SV–4K Ultra HD
Multi viewer Display System

- 3840×2160 resolution panel
- 50/60 frames per second refresh rate
- Standard Rec.709 color space
- Incorporates 16×4 router operating independently of multi-viewer matrix
- Simple set-up with intuitive user interface
- Full function remote control panel and iPad application for multi-viewer presets and router function includes re-assignment for on screen source video in real time

AURORA1600 Ultra HD 4K ULTRA HD Monitor Wall Packages

Introduction

Broadcast and streaming video are transitioning from SD to HD and now UHD at a rapid pace. Display of these signals require a traditional Multi viewer plus 4 HD display panels that require a large space to deliver the same image quality of OSEE's Aurora Multi-viewer with a single 4K display package that delivers the same functionality at a fraction of price and space required.

The Inherent Technical Flaws of
Multi viewer plus HD Resolution Display

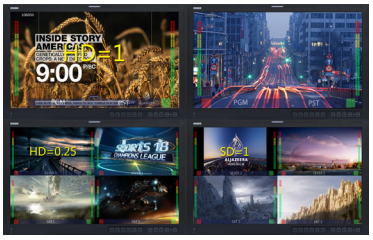
- **Degraded signal with multiple windows on an HD resolution display**

  Take the example of a typical layout of 2 + 8 windows on the single screen, let's say the displayed signals are SD-SDI. Two ¼ screen windows can be shown in a pixel to pixel manner and other smaller windows are presented at 25% of its native resolution. In an SD environment this single screen layout cab meets the needs of basic monitoring purpose. However in the same single HD screen configuration is displaying HD-SDI, the resolution of 2 larger windows are reduced to 25% of native resolution and the 8 smaller windows are only 6.25% of HD native resolution. There is no doubt the display quality at this resolution is nothing but merely a vague image.

- **Comprise to the less number of windows to exchange for quality monitoring?**

  In order to satisfy the needs of high quality HD monitoring, there are often only 4 windows per screen and the amount of screens is quadrupled, and the advantage of using a multi-view system in a space limited environment versus a traditional multiple screen monitor wall may be of little difference in space required.

HD Display



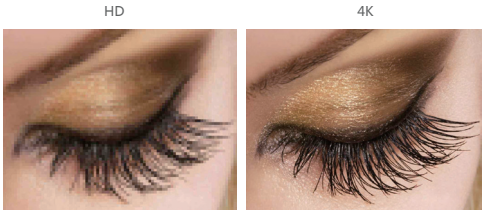
Monitor + Multi viewer

4K Display

Advantages of
AURORA1600 plus 4K Broadcast Monitor

01

- When 4K monitor is used as a display screen from multi viewer some big images can be displayed in pixel to pixel to ensure more details to be observed.



02

- The signal displayed on the common 4K monitor with Rec.2020 color space may result in false color, but OSEE avoids this error using standard HD Rec.709 color space. This tailors the multi viewer for display of HD-SDI, features accurate color and grey level reproduction.

