

LG LED Bloc LSAA Series

# True Innovation Behind Simplicity









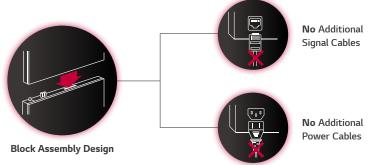
#### OPTIMUM CABLE-LESS DESIGN FOR SIMPLE INSTALLATION

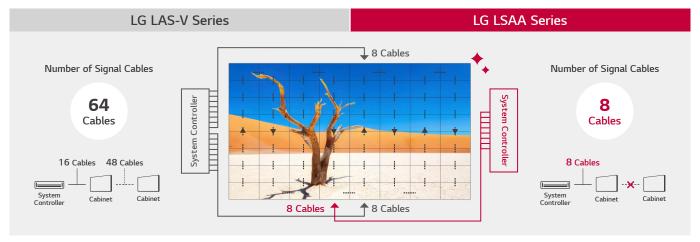


# Why "Optimum Cable-less" LED

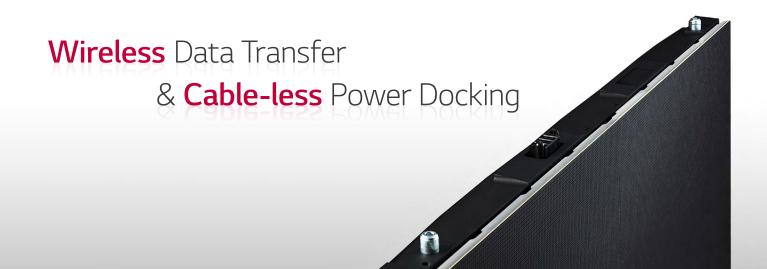
The LSAA series is the innovative LED signage applying the wireless transmission technology with \*non-contact connectors. For up to UHD resolution with the 16:9 ratio, it does not require a cable connection between the cabinets to supply signal & power. Its block assembly design makes the LSAA series easier to be installed than ever before.

\* Non-Contact Connectors: Near-field wireless connectors that use RF(Radio Frequency) to transmit and receive data between two devices.

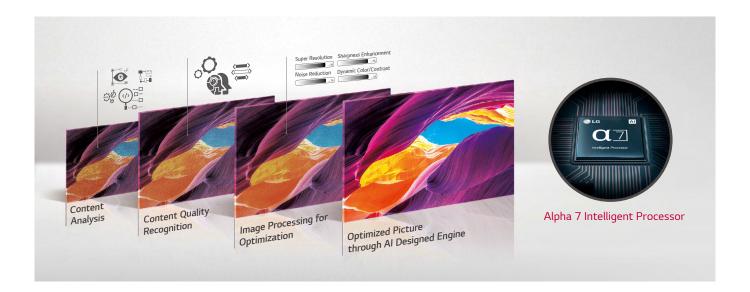




<sup>\*</sup> Based on P1.2, 16:9, UHD Resolution (8 x 8 Cabinets)



# **POWERFUL PICTURE QUALITY**



## Optimized Image Quality with Al-powered Image Processor

The "Alpha 7 Intelligent Processor" applied to the LSAA series recognizes and analyzes the original content, optimizing the clarity and sharpness of the content for itself.

 $^{\star}$  The above functions are created by using deep learning AI technology to improve the picture quality.



# Vivid Color Expression Powered by HDR

With HDR (HDR10, HDR10 Pro\*) support, content becomes vivid with great visual impact. The wider color spectrum and greater contrast ratio allow viewers to fully enjoy lively content.

<sup>\*</sup> HDR10 Pro is LG's own HDR solution for processing HDR signal by using enhanced dynamic tone mapping.

#### **OPTIMUM LED DISPLAY FOR ENTERPRISE USAGE**





#### **Dedicated Accessories Available**

The screen size can be easily expanded as desired by using the dedicated wall mount kits. Also in case of 16:9 FHD / UHD resolution screen, 2 types of frame kit are provided so that the screen can be installed more neatly.





## Easy Remote Control Support

The LSAA series allows users to easily access the settings, such as Picture Mode, volume, etc. by using a remote control instead of connecting to a PC. It uses the same UI as general LG digital signage, so users can easily adapt to it.

#### Compatibility with AV Conference Systems

The LSAA series has been certified Crestron Connected® for a high level of compatibility with professional AV controls to achieve seamless integration and automated control\*, boosting business management efficiency.

<sup>\*</sup> The easy-viewing UI menu is available for over 1,280  $\times 720$  resolution screens.

