Samsung SMART Signage
QHR series

Display any content in ultra-high definition with incredibly rich color on slim, efficient signage

Through intelligent UHD upscaling technology, Samsung's QHR series performs edge restoration and noise reduction to deliver UHD picture quality even with lower resolution content. As an added benefit, the QHR series also features reliable, non-glare panels that provide better visibility from all angles. Backed by Tizen 4.0, the QHR series provides reinforced capability with multiple web formats and secured protection. Additionally, its new slim design simplifies wall mounting and ensures seamless installation.

Highlights

- Engage customers with lifelike images through ultra high-definition resolution
- Deliver UHD-level picture quality even with lower resolution content through Crystal Processor 4K supporting advanced UHD upscaling technology
- Dynamic Crystal Display allows viewers to enjoy a wider spectrum of colors, up to one billion shades
- Symmetrical, slim design simplifies installation and complements any environment
- Secure, PC-free operation through Knox and rigid three-layer protection
- Reliable, non-glare panels provide better visibility from all angles, anytime of day allowing businesses to deliver accurate information 24/7

SAMSUNG

Industry trend

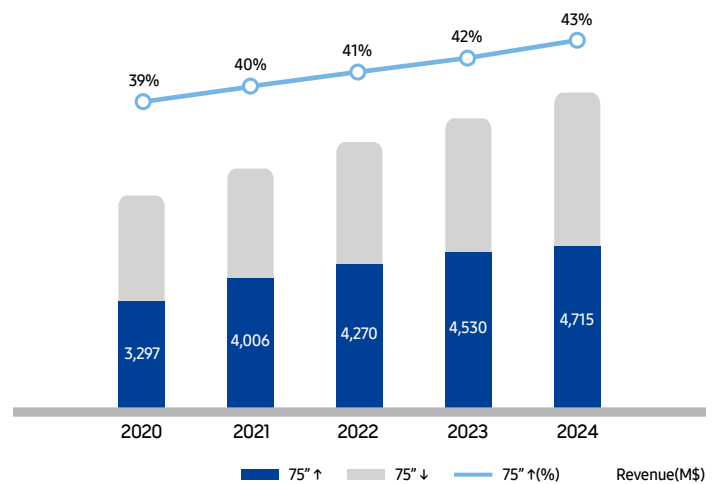With visual display technology continually improving, viewers have developed an ever-growing expectation for better – and bigger – picture quality. Users, more than ever, want to captivate customers with truly lifelike images and gain a competitive edge over their industry peers with best-in-class displays. This is reflected in the fact that UHD resolution continues to grow in popularity, becoming an essential way for brands to impress customers amid a wider variety of stunning, aesthetical visuals and content. This trend is coupled with demand for larger screen sizes, particularly in the 75-inch and above category, enabling businesses to differentiate themselves and display content in a more impactful way than ever before.

Ultra-high definition is the new normal *

UHD digital signage portion

59% — 2019

85% — 2024
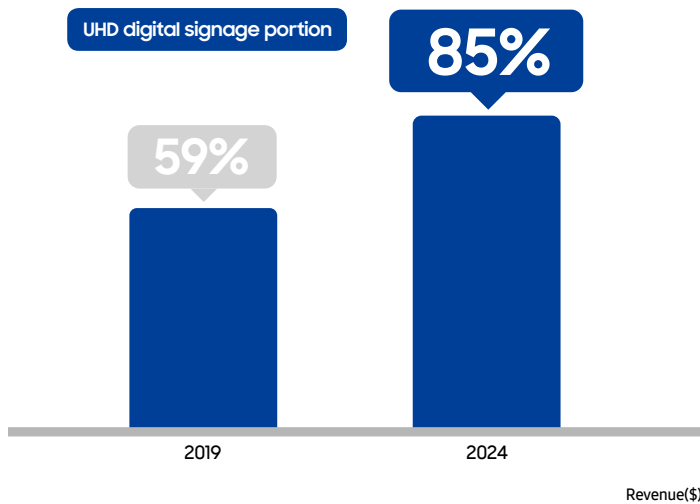
Revenue($)

