Samsung Outdoor Signage

OHN, OHN-D Series

Deliver bright, creative messages on robust outdoor signage

Samsung's new outdoor signage, OHN series, has elevated the typical outdoor advertising experience with its bold and engaging content delivery at any bus stop or street billboard. The OHN series presents enhanced detail and true-to-life graphics in all conditions, from the most powerful sunlight to the darkest of nights, 24/7. The OHN is durable and resistant to multiple outside elements that could affect a display's performance. Also included is easy-to-use management software that allows users to control the display with ease. Samsung's OHN series will make any business stand out from the crowd with its immersive and high-quality images, attracting consumers to its brand.

Highlights

- 85" large-sized digital displays optimized for outdoor usage
- Excellent visibility under direct sunlight through 3,000 nit high brightness
- Optimal durability with IP56-rated displays and IK10-rated Magic Protection Glass
- Advanced content management via MagicINFO S6 Player powered by TIZEN

SAMSUNG

SEC et al. v. MRI
SEC Exhibit 1038.001
IPR2023-00221

Industry trend

The DOOH (Digital Out Of Home) industry is growing at such a rapid pace due to its ability to reach and target consumers on the go. The traditional media tactics businesses previously used, such as static signs, are no longer effective in providing a meaningful visual experience. Instead, more businesses are turning to digital signage as a means of advertisement. As the technical advances in digital signage have taken over, roads and bus stops are now seeking enhanced experiences for consumer engagement. Digital signage is also an efficient medium of promoting products and services with immersive screens and dynamic images. There is a desire to have flexibility and connectivity to the displays through sophisticated content management software. With the industry thriving and companies turning to digital displays, this is the present and the future.

Why Samsung OHN series?

Samsung's OHN series displays were designed for excellent visibility and dependability for outdoor use at bus stops and roadsides. With a high-brightness 3,000nit screen and a built-in dimming sensor, content can be clearly presented, day or night. The OHN series can endure extensive outdoor impact with the Magic Protection Glass and is weatherproof through IP56-rated protection. Combined with a built-in media player, users can manage the display and the content efficiently without needing additional equipment. In addition, the OHN-D series has a double-sided screen and allows users to open the display effortlessly for repair and upkeep with easy access design.

High visibility

Easy content management

High durability

Easy maintenance

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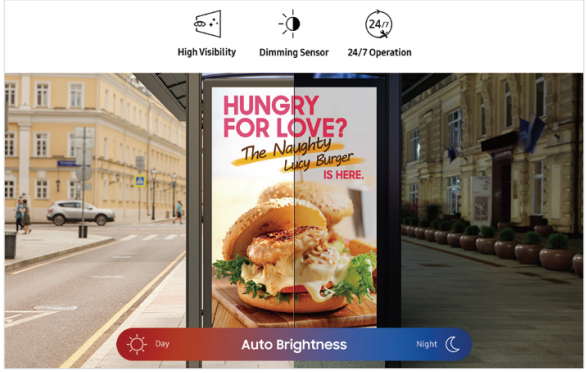
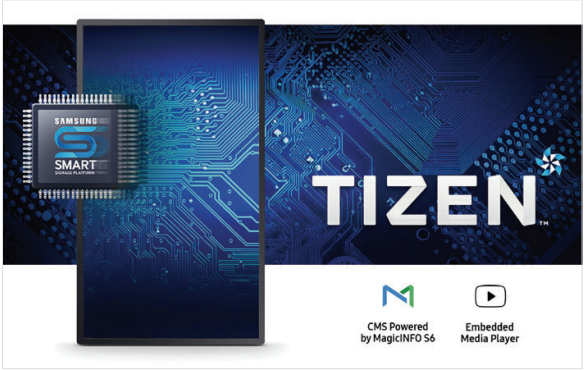
Key features



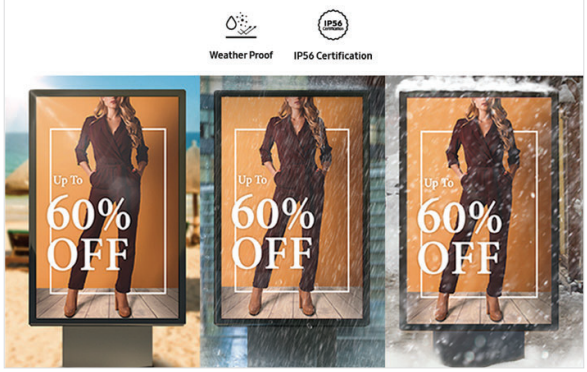
Unsurpassable visibility day and night

The OHN series allows for exceptional, consistent content delivery with 3,000nit brightness and 24/7 performance. With a built-in dimming sensor, the display automatically adjusts the brightness based on the external lighting environment, saving display operating expenses and power consumption.



