SAMSUNG

Outdoor Display

OHA, OHB series

Deliver bright and brilliant messages, built for the outdoors

SEC et al. v. MRI
SEC Exhibit 1046.001
IPR2023-00255

Vivid and versatile display demand on the rise

The role of displays has expanded across industries, with digital boards now trending as an alternative to static images, particularly in outdoor environments such as drive thrus, gas and EV charging stations, and even signposts. Content in these environments must be visible even under bright light, while also remaining stable and durable against a variety of tough conditions for optimized business performance. The right digital signage not only provides a higher level of customer experience, but also maximizes operational efficiency through flexible signage management for an optimized solution.

Outdoor optimization for your business with Samsung outdoor display

High visibility for clear, more concise communication

Businesses can deliver active product promotions with clear visibility in any bright external lighting conditions*, regardless of whether it's day or night. This enables customers to make the best possible choices, ensuring a satisfactory experience to create future sales opportunities.

* This is the result of testing based on outdoor environmental conditions of 10,000 lux or higher.

Flexible and robust hardware to enhance any business

Outdoor displays require certification to ensure they can perform in a variety of conditions, from snow and rain, to strong sunlight and even external physical impact. Typically, providing this robust durability requires bulky hardware, but Samsung's OHA and OHB series offer a slim design that blends well in a variety of outdoor environment.

* IP56 (Ingress Protection Rating): Degrees of protection provided by enclosures (IEC 60529)
* The IK European strength test rating uses a 0-10 scale (where 10 indicates the highest possible protection) to measure the degree of resistance against external impact.

Reliable and advanced software for effective management

Stable content playback is enabled by Tizen, while real-time, seamless display operation is made possible with MagicINFO CMS. As a result, promotions and content throughout a network of signage can be effectively adjusted according to the time and place, reinforced by strong security that protects against external threats such as hackers.

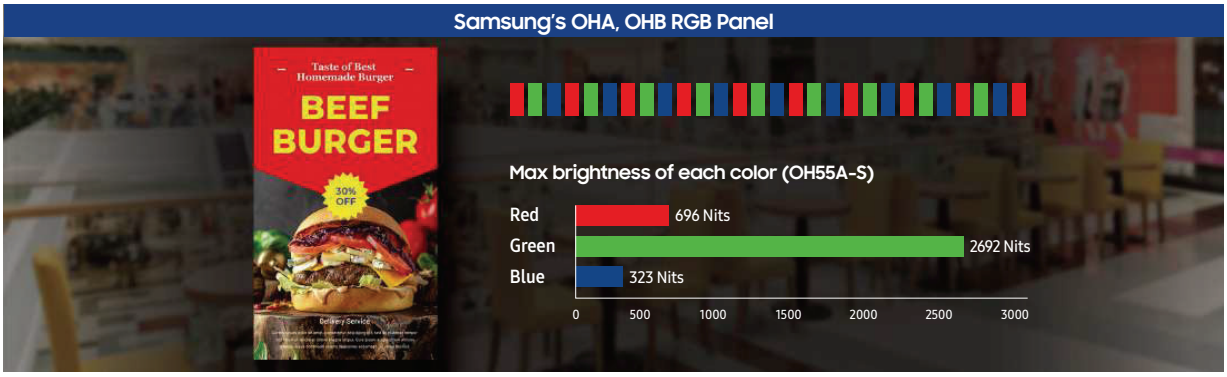
SEC et al. v. MRI
SEC Exhibit 1046.002
IPR2023-00255

Eye-catching visuals from everywhere

Clear and vivid anytime, anywhere Newly upgrade

The OHA and OHB are UL-verified for outdoor visibility and offers brightness levels greater than 3,500nits. The OHA and OHB's 24/7 performance delivers crisp and vivid content with a built-in auto-brightness sensor, which automatically adjusts the brightness based on any external lighting for a versatile and operationally efficient display.

* Images and enclosure are simulated and for illustration purpose only.



Bright and vivid colors for accurate communication and delivery

The OHA and OHB series deliver advanced color accuracy and brightness, creating vivid content through enhanced color reproduction of all red, green and blue shades. With crisp content being what customers now expect, the OHA and OHB's uncompromised picture quality will be sure to capture customer attention.