Demand for bigger screens is on the rise **

39% — 2020 — 3,297
40% — 2021 — 4,006
41% — 2022 — 4,270
42% — 2023 — 4,530
43% — 2024 — 4,715
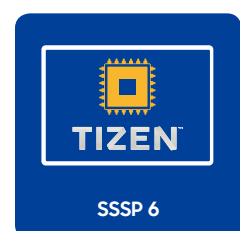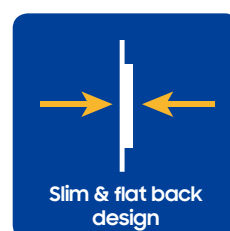
■ 75" ↑   ■ 75" ↓   — 75" ↑(%)   Revenue(M$)

*,** Source : Omdia, Public Displays Market Tracker Q1 2020, July 2020. Revenues in USD Millions. Does Not Include Consumer TVs Used as Public Displays. Not an Endorsement of Samsung Electronics Co. Ltd. Any Reliance on these results is at the third-party's own risk.
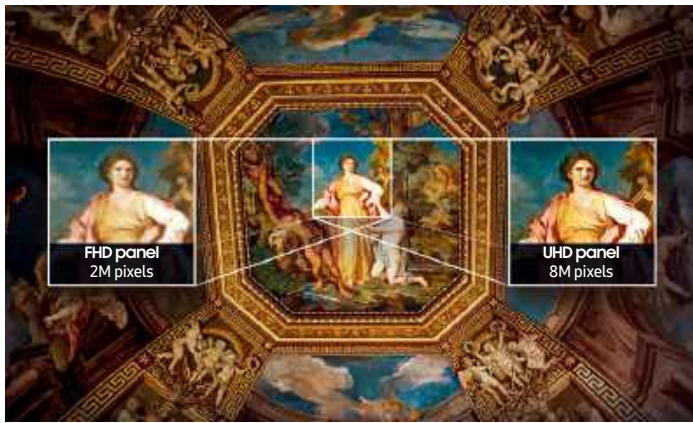
Why Samsung's QHR series?

Samsung's superior visual display technology has positioned them as the industry leader in the digital signage market for a decade* and Samsung brand having been No.1 in sales for 11 consecutive years in the display market**. As an expert in picture quality in the display industry, Samsung is able to deliver best-in-class picture quality through their QHR series. The signage provides rich and flawless colors, sleek and durable design, powerful performance through SSSP 6 and secured protection. Samsung's QHR series is also able to upscale the low resolution content to UHD picture quality. For commercial displays, this technology advancement means highly visible signage with unmatched accuracy to help capture the attention of potential customers. It also means savings both in cost and time for businesses who can produce content more inexpensively at a lower resolution and still display it in stunning UHD quality.

* Results based on Omdia(former IHS) report "Public Displays Market Tracker", 2009 – 2018. Information is not an endorsement of Samsung. Any reliance on these results is at the third party's own risk.
** According to market research company "Omdia". Ranking in terms of shipments. Results are not an endorsement of Samsung. Any reliance on these results is at the third-party's own risk.