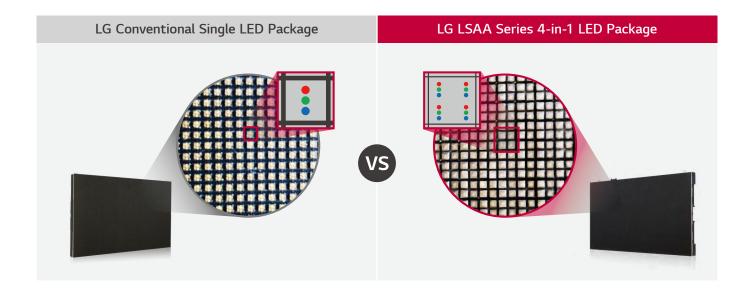
<sup>\*</sup> Network-based control

#### **DELICATE FEATURES CONSIDERING UP-CLOSE USE**



#### **EMC Class B Certified**

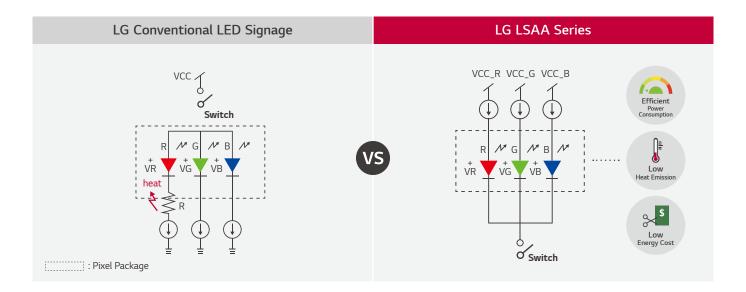
The LG LSAA Series is certified as EMC Class B, which requires electronic equipment made for use in residential environments as well as commercial, industrial, or business environments. Therefore, it is suitable for up-close uses such as corporate meeting rooms, board rooms, etc.



## 4-in-1 LED Package

Unlike LG's conventional LED signage in which one light source constitutes one small LED package, the LSAA series has applied four light sources at once to its wider LED package. So the attached area of 4-in-1 LED package can be wider than the conventional single LED package, making the LED signage surface smoother and suitable for up-close uses such as corporate meeting rooms etc.

#### **ENHANCED POWER EFFICIENCY**



#### **Energy Saving Power System**

By applying Common Cathode Drive-IC, LSAA supplies the right necessary voltage to each R/G/B sub-pixel individually, ensuring efficient power consumption.



## Standby Mode

When there is no input signal for a period of time, the screen turns off and the main circuit parts inside the LED cabinet go to a standby mode. This saves additional power consumption and enables the product to be reactivated simply by using a remote control.

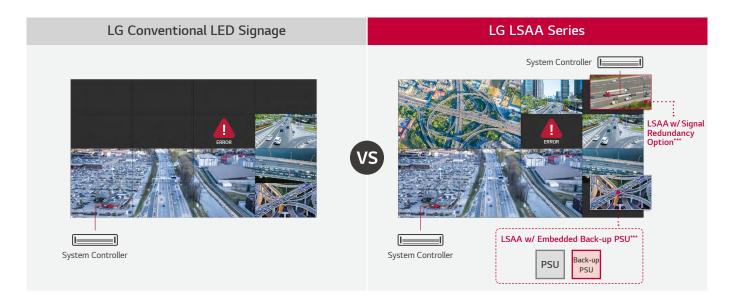
#### **DELICATE FEATURES FOR OPERATION AND MANAGEMENT**



#### Real-time ConnectedCare Service

Maintenance is easy and fast with the optional ConnectedCare\* service, a cloud service solution provided by LG. It remotely manages the status of displays in client workplaces for fault diagnosis and remote-control services, enabling the stable operation of clients' businesses.

 $\hbox{$^*$ Connected Care is the brand name of LG Signage 365 Care Service. The availability differs by region.}\\$ 



# Power/Signal Redundancy Support

The LSAA series is designed to support redundancy of signal and power, providing users with comfort. With optional embedded back-up power supply unit and signal redundancy, customers can assure the continuous operation of the screen without power failure, while the dual controllers minimize screen failure with a bi-directional signal input.

<sup>\*</sup> The "Conventional" shown above refers to LED displays which do not support the power/signal redundancy mode.

<sup>\*\*</sup> The power/signal redundancy features are available from the fourth quarter of 2020.

<sup>\*\*\*</sup> The power/signal redundancy models are optional.