* The max brightness of each color is based on internal measurements conducted by Samsung.
* The max brightness of each color may vary by model.

Enhanced visibility with anti-reflection technology

Samsung OH55A-S is enhanced by Magic Protection Glass, which utilizes advanced anti-reflection technology. This innovative solution ensures much better visibility when watching in broad daylight, with a total reflections rate of lower than 1.5%, ensuring clearer images and text for every viewer.

* The total reflection rate is based on internal measurements conducted by Samsung.
* The total reflection rate may vary by model.

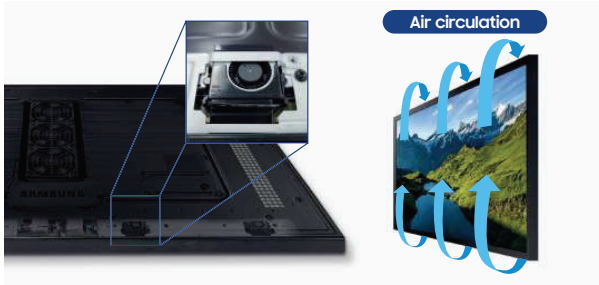
SEC et al. v. MRI
SEC Exhibit 1046.003
IPR2023-00255

Designed with durability in mind

Optimized protection in a variety of outdoor conditions

With certified IP56-rated protection, OHA and OHB deliver robust reliability to withstand physical impact as well as dust and water that might affect the display. This ensures optimized operation in a variety of outdoor conditions for consistent performance.

* IP56 (Ingress Protection Rating): Degrees of protection provided by enclosures (IEC 60529)



Prevent humidity for optimal performance with newly added fans Newly upgrade

With four newly added, hidden fans in the downside of the display, the OH55A-S and OH46B reduce concerns around external humidity issues such as condensation. The effective air propelling capabilities of the display by the fans enable seamless operation.

* Newly added fans are only available for OH55A-S and OH46B.

Robust durability for screen safety

Fitted with tempered Magic Protection Glass, the Samsung OHA and OHB provide durability that is IK10-rated, ensuring advanced safety and protection against external impact. This ensures the product is safe against unexpected damage, giving store manager better peace of mind.

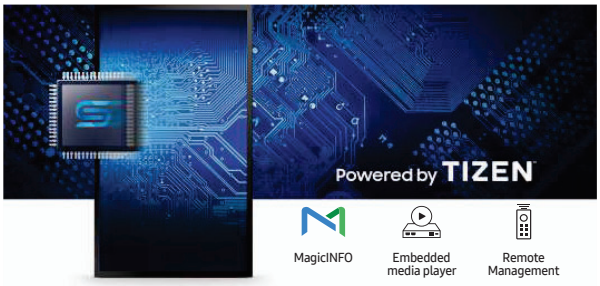
* The IK European strength test rating uses a 0-10 scale (where 10 indicates the highest possible protection) to measure the degree of resistance against external impact.

Powerful performance with slim design

A slim, all-in-one composition enables easy installation, while long-term performance is ensured through IP56 protection, anti-reflection technology, damage defense and an efficient cooling system. Plus, an integrated power box condenses operational components and supports an ultra slim frame.

* "Conventional" refers to Samsung's OHD series.
* IP56 (Ingress Protection Rating): Degrees of protection provided by enclosures (IEC 60529)
* The IK European strength test rating uses a 0-10 scale (where 10 indicates the highest possible protection) to measure the degree of resistance against external impact.
* Design including depth and bezel size may vary by model.

Optimized performance without compromise



Smooth and seamless content playback

The embedded MagicINFO Player S7, backed by the powerful TIZEN operating system, boosts the overall performance of the display and offers painless content management. This ensures seamless transitions and playback to deliver a better experience for both customers and store managers.

* MagicINFO license must be purchased separately.

Powerful, protective security

The OHA and OHB series use comprehensive three-layer security protection, powered by Samsung's proprietary Knox technology, supporting application development on the secured platform and minimization of security attacks.

