

SAMSUNG

QN90C Neo QLED 4K Smart TV (2023)

More Wow than ever in 4K, Neo QLED.



43", 50"



55", 65", 75", 85"

Top Features

Quantum Matrix Technology

Quantum Matrix Technology represents a revolution in TV display technology. Using miniaturised backlighting technology with precise light control to deliver incredible detail, deep blacks and brilliant contrast.¹

Neo Quantum HDR+

Neo Quantum HDR+ helps reveal what you might have missed in particularly dark or light scenes, making them pop with vivid, breathtaking colour.²

True Dolby Atmos

The QN90C features inbuilt up firing speakers and True Dolby Atmos support to deliver larger-than-life audio experiences (55" and above models only).³

Wide Viewing Angle

See a great view from virtually wherever you sit with Wide Viewing Angle.⁴

1 Available on HDR content only. Colour volume testing is capable of producing results greater than 100%. Q-series models produce more than 100% colour volume when tested using the IDMS 1.03b standard and DCI-P3 colour space. Brightness tested at maximum luminance with 10% White Window in HDR. Testing verified by an independent third party.

2 The Range of Quantum HDR claims luminance based on internal testing standards and is subject to change according to viewing environment or specific conditions. Neo Quantum HDR+ only applies to 55" and above. 43" and 50" feature Neo Quantum HDR.

3 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. Wireless Dolby Atmos compatible only for selected Samsung soundbars. Only applies to 55" and above. 43/50" sizes feature OTS Lite (without up firing speakers).

4 Available on 55" and above only.

Product	43" QLED		50" QLED		55" QLED		65" QLED		75" QLED		85" QLED	
	Product Category											
	Model Number	QA43QN90CAWXXY	QA50QN90CAWXXY	QA55QN90CAWXXY	QA65QN90CAWXXY	QA75QN90CAWXXY	QA85QN90CAWXXY					
Display	Screen Size	43"	50"	55"	65"	75"	85"					
	Resolution	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160	3,840 x 2,160					
	Motion Rate	200 (Up to 144Hz)	200 (Up to 144Hz)	200	200	200	200					
	Anti Reflection	Yes	Yes	Yes	Yes	Yes	Yes					
Video	Picture Engine	Neural Quantum Processor 4K	Neural Quantum Processor 4K	Neural Quantum Processor 4K	Neural Quantum Processor 4K	Neural Quantum Processor 4K	Neural Quantum Processor 4K					
	One Billion Colours	Yes	Yes	Yes	Yes	Yes	Yes					
	HDR (High Dynamic Range)	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)					
	HLG (Hybrid Log Gamma)	Yes	Yes	Yes	Yes	Yes	Yes					
	Contrast	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					
	Wide Viewing Angle	Wide Viewing Angle	Wide Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle	Ultra Viewing Angle					
	Micro Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming	Ultimate UHD Dimming					
	Contrast Enhancer	Real Depth Enhancer	Real Depth Enhancer	Real Depth Enhancer	Real Depth Enhancer	Real Depth Enhancer	Real Depth Enhancer					
	Picture Clarity	Yes	Yes	Yes	Yes	Yes	Yes					
	Film Mode	Yes	Yes	Yes	Yes	Yes	Yes					
	Expert Calibration	Yes	Yes	Yes	Yes	Yes	Yes					
	Smart Calibration	Basic/Professional	Basic/Professional	Basic/Professional	Basic/Professional	Basic/Professional	Basic/Professional					
	AI Upscale	Yes	Yes	Yes	Yes	Yes	Yes					
	Filmmaker Mode	Yes	Yes	Yes	Yes	Yes	Yes					
Audio	Brightness/Colour Detection	Brightness/Colour Detection	Brightness/Colour Detection	Brightness/Colour Detection	Brightness/Colour Detection	Brightness/Colour Detection	Brightness/Colour Detection					
	AI HDR Remastering	Auto HDR Remastering	Auto HDR Remastering	Auto HDR Remastering	Auto HDR Remastering	Auto HDR Remastering	Auto HDR Remastering					
	Dolby Atmos	Yes	Yes	Yes	Yes	Yes	Yes					
	Object Tracking Sound	OTS Lite	OTS Lite	OTS+	OTS+	OTS+	OTS+					
	Q-Symphony	Yes	Yes	Yes	Yes	Yes	Yes					
	Sound Output (RMS)	20W	40W	60W	60W	60W	60W					
	Speaker Type	2.0CH	2.2CH	4.2.2CH	4.2.2CH	4.2.2CH	4.2.2CH					
	Woofer	N/A	Yes	Yes	Yes	Yes	Yes					
	Multiroom Link	Yes	Yes	Yes	Yes	Yes	Yes					
	Bluetooth Audio	Yes	Yes	Yes	Yes	Yes	Yes					
	Active Voice Amplifier	Yes	Yes	Yes	Yes	Yes	Yes					
	Adaptive Sound	Adaptive Sound+	Adaptive Sound+	Adaptive Sound+	Adaptive Sound+	Adaptive Sound+	Adaptive Sound+					
	Dual Audio Support (Bluetooth)	Yes	Yes	Yes	Yes	Yes	Yes					
	Buds Auto Switch	Yes	Yes	Yes	Yes	Yes	Yes					