Easy-to-use management software

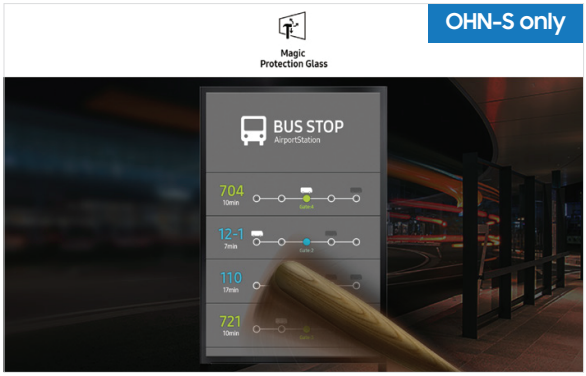
The embedded MagicINFO Player S6, backed by the powerful TIZEN operating system, boosts the display's overall performance, allows for painless content management and ensures seamless transition and playback.



Resistant to outdoor elements

The OHN series is verified to perform in outdoor settings. IP56-rated protection* ensures the OHN series will withstand physical impact as well as dust, humidity or other outdoor elements that could affect the display.

* Additional glass needed for kit type

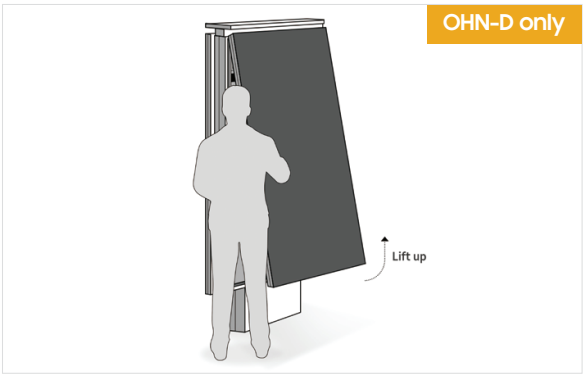


Built strong to endure impacts

The OHN series provides advanced safety through tempered Magic Protection Glass. It features durability that is IK10-rated, further proving its robust level of strength that can endure physical impact.

A double-sided screen with slim depth

The OHN-D series has two screens to highlight brilliant content and graphics on each side. With 3,000nit brightness on both sides of the display, users can double their marketing in one location with vibrant content. Its slim design is ideal for a bus shelter or street billboards.



Easy setup and maintenance

Users can easily access the inside of the OHN-D series for repair or maintenance. Simply lift the set for quick entrance to the display's inner components for any necessary updates.

