

Samsung
PHF/PMF Series SMART Signage

Bringing you premium TIZEN powered displays that meet all business needs in a slim, captivating design

Highlights

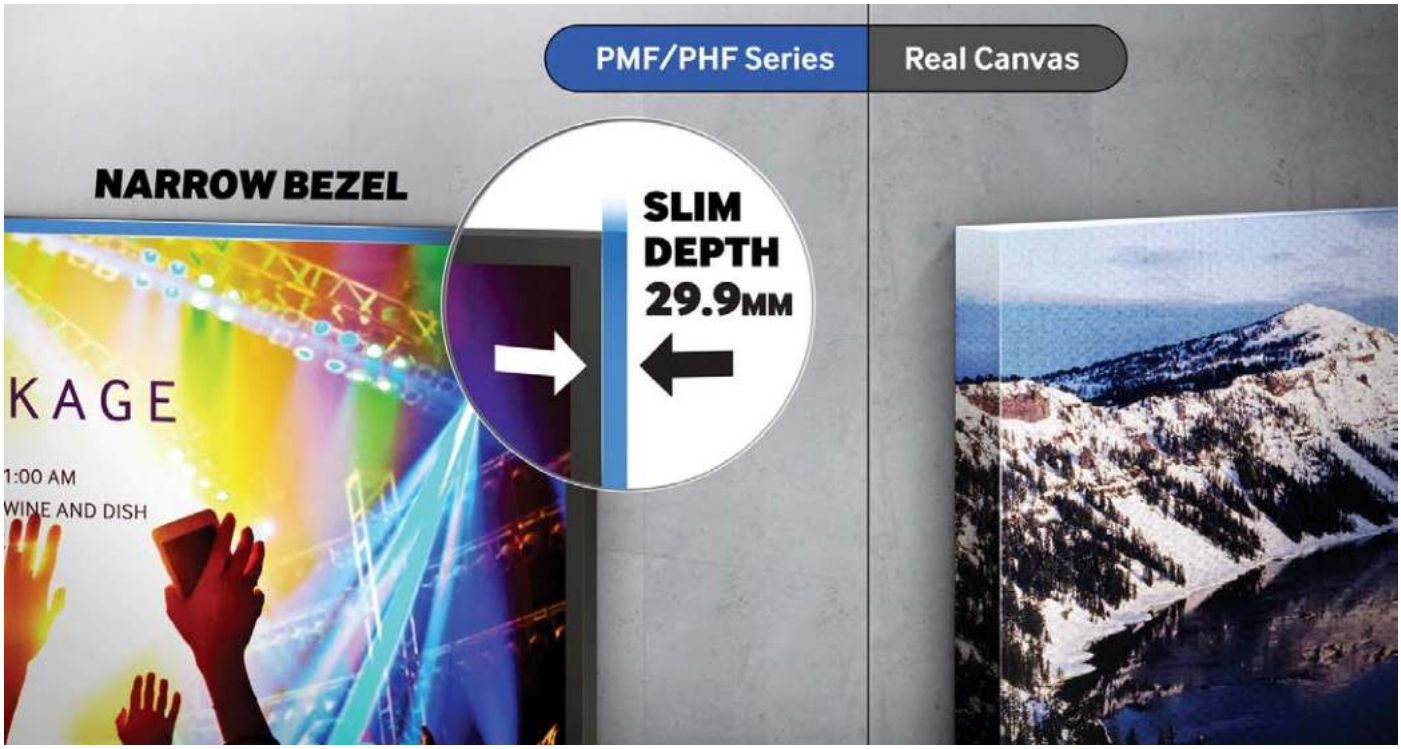
- Overcome spatial limitations through use of the world's slimmest design
- Deploy advanced web applications to effectively manage content by using SSSP 4.0 powered by TIZEN
- Effectively handle all environmental conditions and dusty situations thanks to IP5x-certified displays
- Realize complete and convenient control by navigating display hub with Central IR
- Discover heightened image visibility and information readability with non-glare panels

SAMSUNG

World slimmest design

Discover displays that break the previous limits of slim design

Samsung PHF and PMF Series are the world's first TIZEN powered premium displays that meet all customer needs, ensuring that digital signage is fully optimized for peak performance in a stylish, captivating design. By delivering high brightness and sharp display images in various lighting environments with solid reliability for extended periods of time, businesses are can be assured that their messaging is delivered exactly when and where it is needed.
In addition, IP5x certified PHF and PMF Series displays deliver 24/7 robust durability to allow for uninterrupted and dependable operation.