# **USAGE SCENES**













#### **PRODUCT INFORMATION**



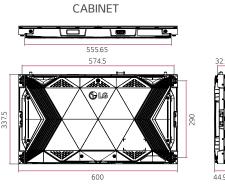
webOS LG SuperSign

Cabinet	LSAA009	LSAA012
Pixel Configuration	SMD, 4 Pixels in 1 PKG	
Pixel Pitch (mm)	0.93	1.25
No. of Modules per Cabinet (W × H)	2 × 3	
Cabinet Resolution (W × H)	640 × 360	480 × 270
Cabinet Dimensions (W × H × D, mm)	600 × 337.5 × 44.9	
Brightness	600 nit (Typ.), 1,200 nit (Peak)	
Contrast Ratio	4,000 : 1 (Typ.), 8,000 : 1 (Peak)	

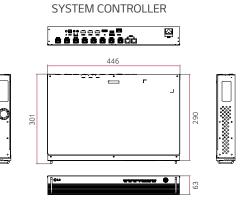
System Controller	CSAA-009	CSAA-012
Resolution	UHD (3,840 × 2,160)	
Input Signal	HDMI (3), DP (1), USB 2.0 (1)	
Output Signal	Ethernet (5 GB × 8 ea	a), SPDIF (Audio, 5.1 ch)
Control	IR, RS232C In	/Out,Ethernet
HDR Compatibility	HDR10,	HDR10 Pro
Built-in Wi-Fi		Yes
Storage	1	16 GB
Image Enhancement		Gamut Mapping, Low Latency, (External Brightness Sensor)
Dimension (W × H × D, mm)	446 × 63 × 301	

#### **DIMENSION**

(unit: mm)



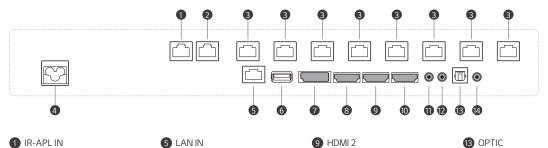




**14** IR

## **CONNECTIVITY**

SYSTEM CONTROLLER



- 1 IR-APL IN
- 2 IR-APL OUT
- 3 Ethernet (5 Gbps)
- 4 AC-IN
- 5 LAN IN
- 6 USB 2.0 IN
- 7 DP
- 8 HDMI 1
- 9 HDMI 2
- **10** HDMI 3
- 11 RS-232C IN
- 12 RS-232C OUT





<sup>\*</sup> Dimensions & Jack Panels may differ from the above image, so please contact LG sales team to verify before ordering.

