



# Samsung PHF/PMF Series SMART Signage

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

## Highlights

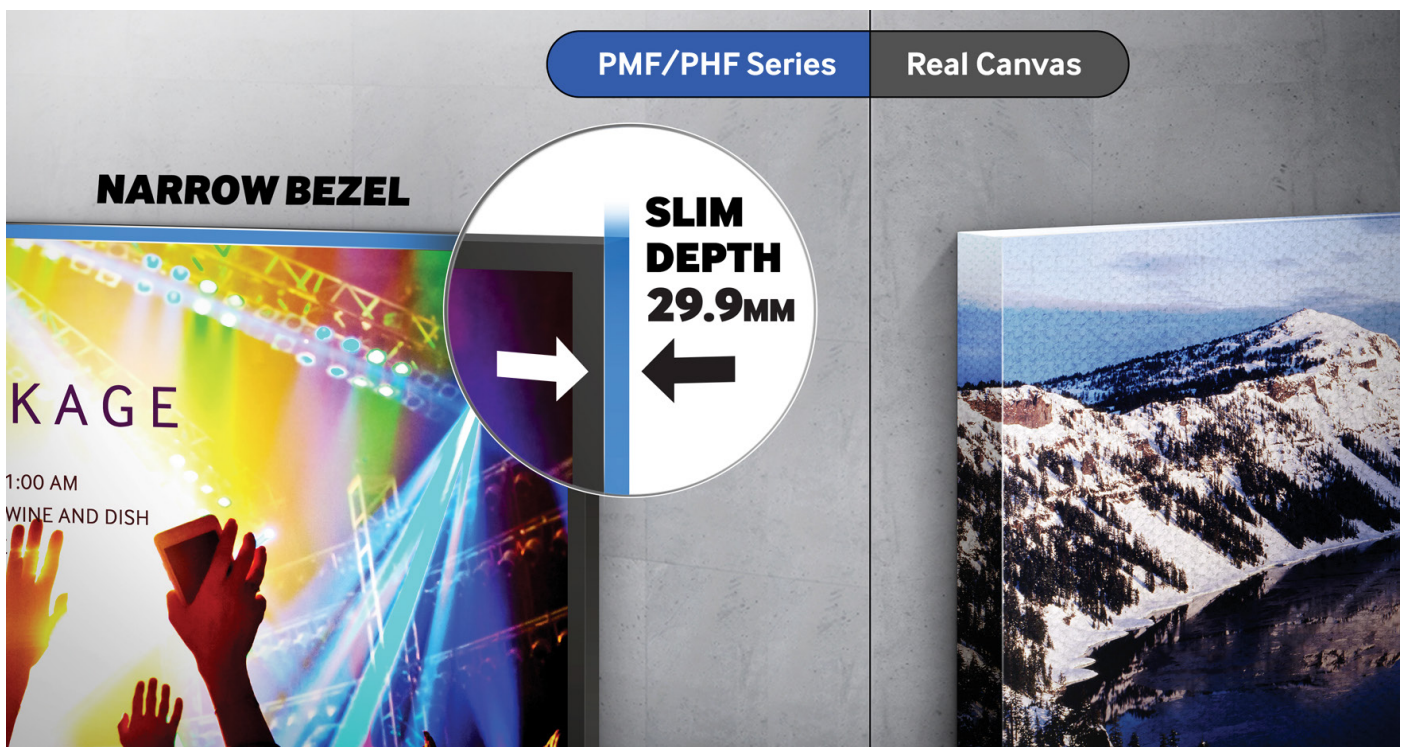
- Overcome spatial limitations through use of the world's slimmest design
- Deploy advanced web applications to effectively manage content by using SSSP 4.0 powered by TIZEN
- Effectively handle all environmental conditions and dusty situations thanks to IP5x-certified displays
- Realize complete and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

## 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 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**

- 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.

- PC-less Touch Solution**

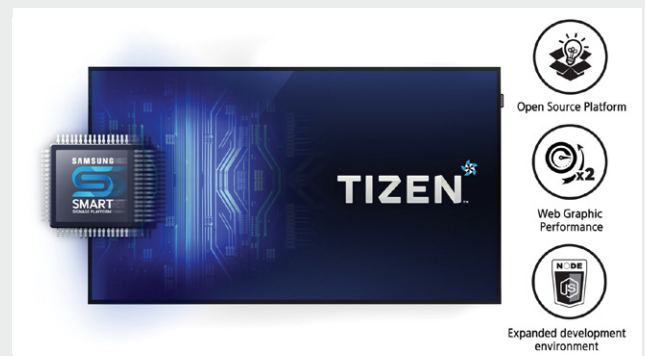
Touch performance is fully realized due to the powerful TIZEN OS that bypasses the need for a PC.

