



# SAMSUNG SMART LED SIGNAGE

## XPS SERIES

Deliver Brilliant and Durable Content in any Outdoor Environment

Often subjected to variable weather conditions and exposure to natural and ambient light, outdoor environments can be among the most challenging for business owners to deliver clear meaningful content. Samsung's new SMART LED signage XPS Series alleviates these challenges through a reinforced design that shares uninterrupted, color-uniform content in any setting. Durable and fine-tuned to meet customers' needs, the XPS Series is the ideal display to help businesses achieve their goals and captivate consumers.

### HIGHLIGHTS

- Ultra-high 49,920 Hz. refresh rate supports clear video content without interruption
- Cabinet design deters light interference to deliver bright, crisp images
- Two-step pixel-by-pixel calibration produces consistent and accurate colors
- Rigorous testing validates displays' ability to perform in various environmental conditions
- Round-the-clock support ensures optimal performance at every state of the customer process

## INDUSTRY TRENDS

As businesses look for new ways to engage customers, LED display technologies have emerged as a popular go-to upgrade. New advances in display brightness and picture quality further inspire forward-thinking businesses to consider replacing outdated analog displays in often-challenging outdoor settings. With new technologies inspiring creativity, and barriers to entry disappearing, businesses are more open to the idea of leveraging digital signage to create unique, sophisticated and memorable customer experience and gain a potential edge on their competition.

## SAMSUNG'S XPS SERIES LED SIGNAGE: INTRODUCING THE POWER OF LED CONTENT TO OUTDOOR SETTINGS

Customizable and engineered for long-term performance, Samsung's XPS Series signage ensures continuous and brilliant message delivery that helps businesses achieve their goals, even in potentially demanding conditions.



### INDUSTRY-LEADING IMAGE QUALITY

Samsung brings the world's leading digital display company with its leading LED technology to deliver the highest-quality LED content possible. Through in-depth calibration, enhanced image processing and an industry-best contrast ratio, Samsung offers the LED signage that solves content challenges while maintaining optimal performance and appearance.



### PROACTIVE EXPERT SUPPORT

A successful LED investment requires time and resources to ensure continuous and smooth long-term operation. Samsung holds high level of expertise within the LED signage marketplace, and provides end-to-end customer support that makes for convenient and effortless display management.



### ENERGY-EFFICIENT PERFORMANCE

Beyond a commitment to improving customers' businesses, Samsung's signage also reflects a commitment to bettering the environment. Our LED signage is sustainably composed, and helps customers reduce their energy expenses while simultaneously achieving their own eco-centered goals.



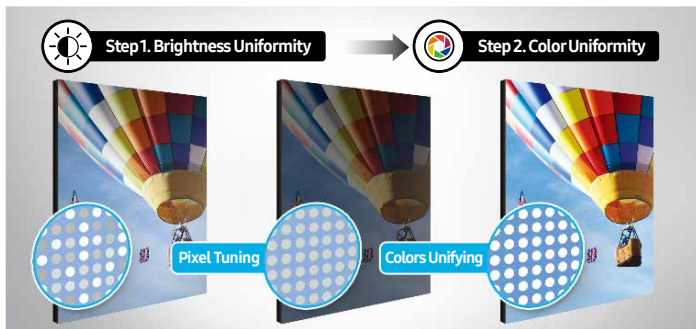
# KEY FEATURES



## SUPERIOR IMAGE QUALITY

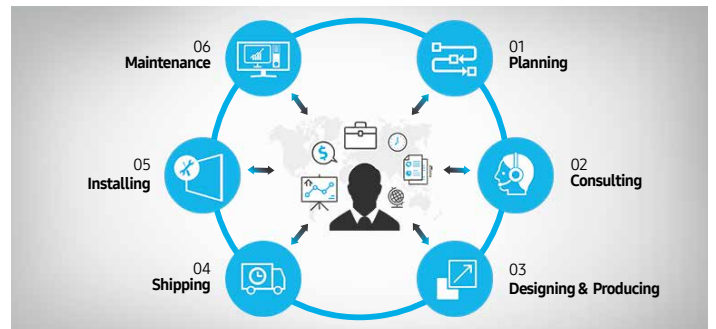
Samsung's XPS Series LED Signage delivers excellent image quality that captures audience eyes even in challenging environments. Through premium diodes and advanced video processing technologies, the displays produce an ultra-high 49,920 Hz. <sup>1)</sup> refresh rate that streams videos without interruption. The XPS Series also is equipped to deter light interference, and produce bright (9,000 nit) <sup>2)</sup> images regardless of conditions.

