

K-8278 Programmable Video Signal Generator



- ◆ **HDMI V1.4 standard specification**
(3D Format, Audio Return Channel, 4K x 2K Graphic Size, Ethernet Channel)
- ◆ **Multi Ports Output**
(HDMI 4ports, DisplayPort 1port)
- ◆ **Wideband Dot Clock**
(Analog 330MHz, DVI Dual link 330MHz)
- ◆ **DisplayPort V1.1a**
- ◆ **Media Play**
- ◆ **HDCP, EDID**
- ◆ **Teletext (PAL only), V-Chip, Closed Caption (NTSC only)**
- ◆ **Graphic 4096 x 2048 (BMP)**
- ◆ **NTSC, PAL, SECAM**

K-8278 Programmable Video Signal Generator supports Analog/DVI/DisplayPort/SDTV/HDTV/HDMI/Media Play signal output. It has standard video regulation and fits into the multimedia display application for LCD TV & Monitor, PDP TV, Projector industries all over the world. It's designed to individual signal module type so that users can choose signal output as their requirements.

◆ Wideband Dot Clock

It supports wideband dot clock such as Analog 330MHz, DVI dual link 330MHz and DisplayPort 300MHz

◆ Multi Ports Output

It supports multi-ports such as HDMI 4ports, DisplayPort 1port in order to allow user to test various display device at the same time.

◆ HDMI V1.4a Standard Specification

HDMI V1.4a standard specification such as 3D Format/Audio Return Channel/4K x 2K Graphic size Ethernet/CEC/Deep Color is available. Various 3D scanning mode can be used for Full HD 3D testing.

◆ 3D test through various signal

Besides HDMI signal, other signal output (Analog, DVI, DisplayPort, D-TV) supports 3D format.

◆ DisplayPort V1.1a Standard Specification

It supports DisplayPort V1.1a standard specification such as Lane count/Pre-emphasis/Swing level DPCD/SSC testing.

◆ TV/D-TV Standard Signal Output

It meets NTSC, PAL, SECAM standard specification and applied SMPTE and ITU international standard. Also various function test like Teletext, V-Chip and Closed Caption is available.

◆ Multi Media Play

It has various timing and source file for multi media play testing and supports Video format (wmv, avi, mpg, vob, mp4, asf, tp, trp), Audio format (MP3, WMA, AAC, Ogg, PCM) and Image (BMP, JPG).

SPECIFICATIONS

ANALOG VIDEO OUTPUT	
Display Size	4096 X 4096
Pixel Rate Range	8MHz~330MHz / Error of less than 25ppm
Video Level	R, G, B (75 ohms) 0~1.0V programmable / 1 mV step
Sync on Green	0~300mV programmable
Blank Level	7.5 IRE / 0 IRE programmable
Output connector	D-Sub 15-pin
Rise / fall time	Less than 3ns (maximum)
Protection	buffered by 75-ohm isolation

HORIZONTAL TIMING	
Total Pixels	100~8192 pixels resolution / 1 Pixel resolution

VERTICAL TIMING	
Total Lines	100~8192 lines (non-interlace) 100~4096 lines (interlace) / 1 lines resolution

SEPARATE SYNC	
HS, VS, TTL Level (4.5V)	

ANALOG AUDIO OUTPUT	
Frequency Range	20Hz to 20KHz / 1Hz step
Waveform	Sine wave
Number of Channel	2 Channel (R/L)
Connector	RCA
Special Control Mode	Fix / Sweep / Mute / Swap

DVI(TMDS) OUTPUT	
Pixel Rate Range	Single link : 25MHz ~ 165MHz, Dual link : 25MHz ~ 330MHz
EDID	Read / Compare
HDCP	HDCP V1.0
Compliant	DVI V1.0
Video Signal Type	RGB
Sampling Mode	4:4:4
Output Connector	DVI-I

TV FORMAT					
Output Mode	NTSC M, J	NTSC 443	PAL B,D,G,H,I	SECAM	
Subcarrier Frequency	3.579545	4.433618	4.433618	For=4.40625 Fob=4.25	MHz
Subcarrier Stability	±5				Hz
Video Output	Composite (BNC), S-Video				
	Signal : CVBS	Connector			BNC
	Signal : Y/C	Connector			4-pin mini DIN
	Burst On/Off (NTSC, PAL)				
Closed Caption (NTSC)	C1, C2, C3, C4 / T1, T2, T3, T4				
V-Chip	MPAA Rating : G, PG, PG-13, R, NC-17, X FCC Rating : TV-Y, TV-Y7, TV-G, TV-PG, TV-14, TV-MA				
Teletext support (PAL)	Teletext System B Level 1, 1.5				

