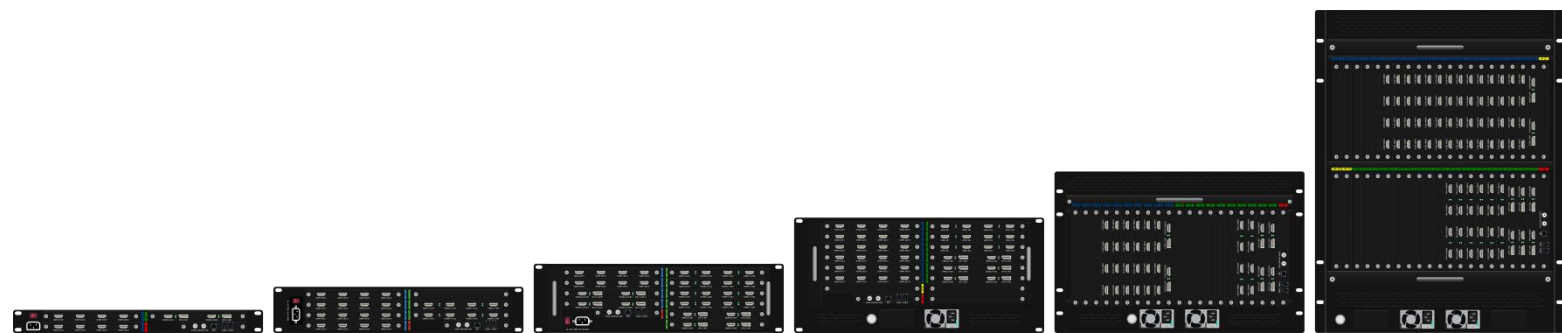# *BVP1000-Pro* **Video Wall Controller**

4k@60Hz

Yiviven

● Product Overview

BVP1000-Pro video Wall Processor is a high performance video processing equipment with hardware-based architecture. It's applicable to fields such as education, research, government broadcasting, traffic commanding center, exhibition, TV studio, etc. BVP1000-Pro processor employs Crosspoint switch technology which offers high speed switching and transmitting. Comparing to "BUS"3 "BUS" switching architecture where all signals share the same bandwidth during transmission, Crosspoint switch assigns each signal to a unique channel to avoid collision,delay, and instability, which contributes to real-time displaying for all video signals. Adopting pure-hardware FPGA architecture with self-developed core algorithm provides HADES processor with excellent image processing performance. Having abandoned Operating System prevents HADES from crashing, blue screen, and viruses which software architecture often suffers from. Its high stability ensures 24x7 continuous operation and meets the increasingly strict demand of market. BVP1000-Pro processor is compatible with a wide selection of input signal formats, including CVBS, YPbPr, VGA, DVI, HDMI, SDI, Twisted-Pair signal, Optical signal, etc. The output signal of HADES supports DVI-I, Twisted-Pair signal, and Optical signal. The resolution of a single output channel can reach up to 1920x1200 @60Hz. Furthermore, customers can upload and display ultra-high resolution static background images with HADES processor. Additionally, ultra-high resolution content is supported by capturing multiple 4K signals from one single equipment to achieve perfect displaying.

● Functional characteristics

○ **CrossMedia Visualized Control**

BVP1000-Pro CrossMedia brings users an entirely new experience on display wall management. With touch screen control interface, video wall management has never been more straightforward. Putting videos on the screen is plainly drag-and-drop; moving and zooming videos are simply done by moving and pinching of your fingers. CrossMedia simplifies the complexity and implements true visual controlling process.

○ **Multiple Video Wall Management**

BVP1000-Pro processor applies RRTA (Resolution Real-time Total Adaption) technology and enables the management of multiple video walls with one single processor. Users can control each video wall separately on the graphic user interface. Moreover, the output resolution of each monitor can be configured individually for different video walls.

○ **Signal Preview**

All input signals can be previewed in the UI of software before being displayed on the screens. It enables the operator to observe the input status and display signals without error or mistake. Our software can also preview the input sources directly within the Control Software.