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Specifications

Model			OH85N (Kit type)	OH85N-D (Kit type)	OH85N-S (with glass)
Panel	Diagonal Size	Class	85	85	85
		Measured	84.5" / 214.7cm	84.5" / 214.7cm	84.5" / 214.7cm
	Type		60Hz D-LED Local Dim. BLU	60Hz D-LED Local Dim. BLU	60Hz D-LED Local Dim. BLU
	Resolution		3840x2160 (16:9)	3840x2160 (16:9)	3840x2160 (16:9)
	Pixel Pitch(mm)		0.488 x 0.488	0.488 x 0.488	0.488 x 0.488
	Active Display Area(mm)		1872(H) x 1053(V)	1872(H) x 1053(V)	1872(H) x 1053(V)
	Brightness(Typ.)		3,300 cd/m2 (w/o glass)	3,300 cd/m2 (w/o glass)	3,000 cd/m2
	Contrast Ratio		3000:1	3000:1	3000:1
	Viewing Angle(H/V)		178/178	178/178	178/178
	Response Time(G-to-G)		8ms	8ms	8ms
	Display Colors		8 bit - 16.7M bit	8 bit - 16.7 Mbit	8 bit - 16.7M bit
	Color Gamut		72%	72%	72%
	Operation Hour		24/7	24/7	24/7
	Haze		0%	0%	0%
Display	Dynamic C/R		100,000:1	100,000:1	100,000:1
	H-Scanning Frequency		15 ~ 135KHz (HDMI), 30 ~ 135KHz (DP)	15 ~ 135KHz (HDMI), 30 ~ 135KHz (DP)	15 ~ 135KHz (HDMI), 30 ~ 135KHz (DP)
	V-Scanning Frequency		24 ~ 75Hz (HDMI), 30 ~ 75Hz (DP)	24 ~ 75Hz (HDMI), 30 ~ 75Hz (DP)	24 ~ 75Hz (HDMI), 30 ~ 75Hz (DP)
	Maximum Pixel Frequency		594MHz (HDMI), 533.25MHz (DP)	594MHz (HDMI), 533.25MHz (DP)	594MHz (HDMI), 533.25MHz (DP)
Sound	Speaker Type		N/A	N/A	N/A
Connectivity	INPUT	RGB	DP1.2	DP1.2 (2)	DP1.2
		VIDEO	HDMI 2.0 (2)	HDMI 2.0 (4)	HDMI 2.0 (2)
		HDCP	HDCP 2.2	HDCP 2.2	HDCP 2.2
		AUDIO	N/A	N/A	N/A
		USB	USB 2.0 (1)	USB 2.0 (2)	USB 2.0 (1)
	OUTPUT	RGB	N/A	N/A	N/A
		VIDEO	N/A	N/A	N/A
		AUDIO	Stereo Mini Jack	Stereo Mini Jack	Stereo Mini Jack
		USB	N/A	N/A	N/A
		Power Out	N/A	N/A	N/A
	EXTERNAL CONTROL		RS232C (In), RJ45 (In)	RS232C (In), RJ45 (In)	RS232C (In), RJ45 (In)
	EXTERNAL SENSOR		N/A	N/A	N/A
	Tuner		N/A	N/A	N/A
Power	Type		Internal	Internal	Internal
	Power Supply		AC 100 - 240 V (+/- 10 %), 50/60 Hz	AC 100 - 240 V (+/- 10 %), 50/60 Hz	AC 100 - 240 V (+/- 10 %), 50/60 Hz
	Power Consumption	Max[W/h]	1,800	3,600 (1,800x2)	1,800
		Typical [W/h]	W/W(EU) 600, US/KOR/Etc. 1,010 ※ Etc: CHINA, TAIWAN, BRA	W/W(EU) 1200 (600x2), US/KOR/Etc. 2,020 (1,010x2) ※ Etc: CHINA, TAIWAN, BRA	W/W(EU) 600, US/KOR/Etc. 1,010 ※ Etc: CHINA, TAIWAN, BRA
		BTU(Max)	6,138	12276 (6,138x2)	6,138
		Sleep mode	less than 0.5W	less than 1W	less than 0.5W
		Off mode	less than 0.5W	less than 1W	less than 0.5W
Mechanical Spec	Dimension(mm)	Set	2,004 x 1,185 x 120 mm	1,193 x 2,012 x 228 mm	2004 x 1185 x 120
		Package	2,175 x 1,383 x 495 mm (Without Pallet)	1,510 x 2,284 x 577 mm (Without Pallet)	2175 x 1383 x 495
	Weight (kg)	Set	137kg	255kg	163kg
		Package	185kg	310.6kg	211kg
	Mounting Hole		1000 x 1118.4 (M8 x 4Hole), 500 x 1118.4 (M8 x 4Hole)	N/A	1000 x 1118.4 (M8 x 4Hole), 500 x 1118.4 (M8 x 4Hole)
	Protection Glass		N/A	N/A	Yes (5T Tempered Glass)
	Stand Type		N/A	N/A	N/A
	Bezel Width (mm)		N/A	N/A	62 / 62 / 62 / 62 mm
Operation	Operating Temperature		-30℃~ 50℃	-30℃~ 50℃	-30℃~ 50℃
	Humidity		10~100% (Non-condensing)	10~100% (Non-condensing)	10~100% (Non-condensing)
	IP Rating		IP56	IP56	IP56
Feature	Key		Slim High Brightness, IP56 Outdoor, Built-in MagicInfo Player S6, SSSP6	Dual Display, High Brightness, IP56 Outdoor, Built-in MagicInfo Player S6, SSSP6	Slim High Brightness, IP56 Outdoor, Built-in MagicInfo Player S6, SSSP6