* The specification by model such as size, brightness, and operational time is different.
See the specification table on the back page for more details.

SSSP 4.0

The all-new embedded media player powered by TIZEN™

The new 2016 SMART Signage that supports SSSP 4.0 allows for a stronger, faster and more stable performance than its previous models. Transcending past hardware performance, the new SSSP 4.0 enables CMS partners to develop and deploy advanced web applications which can help to effectively manage content and SMART Signage for their customers.

• Powerful Performance

1) Enhanced 3D Graphic Engine

Experience dynamic content by enhancing 3D graphic performance while text scrolling appears smooth and the display offers a level of robustness that can even support 3 movies playing concurrently on one screen.

2) PC-less Touch Solution

Touch performance is fully realized due to the powerful TIZEN OS that bypasses the need for a PC.

3)Enhanced Security

Applications, platform and system are all supported by TIZEN OS and a holistic security architecture allows for high stability and security through 3 layers of supplementation.



• Easy Development

The ability to develop the solution further is facilitated, thanks to various development tools such as SW Development Kit (SDK) or Remote Web Inspector (RW). In addition, as it is a web standard-based open platform, it is highly compatible with HTML5.



• Simple Usability

Usability is attained due to a touch-friendly UI while web browsers are able to display a homepage without the need to develop a web app. The SSSP 4.0 user screen has also been improved (new home UI) and quick access for web apps is supported through URL Launcher.



IP5x Certified Display

Put your worries to rest knowing that your display is protected from a range of environmental conditions



All of Samsung's new PMF and PHF standalone displays are IP5x certified, signifying their dust-resistant design and ability to withstand a range of environmental conditions.

The certification alleviates concerns about dust accumulating on displays installed on subway trains or on external platforms. Customers can conveniently use this IP5x certified display without needing to prepare additional enclosure in dusty places. Uninterrupted, 24/7 content delivery is always assured regardless of surrounding natural or interactive conditions.

Central IR

Unlock easier and more flexible control due to a centralized infrared receiver



The standalone displays' integrated centralized infrared receiver (IR) ensures easier and more flexible user control. All models can receive the IR signal on individual panels via Central IR. Through tailored installation or mounting, users can navigate the IR functionality from various locations, further augmenting uninterrupted performance.

Non-Glare Panel

Bring an end to unwanted glare and always be assured of high visibility and readability



Equipped with a non-glare frontal panel, the PHF and PMF Series displays reduce natural and ambient light interference to ensure continuous readability in any location. Image visibility and information readability are deemed to be very high, because it is less reflective under light or sunlight, which poses no issues when used with QSR menu boards, or airport flight schedule boards with ample natural light.

Specifications
PHF

- PHF (43" / 49" / 55")





Connectors



1. USB1
2. USB2
3. RS232C IN
4. RS232C OUT
5. AUDIO IN
6. AUDIO OUT
7. HDMI 1
8. HDMI 2
9. DVI/PC/MAGICINFO IN
10. DP IN
11. DP OUT
12. RJ45

Specifications
PMF

- PMF (32" / 43" / 49" / 55")





Connectors



1. USB1
2. USB2
3. RS232C IN
4. RS232C OUT
5. AUDIO IN
6. AUDIO OUT
7. HDMI 1
8. HDMI 2
9. DVI/PC/MAGICINFO IN
10. DP IN
11. DP OUT
12. ANT IN
13. RJ45

* RF tunner included in PMF (32"~55") for North America model only.

Specifications
PHF (43" / 49" / 55")