SCART OUTPUT	
Signal	CVBS, Audio, Video(R,G,B), Y/C, Y, Pb, Pr
Connector	SCART

D-TV FORMAT					
Signal	Y, Pb, Pr	Connector	BNC		
Format	480P, 720P, 1080i, 1080P				
Timing	Progressive Mode Frame Rate (Hz)		Interlace Mode Frame Rate (Hz)		Standard
	60P	60	60i	30	SMPTE 274M
1920X1080	59.94P	60	59.94i	30	SMPTE 274M
	50P	50	50i	25	SMPTE 274M
	30P	30			SMPTE 274M
	29.97P	30			SMPTE 274M
	25P	25			SMPTE 274M
	24P	24			SMPTE 274M
	23.98P	24			SMPTE 274M
1280X720	60P	60			SMPTE 296M
	59.94P	60			SMPTE 296M
	50P	50			SMPTE 296M

MEDIA PLAY	
Output Port	Analog, DVI, DisplayPort, HDMI, YPbPr, Y/C, CVBS
Storage method	3.5" HDD, USB 2.0(over than WinXP)
Storage capacity	250GB
Regeneration Codec	Divx, Mpeg1/2/4, wmv9
Video Format	wmv, avi, mpg, vob, mp4, asf, tp, trp
Audio	MP3, WMA, AAC, Ogg, PCM
Image	BMP, JPG

DISPLAYPORT VIDEO OUTPUT	
Pixel Rate Range	25MHz ~ 300MHz
Lane Count	1/2/4 lanes
Video Signal Type	RGB or YCbCr
Sampling Mode	4:4:4 / 4:2:2
Color Depth Trans.	6/8/10 bits per component
Lane data rate	2.7Gbps or 1.62Gbps per lane
Pre-emphasis	0dB/3.5dB/6dB/9.5dB selectable
Swing level	400mV/600mV/800mV/1200mV selectable
EDID	Read/Compare
HDCP	HDCP V1.3
Compliant	DisplayPort V1.1a

DISPLAYPORT AUDIO OUTPUT	
Number of Channel	SPDIF 2 Channel
Bits per Sample	Max. 24
Frequency	32, 44.1, 48, 88.2, 96, 176.4, 192KHz

HDMI VIDEO OUTPUT	
Compliant	HDMI V1.4a
Pixel Rate Range	25MHz~165MHz (TMDS rate 225MHz)
Support HDMI Timing	85 Timing (CEA-861E)
Video Signal Type	RGB or YCbCr
Sampling Mode	RGB 4:4:4 / YCbCr 4:4:4 or 4:2:2
Bits per Component	Deep Color 8 / 10 / 12
Color Space	RGB / ITU-R BT. 601 / ITU-R BT.709 / xvYCC
HDCP	HDCP V1.2
EDID	Read/Compare

3D VIDEO FORMAT OUTPUT		
3D Scanning Mode	Frame Packing	Field alternative
	Side-by-Side(Half)	Side-by-Side(Full)
	Line alternative	Top & Bottom
	L+depth	L+depth+graphics+graphics-depth

HDMI AUDIO OUTPUT	
Sample Rate	32.0, 44.1, 48, 88.2, 96, 176.4, 192 KHz
Number of Channel	7.1 Channel
Bits per Sample	24
Waveform	Sine wave
Frequency Range	20 Hz to 20KH
Frequency Resolution	1Hz / Step
Level Range	-46dBFS ~ 0.0dBFS
External Audio Input	Optical
Special Control Mode	Fix / Sweep / Mute / Swap / Optical / Speaker Allocation

SCAN GROUP		
Storage	100 group (1 group ; 40 step.)	Edit : Front panel, PC

FUNCTION GROUP		
Storage	100 group (1 group ; 40 step.)	Edit : Front panel, PC

DATA STORAGE DEVICE		
Timing	500 Timings ; Storage : 300	Edit : Front panel, PC
Pattern	400 Patterns ; Storage : 200	Edit : Front panel, PC
Compact Memory Card	Unlimited data storage(1GB)	Read / Write

OTHERS	
AC Input	90 ~ 260 V auto range / 50 ~ 60 Hz auto range
Operation/Storage Temp.	+5~+40 deg.C / -20~+60 deg.C

DIMENSION / WEIGHT	
H X W X D / Weight	87 X 430 X 340mm / 8Kgs

* All specifications are subject to change without any notice.

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