

SAMSUNG

QN90D – Neo QLED 4K Smart TV (2024)

More Wow than ever in 4K, Neo QLED.



Top Features

4K Quantum Matrix Technology

Quantum Matrix Technology Pro uses our proprietary Quantum Mini LEDs with precise light control to enhance picture quality, deliver incredible detail, deep blacks and brilliant contrast.

4K AI Upscaling powered by NQ4 AI Gen2 Processor

Enjoy one of our best 4K picture performances. By leveraging AI neural networks, your TV upscales your favourite content to help it look its best.¹

Motion Rate 200

See fast-moving scenes with minimal blur and judder so that you have a sharper and smoother viewing experience watching live sports and action movies.²

True Dolby Atmos

The QN90D includes a 60W 4.2.2 channel sound system featuring built-in up, down and side-firing speakers with True Dolby Atmos support to deliver larger-than-life audio experiences.³

¹ 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..

² Viewing experience may vary according to types of content and format.

³ True Dolby Atmos 4.2.2ch. Sound is on 55", 65", 75", 85" and 98". 50" has Dolby Atmos 2.2ch and 43" has Dolby Atmos 2.0ch. Source content must be Dolby Atmos® enabled for Dolby Atmos® playback. Samsung define 'True Dolby Atmos' as featuring an upwards-firing directional speaker for three dimensional sound.