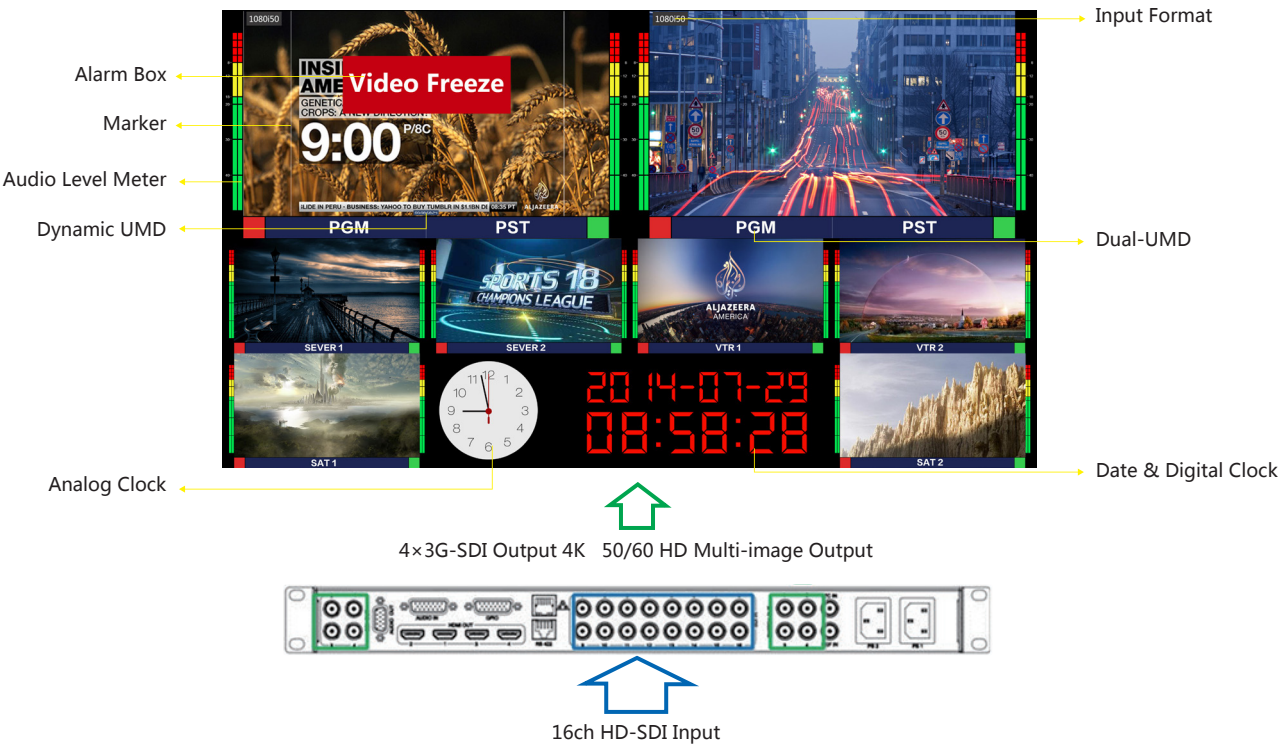
03

- Quad-link 3G-SDI or 4ch HDMI high-speed interfaces can achieve 50/60Hz progressive frame rate display at 3840×2160 resolution.

Conclusion

OSEE has developed an integrated design of the multi-image processor and the display unit with the latest 4K display panel technology and high-speed signal processing.

SV-4K features flexible layout, which means the window can be put anywhere in the screen with any size; images from SV-4K is 4 times clarity than traditional Multi viewer plus HD display unit; for HD signal monitoring the space required can be minimized to a single screen with window quantity, resolution, color and grey level reproduction.



UHD 4K Monitor

		LMW-650-4K	LMW-550-4K	LMW-420-4K
Panel	Size (inch)	65	55	42
	Resolution	3840×2160		
	Color Depth	1.07B		
	Viewing Angle (deg)	178(H)×178(V)		
	Brightness (cd/㎡)	450	400	350
	Contrast Ratio	1400:1	4000:1	5000:1
Input	3G / HD / SD-SDI	4×BNC		
	HDMI	4×DVI-D		
	Analog Audio	2×RCA		
Output	3G / HD / SD-SDI	4×BNC		
	Analog Audio	2×RCA		
	Speaker	2×4Ω 5W		
	Earphone	3.5mm mini jack		
External Control	GPI	6 GPI Input, D-sub9(×1)		
	RS485	2×RJ45(can be cascaded)		
	Ethernet	1×RJ45		
General	Power	AC 100-240V 50/60Hz		
	Power Consumption	240W	180W	120W
	Operating Temperature	32 ℉ (0℃) to 95 ℉ (35℃) commended: 68 ℉ (20℃) to 86 ℉ (30℃)		
	Operating Humidity	20% to 80% (no condensation)		
	Storage Temperature	-4 ℉ (-20℃) to +140 ℉ (+60℃)		
	Storage Humidity	0% to 90%		
	Main Body Dimensions	1461×837×81(mm) / 57.5×32.9×3.2(inch)	1245×715×81(mm) / 49.0×28.1×3.2(inch)	954×553×81(mm) / 37.6×21.8×3.2(inch)
	Weight (Net)	39kg (86.0lbs)	28kg (61.7lbs)	21kg (46.3lbs)
	Accessories Included	AC Power Cord (1), Desk Stand (1), CD-ROM(1)		
SDI Signal Format	PAL	576i50		
	NTSC	480i59.94		
	SMPTE 274	1080p:50,59.94,60		
		1080p:23.98,24,25,29.97,30		
		1080i:50,59.94,60		
		1080PsF:23.98,24,25,29.97,30		
	SMPTE 296	720p:23.98,24,25,29.97,30,50,59.94,60		
	SMPTE 260	1035i:59.94,60		

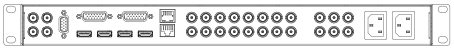
*Specifications are subject to change without notice.

Introduction of AURORA1600

The AURORA1600 is a multi-image processor that combines OSEE's advanced technology for multi-screen controller with high density matrix signal routing. The AURORA1600 features easy programming, high quality multi-image display, and excellent splicing function for a variety of monitor wall applications and configurations, and a host of newly conceived features. Due to the modular design, customers can choose the inputs and outputs according to their need. With high performance, reliability and affordable price, it is widely used in channel play-out, master control, studios, ob van, command centers, video conferences, staging, live concerts and video walls.

