



VWPC Series Video Wall Processor

VitBest's VWPC series video wall processor is a high performance video / image processing system adopted pure hardware wire speed architecture. This series processor is applied widely in educational institute, government notice, information publication, administrative management, military command, exhibition display, security monitoring, sales activities etc. with powerful signal processing ability, it is capable of multiple HD / UHD image / video signal sources capturing, real-time high-resolution digital signal processing, and complex image conversion functions.

Adopted patent no frame loss algorithm, this processor solves the frame loss problems to traditional video wall processor, and reaches up the highest level of image/video quality and signal fresh rate fidelity.

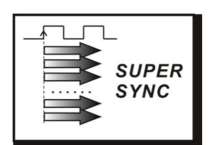
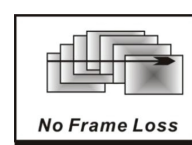
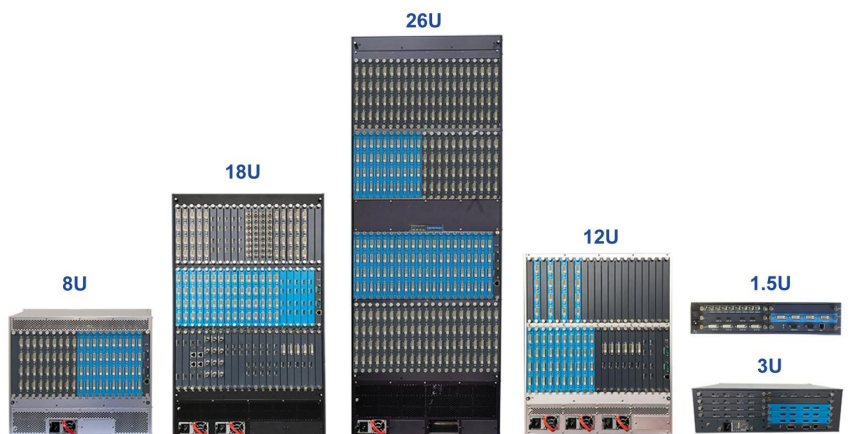
UHD video wall processor adopted modular I/O video card and can mix with different format cards, the processor can receive multiple signals commonly seen as HDMI / DVI / VGA / YPbPr / CVBS, and also UHD signals as DisplayPort / HDMI / Dual link DVI, to achieve floating sub-window in high-resolution, roaming, zooming in applications, it is compatible with all sorts PC input native and self-defined resolution, and also fulfill non-standard output resolution self-defined and optimization.

FEATURES

- High Performance Architecture
- Hardware based FPGA architecture
- Multi-window Layout
- Flexible multiple input signals as multi-window layout capability, allows for multi-window roaming functions and variety of signal formats.
- Per output card (1080p or 4k) upto 8 channel HD windows

FUNCTIONS

- Sub-screen roaming
- Window zooming
- Flexible split
- PIP
- Signal black border erasing / cropping
- Seamlessly switching in real time
- Scan line and refresh rate doubling
- EDID configuration management



SPECIFICATION

VWPC series video wall processor

SIGNAL SOURCE INPUT	
Input Card and Signal Format Supported	Mix with various input cards capable of many and different video formats, allows for DVI-I, HDMI, DisplayPort, VGA, DVI, Dual Link DVI, SDI, CVBS, YPbPr / YCbCr etc.
	DVI-I input is compatible with any format in HDMI, DVI, VGA, YPbPr via passive adapter;
	DisplayPort 1.2 / HDMI 2.0 input allows for 4K@60Hz and other self-defined resolutions; DisplayPort 1.1 / HDMI 1.4b/Dual link DVI allows for 4K@30Hz and other self-defined resolutions.
Max Num. of Input Cards	3 cards / 1.5U; 7 cards / 3U; 18 cards / 8U; 38 cards / 12U; 39 cards / 18U; 40 cards / 26U
Output Card & Signal Format Supported	Support DVI-I, HDMI, HDMI 4K, Dual link DVI and DP etc.
Max Num. of Output Cards	2 cards / 1.5U; 5 cards / 3U; 10 cards / 8U; 20 cards / 12U; 20 cards / 18U; 40 cards / 26U
Total Cages	5 Cage / 1.5U; 9 Cage / 3U; 20 Cage / 8U; 40 Cage / 12U; 59 Cage / 18U;
Other Image/Video Processing Function Image/Video Processing Capability	80 Cage / 26U
	Other Image/Video Processing Function
	Support one complete image split by multiple screens, window overlap and across another screen.
	Support all signal output in sync.
	Support window PIP, overlap, roam, move, zoom and crop etc.
	Support any rectangle shaped screen jointing, support output remaps for quick restart when power down or reset.
Support projectors installed in any angle. (optional)	
Network Control	RJ—45 X1, adaptive for cable up10M/100M, open API
Serial Port Control	RS—232X 2, can be controlled by the 3rd part device as switcher or screen.
Panel Control	Support visual touch pad and real-time display. (optional)
Power Supply	AC 100~240V / 50Hz ~ 60Hz
Working Temperature	0—70°C
Working Humidity	15-85%
Operating System	No operating System, pure hardware
Startup Time	Less than 3 seconds
Weight	Based on the real configuration
Accessories	AC Power cable 1.5m length RS232 serial port cable, 2m length network cable with RJ45 plug Software CD