Product	Product Category	43"	50"	55"	65"	75"	85"	98"
		NeoQLED	NeoQLED	NeoQLED	NeoQLED	NeoQLED	NeoQLED	NeoQLED
		Model Number	QA43QN90DAWXXY	QA50QN90DAWXXY	QA55QN90DAWXXY	QA65QN90DAWXXY	QA75QN90DAWXXY	QA85QN90DAWXXY
Display	Screen Size	43"	50"	55"	65"	75"	85"	98"
	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)	4K (3,840 x 2,160)
	Native Refresh Rate	100Hz	100Hz	100Hz	100Hz	100Hz	100Hz	100Hz
	Motion Rate	200	200	200	200	200	200	200
	Anti Reflection	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Video	Picture Engine	NQ4 AI Gen2 Processor	NQ4 AI Gen2 Processor	NQ4 AI Gen2 Processor	NQ4 AI Gen2 Processor	NQ4 AI Gen2 Processor	NQ4 AI Gen2 Processor	NQ4 AI Gen2 Processor
	HDR (High Dynamic Range)	Neo Quantum HDR	Neo Quantum HDR	Neo Quantum HDR+	Neo Quantum HDR+	Neo Quantum HDR+	Neo Quantum HDR+	Neo Quantum HDR+
	HDR 10+	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)	Yes (ADAPTIVE/ GAMING)
	AI HDR Remastering	Auto HDR Remastering	Auto HDR Remastering	Auto HDR Remastering	Auto HDR Remastering	Auto HDR Remastering	Auto HDR Remastering	Auto HDR Remastering
	Contrast	Quantum Matrix Technology	Quantum Matrix Technology	Quantum Matrix Technology	Quantum Matrix Technology	Quantum Matrix Technology	Quantum Matrix Technology	Quantum Matrix Technology
	Colour	Quantum Dot	Quantum Dot	Quantum Dot	Quantum Dot	Quantum Dot	Quantum Dot	Quantum Dot
	Viewing Angle	Wide Viewing Angle	Wide Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle	Wide Viewing Angle
	Micro Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming
	Contrast Enhancer	Real Depth Enhancer Pro	Real Depth Enhancer Pro	Real Depth Enhancer Pro	Real Depth Enhancer Pro	Real Depth Enhancer Pro	Real Depth Enhancer Pro	Real Depth Enhancer Pro
	Expert Calibration	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Smart Calibration	Basic/Professional	Basic/Professional	Basic/Professional	Basic/Professional	Basic/Professional	Basic/Professional	Basic/Professional
	Picture Upscaling	4K AI Upscaling	4K AI Upscaling	4K AI Upscaling	4K AI Upscaling	4K AI Upscaling	4K AI Upscaling	4K AI Upscaling
	AI Motion Enhancer	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Supersize Picture Enhancer	N/A	N/A	N/A	N/A	N/A	Yes	Yes
	HDR Brightness Optimizer	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Filmmaker Mode	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Audio	Dolby Atmos	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Object Tracking Sound	OTS Lite	OTS Lite	OTS+	OTS+	OTS+	OTS+	OTS+
	Q-Symphony	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Sound Output (RMS)	20W	40W	60W	60W	60W	60W	60W
	Speaker Type	2CH	2.2CH	4.2.2CH	4.2.2CH	4.2.2CH	4.2.2CH	4.2.2CH
	Active Voice Amplifier Pro	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Adaptive Sound	Adaptive Sound Pro	Adaptive Sound Pro	Adaptive Sound Pro	Adaptive Sound Pro	Adaptive Sound Pro	Adaptive Sound Pro	Adaptive Sound Pro
	360 Audio	Yes	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	Tizen™ Smart TV
	Bixby	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Far-Field Voice Interaction	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Built-in Voice Assistant	Alexa	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	Alexa, Google Assistant
	Samsung TV Plus	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Web Browser	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	SmartThings Hub / Matter Hub / IoT-Sensor Functionality	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Smart Feature	Multi Device Experience	TV to Mobile, Mobile to TV, TV initiate mirroring, TV Sound to Mobile, Sound Mirroring, Wireless TV On (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support)	TV to Mobile, Mobile to TV, TV initiate mirroring, TV Sound to Mobile, Sound Mirroring, Wireless TV On (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support)	TV to Mobile, Mobile to TV, TV initiate mirroring, TV Sound to Mobile, Sound Mirroring, Wireless TV On (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support)	TV to Mobile, Mobile to TV, TV initiate mirroring, TV Sound to Mobile, Sound Mirroring, Wireless TV On (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support)	TV to Mobile, Mobile to TV, TV initiate mirroring, TV Sound to Mobile, Sound Mirroring, Wireless TV On (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support)	TV to Mobile, Mobile to TV, TV initiate mirroring, TV Sound to Mobile, Sound Mirroring, Wireless TV On (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support)	TV to Mobile, Mobile to TV, TV initiate mirroring, Sound Mirroring, Wireless TV On (requires Android 6.0† with Screen Cast capabilities or iPhone iOS 11.4† with AirPlay 2 support)
	Tap View	Yes (requires Android 8.1† with Screen Cast capabilities)	Yes (requires Android 8.1† with Screen Cast capabilities)	Yes (requires Android 8.1† with Screen Cast capabilities)	Yes (requires Android 8.1† with Screen Cast capabilities)	Yes (requires Android 8.1† with Screen Cast capabilities)	Yes (requires Android 8.1† with Screen Cast capabilities)	Yes (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	Up to 2 videos
	Ambient Mode	Ambient Mode+	Ambient Mode+	Ambient Mode+	Ambient Mode+	Ambient Mode+	Ambient Mode+	Ambient Mode+
	NFT	Nifty Gateway	Nifty Gateway	Nifty Gateway	Nifty Gateway	Nifty Gateway	Nifty Gateway	Nifty Gateway
	ScreenVitals	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Apple AirPlay	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Daily+	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Game Feature	Auto Game Mode (ALLM)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Game Motion Plus	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	VRR	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Dynamic Black EQ	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Surround Sound	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Super Ultra Wide Game View	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	MiniMap Zoom	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Hue Sync	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	FreeSync	FreeSync Premium Pro	FreeSync Premium Pro	FreeSync Premium Pro	FreeSync Premium Pro	FreeSync Premium Pro	FreeSync Premium Pro	FreeSync Premium Pro
	HGiG	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Gaming Hub	Yes	Yes	Yes	Yes	Yes	Yes	Yes
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)	DVB-T(T2 Ready)
	Analog Tuner	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	CI (Common Interface)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[illegible]