	Special		IP56 Rated Simple Enclosure Outdoor, Polarized Sun Glasses Viewable in any direction, Portrait /Landscape Installation Support, Auto Brightness Control with Ambient Brightness Sensor, Temperature Sensor, RJ45 MDC, Auto Source Switching & Recovery, Clock Battery(80hrs Clock Keeping)	IP56 Rated Simple Enclosure Outdoor, Polarized Sun Glasses Viewable in any direction, Portrait Installation Support, Auto Brightness Control with Ambient Brightness Sensor, Temperature Sensor, RJ45 MDC, Auto Source Switching & Recovery, Clock Battery(80hrs Clock Keeping)	IP56 Rated Simple Enclosure Outdoor, Polarized Sun Glasses Viewable in any direction, Portrait /Landscape Installation Support, Auto Brightness Control with Ambient Brightness Sensor, Temperature Sensor, RJ45 MDC, Auto Source Switching & Recovery, Clock Battery(80hrs Clock Keeping)
	Internal Player (Embedded H/W)	Processor	Cortex A72 1.7GHz Quad-Core CPU	Cortex A72 1.7GHz Quad-Core CPU	Cortex A72 1.7GHz Quad-Core CPU
		On-Chip Cache Memory	L1 Instruction Cache : 48KB, L1 Data Cache : 32KB L2 Cache : 2MB	L1 Instruction Cache : 48KB, L1 Data Cache : 32KB L2 Cache : 2MB	L1 Instruction Cache : 48KB, L1 Data Cache : 32KB L2 Cache : 2MB
		Clock Speed	1.7GHz	1.7GHz	1.7GHz
		Main Memory Interface	2.5GB, LPDDR4 1.5GHz 64bit	2.5GB, LPDDR4 1.5GHz 64bit	2.5GB, LPDDR4 1.5GHz 64bit
		Graphics	Graphic resolution : 1920x1080 Output resolution : up to 3840x2160 (Scale up from graphic processing result.) - Supports OpenGL ES	Graphic resolution : 1920x1080 Output resolution : up to 3840x2160 (Scale up from graphic processing result.) - Supports OpenGL ES	Graphic resolution : 1920x1080 Output resolution : up to 3840x2160 (Scale up from graphic processing result.) - Supports OpenGL ES
		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)
		Multimedia	Video Decoder - MPEG-1/2/4, H.263, H.264/AVC, UHD H.264/AVC - VC-1, AVS+, HEVC, JPEG, PNG, VP8, VP9 Audio Decoder - AC3 (DD), MPEG	Video Decoder - MPEG-1/2/4, H.263, H.264/AVC, UHD H.264/AVC - VC-1, AVS+, HEVC, JPEG, PNG, VP8, VP9 Audio Decoder - AC3 (DD), MPEG	Video Decoder - MPEG-1/2/4, H.263, H.264/AVC, UHD H.264/AVC - VC-1, AVS+, HEVC, JPEG, PNG, VP8, VP9 Audio Decoder - AC3 (DD), MPEG
		IO Ports	USB 2.0	USB 2.0	USB 2.0
		Operating System	Tizen 4.0 (VDLinux)	Tizen 4.0 (VDLinux)	Tizen 4.0 (VDLinux)
Certification	Safety		CB (Europe) : IEC60950-1/EN60950-1 UL(USA) : cUL60950-1	CB (Europe) : IEC60950-1/EN60950-1 UL(USA) : cUL60950-1	CB (Europe) : IEC60950-1/EN60950-1 UL(USA) : cUL60950-1
	EMC		FCC (USA) : Part 15, Subpart B Class B CE (Europe) : EN55032:2015 Class B, EN55035:2017	FCC (USA) Part 15, Subpart B Class A CE (Europe) : EN55022:2006+A1:2007 EN55024:1998+A1:2001+A2:2003	FCC (USA) : Part 15, Subpart B Class B CE (Europe) : EN55032:2015 Class B, EN55035:2017
	Environment		N/A	N/A	N/A
Accessories	Included		Quick Setup Guide, Regulatory Guide, Warranty Card, Remote Controller, Batteries	Quick Setup Guide, Regulatory Guide, Warranty Card, Remote Controller, Batteries	Quick Setup Guide, Regulatory Guide, Warranty Card, Remote Controller, Batteries
	Optional	Media Player	N/A	N/A	N/A

* Additional glass needed for kit-type

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