Crystal Processor 4K	Dynamic Crystal Display	Slim & flat back design	SSSP 6

Key features

FHD panel
2M pixels

UHD panel
8M pixels

Conventional Glare Panel	Non-Glare Panel

ARRIVALS

ARRIVALS

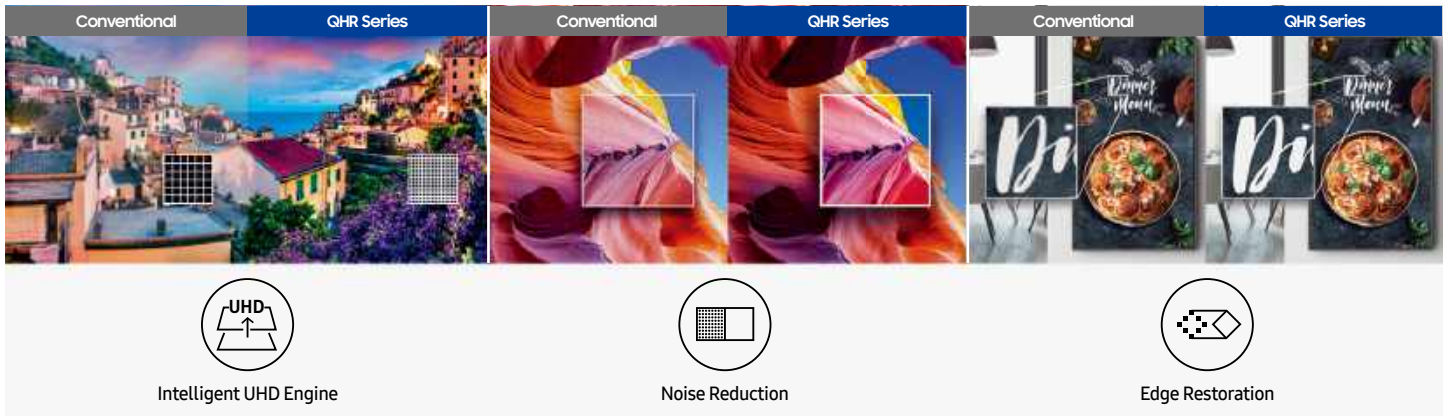24/7 Operation

Non-glare

Incredible 4K picture quality

Samsung's new QHR series is able to capture customer attention by providing an incredibly clear picture, showcasing lifelike images and intricate details better than ever before thanks to ultra high-definition 4K resolution.

Perfect view with non-glare display

When clear visibility is essential, the QHR series incorporates key features including up to 500 nit brightness and reliable, non-glare panels that provide better visibility from all angles, anytime of day. The display is ideal for locations such as airports and commuter stations where 24/7 access to clear and accurate information is crucial.

Conventional	QHR Series	Conventional	QHR Series	Conventional	QHR Series

Intelligent UHD Engine

Noise Reduction

Edge Restoration

Crystal Processor 4K

Samsung's global leadership in display technology and picture quality spans more than a decade. Thanks to superior semi-conductor technology, Samsung has developed the powerful video processor available. Additionally, intelligent UHD upscaling technology is a cutting-edge solution based on Samsung's proprietary UHD Processor that allows content developed at a lower resolution to be elevated to UHD-level quality. It also performs edge restoration and noise reduction to optimize on-screen text and imagery with crisp edges and fine detail.

Samsung
Conventional

Dynamic
Crystal Display

1 Billion Color

Wide Color Gamut

Dynamic Crystal Display

Dynamic Crystal Display is what brings the incredible, lifelike color to Samsung displays. Using 10-bit processing, the displays are able to showcase a wider spectrum of colors — up to a billion different shades — capturing subtle differences for flawless color expression, critical to businesses in ensuring brand consistency across communication channels. The QBR and QBT series also features HDR+ functionality that converts standard definition (SDR) content to HDR quality for sharper contrast and more vivid colors.

Key features

Side power inlet for no depth extension

Symmetric

Slim Depth

Narrow Bezel

Long Life Cycle

Slim and symmetrical design

The all-new slim and symmetrical design of the QHR series significantly simplifies wall mounting the display and ensures installation is a seamless process. The display's power inlet direction has been redesigned to sit flush against the wall. The new design sets guarantees a long life cycle ensuring the QHR series will stand the test of time.

Clean cable management

In a corporate or retail environment, the back of a display is often visible to customers. With the QHR series' new cable guide feature retailers can tuck messy cables away from view. This allows for a clean and more visually-appealing customer shopping experience.

