UCD-452

HDMI 2.1 - 10K Video Generator 32GB





10K Video Generator

UCD-452 is a video generator for testing HDMI 2.1 sink devices up to 10K video modes. Resolutions supported are 4K@120Hz, 8K@60Hz and 10K@30Hz with uncompressed video, and 10K@60Hz with DSC. UCD-452 offers support for FEC, DSC and eARC. HDCP 1.4 and HDCP 2.2/2.3 are also supported. Any video format, audio format, frame rate, video timing, and infoframes can be played by UCD-452. There are no restrictions on the output of video formats except for uncompressed video in deep colour 4K@144, only 2GB of video memory can be used which allows playing a sequence of 40 frames.

8K Dolby Vision[™] and Dolby Audio

Unigraf's UCD-452 is a 8K Dolby Vision and Dolby Audio test tool. Compared to UCD-412, UCD-452 offers an extended 32GB memory in an embedded Windows PC which enables the verification of 8K Dolby Vision content. With the Dolby SW package, UCD-452 is a mandatory tool for any e.g. television or monitor manufacturer that is willing to have a Dolby Vision[™] certificate on their products.

Enhanced Gaming Features

Check the availability of enhanced gaming features on sink devices that support Variable Refresh Rate (VRR) and Auto Low Latency Mode (ALLM). Check full range of VRR from 40 Hz to 120 Hz. Ready-made scenarios for VRR and ALLM testing are available in the UCD-452. By supporting these enhanced gaming features, the UCD-452 is an essential test tool for display manufacturers.

Highlights

- HDMI 2.1 Test Equipment (FRL/ TMDS)
- 8K Dolby Vision[™] Test Tool
- Extended Memory 32GB
- Embedded Windows PC
- Variable Refresh Rate (VRR)
- Auto Low Latency Mode (ALLM)
- Forward Error Correction (FEC)
- HDCP 1.4 & HDCP 2.2/2.3 Support
- DSC Support
- eARC Support

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OMI TX Event Log Memory Layout Sys.Log	oger			
Link Pattern Generator Playback Audio Ge	enerator HDCP EDID	SCDC Sink DUT Testing		
HPD	FRL Control		Sink DUT Capabilities	
De-asserted	O Disable FRL		Mode -	
Deasered	3 Lanes () 3 () 6	(Gbps)	Behavior: -	
HDMI Behavior	4 Lanes 0 6	○8 ● 10 ○ 12	TMDS Bit Clock Ratio -	
○ 1.4 ○ 2.0 ④ 2.1	LT Timeout (ms):	0	FRL Support: - VRR Support: -	
	LT Poll Timeout (ms):	0 0	ALLM Support: -	
Status				
Lane 0 Lane 1 Lane 2 Lane 3			HDCP Status	
Channel lock	Link Ti	raining	1.X 2.X	
Behavior HDMI 2.1	FRL Status		Active Authenticated	
	FRL Mode	10Gbps 4-lane	Keys loaded	
TMDS Control	LT Status	LTS:1		
Mode: OVI ® HDMI	FLT Update		HDCP Configuration	
Link Mode: O 6G	FLT Ready		1.X 2.X Enable Encryption	
Enable Scrambler	FRL Start FLT No Timeout		Enable Encryption	
TMDS Status	FRL Max		Addrenocate	
Mode HDMI	Lane 0 Lane	e 1 Lane 2 Lane 3		
TMDS Bit Clock Ratio 1/10 3G mode	LTP 0 0	0 0		
Video	Pattern 15 15	15 15		
Scrambling	FFE level 0 0	0 0		

UCD Console

UCD Console Software with easy-to-use GUI enables users to monitor and control all vital functionalities of HDMI 2.1 interface. With built-in pattern generator you can test sink devices up to 10K@30Hz with uncompressed video. The GUI provides users with control and visual presentation of FRL status, FRL configuration and Link status up to four lanes. Dolby Vision scenarios can be played back in UCD Playback integrated into UCD Console. UCD Playback can combine info frames, video frames and audio packets. They are all seperate files providing full flexibility to customize the scenario.

Fixed Rate Link (FRL)

Fixed Rate Link (FRL) is the new video transport method in HDMI 2.1. The UCD-452 can identify interoperability issues on FRL capable sink devices. UCD-452 can transmit video in different FRL modes to verify an HDMI 2.1 sink DUT.

Embedded Windows PC

UCD-452 contains an embedded Windows PC that has 32GB of memory and 500GB of SSD storage. Dolby Vision content can be stored on the SSD. Users will be able to operate UCD Console on the embedded PC in UCD-452 device with a monitor, keyboard and mouse of user's choice connected straight to the device.



Specifications

Product Number	066615
Output	HDMI 2.1 (10K@60Hz with DSC /10K@30Hz) (HDMI Tx)
HDMI 2.1 Features	FRL, TMDS, ALLM, VRR
Content Protection	HDCP 1.4, 2.2, 2.3
Additional features	DSC 1.2a, eARC, FEC
Operating System	Windows 10
Software	UCD Console GUI TSI API with interface specific test sets
PC Connectors	6 x USB 3.0
	2 x Ethernet
	1 x HDMI
Power Input	AC/DC Power supply
	100 to 240 Vac 50/60 Hz input, +12 Vdc output
Module Size	329 x 188 x 215 mm
Weight	3.9 kg w/o power supply



UNIGRAF OY Piispantilankuja 4 FI-02240 Espoo Finland Tel +358 9 859 550 info@unigraf.fi