<sup>1)2)</sup> Refer to specifications for details as refresh rate and brightness can differ by models.



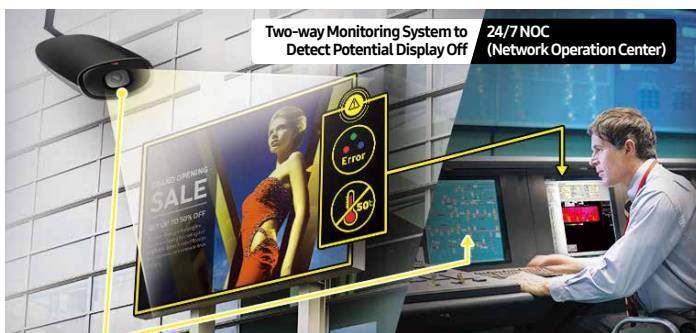
## SPECIALIZED COLOR TUNING

Samsung's two-step calibration process delivers accurate and consistent color quality. First, display experts close color distortion gaps by tuning pixels to the lowest possible brightness level. Next, each pixel undergoes LED voltage adjustment that creates perfect color uniformity as brightness settings increase. By achieving the correct color tones, this thorough calibration process produces high-quality imagery with optimal color integrity.



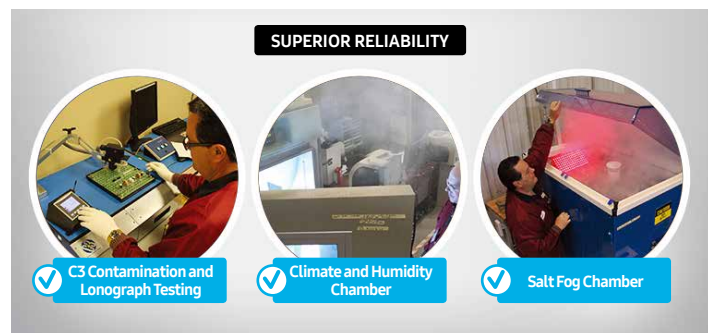
## END-TO-END PROJECT MANAGEMENT

During each installation, Samsung establishes a centralized customer support center that remedies and prevents common LED performance challenges. A dedicated expert answers questions and ensures optimal performance throughout the planning, consulting, designing and producing, shipping, installing and maintenance stages. This proactive, involved approach not only saves customers time and money, but alleviates problems quickly and effortlessly.



## PROACTIVE ERROR RESOLUTION

To further this end-to-end project management, each XPS Series signage easily identifies common LED performance problems. A two-way monitoring system notifies Samsung's Network Operating Center (NOC) of potential "display off" errors, color and temperature discrepancies, and LED dot errors. Once received, the NOC team proactively notifies and works with customers to address such issues and ensure seamless content delivery.



## SUPERIOR RELIABILITY

Each XPS Series signage undergoes rigorous environmental testing to ensure uninterrupted performance. C3 Contamination and Ionograph testing deters circuit contamination and extends shelf-life. Complementary Climate and Humidity and Salt Fog Chamber exposure additionally ensures performance in variable weather conditions and wet and corrosive elements. This enhanced durability gives customers peace of mind, and prevents frustrating and expensive maintenance.

