

# SAMSUNG

## OLED S90F 4K Vision AI Smart TV (2025)

Enrich your experience with Samsung Vision AI



**42-48"**



**55-83"**

### Top Features

#### NQ4 AI Gen3 Processor

Powered by 128 AI neural networks, this AI processor enhances your picture and sound to superb heights. Enjoy the best 4K TV experience, whether you're watching streaming services, playing your favourite video games, or watching live sports.<sup>1</sup>

#### 4K AI Upscaling Pro

Our 4K AI Upscaling Pro technology powered by 128 AI neural networks transforms content into a 4K resolution. Our NQ4 AI Gen3 Processor enables sharp and smooth picture quality.<sup>2</sup>

#### OLED HDR+

Enjoy HDR10+ content on your OLED screen. With extraordinary detail in both dark and light scenes, you can experience lifelike colour and deep contrast.<sup>3</sup>

#### Motion Xcelerator 144Hz

Level up your gaming experience with exceptional motion enhancements up to 144Hz VRR. Providing crisp visuals at high speeds, unlock peak performance in every round. HDMI 2.1 compatibility provides access to ultra-high bandwidth for compatible devices, helping you keep ahead of the competition.<sup>4</sup>

<sup>1</sup> Compared to NQ4 AI Gen2 Processor. Picture quality of upscaled content will vary depending on the quality and resolution of source content and may not apply to PC connection and Game Mode.

<sup>2</sup> Viewing experience may vary according to types of content and format. Upscaling may not apply to PC connection and Game Mode.

<sup>3</sup> Source content must be HDR10+ format. The Range of Quantum HDR claims luminance based on internal testing standards and is subject to change according to viewing environment or specific conditions. For S90F 42 and 48 inch: OLED HDR applied.

<sup>4</sup> Requires compatible gaming PC supporting 4K resolution, 144Hz motion rate and Variable Refresh Rate. Picture quality will vary depending on quality and resolution of source content.

Product	Product Category	42"	48"	55"	65"	77"	83"
Display	Model Number	QA42S90FAEXXY	QA48S90FAEXXY	QA55S90FAWXXY	QA65S90FAEXXY	QA77S90FAEXXY	QA83S90FAEXXY
	Screen Size	42"	48"	55"	65"	77"	83"
	Resolution	4K (3,840 x 2,160)	4K (3,840 x 2,160)	4K (3,840 x 2,160)	4K (3,840 x 2,160)	4K (3,840 x 2,160)	4K (3,840 x 2,160)
	Native Refresh Rate	100Hz	100Hz	100Hz	100Hz	100Hz	100Hz
	Anti Reflection	Yes	Yes	Yes	Yes	Yes	Yes
Video	Picture Engine	NQ4 AI Gen3 Processor	NQ4 AI Gen3 Processor	NQ4 AI Gen3 Processor	NQ4 AI Gen3 Processor	NQ4 AI Gen3 Processor	NQ4 AI Gen3 Processor
	HDR (High Dynamic Range)	OLED HDR	OLED HDR	OLED HDR+	OLED HDR+	OLED HDR+	OLED HDR+
	HDR 10+	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)
	Auto HDR Remastering	Auto HDR Remastering pro	Auto HDR Remastering pro	Auto HDR Remastering pro	Auto HDR Remastering pro	Auto HDR Remastering pro	Auto HDR Remastering pro
	Contrast	Self-illuminating pixels	Self-illuminating pixels	Self-illuminating pixels	Self-illuminating pixels	Self-illuminating pixels	Self-illuminating pixels
	Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle
	Micro Dimming	N/A	N/A	N/A	N/A	N/A	N/A
	Contrast Enhancer	Real Depth Enhancer	Real Depth Enhancer	Real Depth Enhancer	Real Depth Enhancer	Real Depth Enhancer	Real Depth Enhancer
	Expert Calibration	N/A	N/A	N/A	N/A	N/A	N/A
	Smart Calibration	Basic	Basic	Basic	Basic	Basic	Basic
	Picture Upscale	4K AI Upscaling Pro	4K AI Upscaling Pro	4K AI Upscaling Pro	4K AI Upscaling Pro	4K AI Upscaling Pro	4K AI Upscaling Pro
	AI Motion Enhancer	AI Motion Enhancer Pro	AI Motion Enhancer Pro	AI Motion Enhancer Pro	AI Motion Enhancer Pro	AI Motion Enhancer Pro	AI Motion Enhancer Pro
	Supersize Picture Enhancer	N/A	N/A	N/A	N/A	N/A	N/A
	HDR Brightness Optimiser	Yes	Yes	Yes	Yes	Yes	Yes
Filmmaker Mode	Yes	Yes	Yes	Yes	Yes	Yes	
Audio	Dolby Atmos	Yes	Yes	Yes	Yes	Yes	Yes
	Object Tracking Sound	OTS Lite	OTS Lite	OTS Lite	OTS Lite	OTS Lite	OTS Lite
	Q-Symphony	Yes	Yes	Yes	Yes	Yes	Yes
	Sound Output (RMS)	20W	40W	40W	40W	40W	40W
	Speaker Type	2CH	2.1CH	2.1CH	2.1CH	2.1CH	2.1CH
	Adaptive Sound	Yes (Adaptive Sound Pro)	Yes (Adaptive Sound Pro)	Yes (Adaptive Sound Pro)	Yes (Adaptive Sound Pro)	Yes (Adaptive Sound Pro)	Yes (Adaptive Sound Pro)
	360 Audio	Yes	Yes	Yes	Yes	Yes	Yes