Front Panel

Rear Panel



Features of Aurora1600 Introductory Package

- Auto-sensing of 16ch 3G/HD/SD-SDI
- 4ch SDI/HDMI output
- 4ch matrix router output
- Presents up to 16 framed images on a single screen
- Cross-screen display
- 16ch GPI input and 4ch GPO output
- LTC and UTC time calibration
- Up to 1920×1080P50/60 resolution output on 4 independent HD screens
- 4 outputs combined produce a single (quad link) 4k output at 50/60 frame rate
- Dual-UMD, dual-Tally, up to 8ch audio level meter display and dynamically updated UMDs
- Format, Marker and TC code display
- Video/audio alarming: Video loss, freeze, black field, audio loss, audio over high or over low
- Analog clock, digital clock and digital date function
- Includes control and set-up software
- Remote control panel operation for router outputs, layout presets, and in window source change

Specifications

Video Input

Interface: 16ch BNC

SD-SDI:

Signal: 4:2:2 SMPTE 259M-C (270Mbps)
Format: 525i60\625i50
Audio: SMPTE 274M-1994
Cable Length: 100m (Belden8281)
Return Loss: >15DB (to 270MHz)
Jitter: <0.2UI

HD-SDI:

Signal: 4:2:2 SMPTE 292M-C (1.5Gbps)
Format: 720p29.97 Hz, 720p25 Hz, 720p24 Hz, 720p59.94 Hz, 720p50 Hz, 1080i59.94 Hz /29.97 Hz (PSF), 1080p29.97 Hz, 1080i50 Hz / 25 Hz (PSF), 1080p25 Hz, 1080p23.98 Hz /24 Hz, 1080p23.98(PSF) / 24PSF, 1080i50 Hz
Audio: SMPTE 299M
Cable Length: 100m (Belden8281)
Return Loss: >15DB (5MHz to 750MHz)
>10DB(750MHz to 1.5GHz)
Jitter: <0.2UI

3G-SDI:

Signal: 4:2:2 SMPTE 259M-C (270Mbps)
Format: 1920x1080p60, 1920x1080p59.94, 1920x1080p50
Audio: SMPTE 299M
Cable Length: 100m (Belden8281)
Return Loss: >15DB (to 1.5GHz)
>10DB(1.5GHz to 3GHz)
Jitter: <0.3UI

LTC Input

Interface: 1ch BNC
Signal: SMPTE 12M-1995 (EBU-3259-E) ,SMPTE 309M

Video Output

HDMI:

Interface: 4ch HDMI
Signal: HDMI V1.3
Format: 1920x1080p50, 1920x1080p60, 1920x1080i50, 1920x1080i60
Cable Length: 15m

SDI:

Interface: 4ch BNC
Signal: 3Gbps/HD-SDI SMPTE 424M/292M
Format: 1920x1080p50, 1920x1080p60, 1920x1080i50, 1920x1080i60
Return Loss: >15DB (to 1.5GHz)
>10DB(1.5GHz to 3GHz)
Jitter: <0.3UI

Communication Interface

Network Interface

Port: One RJ45
Signal: 10 / 100 BASE-T

Serial Port (For Image Video and STL IMD):

Port: One RJ45
Signal: RS-422, SMPTE207M, EBU-3245

GPI / O Interface:

Port: One DB26
Number of Inputs: 16
Number of Outputs: 4
Signal: TTL-3.3V
Trigger Mode: Active-low

Chassis

Working Environment: Operating Temperature: 0~70; Humidity: 10%~90% no condensation; Elevation: below 100 feet (3048m)
Weight: 6.1kg (13.4lbs)
Size: 465.5 (L) x 342(W) x 44(H) mm / 18.3 (L) x 13.5(W) x 1.7(H) inch
Input Voltage: AC 100~240V
Frequency: 50-60Hz
Actual Power: 60W
Power Supply: Hot plug dual power supply

Ordering Information

Model	Description
AURORA1600A	16ch 3G/HD/SD-SDI input, up to 16 images display simultaneously, 4ch HDMI multi-image output, 4ch SDI multi-image output, 4ch SDI router output
AURORA1600	16ch 3G/HD/SD-SDI input, up to 16 images display simultaneously, 2ch HDMI multi-image output, 2ch SDI multi-image output
AURORA1600-12A	16ch 3G/HD/SD-SDI input, up to 12 images display simultaneously, 4ch HDMI multi-image output, 4ch SDI multi-image output, 4ch SDI router output
AURORA1600-12	16ch 3G/HD/SD-SDI input, up to 12 images display simultaneously, 2ch HDMI multi-image output, 2ch SDI multi-image output
AURORA1600-8A	16ch 3G/HD/SD-SDI input, up to 8 images display simultaneously, 4ch HDMI multi-image output, 4ch SDI multi-image output, 4ch SDI router output
AURORA1600-8	16ch 3G/HD/SD-SDI input, up to 8 images display simultaneously, 2ch HDMI multi-image output, 2ch SDI multi-image output
A16-RCP	Remote Control Panel of AURORA1600, 38 keys with the operations of router control, template select, signal source switching, audio control, volume control, audio output select, alarm on/off, Marker on/off, full screen control, etc.

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