	




7.2 Timing List

The HDMI 2.0 Test Generator-Analyzer supports 55 types of video resolutions.

HDCP OFF 		HDCP OFF 		HDCP OFF 	
* 480i60	720p24	* 720p60	1080p50	* 576p100	1080i100
480p60	720p25	1080p24	1080p60	480p120	1080i120
576p50	720p30	1080p25	1080i50	720p100	1080p100
576i50	720p50	1080p30	1080i60	720p120	1080p120

HDCP OFF 		HDCP OFF 		HDCP OFF 	
* 4K24	4K25W	* 4K50W420	4K50W	* XGA60	WXGA60_800
4K25	4K30W	4K60W420	4K60W	XGA70	SXGA60
4K30	4K50_420	4K50	VGA60	WXGA60	WSXGA60
4K24W	4K60_420	4K60	SVGA60	WXGA75	HD60

HDCP OFF 	
* 1050p60	WUXGA50
1050p75	WUXGA60
900p50	1600p60
UXGA60	

Supported CEA Timings

Name	CEA VIC	Resolution	Name	CEA VIC	Resolution
480i60	6	1440x480i60	720p120	47	1280x720p120
480p60	2	720x480p60	1080i100	40	1920x1080i100
576p50	17	720x576p50	1080i120	46	1920x1080i120
576i50	21	1440x576i50	1080p100	64	1920x1080p100
720p24	60	1280x720p24	1080p120	63	1920x1080p120
720p25	61	1280x720p25	4K24	93	3840x2160p24
720p30	62	1280x720p30	4K25	94	3840x2160p25
720p50	19	1280x720p50	4K30	95	3840x2160p30
720p60	4	1280x720p60	4K24W	98	4096x2160p24
1080p24	32	1920x1080p24	4K25W	99	4096x2160p25
1080p25	33	1920x1080p25	4K30W	100	4096x2160p30
1080p30	34	1920x1080p30	4K50_420	96	3840x2160p50 (YCbCr420)
1080p50	31	1920x1080p50	4K60_420	97	3840x2160p60 (YCbCr420)
1080p60	16	1920x1080p60	4K50W420	101	4096x2160p50 (YCbCr420)
1080i50	20	1920x1080i50	4K60W420	102	4096x2160p60 (YCbCr420)
1080i60	5	1920x1080i60	4K50	96	3840x2160p50
576p100	42	720x576p100	4K60	97	3840x2160p60
480p120	48	720x480p120	4K50W	101	4096x2160p50
720p100	41	1280x720p100	4K60W	102	4096x2160p60

Supported PC Timings

Name	CEA VIC	Resolution
VGA60	0	640x480p60
SVGA60	0	800x600p60
XGA60	0	1024x768p60
XGA70	0	1024x768p70
WXGA60	0	1280x768p60
WXGA75	0	1280x768p75
WXGA60_800	0	1280x800p60
SXGA60	0	1280x1024p60
WSXGA60	0	1360x768p60
HD60	0	1366x768p60
1050p60	0	1400x1050p60
1050p75	0	1400x1050p75
900p50	0	1440x900p50
UXGA60	0	1600x1200p60
WUXGA50	0	1920x1200p50
WUXGA60	0	1920x1200p60
1600p60	0	2560x1600p60

8. Connection Diagram