		43"	50"	55"	65"	75"	85"
		Tizen™ Smart TV	Tizen™ Smart TV	Tizen™ Smart TV	Tizen™ Smart TV	Tizen™ Smart TV	Tizen™ Smart TV
Smart Service	Operating System						
	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 Funtionality	Yes	Yes	Yes	Yes	Yes	Yes
	Media Home	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)
	NFC on TV	N/A	N/A	N/A	N/A	N/A	N/A
	Video Communication	Google Meet	Google Meet	Google Meet	Google Meet	Google Meet	Google Meet
	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)
	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
	Music Wall	Yes	Yes	Yes	Yes	Yes	Yes
	Mobile Camera Support	Yes	Yes	Yes	Yes	Yes	Yes
	Easy Setup	Yes	Yes	Yes	Yes	Yes	Yes
	App Casting	Yes	Yes	Yes	Yes	Yes	Yes
	Ambient Mode	Ambient Mode+	Ambient Mode+	Ambient Mode+	Ambient Mode+	Ambient Mode+	Ambient Mode+
	Wireless Dex	Yes	Yes	Yes	Yes	Yes	Yes
	Web Service	Microsoft 365 (Subscription required)	Microsoft 365 (Subscription required)	Microsoft 365 (Subscription required)	Microsoft 365 (Subscription required)	Microsoft 365 (Subscription required)	Microsoft 365 (Subscription required)
	NFT	Nifty Gateway	Nifty Gateway	Nifty Gateway	Nifty Gateway	Nifty Gateway	Nifty Gateway
Game Feature	Auto Game Mode (ALLM)	Yes	Yes	Yes	Yes	Yes	Yes
	Game Motion Plus	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
	Light-sync	N/A	N/A	N/A	N/A	N/A	N/A
	Freesync	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
	Gaming Hub	N/A	N/A	N/A	N/A	N/A	N/A
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

Connectivity	HDMI	43"	50"	55"	65"	75"	85"
		4	4	4	4	4	4
	HDMI (High Frame Rate)	4K 144Hz (for HDMI 1/2/3/4)	4K 144Hz (for HDMI 1/2/3/4)	4K 120Hz (for HDMI 1/2/3/4)	4K 120Hz (for HDMI 1/2/3/4)	4K 120Hz (for HDMI 1/2/3/4)	4K 120Hz (for HDMI 1/2/3/4)
	USB	2	2	2	2	2	2
	USB-C (Camera Only)	N/A	N/A	N/A	N/A	N/A	N/A
	POGO (SlimFit Cam Only)	N/A	N/A	N/A	N/A	N/A	N/A
	Component In (Y/Pb/Pr)	N/A	N/A	N/A	N/A	N/A	N/A
	Ethernet (LAN)	1	1	1	1	1	1
	Audio Out (Mini Jack)	N/A	N/A	N/A	N/A	N/A	N/A
	Digital Audio Out (Optical)	1	1	1	1	1	1
	RF In (Terrestrial / Cable input / Satellite input)	1/1(Common Use for Terrestrial)/0	1/1(Common Use for Terrestrial)/0	1/1(Common Use for Terrestrial)/0	1/1(Common Use for Terrestrial)/0	1/1(Common Use for Terrestrial)/0	1/1(Common Use for Terrestrial)/0
	Ex-Link (RS-232C)	N/A	N/A	N/A	N/A	N/A	N/A
	HDMI Audio Return Channel	eARC	eARC	eARC	eARC	eARC	eARC
	WIFI	Yes (WIFI5)	Yes (WIFI5)	Yes (WIFI5)	Yes (WIFI5)	Yes (WIFI5)	Yes (WIFI5)
	Bluetooth	Yes (BT5.2)	Yes (BT5.2)	Yes (BT5.2)	Yes (BT5.2)	Yes (BT5.2)	Yes (BT5.2)
	Anynet+ (HDMI-CEC)	Yes	Yes	Yes	Yes	Yes	Yes
Design	Design	Neo Slim	Neo Slim	Neo Slim	Neo Slim	Neo Slim	Neo Slim
	Bezel Type	3 Bezel-less	3 Bezel-less	4 Bezel-less	4 Bezel-less	4 Bezel-less	4 Bezel-less
	Slim Type	Flat look	Flat look	Flat look	Flat look	Flat look	Flat look
	Front Colour	CARBON SILVER	CARBON SILVER	CARBON SILVER	CARBON SILVER	CARBON SILVER	CARBON SILVER
	Stand Type	Sharp Neck Hexagon	Sharp Neck Hexagon	Sharp Neck Hexagon	Sharp Neck Hexagon	Sharp Neck Hexagon	Sharp Neck Hexagon
	Stand Colour	ECLIPSE SILVER	ECLIPSE SILVER	ECLIPSE SILVER	ECLIPSE SILVER	ECLIPSE SILVER	ECLIPSE SILVER
Additional Feature	Auto Rotation	N/A	N/A	N/A	N/A	N/A	N/A
	9:16 Screen Support	Yes (Need Auto Rotating Accessory, Compatible Model Only)	Yes (Need Auto Rotating Accessory, Compatible Model Only)	Yes (Need Auto Rotating Accessory, Compatible Model Only)	Yes (Need Auto Rotating Accessory, Compatible Model Only)	Yes	Yes
	Caption (Subtitle)	Yes	Yes	Yes	Yes	Yes	Yes
	ConnectShare™	Yes	Yes	Yes	Yes	Yes	Yes
	EPG	Yes	Yes	Yes	Yes	Yes	Yes
	Extended PVR	Yes	Yes	Yes	Yes	Yes	Yes
	OSD Language	Local Languages	Local Languages	Local Languages	Local Languages	Local Languages	Local Languages
	Picture-In-Picture	N/A	N/A	N/A	N/A	N/A	N/A
	Teletext (TTX)	Yes	Yes	Yes	Yes	Yes	Yes
	Time Shift	Yes	Yes	Yes	Yes	Yes	Yes
	One Connect Box	N/A	N/A	N/A	N/A	N/A	N/A
	MBR Support	Yes	Yes	Yes	Yes	Yes	Yes