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Smart Service	Operating System	Tizen™ Smart TV	Tizen™ Smart TV	Tizen™ Smart TV	Tizen™ Smart TV	Tizen™ Smart TV	Tizen™ Smart TV
	Bixby	Yes	Yes	Yes	Yes	Yes	Yes
	Far-Field Voice Interaction	Yes	Yes	Yes	Yes	Yes	Yes
	Built-in Voice Assistant	Alexa	Alexa	Alexa	Alexa	Alexa	Alexa
	Works with AI Speaker	Alexa, Google Assistant	Alexa, Google Assistant	Alexa, Google Assistant	Alexa, Google Assistant	Alexa, Google Assistant	Alexa, Google Assistant
	Samsung TV Plus	Yes	Yes	Yes	Yes	Yes	Yes
	Web Browser	Yes	Yes	Yes	Yes	Yes	Yes
	SmartThings Hub / Matter Hub / IoT-Sensor Functionality / Quick Remote	Yes	Yes	Yes	Yes	Yes	Yes
Smart Feature	Multi Device Experience	TV to Mobile, Mobile to TV, TV initiate mirroring, Sound Mirroring, Wireless TV On, Tap View (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support) (Tap View requires Android 8.1† with Screen Cast capabilities)	TV to Mobile, Mobile to TV, TV initiate mirroring, Sound Mirroring, Wireless TV On, Tap View (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support) (Tap View requires Android 8.1† with Screen Cast capabilities)	TV to Mobile, Mobile to TV, TV initiate mirroring, Sound Mirroring, Wireless TV On, Tap View (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support) (Tap View requires Android 8.1† with Screen Cast capabilities)	TV to Mobile, Mobile to TV, TV initiate mirroring, Sound Mirroring, Wireless TV On, Tap View (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support) (Tap View requires Android 8.1† with Screen Cast capabilities)	TV to Mobile, Mobile to TV, TV initiate mirroring, Sound Mirroring, Wireless TV On, Tap View (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support) (Tap View requires Android 8.1† with Screen Cast capabilities)	TV to Mobile, Mobile to TV, TV initiate mirroring, Sound Mirroring, Wireless TV On, Tap View (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support) (Tap View requires Android 8.1† with Screen Cast capabilities)
	Multi-View	Up to 2 videos	Up to 2 videos	Up to 2 videos	Up to 2 videos	Up to 2 videos	Up to 2 videos
	Ambient Mode	Yes	Yes	Yes	Yes	Yes	Yes
	ScreenVitals	Yes	Yes	Yes	Yes	Yes	Yes
	Apple AirPlay 2	Yes	Yes	Yes	Yes	Yes	Yes
	Daily+	Yes	Yes	Yes	Yes	Yes	Yes
Game Feature	Auto Game Mode (ALLM)	Yes	Yes	Yes	Yes	Yes	Yes
	Game Motion Plus	Yes	Yes	Yes	Yes	Yes	Yes
	VRR	Yes	Yes	Yes	Yes	Yes	Yes
	Dynamic Black EQ	Yes	Yes	Yes	Yes	Yes	Yes
	Surround Sound	Yes	Yes	Yes	Yes	Yes	Yes
	Ultra Wide Game View	Yes	Yes	Yes	Yes	Yes	Yes
	MiniMap Zoom	Yes	Yes	Yes	Yes	Yes	Yes
	Hue Sync	Yes	Yes	Yes	Yes	Yes	Yes
	FreeSync	FreeSync Premium	FreeSync Premium	FreeSync Premium Pro	FreeSync Premium Pro	FreeSync Premium Pro	FreeSync Premium Pro
	HGiG	Yes	Yes	Yes	Yes	Yes	Yes
Gaming Hub	Yes (KR, US, CA, BR, GB, FR, DE, IT, ES, MX, AU)	Yes (KR, US, CA, BR, GB, FR, DE, IT, ES, MX, AU)	Yes (KR, US, CA, BR, GB, FR, DE, IT, ES, MX, AU)	Yes (KR, US, CA, BR, GB, FR, DE, IT, ES, MX, AU)	Yes (KR, US, CA, BR, GB, FR, DE, IT, ES, MX, AU)	Yes (KR, US, CA, BR, GB, FR, DE, IT, ES, MX, AU)	
Tuner/Broadcasting	Digital Broadcasting	DVB-T(T2 Ready)	DVB-T(T2 Ready)	DVB-T(T2 Ready)	DVB-T(T2 Ready)	DVB-T(T2 Ready)	DVB-T(T2 Ready)
	Analog Tuner	Yes	Yes	Yes	Yes	Yes	Yes
	CI (Common Interface)	N/A	N/A	N/A	N/A	N/A	N/A