Specifications

Model			PH43F	PH49F	PH55F
Panel	Picture		43"	49"	55"
	Type		60Hz E-LED BLU	60Hz E-LED BLU	60Hz E-LED BLU
	Resolution		1920x1080 (16:9)	1920x1080 (16:9)	1920x1080 (16:9)
	Pixel Pitch(mm)		0.490(H) x 0.490(V)	0.560(H) x 0.560(V)	0.630(H) x 0.630(V)
	Active Display Area(mm)		940.89(H) x 529.25(V)	1073.779(H) x 604.00(V)	1209.6(H) x 680.4(V)
	Brightness(Typ.)		700nit	700nit	700nit
	Contrast Ratio(Typ.)		3000:1	4000:1	5000:1
	Viewing Angle(H/V)		178:178	178:178	178:178
	Response Time(G-to-G)		8ms	8ms	6ms
	Display Colors		10bit Dithering - 1.07Billion	10bit Dithering - 1.07Billion	10bit Dithering - 1.07Billion
	Color Gamut		72%	72%	72%
	Operation Hour		24/7	24/7	24/7
	Haze		44%	25%	25%
Display	Dynamic C/R		Mega	Mega	Mega
	H-Scanning Frequency		30 ~ 81kHZ	30 ~ 81kHZ	30 ~ 81kHZ
	V-Scanning Frequency		48 ~ 75HZ	48 ~ 75HZ	48 ~ 75HZ
	Maximum Pixel Frequency		148.5MHz	148.5MHz	148.5MHz
Sound	Speaker Type		Built in Speaker(10W + 10W)	Built in Speaker(10W + 10W)	Built in Speaker(10W + 10W)
Connectivity	INPUT	RGB	DVI-I(D-Sub Common), Display Port 1.2 (2)	DVI-I(D-Sub Common), Display Port 1.2 (2)	DVI-I(D-Sub Common), Display Port 1.2 (2)
		VIDEO	HDMI (2)	HDMI (2)	HDMI (2)
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
		USB	USB 2.0 x 2	USB 2.0 x 2	USB 2.0 x 2
	OUTPUT	RGB	DP1.2(Loop-out)	DP1.2(Loop-out)	DP1.2(Loop-out)
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
		Power Out	N/A	N/A	N/A
	EXTERNAL CONTROL		RS232C(in/out) thru Stereo Jack, RJ45	RS232C(in/out) thru Stereo Jack, RJ45	RS232C(in/out) thru Stereo Jack, RJ45
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]	154	165	187
		Typical[W/h]	EU108, US 108, WW 108	EU 115, US 112, WW 115	EU 134, US 134, WW 134
		BTU(Max)	525.14	562.65	637.67
		Sleep mode	less than 0.5W	less than 0.5W	less than 0.5W
		Off mode	less than 0.5W	less than 0.5W	less than 0.5W
Mechanical Spec	Dimension (mm)	Set	959.7 x 550.1 x 29.9	1092.6 x 624.8 x 29.9	1228.4 x 701.2 x 29.9
		Package	1037 x 628 x 132	1195 X 721 X 167	1335 X 812 X 182
	Weight (kg)	Set	9.4	13.2	16.3
		Package	11.4	18.1	21.8
	VESA Mount		200x200	400x400	400x400
	Protection Glass		N/A	N/A	N/A
	Stand Type		Foot Stand (Optional)	Foot Stand (Optional)	Foot Stand (Optional)
	Bezel Width (Top/Side/Bot) (mm)		6.9/6.9/8.9	6.9/6.9/8.9	6.9/6.9/8.9

Specifications
PHF (43" / 49" / 55")