SEC et al. v. MRI
SEC Exhibit 1046.004
IPR2023-00255

Suitable for various business environments

Samsung's full-outdoor series provides a versatile is suitable for a wide range of business uses. Designed to be visible in a variety of weather conditions, the OHA and OHB series provide a versatile and optimized solution for the purpose of advertising, information display, and even menu boards.

OH55A-S, OH46B

EV charging station

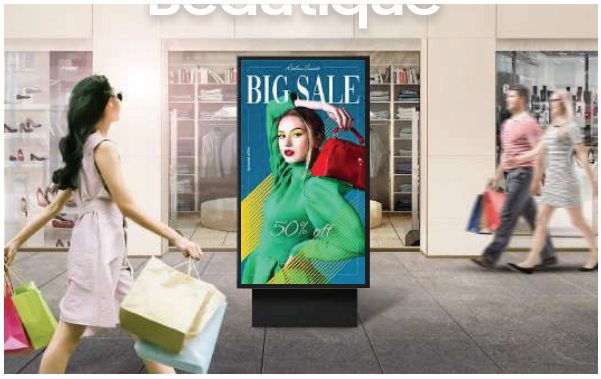
Sports arena

Art gallery

OH75A

Bus shelter

Shopping mall



Airport

SEC et al. v. MRI
SEC Exhibit 1046.005
IPR2023-00255

Specifications

Model			OH46B	OH55A-S	OH75A
Display Panel	Diagonal Size	Class	46	55	75
		Measured	45.9" / 116.8cm	54.6" / 138.7cm	74.5" / 189.2cm
	Resolution		1920x1080 (16:9)	1920x1080 (16:9)	3840x2160 (16:9)
	Brightness(Typ.)		3,500 nit (Peak 4,000nit)	3,500 nit (Peak 4,000nit)	3,500 nit (Peak 4,000nit)
	Orientation		Landscape / Portrait	Landscape / Portrait	Landscape / Portrait
	Haze		0%	0%	1%
	Contrast Ratio (Typ.)		6000:1	6000:1	1,200:1
	Type		VA	VA	VA
	Active Display Area		1018.08(H) x 572.67(V)	1209.60(H) x 680.40(V)	1649.664(H) x 927.936(V)
	Pixel Pitch (mm)		0.53 x0.53	0.630 x 0.630	0.429 x 0.429
	Color Gamut		72%	72%	72%
	Operation Hour		24/7	24/7	24/7
Connectivity / Sound	INPUT	VIDEO	HDMI 2.0 (2), HDBaseT	HDMI 2.0 (2), HDBaseT(LAN Common)	HDMI 2.0 (2)
		AUDIO	N/A	N/A	N/A
		USB	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1
		Tuner	N/A	N/A	N/A
	OUTPUT	VIDEO	HDMI 2.0	N/A	N/A
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
		USB	N/A	N/A	N/A
	WiFi / BT		N/A	N/A	N/A
	EXTERNAL CONTROL		RS232C(in/out), RJ45 (in/out), HDBaseT	RS232C (In/Out), RJ45(In/Out), HDBaseT	RS232C (In), RJ45(In)
	Speaker		N/A	N/A	N/A
Mechanical Spec	Dimension (mm)	Set	1069 x 623.6 x 85	1260.6 x 731.4 x 85	1774.8 x 1053.4 x 130
		Package	1156 x 713 x 200	1358 x 845 x 230	1932 x 1251 x 367
	Weight (kg)	Set	36	46.1	134
		Package	40.5	52.6	150
	VESA Mount		995 x 500 1000 x 400 (VESA Bracket Option)	1186 x 560 (Basic) 1200 x 400 (VESA Bracket Option)	870 x 1118.4 (M8 x 4Hole) 260 x 1118.4 (M8 x 4Hole)
	Bezel Width (mm)		24.9	24.9	59.8
Features	Internal Player	Operating System	Tizen 5.0 (VDLinux)	Tizen 5.0 (VDLinux)	Tizen 5.0 (VDLinux)
		Processor	Cortex A72 1.7GHz Quad-Core CPU	Cortex A72 1.7GHz Quad-Core CPU	Cortex A72 1.7GHz Quad-Core CPU
		Storage (FDM)	8GB (3.88GB Occupied by O/S, 4.12GB Available)	8GB (3.88GB Occupied by O/S, 4.12GB Available)	8GB (3.88GB Occupied by O/S, 4.12GB Available)
	Special	H/W	IP56 Rated Simple Enclosure Outdoor Protection Glass(IK-10 Level, Anti Graffiti, Infrared Reduce) Polarized Sun Glasses Viewable in any direction HD Base T for Long Distance Instal-lalling Auto Brightness Control with Ambient Brightness Sensor Temperature Sensor Clock Battery(80hrs Clock Keeping) Kensington Lock	IP56 Rated Simple Enclosure Outdoor Protection Glass(IK-10 Level, Anti Graffiti, Infrared Reduce) Polarized Sun Glasses Viewable in any direction HD Base T for Long Distance Instal-lalling Auto Brightness Control with Ambient Brightness Sensor, Temperature Sensor Clock Battery(80hrs Clock Keeping) Kensington Lock	IP56 Rated Simple Enclosure Outdoor Protection Glass(IK-10 Level, Anti Graffiti, Infrared Reduce) Polarized Sun Glasses Viewable in any direction Auto Brightness Control with Ambient Brightness Sensor Temperature Sensor Clock Battery(80hrs Clock Keeping)