# SPECIFICATIONS

MODEL		XPS060	XPS080	XPS100	XPS110
Physical Parameter	Pixel Pitch	6.35 mm (.25") centers	8.255 mm (.325") centers	10.32 mm (.40625") centers	10.32 mm (.40625") centers
	Pixel Configuration	1 Red, 1 Green, 1 Blue	1 Red, 1 Green, 1 Blue	1 Red, 1 Green, 1 Blue	1 Red, 1 Green, 1 Blue
	Pixel Density	24,800 m <sup>2</sup> / 2,313 ft <sup>2</sup>	14,675 m <sup>2</sup> / 1,363 ft <sup>2</sup>	9,392 m <sup>2</sup> / 876 ft <sup>2</sup>	9,392 m <sup>2</sup> / 876 ft <sup>2</sup>
	Diode Density	74,400 m <sup>2</sup> / 6,939 ft <sup>2</sup>	44,025 m <sup>2</sup> / 4,089 ft <sup>2</sup>	28,176 m <sup>2</sup> / 2,628 ft <sup>2</sup>	28,176 m <sup>2</sup> / 2,628 ft <sup>2</sup>
	Module Configuration (LxH)	32x32 pixels	32x36 pixels	32x16 pixels	16x16 pixels
	Diode Type	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Surface Mount Device (SMD)
	Dimensions (LxH) (per module)	203x203 mm	264x297 mm	330x165 mm	165x165 mm
	Weight (per module)	0.54 kg	1.0 kg	0.69 kg	0.69 kg
	Cabinet Construction	All aluminum construction	All aluminum construction	All aluminum construction	All aluminum construction
Optical Parameter	Brightness	9,000 nit	9,000 nit	9,000 nit	9,000 nit
	Contrast Ratio	11,000:1	11,000:1	13,000:1	13,000:1
	Viewing Angle - Horizontal	160° (+/- 80°)	160° (+/- 80°)	160° (+/- 80°)	160° (+/- 80°)
	Viewing Angle - Vertical	95° (+40/- 55°)	101° (+38.5/- 62.5°)	65° (+15/- 50°)	65° (+15/- 50°)
	Number of Colors	281 trillion colors	281 trillion colors	281 trillion colors	281 trillion colors
	Gray Scale Intensity	65,536 Levels of Red, Green and Blue	65,536 Levels of Red, Green and Blue	65,536 Levels of Red, Green and Blue	65,536 Levels of Red, Green and Blue
	Dimming Capability	256 levels of brightness	256 levels of brightness	256 levels of brightness	256 levels of brightness
	Color Wavelength	Red: 630 nm, Green: 530 nm, Blue: 468 nm	Red: 630 nm, Green: 530 nm, Blue: 468 nm	Red: 630 nm, Green: 530 nm, Blue: 468 nm	Red: 630 nm, Green: 530 nm, Blue: 468 nm
	Color Temperature - Default	6,500 K	6,500 K	6,500 K	6,500 K
	Color Temperature - Adjustable	4,500 - 9,000 K	4,500 - 9,000 K	4,500 - 9,000 K	4,500 - 9,000 K
Electrical Parameter	Video Rate	60 Frames per second	60 Frames per second	60 Frames per second	60 Frames per second
	Animation Rate	60 Frames per second	60 Frames per second	60 Frames per second	60 Frames per second
	Video Processing	24 bit, 100% digital	24 bit, 100% digital	24 bit, 100% digital	24 bit, 100% digital
	Color Processing	16 bit per color (48 bit total)	16 bit per color (48 bit total)	16 bit per color (48 bit total)	16 bit per color (48 bit total)
	Input Power Range	120/240 volts, 50/60 Hz	120/240 volts, 50/60 Hz	120/240 volts, 50/60 Hz	120/240 volts, 50/60 Hz
	Power Consumption - Max	992 (W/m <sup>2</sup> ) / 92.5 (W/ft <sup>2</sup> )	704 (W/m <sup>2</sup> ) / 65 (W/ft <sup>2</sup> )	714 (W/m <sup>2</sup> ) / 66 (W/ft <sup>2</sup> )	714 (W/m <sup>2</sup> ) / 66 (W/ft <sup>2</sup> )
	Power Consumption - Typical	248 (W/m <sup>2</sup> ) / 23.1 (W/ft <sup>2</sup> )	176 (W/m <sup>2</sup> ) / 16.4 (W/ft <sup>2</sup> )	179 (W/m <sup>2</sup> ) / 16.6 (W/ft <sup>2</sup> )	179 (W/m <sup>2</sup> ) / 16.6 (W/ft <sup>2</sup> )
	Refresh Rate	49,920 Hz	49,920 Hz	49,920 Hz	49,920 Hz
	Scan Rate	Scan Rate 1:1 non-multiplexed	Scan Rate 1:1 non-multiplexed	Scan Rate 1:1 non-multiplexed	Scan Rate 1:1 non-multiplexed
	Calibration	Pixel to pixel - Module to module	Pixel to pixel - Module to module	Pixel to pixel - Module to module	Pixel to pixel - Module to module
	Calibration White Point	D65 - 6500 K	D65 - 6500 K	D65 - 6500 K	D65 - 6500 K
	Calibration Standards	REC 709, REC 2020 or Max Gamut	REC 709, REC 2020 or Max Gamut	REC 709, REC 2020 or Max Gamut	REC 709, REC 2020 or Max Gamut
	Operation Conditions	Working Temperature	-40°C to 55°C (-40°F to 131°F)	-40°C to 55°C (-40°F to 131°F)	-40°C to 55°C (-40°F to 131°F)
Cooling		Quiet running vent fans	Quiet running vent fans	Quiet running vent fans	Quiet running vent fans
IP Rating		IP56	IP56	IP56	IP56
LED Lifetime		100,000 hours	100,000 hours	100,000 hours	100,000 hours
Certification	Certification	CE, UL / ULC listed	CE, UL / ULC listed	CE, UL / ULC listed	CE, UL / ULC listed
Service	Service	Front Service and/or Rear Service	Front Service and/or Rear Service	Front Service and/or Rear Service	Front Service and/or Rear Service