Specifications

Model			PH43F	PH49F	PH55F
Operation	Operating Temperature		0°C~ 40°C	0°C~ 40°C	0°C~ 40°C
	Humidity		10~80%	10~80%	10~80%
Feature	Key		Slim & Light Signage with Built-in MagicInfo S4, SSSP 4.0		
	Special	H/W	Non Glare Panel, Temperature Sensor, Video Wall(15x15(OSD)), Video Wall Daisy Chain(16), Pivot Display, Clock Battery(80hrs Clock Keeping), Built in Speaker(10W x 2), WiFi Module Embedded, IP5x, Center IR		
		S/W	Magic Clone(to USB), Auto Source Switching & Recovery, RS232C/RJ45 MDC,Plug and Play, PIP/PBP, Image Rotation, Button Lock, DP1.2 Digital Daisy Chain(HDCP Support), Firmware Update by Network, New Home Screen, PC-less VideoWall, Multi Channel, Mobile Control, Event Schedule, Backup Player		
	Internal Player (Embedded H/W)	Processor	Cortex-A12 1.3GHz Quad Core CPU		
		On-Chip Cache Memory	L1 (I/D) : 32KB / 32KB L2 (Unified) : 1MB		
		Clock Speed	1.3GHz CPU Quad		
		Main Memory Interface	2.5GB 3 channel 96bit DDR3-933 (1866MHz)		
		Graphics	2D & 3D Graphics Engine : Up to 3840x2160p. 32bpp / Supports OpenGL ES		
		Storage (FDM)	8GB (3.75GB Occupied by O/S, 4.25GB 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 DSP (Decoder) : AC3 (DD), MPEG, DTS and etc.		
		IO Ports	USB 2.0		
		Operating System	Tizen 2.4 (VDLinux)		
Certification	Safety		CB (Europe) : IEC60950-1/EN60950-1 , CCC (China) : GB4943.1-2011 , PSB (Singapore) : PB+IEC60950-1 NOM (Mexico) : NOM-001-SCFI-1993 , IRAM (Argentina) : IRAM+IEC60950-1 , SASO (Saudi Arabia) : SASO+IEC60950-1 , BIS(India) : IEC60950-1 / IS13252 , NOM(Mexico) : Tuner : NOM-001-SCFI-1993 /Tunerless : NOM-019-SCFI-1998 , KC(Korea) : K 60950-1 /EAC(Russia) : EAC+IEC60950-1 , INMETRO(Brazil) : INMETRO+IEC60950-1 , BSMI(Taiwan) : BSMI+IEC60950-1 /RCM(Australia) : IEC60950-1/AS/NZS 60950-1 , UL(USA) : cUL60950-1 ,CSA (Canada) : cUL , TUV (Germany) : CE , NEMKO (Norway) : CE		
	EMC		FCC (USA) Part15, Subpart B Class A , CE (Europe) : EN55022:2006+A1:2007 , EN55024:1998+A1:2001+A2:2003 , VCCI (Japan) : VCCI V-3 /2010.04 Class A , KCC/EK (Korea) : Tuner : KN13 / KN20 /Tunerless : KN22 / KN24 , BSMI (Taiwan) : CNS13438 (ITE EMI) Class A / /CNS13439 (AV EMI) / CNS14409 (AV EMS) / CNS14972 (Digital) , C-Tick (Australia) : AS/NZS CISPR22:2009 , CCC(China) :GB9254-2008 /GB17625.1-2012 , GOST(Russia/CIS) : GOST R 51317 Series,GOST 22505-97 /EN55022:2006+A1:2007 , EN55024:1998+A1:2001+A2:2003		
	Environment		N/A	ENERGY STAR 7.0 (USA)	ENERGY STAR 7.0 (USA)
Accessories	Included		Quick Setup Guide, Regulatory Guide , Warranty Card,Power Cord, Remote Controller, Batteries, RS232C(IN) adapter, Cover Jack		
	Optional	Stand	STN-L3240E	STN-L4655E	STN-L4655E
		Mount	WMN4070SD	WMN4270SD	WMN4270SD
		Specialty	CML400XJ	CML450H	CML450H
		Media Player	SBB	SBB	SBB

Specifications
PMF (32" / 43" / 49" / 55")