		43"	50"	55"	65"	75"	85"	98"
Accessibility	Voice Guide	AU English, China Chinese, Korean, France French, Italian, German, Spain Spanish, Malay	AU English, China Chinese, Korean, France French, Italian, German, Spain Spanish, Malay	AU English, China Chinese, Korean, France French, Italian, German, Spain Spanish, Malay	AU English, China Chinese, Korean, France French, Italian, German, Spain Spanish, Malay	AU English, China Chinese, Korean, France French, Italian, German, Spain Spanish, Malay	AU English, China Chinese, Korean, France French, Italian, German, Spain Spanish, Malay	AU English, China Chinese, Korean, France French, Italian, German, Spain Spanish, Malay
	Low Vision Support	Audio Subtitles (AU,KR,UK,US Only), Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Picture Off	Audio Subtitles (AU,KR,UK,US Only), Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Picture Off	Audio Subtitles (AU,KR,UK,US Only), Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Picture Off	Audio Subtitles (AU,KR,UK,US Only), Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Picture Off	Audio Subtitles (AU,KR,UK,US Only), Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Picture Off	Audio Subtitles (AU,KR,UK,US Only), Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, Picture Off	Audio Subtitles (AU,KR,UK,US Only), Relumino, Magnification, Audio Description, Zoom Menu and Text, High Contrast, SeeColors, Colour Inversion, Grayscale, 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	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	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	AC220-240V~ 50/60Hz
	Power Consumption (Max)	145 W	175 W	225 W	285 W	300 W	375 W	435 W
	Power Consumption (Energy Saving Mode)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Power Consumption (Stand-by)	0.5 W	0.5 W	0.5 W	0.5 W	0.5 W	0.5 W	0.5 W
	Power Consumption (Typical)	63.0 W	81.0 W	114.0 W	138.0 W	157.0 W	211.0 W	256.0 W
	Yearly Power Consumption (EU standard)	233 kWh	299 kWh	419 kWh	507 kWh	576 kWh	773 kWh	937 kWh
	Eco Sensor	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Auto Power Saving	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Energy Efficiency Class	4.5	4.5	4	4.5	5	5	5
	Auto Power Off	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dimension	Package Size (WxHxD)	1164 x 667 x 140 mm	1317 x 767 x 140 mm	1448 x 826 x 170 mm	1622 x 935 x 185 mm	1884 x 1118 x 191 mm	2141 x 1245 x 230 mm	2370 x 1420 x 275 mm
	Set Size with Stand (WxHxD)	960.8 x 619.9 x 220.0 mm	1113.6 x 705.4 x 220.0 mm	1227.4 x 768.2 x 237.0 mm	1446.3 x 891.3 x 270.6 mm	1670.0 x 1017.2 x 301.2 mm	1892.2 x 1143.0 x 321.3 mm	2185.1 x 1305.9 x 364.9 mm
	Set Size without Stand (WxHxD)	960.8 x 558.9 x 26.9 mm	1113.6 x 644.1 x 26.9 mm	1227.4 x 705.6 x 26.9 mm	1446.3 x 828.7 x 26.9 mm	1670.0 x 957.4 x 27.7 mm	1892.2 x 1081.9 x 27.9 mm	2185.1 x 1249.3 x 31.1 mm
	Stand (Basic) (WxD)	519.0 x 220 mm	519.0 x 220.0 mm	388.3 x 237.0 mm	390 x 270.6 mm	416.9 x 301.2 mm	417.6 x 321.3 mm	478.9 x 364.9 mm
	Stand (Minimum) (WxD)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	VESA Spec	200 x 200 mm	200 x 200 mm	200 x 200 mm	400 x 300 mm	400 x 400 mm	600 x 400 mm	600 x 400 mm
Weight	Package Weight	17.5 kg	22.5 kg	26.2 kg	35.4 kg	50.2 kg	63.3 kg	92.7 kg
	Set Weight with Stand	13.4 kg	17.6 kg	20.6 kg	27.5 kg	39.7 kg	49.9 kg	70.6 kg
	Set Weight without Stand	9.4 kg	13.5 kg	17.7 kg	24.2 kg	34.1 kg	43.5 kg	61.4 kg

Accessory		43"	50"	55"	65"	75"	85"	98"
	Remote Controller Model	TM2360E	TM2360E	TM2360E	TM2360E	TM2360E	TM2360E	TM2360E
	Slim Fit Wall-mount Support	Yes	Yes	Yes	Yes	Yes	Yes	N/A
	Studio Stand Support	N/A	Yes	Yes	Yes	N/A	N/A	N/A
	Auto-Rotation Accessory Support	Yes	Yes	Yes	Yes	N/A	N/A	N/A
	Full Motion Slim Wall Mount Support (Y22)	Yes	Yes	Yes	Yes	Yes	Yes	N/A
	SlimFit Cam Support	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Zigbee / Thread Module	Built-In	Built-In	Built-In	Built-In	Built-In	Built-In	Built-In
	User Manual	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Power Cable	Yes	Yes	Yes	Yes	Yes	Yes	Yes