- 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.

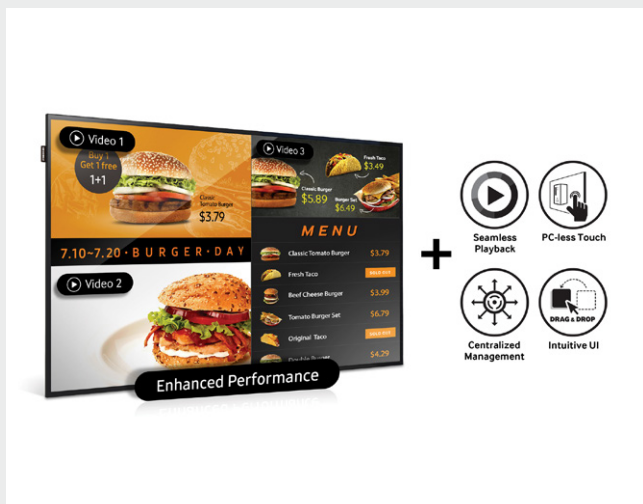
- Easy Development**

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

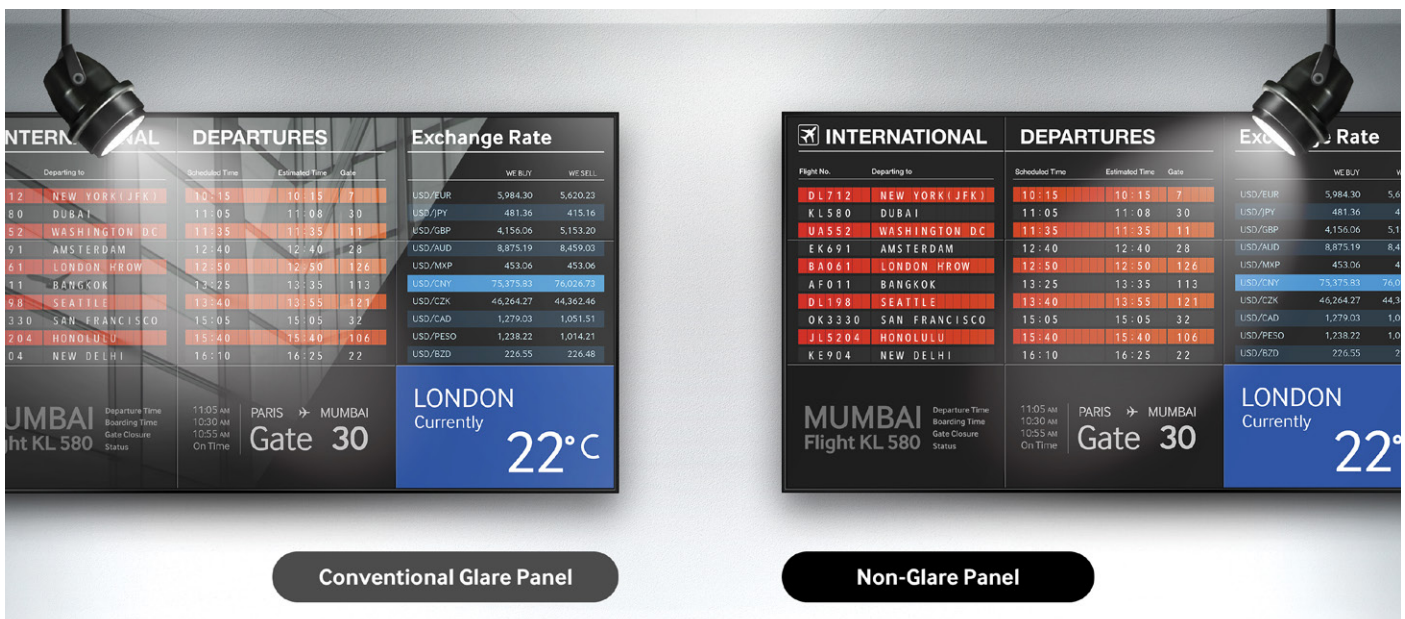
Unlock easier and more flexible control due to a centralized infrared receiver



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



\* RF tuner 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		
	Humidity		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) 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	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, 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) 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

## About Samsung

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, printers, medical equipment, network systems, and semiconductor and LED solutions.

For the latest news, please visit the Samsung Newsroom at [news.samsung.com](http://news.samsung.com).

## For more information

For more information about Samsung

SMART Signage Solutions, visit

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[www.samsung.com/displaysolutions](http://www.samsung.com/displaysolutions).

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