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Accessibility	Voice Guide	Chinese (China),English (Australia),French (France),German (Germany),Italian (Italy),Korean (Korea),Malay (Malaysia),Spanish (Spain)		Chinese (China),English (Australia),French (France),German (Germany),Italian (Italy),Korean (Korea),Malay (Malaysia),Spanish (Spain)		Chinese (China),English (Australia),French (France),German (Germany),Italian (Italy),Korean (Korea),Malay (Malaysia),Spanish (Spain)		Chinese (China),English (Australia),French (France),German (Germany),Italian (Italy),Korean (Korea),Malay (Malaysia),Spanish (Spain)		Chinese (China),English (Australia),French (France),German (Germany),Italian (Italy),Korean (Korea),Malay (Malaysia),Spanish (Spain)		Chinese (China),English (Australia),French (France),German (Germany),Italian (Italy),Korean (Korea),Malay (Malaysia),Spanish (Spain)	
	Low Vision Support	Audio Subtitles, Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Auto Picture Off		Audio Subtitles, Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Auto Picture Off		Audio Subtitles, Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Auto Picture Off		Audio Subtitles, Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Auto Picture Off		Audio Subtitles, Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Auto Picture Off		Audio Subtitles, Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Auto Picture Off	
	Hearing Impaired Support	Closed Caption (Subtitle), Multi-output Audio, Sign Language Zoom		Closed Caption (Subtitle), Multi-output Audio, Sign Language Zoom		Closed Caption (Subtitle), Multi-output Audio, Sign Language Zoom		Closed Caption (Subtitle), Multi-output Audio, Sign Language Zoom		Closed Caption (Subtitle), Multi-output Audio, Sign Language Zoom		Closed Caption (Subtitle), Multi-output Audio, Sign Language Zoom	
	Motor Impaired Support	Slow Button Repeat, Remote Control App. for All		Slow Button Repeat, Remote Control App. for All		Slow Button Repeat, Remote Control App. for All		Slow Button Repeat, Remote Control App. for All		Slow Button Repeat, Remote Control App. for All		Slow Button Repeat, Remote Control App. for All	