MODEL		XPS120	XPS150	XPS160	XPS200	XPS250
Physical Parameter	Pixel Pitch	12.7 mm (.5") centers	16.5 mm (.65") centers	16.5 mm (.65") centers	20.6 mm (.8125") centers	25.4 mm (1.0") centers
	Pixel Configuration	1 Red, 1 Green, 1 Blue	1 Red, 1 Green, 1 Blue	1 Red, 1 Green, 1 Blue	1 Red, 1 Green, 1 Blue	1 Red, 1 Green, 1 Blue
	Pixel Density	6,200 m <sup>2</sup> / 576 ft <sup>2</sup>	3,669 m <sup>2</sup> / 344 ft <sup>2</sup>	3,669 m <sup>2</sup> / 344 ft <sup>2</sup>	2,350 m <sup>2</sup> / 218 ft <sup>2</sup>	1,550 m <sup>2</sup> / 144 ft <sup>2</sup>
	Diode Density	18,600 m <sup>2</sup> / 1,728 ft <sup>2</sup>	11,007 m <sup>2</sup> / 1,032 ft <sup>2</sup>	11,007 m <sup>2</sup> / 1,032 ft <sup>2</sup>	7,050 m <sup>2</sup> / 654 ft <sup>2</sup>	4,652 m <sup>2</sup> / 432 ft <sup>2</sup>
	Module Configuration (LxH)	16x16 pixels	16x16 pixels	16x16 pixels	16x8 pixels	16x8 pixels
	Diode Type	Surface Mount Device (SMD)	Surface Mount Device (SMD)	Discrete lamp	Discrete lamp	Discrete lamp
	Dimensions (LxH) (per module)	203x203 mm	264x264 mm	264x264 mm	330x165 mm	406x203 mm
	Weight (per module)	0.61 kg	0.95 kg	1.16 kg	0.95 kg	1.38 kg
	Cabinet Construction	All aluminum construction	All aluminum construction	All aluminum construction	All aluminum construction	All aluminum construction
Optical Parameter	Brightness	9,000 nit	7,500 nit	9,000 nit	9,000 nit	7,500 nit
	Contrast Ratio	18,000:1	21,000:1	11,000:1	12,000:1	12,000:1
	Viewing Angle - Horizontal	160° (+/- 80°)	160° (+/- 80°)	140° (+/- 70°)	140° (+/- 70°)	140° (+/- 70°)
	Viewing Angle - Vertical	72° (+16°/- 56°)	75° (+17°/- 58°)	77° (+25°/- 52°)	59° (+17°/- 42°)	76° (+23°/- 53°)
	Number of Colors	281 trillion colors	281 trillion colors	281 trillion colors	281 trillion colors	281 trillion colors
	Gray Scale Intensity	65,536 Levels of Red, Green and Blue	65,536 Levels of Red, Green and Blue	65,536 Levels of Red, Green and Blue	65,536 Levels of Red, Green and Blue	65,536 Levels of Red, Green and Blue
	Dimming Capability	256 levels of brightness	256 levels of brightness	256 levels of brightness	256 levels of brightness	256 levels of brightness
	Color Wavelength	Red: 630 nm, Green: 530 nm, Blue: 468 nm	Red: 630 nm, Green: 530 nm, Blue: 468 nm	Red: 630 nm, Green: 530 nm, Blue: 468 nm	Red: 630 nm, Green: 530 nm, Blue: 468 nm	Red: 630 nm, Green: 530 nm, Blue: 468 nm
	Color Temperature - Default	6,500 K	6,500 K	6,500 K	6,500 K	6,500 K
	Color Temperature - Adjustable	4,500 - 9,000K	4,500 - 9,000K	4,500 - 9,000K	4,500 - 9,000K	4,500 - 9,000K
Electrical Parameter	Video Rate	60 Frames per second	60 Frames per second	60 Frames per second	60 Frames per second	60 Frames per second
	Animation Rate	60 Frames per second	60 Frames per second	60 Frames per second	60 Frames per second	60 Frames per second