○ **Pure Hardware Design**

○ **CrossPoint Bus**

○ **Modular Design**

○ **Hot Swappable I/O Cards**

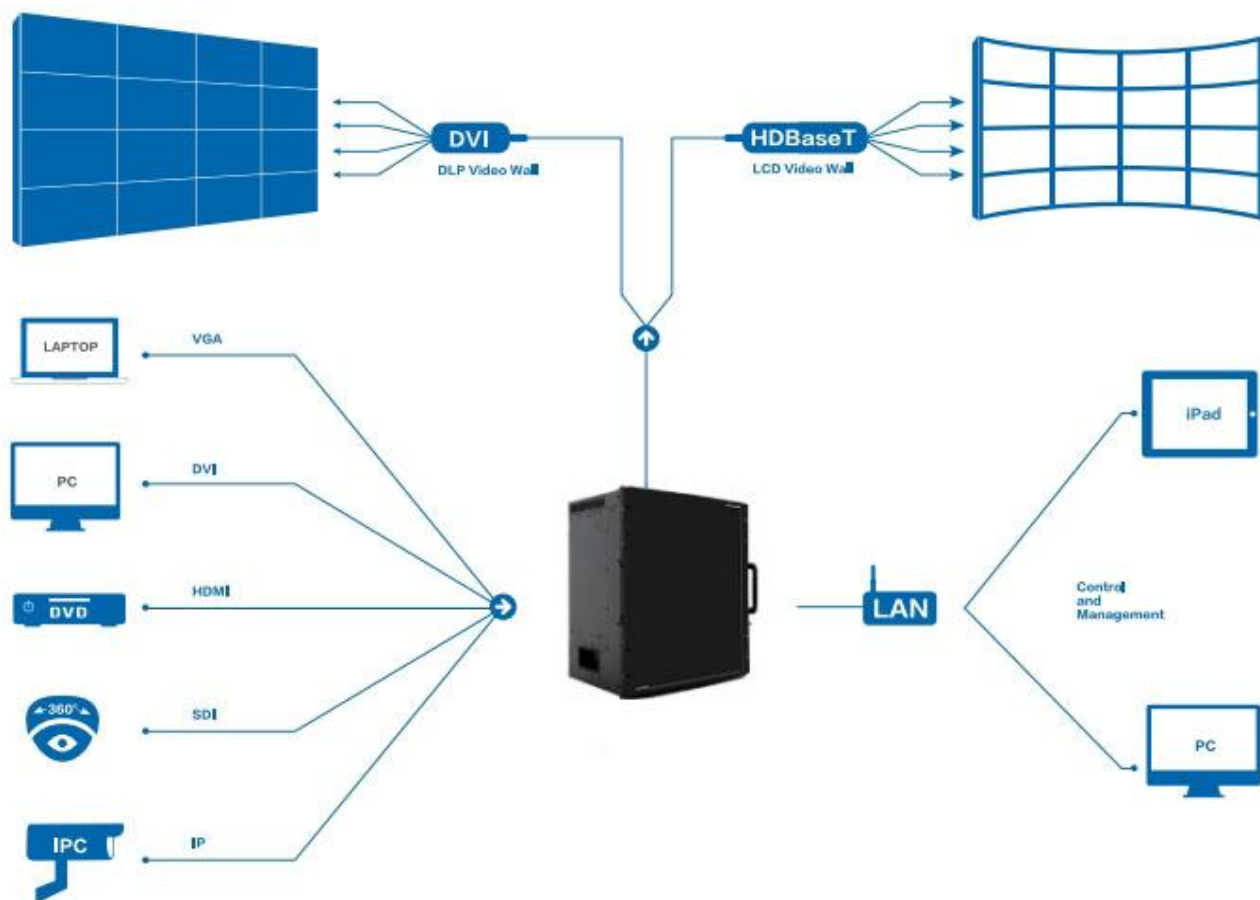○ **Redundant Power Supply (8U and above)**

○ **Image Cropping**

○ **Background Image**

○ **Character Suerinposition**

○ **Multiple Video-Wall Management**

○ **Open RS232/Etherner Control Protocol**

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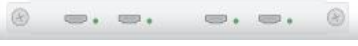
System Diagram

Specifications

Input

VGA		DVI		HDMI	
Signal Format	RGBHV/YPbPr	Signal Format	DVI-D digital T.M.D.S. signal in DVI 1.0	Signal Format	HDMI 1.3
Physical Connector	15 pin D-sub(DB15/DE-15F)/ Female	Physical Connector	24+5 pins/DVI-I	Physical Connector	HDMI TYPE A
Maximum Resolution	1920×1200@60Hz	Maximum Resolution	1920×1200@60Hz	Resolution	1920×1200@60Hz
Impedance	75Ω	Impedance	75Ω	Impedance	75Ω
RGB Synchronization	Separate Sync	Signal Level	T.M.D.S 2.9V-3.3V	Maximum Data Rate	4.95Gbps
Reference Level	0.7 Vp-p	Maximum Data Rate	4.95Gbps	EDID Management	Yes