IMAGE/VIDEO CARD INTRODUCTION

INPUT VIDEO CARD

1) Multi format Input card with 4 channels DVI-I inputs



Connectors: 4 DVI-I input connectors (capable of supporting HDMI / DVI / VGA / YPbPr via conversion adapter)

Input Format	HDMI / DVI / VGA / YPbPr
Input Signal Electrical Level	Refer to all sorts signal standards
Electrical Resistance	50ohm
Input Band Width	165Mhz
Input Channels	4
Power Consumption	18W
Resolution	Up to 1920x1200@60Hz

3) Input card with 4 channels DVI-D input



Connectors: 4 DVI-D input connectors capable of supporting HDMI / DVI)

Input Format	HDMI / DVI
Input Signal Electrical Level	Refer to all sorts signal standards
Electrical Resistance	Differential 100ohm
Input Band Width	165Mhz
Input Channels	4
Power Consumption	18W
Resolution	Up to 1920x1200@60Hz

5) 4K30 Input card with 2 channels DisplayPort inputs



Connectors: DisplayPort 1.1a

Input Format	DisplayPort 1.1a
Input Signal Electrical Level	CML
Electrical Resistance	Differential 100ohm
Input Band Width	360MHz
Input Channels	2
Power Consumption	12W
Resolution	Up to 3840x2160@30Hz, 3840x1200@60Hz

7) Input card with 4 channels 3G/HD/SD SDI inputs



Connectors: BNC female connectors X4

Input Format	3G / HD / SD SDI
Input Signal Electrical Level	2.0V VPP
Electrical Resistance	75ohm
Input Band Width	2.97gbps
Input Channels	4
Power Consumption	12W
Resolution	SDI standard / Up to 1920x1080@60Hz

2) Input card with 4 channels HDMI inputs



Connectors: HDMI input connectors (Type A)

Input Format	HDMI 1.3 / DVI 1.0
Input Signal Electrical Level	TMDS sink standard
Electrical Resistance	50ohm
Input Band Width	165Mhz
Input Channels	4
Power Consumption	12W
Resolution	Up to 1920x1200@60Hz

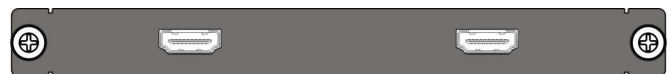
4) 4K30 Input card with dual link DVI/ DisplayPort inputs



Connectors: Dual link DVI (24+1) or DisplayPort 1.1a

Input Format	Dual link DVI-D or DisplayPort 1.1a
Input Signal Electrical Level	TMDS /CML
Electrical Resistance	Differential 100ohm
Input Band Width	330MHz
Input Channels	2
Power Consumption	12W
Resolution	Up to 3840x2160@30Hz, 3840x1200@60Hz

6) 4k30 HDMI input card with 2 channels inputs



Connectors: HDMI input connectors (Type A)

Input Format	HDMI 1.4b / DVI 1.0
Input Signal Electrical Level	TMDS sink standard
Electrical Resistance	Differential 100ohm
Input Band Width	300MHz
Input Channels	2
Power Consumption	12W
Resolution	Up to 3840x2160@30Hz

8) Input card with 8 channels Cvbs inputs



Connectors: BNC female connectors X 8

Input Format	PAL / NTSC / SECAM
Input Signal Electrical Level	1.0V VPP
Electrical Resistance	75ohm
Input Band Width	27MHz
Input Channels	8
Power Consumption	12W

9) 4k60 HDMI input card with 2 channels inputs



Connectors: HDMI input connectors (Type A)

Input Format	HDMI 2.0
Input Signal Electrical Level	TMDS sink standard
Electrical Resistance	Differential 100ohm
Input Band Width	300MHz
Input Channels	2
Power Consumption	12W
Resolution	Up to 3840x2160@60Hz, 3840x1080@120Hz