Accessibility		43"	50"	55"	65"	75"	85"
		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
		UK English, French, Spanish	UK English, French, Spanish	UK English, French, Spanish	UK English, French, Spanish	UK English, French, Spanish	UK English, French, Spanish
		Zoom Menu and Text, High Contrast, SeeColors, Color Inversion, Grayscale, Picture Off, Magnification	Zoom Menu and Text, High Contrast, SeeColors, Color Inversion, Grayscale, Picture Off, Magnification	Zoom Menu and Text, High Contrast, SeeColors, Color Inversion, Grayscale, Picture Off, Magnification	Zoom Menu and Text, High Contrast, SeeColors, Color Inversion, Grayscale, Picture Off, Magnification	Zoom Menu and Text, High Contrast, SeeColors, Color Inversion, Grayscale, Picture Off, Magnification	Zoom Menu and Text, High Contrast, SeeColors, Color Inversion, Grayscale, Picture Off, Magnification
		Multi-output Audio, Sign Language Zoom	Multi-output Audio, Sign Language Zoom	Multi-output Audio, Sign Language Zoom	Multi-output Audio, Sign Language Zoom	Multi-output Audio, Sign Language Zoom	Multi-output Audio, Sign Language Zoom
		Slow Button Repeat	Slow Button Repeat	Slow Button Repeat	Slow Button Repeat	Slow Button Repeat	Slow Button Repeat
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
		Power Consumption (Max)	145 W	175 W	225 W	285 W	300 W
		Power Consumption (Stand-by)	0.5 W	0.5 W	0.5 W	0.5 W	0.5 W
		Power Consumption (Energy Saving Mode)	N/A	N/A	N/A	N/A	N/A
		Power Consumption (Typical)	70.0 W	94.0 W	113.0 W	155.0 W	186.0 W
		Yearly Power Consumption (EU standard)	259 kWh	346 kWh	416 kWh	569 kWh	682 kWh
		Eco Sensor	Yes	Yes	Yes	Yes	Yes
		Auto Power Saving	Yes	Yes	Yes	Yes	Yes
		Energy Efficiency Class	4	4	4	4	4
		Auto Power Off	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
		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
		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 25.9 mm	1446.3 x 828.7 x 25.9 mm	1670.0 x 957.4 x 26.7 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
		Stand (Minimum) (WxD)	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
Weight		Package Weight	17.5 kg	22.5 kg	26.2 kg	35.4 kg	50.2 kg
		Set Weight with Stand	13.4 kg	17.6 kg	20.6 kg	27.5 kg	39.7 kg
		Set Weight without Stand	9.4 kg	13.5 kg	17.7 kg	24.2 kg	34.1 kg

Accessory		43"	50"	55"	65"	75"	85"
	Remote Controller Model	TM2360E	TM2360E	TM2360E	TM2360E	TM2360E	TM2360E
	Batteries (for Remote Control)	N/A	N/A	N/A	N/A	N/A	N/A
	Slim Fit Wall-mount Support	Yes	Yes	Yes	Yes	Yes	Yes
	Studio Stand Support	N/A	Yes	Yes	Yes	N/A	N/A
	Optional One Connect Cable Support	N/A	N/A	N/A	N/A	N/A	N/A
	Vesa Wall Mount Support	Yes	Yes	Yes	Yes	Yes	Yes
	Auto-Rotation Accessory Support	Yes	Yes	Yes	Yes	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
	E-Manual	Yes	Yes	Yes	Yes	Yes	Yes
	Power Cable	Yes	Yes	Yes	Yes	Yes	Yes