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# Pattern Generator Specification

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通核科技有限公司  
Broadcasting System turn-Key solution

# Contents

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1	Main Specifications.....	1
1.1	Output.....	1
1.2	Supported Output Frame Rates.....	2
1.3	Terminals .....	2
1.4	External Interface .....	2
2	Comparison Table With Chroma 22293 .....	3

# 1 Main Specifications

## 1.1 Output

Item		Specification	
VGA Signal	Analog	Up to UXGA(1600x1200) or 150 MHz	
	Digital	DVI	Up to UXGA(1600x1200) or 165 MHz
		HDMI	Up to UXGA(1600x1200) or 165 MHz
Sync On Green		On/Off	
Video Level		R, G, B (75ohms) 1.0 V	
Composite Output (RCA & S-Video)		NTSC & PAL TV Systems : NTSC-M NTSC-J PAL-B/D/G/H/I PAL-M PAL-60 PAL-N	
Y/C Relative Delay		No Delay Delay C by 1/2/3 Sample Clocks Delay Y by 1/2/3 Sample Clocks	
Components Output		480i/480p/576i/576p/720p/1080i/1080p	
DVI output		DVI 1.0 HDCP: Ver.1.0 complied with Color Space : RGB Sampling Mode : 4:4:4	
HDMI output		HDMI 1.3a (with 24/30/36 bit deep color) HDCP: Ver.1.1 complied with Color mode: RGB / YCbCr Up to 1080P	

## 1.2 Supported Output Frame Rates

Terminals	Supported Frame Rates							
HDMI	23.976p	24p	25i	29.97i	30i	50p	59.94p	60p
Component	-	-	25i	29.97i	30i	50p	59.94p	60p
S-Video	-	-	25i	29.97i	-	-	-	-
Composite	-	-	25i	29.97i	-	-	-	-

## 1.3 Terminals

Item	Number
HDMI	1
DVI-D	1
VGA (15 pin D-Sub)	1
Y/Pb/Pr (BNC x 3)	1
S-Video	1
CVBS (BNC)	1
Analog Audio output connectors (RCA x 2)	1

## 1.4 External Interface

Item	Number
Remote Controller (Digital Keys Change Pattern)	1
Keys	4
USB	1
RS-232C (9pin)	1

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## 2 Comparison Table With Chroma 22293

Item	Chroma 22293	BSK
<b>General Function</b>		
Analog Pixel Rate	250 MHz	150 MHz
DVI Version	DVI 1.0	DVI 1.0
DVI-D Pixel Rate	330 MHz	165 MHz
HDMI Version	1.3b	1.3a
HDMI Pixel Rate	165MHz	165 MHz
HDCP Support	HDCP V1.0 @ DVI HDCP V1.2 @ HDMI	HDCP V1.0 @ DVI HDCP V1.2 @ HDMI
HDMI Sampling Mode	4:4:4 or 4:2:2	4:4:4 or 4:2:2
Bit Per Sample	8 / 10 / 12	8 / 10 / 12

<b>TV Signal Output</b>		
TV Format	NTSC / PAL / SCEAM	NTSC / PAL / SCEAM
Close Caption (NTSC)	Yes	No
V-CHIP (NTSC)	Yes	No
Teletext (PAL)	Yes	No
Composite Connector	Yes (BNC / RCA)	Yes (BNC Only)
S-Video Connector	Yes	Yes
SCART Connector	Yes	No
Timing	25i (PAL/SECAM) 29.97i (NTSC)	25i (PAL/SECAM) 29.97i (NTSC)

<b>SD/HD Video Signal Output</b>		
SDTV		25i / 29.97i / 30i 50P / 59.94P / 60P
HDTV	1920x1080	25i / 29.97i / 30i 24P / 50P / 59.94P / 60P
	1280x720	50P / 59.94P / 60P
DVI-D Connector	Yes	Yes
HDMI Connector	Yes	Yes