	Video Processing	24 bit, 100% digital	24 bit, 100% digital	24 bit, 100% digital	24 bit, 100% digital	24 bit, 100% digital
	Color Processing	16 bit per color (48 bit total)	16 bit per color (48 bit total)	16 bit per color (48 bit total)	16 bit per color (48 bit total)	16 bit per color (48 bit total)
	Input Power Range	120/240 volts, 50/60 Hz	120/240 volts, 50/60 Hz	120/240 volts, 50/60 Hz	120/240 volts, 50/60 Hz	120/240 volts, 50/60 Hz
	Power Consumption - Max	806 (W/m <sup>2</sup> ) / 74.9 (W/ft <sup>2</sup> )	624 (W/m <sup>2</sup> ) / 58.5 (W/ft <sup>2</sup> )	348 (W/m <sup>2</sup> ) / 32.7 (W/ft <sup>2</sup> )	329 (W/m <sup>2</sup> ) / 30.5 (W/ft <sup>2</sup> )	318 (W/m <sup>2</sup> ) / 29.5 (W/ft <sup>2</sup> )
	Power Consumption - Typical	202 (W/m <sup>2</sup> ) / 18.7 (W/ft <sup>2</sup> )	156 (W/m <sup>2</sup> ) / 14.6 (W/ft <sup>2</sup> )	183 (W/m <sup>2</sup> ) / 17.2 (W/ft <sup>2</sup> )	169 (W/m <sup>2</sup> ) / 15.7 (W/ft <sup>2</sup> )	169 (W/m <sup>2</sup> ) / 15.7 (W/ft <sup>2</sup> )
	Refresh Rate	49,920 Hz	49,920 Hz	24,960 Hz	49,920 Hz	24,960 Hz
	Scan Rate	Scan Rate 1:1 non-multiplexed	Scan Rate 1:1 non-multiplexed	Scan Rate 1:1 non-multiplexed	Scan Rate 1:1 non-multiplexed	Scan Rate 1:1 non-multiplexed
	Calibration	Pixel to pixel - Module to module	Pixel to pixel - Module to module	Pixel to pixel - Module to module	Pixel to pixel - Module to module	Pixel to pixel - Module to module
	Calibration White Point	D65 - 6500K	D65 - 6500K	D65 - 6500K	D65 - 6500K	D65 - 6500K
	Calibration Standards	REC 709, REC 2020 or Max Gamut	REC 709, REC 2020 or Max Gamut	REC 709, REC 2020 or Max Gamut	REC 709, REC 2020 or Max Gamut	REC 709, REC 2020 or Max Gamut
	Operation Conditions	Working Temperature	-40°C to 55°C (-40°F to 131°F)	-40°C to 55°C (-40°F to 131°F)	-40°C to 55°C (-40°F to 131°F)	-40°C to 55°C (-40°F to 131°F)
Cooling		Quiet running vent fans	Quiet running vent fans	Quiet running vent fans	Quiet running vent fans	Quiet running vent fans
IP Rating		IP56	IP56	IP56	IP56	IP56
LED Lifetime		100,000 hours	100,000 hours	100,000 hours	100,000 hours	100,000 hours
Certification	Certification	CE, UL / ULC listed	CE, UL / ULC listed	CE, UL / ULC listed	CE, UL / ULC listed	CE, UL / ULC listed
Service	Service	Front Service and/or Rear Service	Front Service and/or Rear Service	Front Service and/or Rear Service	Front Service and/or Rear Service	Front Service and/or Rear Service

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## SMART LED SIGNAGE

For more information about Samsung SMART LED Signage, visit [www.samsung.com/business](http://www.samsung.com/business) or [www.samsung.com/displaysolutions](http://www.samsung.com/displaysolutions)

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