Saving TCO

PC-less Solution

Enhanced Security

Any PC

Office 365

VMware Horizon

Samsung Workspace secured by Knox

Samsung Workspace is a powerful new feature fortified by proprietary Knox security technology allowing users to create an enhanced virtual collaboration workspace without needing a PC in the room, or any physical connection. Simply connect a keyboard and mouse to the display and immediately get to work accessing a PC remotely or web based cloud services such as Microsoft Office 365 and VMWare Horizon.

* Samsung Workspace feature support may vary by region and market conditions.
* The scheduled availability of this feature varies by model.

Easy Development

Reinforced Compatibility

High Expandability

Secured Protection

Powerful, all-in-one solution

The Samsung SMART Signage Platform (SSSP) is an open-source, all-in-one solution embedded in Samsung SMART signage that simplifies installation and maintenance. With SSSP, there is no need for any external devices to communicate with the server or play digital media enjoying easy development, reinforced capability with multiple web formats, and secured protection.

Wi-Fi and Bluetooth built-in

The QHR series features a nearly endless range of business use cases thanks to built-in Wi-Fi and Bluetooth. Wireless connectivity allows for personalized and interactive services including enabling integration with beacon technology in store, while also simplifying how businesses showcase content.

* Image is for illustrative purposes only, specific application or program may have to be developed for the depicted usage scenario.

EMC Class B

EPEAT registered

Industry standard certified

QHR displays are EMC class B compliant, providing a safe and healthy viewing environment by meeting strict standards of electromagnetic wave emission and assuring reliable operation even near other electronic equipment. The displays are also registered by EPEAT, the global ecolabel for IT, confirming the hardware is sustainable for the full product lifecycle, from design and production to energy use and recycling.