Power & Eco Solution	Power Supply	AC220-240V- 50/60Hz		AC220-240V- 50/60Hz		AC220-240V- 50/60Hz		AC220-240V- 50/60Hz		AC220-240V- 50/60Hz		AC220-240V- 50/60Hz	
	Power Consumption (Max)	195 W		230 W		310 W		510 W		630 W		740 W	
	Power Consumption (Stand-by)	0.5 W		0.5 W		0.5 W		0.5 W		0.5 W		0.5 W	
	Power Consumption (Typical)	67.0 W		79.0 W		109.0 W		145.0 W		174.0 W		216.0 W	
	Power Consumption (Energy Saving Mode)	N/A		N/A		N/A		N/A		N/A		N/A	
	Yearly Power Consumption (EU standard)	248 kWh		291 kWh		401 kWh		532 kWh		638 kWh		791 kWh	
	Eco Sensor	Yes		Yes		Yes		Yes		Yes		Yes	
	Auto Power Saving	Yes		Yes		Yes		Yes		Yes		Yes	
	Energy Efficiency Class	4		4.5		4		4		5		4.5	
	Auto Power Off	Yes		Yes		Yes		Yes		Yes		Yes	
Dimension	Package Size (WxHxD)	1051 x 657 x 131 mm		1197 x 770 x 143 mm		1385 x 832 x 153 mm		1617 x 950 x 160 mm		1885 x 1154 x 180 mm		2024 x 1234 x 189 mm	
	Set Size with Stand (WxHxD)	934.4 x 606.9 x 206.3 mm		1069.3 x 682.6 x 209.5 mm		1225.4 x 773.6 x 265.2 mm		1444.3 x 896.7 x 265.2 mm		1718.5 x 1058.6 x 359.0 mm		1851.0 x 1133.7 x 359.0 mm	
	Set Size without Stand (WxHxD)	934.4 x 542.6 x 39.5 mm		1069.3 x 619.9 x 39.6 mm		1225.4 x 708.6 x 39.9 mm		1444.3 x 831.7 x 39.9 mm		1718.5 x 987.6 x 44.9 mm		1851.0 x 1062.8 x 44.9 mm	
	Stand (Basic) (WxD)	652.5 x 206.3 mm		534.0 x 209.5 mm		366.0 x 265.2 mm		366.0 x 265.2 mm		366.0 x 359.0 mm		366.0 x 359.0 mm	
	Stand (Minimum) (WxD)	N/A		N/A		N/A		N/A		N/A		N/A	
	VESA Spec	200 x 200 mm		300 x 200 mm		300 x 200 mm		300 x 200 mm		400 x 300 mm		400 x 300 mm	
Weight	Package Weight	12.1 kg		17.8 kg		22.9 kg		26.20 kg		44.4 kg		52.1 kg	
	Set Weight with Stand	8.7 kg		13.2 kg		17.3 kg		20.40 kg		34.2 kg		39.4 kg	
	Set Weight without Stand	8.3 kg		12.3 kg		16 kg		19.1 kg		32.4 kg		37.6 kg	

Accessory	42"	48"	55"	65"	77"	83"
Remote Controller Model	TM2360E	TM2360E	TM2360E	TM2360E	TM2360E	TM2360E
Slim Fit Wall-mount Support	Yes	Yes	Yes	Yes	N/A	N/A
Studio Stand Support	N/A	N/A	N/A	N/A	N/A	N/A
Auto-Rotation Accessory Support	N/A	N/A	N/A	N/A	N/A	N/A
Full Motion Slim Wall Mount Support (Y22)	Yes	Yes	Yes	Yes	Yes	Yes
SlimFit Cam Support	Yes	Yes	Yes	Yes	Yes	Yes
Zigbee / Thread Module	Built-In	Built-In	Built-In	Built-In	Built-In	Built-In
User Manual	Yes	Yes	Yes	Yes	Yes	Yes
Power Cable	Yes	Yes	Yes	Yes	Yes	Yes