Specifications

Model			PM32F	PM43F	PM49F	PM55F
Panel	Diagonal Size		32"	43"	49"	55"
	Type		60Hz E-LED BLU	60Hz E-LED BLU	60Hz E-LED BLU	60Hz E-LED BLU
	Resolution		1920x1080 (16:9)	1920x1080 (16:9)	1920x1080 (16:9)	1920x1080 (16:9)
	Pixel Pitch(mm)		0.360(H) x 0.360(V)	0.490(H) x 0.490(V)	0.560(H) x 0.560(V)	0.630(H) x 0.630(V)
	Active Display Area(mm)		698.4(H) x 392.85(V)	940.89(H) x 529.25(V)	1073.779(H) x 604.00(V)	1209.6(H) x 680.4(V)
	Brightness(Typ.)		400nit	500nit	500nit	500nit
	Contrast Ratio(Typ.)		5000:1	3000:1	4000:1	5000:1
	Viewing Angle(H/V)		178:178	178:178	178:178	178:178
	Response Time(G-to-G)		8ms	8ms	8ms	8ms
	Display Colors		10bit Dithering - 1.07Billion	10bit Dithering - 1.07Billion	10bit Dithering - 1.07Billion	10bit Dithering - 1.07Billion
	Color Gamut		72%	72%	72%	72%
	Operation Hour		16/7	24/7	24/7	24/7
	Haze		2%	44%	25%	25%
Display	Dynamic C/R		Mega	Mega	Mega	Mega
	H-Scanning Frequency		30 ~ 81kHZ	30 ~ 81kHZ	30 ~ 81kHZ	30 ~ 81kHZ
	V-Scanning Frequency		48 ~ 75HZ	48 ~ 75HZ	48 ~ 75HZ	48 ~ 75HZ
	Maximum Pixel Frequency		148.5MHz	148.5MHz	148.5MHz	148.5MHz
Sound	Speaker Type		Built in Speaker(10W + 10W)	Built in Speaker(10W + 10W)	Built in Speaker(10W + 10W)	Built in Speaker(10W + 10W)
Connectivity	INPUT	RGB	DVI-I(D-Sub Common), Display Port 1.2 (2)	DVI-I(D-Sub Common), Display Port 1.2 (2)	DVI-I(D-Sub Common), Display Port 1.2 (2)	DVI-I(D-Sub Common), Display Port 1.2 (2)
		VIDEO	HDMI (2)	HDMI (2)	HDMI (2)	HDMI (2)
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
		USB	USB 2.0 x 2	USB 2.0 x 2	USB 2.0 x 2	USB 2.0 x 2
	OUTPUT	RGB	DP1.2(Loop-out)	DP1.2(Loop-out)	DP1.2(Loop-out)	DP1.2(Loop-out)
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
		Power Out	N/A			
	EXTERNAL CONTROL		RS232C(in/out) thru Stereo Jack, RJ45	RS232C(in/out) thru Stereo Jack, RJ45	RS232C(in/out) thru Stereo Jack, RJ45	RS232C(in/out) thru Stereo Jack, RJ45
	Tuner		Yes(only for North America)	Yes(only for North America)	Yes(only for North America)	Yes(only for North America)
Power	Type		Internal	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	AC 100 - 240 V~ (+/- 10 %), 50/60 Hz
	Power Consumption	Max[W/h]	88	154	165	187
		Typical[W/h]	EU 61, US 42, WW 61	EU 123, US 66, WW 123	EU 98, US 47, WW 98	EU 115, US 55, WW 115
		BTU(Max)	300.08	525.14	562.65	637.67
		Sleep mode	less than 0.5W	less than 0.5W	less than 0.5W	less than 0.5W
		Off mode	less than 0.5W	less than 0.5W	less than 0.5W	less than 0.5W
Mechanical Spec	Dimension (mm)	Set	721.2 x 415.6 x 29.9	959.7 x 550.1 x 29.9	1092.6 x 624.8 x 29.9	1228.4 x 701.2 x 29.9
		Package	796 X 484 X 132	1037 x 628 x 132	1195 X 721 X 167	1335 X 812 X 182
	Weight (kg)	Set	5.6	9.4	13.2	16.3
		Package	7	11.4	18.1	21.8
	VESA Mount		200x200	200x200	400x400	400x400
	Protection Glass		N/A	N/A	N/A	N/A
	Stand Type		Foot Stand (Optional)	Foot Stand (Optional)	Foot Stand (Optional)	Foot Stand (Optional)
	Bezel Width (Top/Side/Bot) (mm)		8.9(Even)	6.9/6.9/8.9	6.9/6.9/8.9	6.9/6.9/8.9

Specifications
PMF (32" / 43" / 49" / 55")