Specifications

			QH43R	QH50R	QH55R	QH65R	QH75R
Panel	Diagonal Size	Class	43	50	55	65	75
		Measured	42.5	49.5	54.6	64.5	74.5
	Type		Edge LED BLU	Edge LED BLU	Edge LED BLU	Edge LED BLU	Edge LED BLU
	Resolution		UHD (3840 x 2160)	UHD (3840 x 2160)	UHD (3840 x 2160)	UHD (3840 x 2160)	UHD (3840 x 2160)
	Pixel Pitch (mm)		0.2451 x 0.2451	0.285 x 0.285	0.315 x 0.315	0.372 x 0.372	0.42975 x 0.42975
	Active Display Area		941.184 (H) x 529.416 (V)	1095.84(H) x 616.41(V)	1209.6(H) x 680.4(V)	1428.48 (H) x 803.52 (V)	1650.24 (H) x 928.26 (V)
	Brightness(Typ.)		700	700	700	700	700
	Contrast Ratio (Typ.)		4000:1	4000:1	4000:1	4000:1	4000:1
	Viewing Angle(H/V)		178/178	178/178	178/178	178/178	178/178
	Response Time (G to G)		8ms(Typ.)	8ms(Typ.)	8ms(Typ.)	8ms(Typ.)	8ms(Typ.)
	Display Colors		16.7M(True Display) 1.07B(Ditherd 10bit)	16.7M(True Display) 1.07B(Ditherd 10bit)	16.7M(True Display) 1.07B(Ditherd 10bit)	16.7M(True Display) 1.07B(Ditherd 10bit)	16.7M(True Display) 1.07B(Ditherd 10bit)
	Color Gamut		92% (DCI-P3, CIE 1976)	92% (DCI-P3, CIE 1976)	92% (DCI-P3, CIE 1976)	92% (DCI-P3, CIE 1976)	92% (DCI-P3, CIE 1976)
	Operation Hour		24/7	24/7	24/7	24/7	24/7
	Haze		44%	25%	25%	25%	44%
Display	Dynamic C/R		MEGA	MEGA	MEGA	MEGA	MEGA
	H-Scanning Frequency		30 ~ 81kHZ	30 ~ 81kHZ	30 ~ 81kHZ	30 ~ 81kHZ	30 ~ 81kHZ
	V-Scanning Frequency		48 ~ 75HZ	48 ~ 75HZ	48 ~ 75HZ	48 ~ 75HZ	48 ~ 75HZ
	Maximum Pixel Frequency		594MHz	594MHz	594MHz	594MHz	594MHz
Sound	Speaker Type		Built in Speaker(10W + 10W)	Built in Speaker(10W + 10W)	Built in Speaker(10W + 10W)	Built in Speaker(10W + 10W)	Built in Speaker(10W + 10W)
Connectivity	INPUT	RGB	DVI-D, Display Port 1.2 (1)	DVI-D, Display Port 1.2 (1)	DVI-D, Display Port 1.2 (1)	DVI-D, Display Port 1.2 (1)	DVI-D, Display Port 1.2 (1)
		VIDEO	HDMI 2.0 (2)	HDMI 2.0 (2)	HDMI 2.0 (2)	HDMI 2.0 (2)	HDMI 2.0 (2)
		HDCP	HDCP2.2	HDCP2.2	HDCP2.2	HDCP2.2	HDCP2.2
		AUDIO	Stereo mini Jack, DVI, HDMI	Stereo mini Jack, DVI, HDMI	Stereo mini Jack, DVI, HDMI	Stereo mini Jack, DVI, HDMI	Stereo mini Jack, DVI, HDMI
		USB	USB 2.0 x 2	USB 2.0 x 2	USB 2.0 x 2	USB 2.0 x 2	USB 2.0 x 2
	OUTPUT	RGB	HDMI 2.0 (Loop-out)	HDMI 2.0 (Loop-out)	HDMI 2.0 (Loop-out)	HDMI 2.0 (Loop-out)	HDMI 2.0 (Loop-out)
		VIDEO	N/A	N/A	N/A	N/A	N/A
		AUDIO	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack	Stereo mini Jack
		Power Out	N/A	N/A	N/A	N/A	N/A
		USB	N/A	N/A	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	RS232C(in/out) thru stereo jack, RJ45	RS232C(in/out) thru stereo jack, RJ45
	EXTERNAL SENSOR		IR	IR	IR	IR	IR
	Tuner		N/A	N/A	N/A	N/A	N/A
Power	Type		Internal	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	AC 100 - 240 V~ (+/-10 %), 50/60 Hz
	Power Consumption	Max[W/h]	138	TBD	160	204	314
		Typical[W/h]	96	TBD	118	150	247
		Rating[W/h]	125	TBD	145	185	285
		BTU(Max)	470.6	TBD	545.6	695.6	1070.7
		Sleep mode	0.5	0.5	0.5	0.5	0.5
		Off mode	N/A	N/A	N/A	N/A	N/A
Mechanical Spec	Dimension(mm)	Set	967.5 x 557.7 x 48.3	1121.4 x 643.9 x 46.3	1235.1 x 707.9 x 46.3	1453.9 x 831.0 x 46.3	1681.1 x 960.1 x 49.7
		Package	1095 x 676 x 151	1269 x 784 x 152	1402 x 858 x 163	1611 x 973 x 185	1871 x 1127 x 223
	Weight (kg)	Set	10	13.4	18.1	24.9	38.3
		Package	13.3	17.6	23.6	33.3	49
	VESA Mount		200 X 200	200 X 200	200 X 200	400 X 400	400 X 400
	Protection Glass		N/A	N/A	N/A	N/A	N/A
	Stand Type		Foot Stand (Optional)	Foot Stand (Optional)	Foot Stand (Optional)	No	No
	Bezel Width (Top/Side/Bot) (mm)		9.2mm(U/L/R),11.2mm(B)	9.2mm(U/L/R),11.2mm(B)	9.2mm(U/L/R),11.2mm(B)	9.2mm(U/L/R),11.2mm(B)	11.5mm(U/L/R), 12.5mm(B)
Operation	Operating Temperature		0°C~ 40°C	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%	10~80%