## **SPECIFICATIONS**

Peacl Configuration		Model	LSAA012MX/SX
Module Resolution (W. xh t)		Pixel Configuration	4 in 1 Package
Module Dimensions (W x H)   300 x 112.5 mm		Pixel Pitch (mm)	1.25 mm
Weight per Module		Module Resolution (W x H)	240 x 90
PHYSICAL   PARAMÉTERS		Module Dimensions (W x H)	300 x 112.5 mm
Number of Modules per Unit. Case (W x H)		Weight per Module	0.2 kg
PMYSICAL   DINT Case Resolution (W x H)		LED Package Manufacturer	Xindeco
PARAMETERS   Unit Case Dimensions (M x H x D)		Number of Modules per Unit Case (W x H)	2 x 3
Unit Case Surface Area   0.203 m²   Weight per Unit Case   6.9 kg	PHYSICAL	Unit Case Resolution (W x H)	480 × 270
Weight per Unit Case	PARAMETERS	Unit Case Dimensions (W x H x D)	600 x 337.5 x 44.9 mm
Weight per Unit Area		Unit Case Surface Area	0.203 m <sup>2</sup>
Physical Pixel Density		Weight per Unit Case	6.9 kg
Flatness of Unit Case   ±0.5 mm		Weight per Unit Area	34.1 kg/m²
Unit Case material		Physical Pixel Density	640,000 pixels/m <sup>2</sup>
Service access   Front and Rear		Flatness of Unit Case	±0.5 mm
Lead Type		Unit Case material	Die-cast Aluminum
Brightness (After Calibration)		Service access	Front and Rear
Color Temperature		Lead Type	Gold
Visual Viewing Angle (Horizontal)   160		Brightness (After Calibration)	1,200 nits (Peak) 600 nits (Typ)
OPTICAL SPECIFICATIONS         Visual Viewing Angle (Vertical)         140           Brightness Uniformity         97%           Color Uniformity         ± 0.015 Cx,Cy           Contrast Ratio         Peak. 9,000:1 Typ. 5,000:1           Processing Depth (bit)         20 (HDR10, HDR10 Pro)           Max Power Consumption per Unit         64.02 W           Average Power Consumption per Unit Area         526.9 W/           Max Power Consumption per Unit Area         364 BTU           Average Power Consumption per Unit Area         1,798 BTU           Max Power Consumption per Unit Area         1,798 BTU           Max Power Consumption per Unit Area         1,798 BTU           Max Power Consumption per Unit Area         1,798 BTU           Power Supply         100 to 240 V           Frame Rate         3840 Hz           Ufetime (Half brightness)         100000 Hours           OPERATION SPECIFICATIONS         100000 Hours           OPerating Temperature         0 to +40 °C           Operating Humidity         10-80% RH           IP rating Front         1P20           IP rating Rear         1P20           IEC 60950-1 (Safety)         Yee		Color Temperature	6,500K / 2,800-10,000K, (Adjustable by LED Assistant on PC)
Brightness Uniformity		Visual Viewing Angle (Horizontal)	160
Color Uniformity	OPTICAL	Visual Viewing Angle (Vertical)	140
Contrast Ratio   Peak. 9,000:1 / Typ. 5,000:1	SPECIFICATIONS	Brightness Uniformity	97%
Processing Depth (bit)   20 (HDR10, HDR10 Pro)		Color Uniformity	± 0.015 Cx,Cy
Max Power Consumption per Unit		Contrast Ratio	Peak. 9,000:1 / Typ. 5,000:1
Average Power Consumption per Unit		Processing Depth (bit)	20 (HDR10, HDR10 Pro)
Max Power Consumption per Unit Area   526.9 W/		Max Power Consumption per Unit	106.7 W
Max Power Consumption per Unit		Average Power Consumption per Unit	64.02 W
Average Power Consumption per Unit		Max Power Consumption per Unit Area	526.9 W/
Average Power Consumption per Unit   Max Power Consumption per Unit Area   1,798 BTU		Max Power Consumption per Unit	364 BTU
Max Power Consumption per Unit Area   1,798 BTU		Average Power Consumption per Unit	218.4 BTU
Frame Rate   50 / 60 Hz	31 ECH ICAHONS	Max Power Consumption per Unit Area	1,798 BTU
OPERATION SPECIFICATIONS         Refresh Rate         3840 Hz           OPERATION SPECIFICATIONS         100000 Hours           OPERATION SPECIFICATIONS         0 to +40 °C           OPERATION SECTION SECT		Power Supply	100 to 240 V
OPERATION SPECIFICATIONS         Lifetime (Half brightness)         100000 Hours           Operating Temperature         0 to +40 °C           Operating Humidity         10-80% RH           IP rating Front         IP20           IP rating Rear         IP20           IEC 60950-1 (Safety)         Yes		Frame Rate	50 / 60 Hz
OPERATION SPECIFICATIONS         Operating Temperature         0 to +40 °C           Operating Humidity         10-80% RH           IP rating Front         IP20           IP rating Rear         IP20           IEC 60950-1 (Safety)         Yes		Refresh Rate	3840 Hz
OPERATION SPECIFICATIONS         Operating Humidity         10-80% RH           IP rating Front         IP20           IP rating Rear         IP20           IEC 60950-1 (Safety)         Yes    CERTIFICATIONS &  ECC Part 15 (Jack B (FMC))  Yes		Lifetime (Half brightness)	100000 Hours
SPECIFICATIONS         Operating Funition(y)         10-60% KH           IP rating Front         IP20           IP rating Rear         IP20           IEC 60950-1 (Safety)         Yes           CERTIFICATIONS &         FCC Part 15 (Jacs B (FMC)		Operating Temperature	0 to +40 °C
		Operating Humidity	10-80% RH
IEC 60950-1 (Safety)		IP rating Front	IP20
CERTIFICATIONS & ECC Part 15 Class R (FMC) Vac		IP rating Rear	IP20
CERTIFICATIONS & ECC Part 15 Class R (FMC) Vac	CERTIFICATIONS & STANDARDS	IEC 60950-1 (Safety)	Yes
ZIAIVUAKUZ			
RoHS (Environmental) Yes		RoHS (Environmental)	Yes

	Controller Model	CSAA-012X
	Loading Capacity	3840 x 2160 @ 60HZ
	Output Resolution	8.2944 Million Pixels
	Input Interface	HDMI 2.0, DP 1.2
	Loop	No
	Output Ethernet	8-channel
	Output optical	No
	Control Interface	IR(1), RS232C In(1)/Out(1), Ethernet(1), USB(1)"
	Cascading	No
	Sensor interface	Ambient Light Sensor
	HDCP	HDCP 2.2
	Brightness Adjustment	Yes
LED CONTROLLER	Chroma Adjustment	Yes
	Improved Grayscale at Low Brightness	Yes
	Scaling	Yes
	HDR	HDR 10 PRO
	Content Management	SuperSign CMS
	Signage365 Care	Yes
	webOS	v4.0
	Configuration Software	LED Assistant
	Custom EDID Support	No
	Signal Redundancy	Yes
	Dimensions (W x H x D)	443 x 63 x 298 mm
	Weight	4.5 kg
	Product Compatibility	LSAA012MX/SX