SEC et al. v. MRI
SEC Exhibit 1046.006
IPR2023-00255

Specifications

Model			OH46B	OH55A-S	OH75A
Features	S/W		Auto Source Switching & Recovery RJ45 MDC	Auto Source Switching & Recovery RJ45 MDC	Auto Source Switching & Recovery RJ45 MDC
Certification	Safety		60950-1	60950-1	60950-1
	EMC		Class A	Class A	Class A
	Environment		N/A	N/A	N/A
	IP Rating		IP56	IP56	IP56
	Security		N/A	N/A	N/A
Power	Power Supply		AC 100 - 240 V, 50/60 Hz	AC 100 - 240 V, 50/60 Hz	AC 100 - 240 V, 50/60 Hz
	Power Consumption	Max[W/h]	460	530	1200
		Typical[W/h]	205 ※ IEC 62087 measurement standard	274 ※ IEC 62087 measurement standard	471 ※ IEC 62087 measurement standard
		Sleep mode	0.5	Less than 0.5W	Less than 0.5W
Operating Condition	Temperature		-30°C~ 50°C	-30°C~ 50°C	-30°C~ 50°C
	Relative Humidity		10~100%	10~100% (Non-condensing)	10~80% (Non-condensing)
Accessories	Included		Quick Setup Guide Warranty Card Power Cord Remote Controller + Batteries	Quick Setup Guide Regulatory Guide Warranty Card Power Cord Remote Controller Batteries	Quick Setup Guide Regulatory Guide Warranty Card Power Cord Remote Controller Batteries
	Optional	Stand	N/A	N/A	N/A
		Mount	Sold Separately	Sold Separately	Sold Separately
		Specialty	N/A	N/A	N/A

SEC et al. v. MRI
SEC Exhibit 1046.007
IPR2023-00255

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd. inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, cameras, digital appliances, medical equipment, network systems, and semiconductor and LED solutions. For the latest news, please visit the Samsung Newsroom at news.samsung.com. For more information about Samsung Smart Signage, visit www.samsung.com/business or www.samsung.com/displaysolutions.

Smart Signage

For more information about Samsung Smart Signage OH46B, OH55A-S, OH75A Displays, visit www.samsung.com/business or www.samsung.com/displaysolutions

Copyright © 2022 Samsung Electronics Co. Ltd. All rights reserved. Samsung is a registered trademark of Samsung Electronics Co. Ltd. Specifications and designs are subject to change without notice. Non-metric weights and measurements are approximate. All data were deemed correct at time of creation. Samsung is not liable for errors or omissions. All brand, product, service names and logos are trademarks and/or registered trademarks of their respective owners and are hereby recognized and acknowledged.

Samsung Electronics Co., Ltd.
416, Maetan 3-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-772, Korea

2022-03

SEC et al. v. MRI
SEC Exhibit 1046.008
IPR2023-00255