Feature	Key		UHD Signage Display Slim & Light Signage with Built-in MagicInfo S6, SSSP 6.0	UHD Signage Display Slim & Light Signage with Built-in MagicInfo S6, SSSP 6.0	UHD Signage Display Slim & Light Signage with Built-in MagicInfo S6, SSSP 6.0	UHD Signage Display Slim & Light Signage with Built-in MagicInfo S6, SSSP 6.0	UHD Signage Display Slim & Light Signage with Built-in MagicInfo S6, SSSP 6.0
	Special	H/W	Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT	Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT	Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT	Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT	Temperature Sensor,Pivot Display, Clock Battery(168hrs Clock Keeping), Built in Speaker(10W 2ch), Video Wall Daisy Chain(HDCP2.2:4EA,HDCP1.4:7EA), IP5x Rating, Wi-Fi/BT
		S/W	Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting)	Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting), 802.1x(WPA2 Enterprise) Certified	Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting)	Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting)	Auto Source Switching & Recovery, LFD Home UI, Button Lock, Hot key option, Plug&Play (Initial Setting)
	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	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	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	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	2.5GB LPDDR4 1.5GHz 64bit	2.5GB LPDDR4 1.5GHz 64bit
		Graphics	Graphic resolution : 1920x1080 Output resolution : 3840x2160 (Scale up from graphic processing result.)	Graphic resolution : 1920x1080 Output resolution : 3840x2160 (Scale up from graphic processing result.)	Graphic resolution : 1920x1080 Output resolution : 3840x2160 (Scale up from graphic processing result.)	Graphic resolution : 1920x1080 Output resolution : 3840x2160 (Scale up from graphic processing result.)	Graphic resolution : 1920x1080 Output resolution : 3840x2160 (Scale up from graphic processing result.)
		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)	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	*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	USB 2.0	USB 2.0
		Operating System	Tizen 4.0 (VDLinux)	Tizen 4.0 (VDLinux)	Tizen 4.0 (VDLinux)	Tizen 4.0 (VDLinux)	Tizen 4.0 (VDLinux)
Certification	Safety		60950-1	60950-1	60950-1	60950-1	60950-1
	EMC		Class B	Class B	Class B	Class B	Class B
	Environment		ENERGY STAR 8.0, Epeat	N/A	ENERGY STAR 8.0, Epeat	ENERGY STAR 8.0, Epeat	N/A
	Security		802.1x(WPA2 Enterprise) : EAP-TLS, EAP-TTLS, EAP-PEAP	802.1x(WPA2 Enterprise) : EAP-TLS, EAP-TTLS, EAP-PEAP	802.1x(WPA2 Enterprise) : EAP-TLS, EAP-TTLS, EAP-PEAP	802.1x(WPA2 Enterprise) : EAP-TLS, EAP-TTLS, EAP-PEAP	802.1x(WPA2 Enterprise) : EAP-TLS, EAP-TTLS, EAP-PEAP
Accessories	Included		Quick Setup Guide, Warranty Card, Power Cord, Remote Controller, Batteries	Quick Setup Guide, Warranty Card, Power Cord, Remote Controller, Batteries	Quick Setup Guide, Warranty Card, Power Cord, Remote Controller, Batteries	Quick Setup Guide, Warranty Card, Power Cord, Remote Controller, Batteries	Quick Setup Guide, Warranty Card, Power Cord, Remote Controller, Batteries
	Optional	Stand	STN-L4355F	TBD	STN-L4355F	No	No
		Mount	WMN4070SE (Land Only)	WMN4070SE (Land Only)	WMN4070SE (Land Only)	WMN4277SE (Land Only)	WMN4277SE (Land Only) WMN6575SE
		Specialty	CML400XK	TBD	CML400XK	CLM450K	CLM450K
		Media Player	N/A	N/A	N/A	N/A	N/A

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SMART Signage

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

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