Specifications

Model			PM32F	PM43F	PM49F	PM55F
Operation	Operating Temperature		0°C~ 40°C	0°C~ 40°C	0°C~ 40°C	0°C~ 40°C
	Humidity		10~80%	10~80%	10~80%	10~80%
Feature	Key		Slim & Light Signage with Built-in MagicInfo S4, SSSP 4.0			
	Special	H/W	Temperature Sensor, Video Wall(15x15(OSD)), Video Wall Daisy Chain(16), Pivot Display, Clock Battery(80hrs Clock Keeping), Built in Speaker(10W x 2), WiFi Module Embedded, Tuner(only for NA), IP5x, Center IR	Non Glare Panel, Temperature Sensor, Video Wall(15x15(OSD)), Video Wall Daisy Chain(16), Pivot Display, Clock Battery(80hrs Clock Keeping), Built in Speaker(10W x 2), WiFi Module Embedded, Tuner(only for NA), IP5x, Center IR	Non Glare Panel, Temperature Sensor, Video Wall(15x15(OSD)), Video Wall Daisy Chain(16), Pivot Display, Clock Battery(80hrs Clock Keeping), Built in Speaker(10W x 2), WiFi Module Embedded, Tuner(only for NA), IP5x, Center IR	Non Glare Panel, Temperature Sensor, Video Wall(15x15(OSD)), Video Wall Daisy Chain(16), Pivot Display, Clock Battery(80hrs Clock Keeping), Built in Speaker(10W x 2), WiFi Module Embedded, Tuner(only for NA), IP5x, Center IR
		S/W	Magic Clone(to USB), Auto Source Switching & Recovery, RS232C/RJ45 MDC,Plug and Play, PIP/PBP, Image Rotation, Button Lock, DP 1.2 Digital Daisy Chain(HDCP Support), Firmware Update by Network, New Home Screen, PC-less VideoWall, Multi Channel, Mobile Control, Event Schedule, Backup Player			
	Internal Player (Embedded H/W)	Processor	Cortex-A12 1.3GHz Quad Core CPU			
		On-Chip Cache Memory	L1 (I/D) : 32KB / 32KB L2 (Unified) : 1MB			
		Clock Speed	1.3GHz CPU Quad			
		Main Memory Interface	2.5GB 3 channel 96bit DDR3-933 (1866MHz)			
		Graphics	2D & 3D Graphics Engine : Up to 3840x2160p. 32bpp / Supports OpenGL ES			
		Storage (FDM)	8GB (3.75GB Occupied by O/S, 4.25GB 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 DSP (Decoder) : AC3 (DD), MPEG, DTS and etc.			
		IO Ports	USB 2.0			
		Operating System	Tizen 2.4 (VDLinux)			
Certification	Safety		CB (Europe) : IEC60950-1/EN60950-1 , CCC (China) : GB4943.1-2011 / PSB (Singapore) : PB+IEC60950-1 / NOM (Mexico) : NOM-001-SCFI-1993 , IRAM (Argentina) : IRAM+IEC60950-1 , SASO (Saudi Arabia) : SASO+IEC60950-1 , BIS(India) : IEC60950-1 / IS13252 , NOM(Mexico) : Tuner : NOM-001-SCFI-1993 /Tunerless : NOM-019-SCFI-1998 , KC(Korea) : K 60950-1 , EAC(Russia) : EAC+IEC60950-1 , INMETRO(Brazil) : INMETRO+IEC60950-1 , BSMI(Taiwan) : BSMI+IEC60950-1 , RCM(Australia) : IEC60950-1/AS/NZS 60950-1 , UL(USA) : cUL60950-1 , CSA (Canada) : cUL , TUV (Germany) : CE , NEMKO (Norway) : CE ,			
	EMC		FCC (USA) Part 15, Subpart B Class A , CE (Europe) : EN55022:2006+A1:2007 /EN55024:1998+A1:2001+A2:2003 , VCCI (Japan) : VCCI V-3 /2010.04 Class A , KCC/EK (Korea) : Tuner : KN13 / KN20 /Tunerless : KN22 / KN24 , BSMI (Taiwan) : CNS13438 (ITE EMI) Class A / /CNS13439 (AV EMI) / CNS14409 (AV EMS) / CNS14972 (Digital) , C-Tick (Australia) : AS/NZS CISPR22:2009 , CCC(China) :GB9254-2008 /GB17625.1-2012 , GOST(Russia/CIS) : GOST R 51317 Series, GOST 22505-97 /EN55022:2006+A1:2007 /EN55024:1998+A1:2001+A2:2003			
	Environment		N/A	N/A	ENERGY STAR 7.0 (USA)	ENERGY STAR 7.0 (USA)
Accessories	Included		Quick Setup Guide, Regulatory Guide , Warranty Card, Power Cord, Remote Controller, Batteries, RS232C(IN) adapter, Cover Jack			
	Optional	Stand	STN-L3240E	STN-L3240E	STN-L4655E	STN-L4655E
		Mount	WMN4070SD	WMN4070SD	WMN4270SD	WMN4270SD
		Specialty	CML400XJ	CML400XJ	CML450H	CML450H
		Media Player	SBB(Not attachble)	SBB	SBB	SBB

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For the latest news, please visit the Samsung Newsroom at news.samsung.com.

For more information

For more information about Samsung SMART Signage Solutions, visit www.samsung.com/business or www.samsung.com/displaysolutions.

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