10) 4k60 DP input card with 2 channels inputs

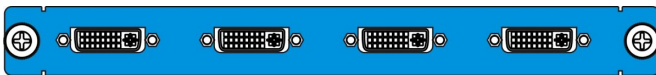


Connectors: DisplayPort 1.2

Input Format	DisplayPort 1.2
Input Signal Electrical Level	CML
Electrical Resistance	Differential 100ohm
Input Band Width	360MHz
Input Channels	2
Power Consumption	12W
Resolution	Up to 7680x2160@30Hz, 3840x2160@60Hz, 3840x1080@120Hz

OUTPUT VIDEO CARD

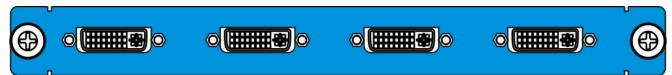
1) 4 channels DVI-I output card



Connectors: DVI-I (VGA output via conversion adapter) x4

Output Format	HDMI / DVI / VGA
Output Signal Electrical Level	Refer to all sorts signal standards
Electrical Resistance	Differential 100ohm
Output Band Width	165MHz
Output Channels	4
Power Consumption	20W
Resolution	Nonstandard resolution/Up to 1920x1200@60Hz

2) 4 channels DVI-I enhancement output card



Connectors: DVI-I (VGA output via conversion adapter) x4

Output Format	DVI / VGA
Output Signal Electrical Level	Refer to all sorts signal standards
Electrical Resistance	50ohm
Output Band Width	165MHz
Output Channels	4
Power Consumption	20W
Resolution	Nonstandard resolution/Up to 3840x2160@30Hz, 3840x1200@60Hz

3) 4 channels HDMI output card



Connectors: HDMI 1.3 X4

Output Format	HDMI / DVI
Output Signal Electrical Level	TMDS source
Electrical Resistance	Differential 100ohm
Output Band Width	165MHz
Output Channels	4
Power Consumption	20W
Resolution	Nonstandard resolution / Up to 1920x1080@60Hz

4) 4 channels 3G/HD/SD SDI output card



Connectors: BNC female connectors X4

Output Format	3G / HD / SD SDI
Output Signal Electrical Level	2.0Vpp
Electrical Resistance	75ohm
Output Band Width	2.97Gbps
Output Channels	4
Power Consumption	12W
Resolution	Up to 1920x1080@60Hz SDI standard / Up to 1920x1080@60Hz

5) 2 channels DVI Creative splicing vertical screen output card



Connectors: DVI-I

Output Format	HDMI / DVI
Output Signal Electrical Level	TMDS
Electrical Resistance	Differential 100ohm
Output Band Width	165MHz
Output Channels	2
Power Consumption	20W
Resolution	Nonstandard resolution/Up to 1920x1200@60Hz

6) 2 channels DVI creative splicing 360-degree rotation output card



Connectors: DVI-I

Output Format	HDMI / DVI
Output Signal Electrical Level	TMDS
Electrical Resistance	Differential 100ohm
Output Band Width	165MHz
Output Channels	2
Power Consumption	20W
Resolution	Nonstandard resolution/Up to 1920x1200@60Hz

7) 2 channel HDMI 4K30 output card



Connectors: HDMI1.4b

Output Format	HDMI
Output Signal Electrical Level	TMDS
Electrical Resistance	Differential 100ohm
Output Band Width	300MHz
Output Channels	2
Power Consumption	20W
Resolution	Up to 3840x2160@30Hz, 3840x1200@60Hz

9) 4 channels analog audio input/output card



Connectors: 3.5mm audio plug

Output Format	3.5mm
Output Signal Electrical Level	2Vrms
Electrical Resistance	75ohm
Maximum Sampling Rate	192KHz
Output Channels	4/4
Power Consumption	10W

8) 2 channel HDMI 4K60 output card



Connectors: HDMI 2.0

Output Format	HDMI
Output Signal Electrical Level	TMDS
Electrical Resistance	Differential 100ohm
Output Band Width	600MHz
Output Channels	2
Power Consumption	20W
Resolution	Up to 3840x2160@60Hz, 3840x1080@120Hz

10) System control card



Connectors: RS232 I/O 100M RJ45 network port

Network Port	100 / 10M adaptive
Default Network Address	192.168.1.200
RS232 Baud rate	9600
RS232 communication protocol	No parity bit, 8data bite, 1 stop bite
RS232 loop out	Yes
Power Consumption	10W