SDI		CVBS		DP	
Signal Format	SDI SMPTE 259M/292M/424M	Signal Format	Composite Video	Signal Format	DisplayPort 1.1
Physical Connector	BNC/Female	Physical Connector	BNC/Female	Physical Connector	DisplayPort
Resolution	1920×1080	Resolution	720×576（PAL）720×480（NTSC）	Resolution	2560*1600@60Hz, 3840*2160@30Hz
Impedance	75Ω	Impedance	75Ω	Impedance	50Ω
Loop Through	Yes	Reference Level	1 Vp-p	Maximum Data Rate	10.8Gbps

DL-DVI		HDMI		HDBaseT	
Signal Format	Dual-link DVI	Signal Format	HDMI 1.4	Signal Format	HDBaseT
Physical Connector	24+5 pins/DVI-I	Physical Connector	HDMI Type A	Physical Connector	RJ45/Female
Resolution	2560*1600@60Hz, 3840*2160@30Hz	Resolution	2560*1600@60Hz, 3840*2160@30Hz	Resolution	1920*1200@60Hz
Impedance	50Ω	Impedance	YES	Transmission Distance	100m
Maximum Data Rate	9.90Gbps	Maximum Data Rate	10.2Gbps	Front-end Device	HDBaseT Transmitter

Fiber		IP	
Signal Format	Fiber Optic	Format	H.264/MPEG4
Physical Connector	LC	Protocol	RTSP
Resolution	1920*1080@60Hz	Resolution	CIF、D1、720p、1080p
Transmission Distance	5KM	Connector	RJ45
Front-end Device	TRIF-HFT-500-TX	Capacity (per card)	D1*36、720p*16、1080p@30 *8、1080p@60 *4

Output

DVI		HDMI		CVBS	
Signal Format	DVI-I	Signal Format	HDMI 1.3	Signal Format	Composite Video
Physical Connector	15 pin D-sub(DB15/DE-15F)/ Female	Physical Connector	HDMI TYPE A	Physical Connector	BNC/Female
Maximum Resolution	1920×1200@60Hz	Resolution	1920×1200@60Hz	Resolution	720×576（PAL）720×480（NTSC）

Impedance	50Ω	Impedance	75Ω	Impedance	75Ω
Signal Level	T.M.D.S 2.9V-3.3V	Maximum Data Rate	4.95Gbps	Reference Level	1 Vp-p
Maximum Data Rate	4.95Gbps	Signal Level	T.M.D.S 2.9V-3.3V	Compatibility	Only On Hades 380

YPbPR / HDBaseT / SDI

YPbPR		**HDBaseT**		**SDI**	
Signal Format	YPbPr Component EIA-770.2-A	Signal Format	HDBaseT	Signal Format	SDI SMPTE 259M/292M/424M
Physical Connector	RCA	Physical Connector	RJ45/Female	Physical Connector	BNC/Female
Resolution	720×576,720×480,1280*720 ,1920x1080	Resolution	1920*1200@60Hz	Resolution	1920×1080
Impedance	75Ω	Transmission Distance	100m	Impedance	75Ω
Compatibility	Only On Hades 380	Back-end Device	HDBaseT Transmitter	Output Mirroring	Yes

Fiber / DL-DVI / HDMI

Fiber		**DL-DVI**		**HDMI**	
Signal Format	Fiber Optic	Signal Format	Dual-link DVI	Signal Format	HDMI 1.4
Physical Connector	LC	Physical Connector	24+5 pins/DVI-I	Physical Connector	HDMI Type A
Resolution	1920*1080@60Hz	Resolution	2560*1600@60Hz, 3840*2160@30Hz	Resolution	2560*1600@60Hz, 3840*2160@30Hz
Transmission Distance	5KM	Impedance	50Ω	Pixel Clock	330M
Back-end Device	TRIF-HFT-500-TX	Maximum Data Rate	9.90Gbps	Maximum Data Rate	10.2Gbps

CHASSIS PARAMETER

Models	Chassis	Dimension (mm) W x H x D	Input Slots	Output Slots	Models	Chassis	Dimension (mm) W x H x D	Input Slots	Output Slots
BVP1000-Pro	2U	438 x 89 x 380	2	2	BVP2000-Pro	4U	438 x 178 x 380	6	2
	4U	438 x 178 x 380	4	4		8U	438 x 356 x 380	13	4.5
	8U	438 x 356 x 380	8	9		14U	438 x 623 x 380	24	9
	14U	438 x 623 x 380	16	18		22U	438 x 979 x 380	32	18
	20U	438 x 890 x 380	32	18					
	28U	438 x 1246 x 380	32	36					