

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	Product Category	43"	50"	55"	65"	75"	85"
		QLED	QLED	QLED	QLED	QLED	QLED
Product	Model Number	QA43QN90CAWXXY	QA50QN90CAWXXY	QA55QN90CAWXXY	QA65QN90CAWXXY	QA75QN90CAWXXY	QA85QN90CAWXXY
	Screen Size	43"	50"	55"	65"	75"	85"
Display	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
	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
Video	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
	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	
Audio	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"
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 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
	Tap View	Yes (requires Android 8.1† with Screen Cast capabilities) Up to 2 videos	Yes (requires Android 8.1† with Screen Cast capabilities) Up to 2 videos	Yes (requires Android 8.1† with Screen Cast capabilities) Up to 2 videos	Yes (requires Android 8.1† with Screen Cast capabilities) Up to 2 videos	Yes (requires Android 8.1† with Screen Cast capabilities) Up to 2 videos	Yes (requires Android 8.1† with Screen Cast capabilities) Up to 2 videos
	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
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		Yes	Yes	Yes	Yes	Yes	Yes
Hue Sync		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)
	Analog Tuner	Yes	Yes	Yes	Yes	Yes	Yes
	CI (Common Interface)	N/A	N/A	N/A	N/A	N/A	N/A

	43" 4	50" 4	55" 4	65" 4	75" 4	85" 4	
Connectivity	HDMI	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)
	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	

		43"		50"		55"		65"		75"		85"	
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	
	Learn TV Remote / Learn Menu Screen	UK English, French, Spanish		UK English, French, Spanish		UK English, French, Spanish		UK English, French, Spanish		UK English, French, Spanish		UK English, French, Spanish	
	Low Vision Support	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	
	Hearing Impaired Support	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	
	Motor Impaired Support	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		AC220-240V~ 50/60Hz	
	Power Consumption (Max)	145 W		175 W		225 W		285 W		300 W		375 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 (Energy Saving Mode)	N/A		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		245.0 W	
	Yearly Power Consumption (EU standard)	259 kWh		346 kWh		416 kWh		569 kWh		682 kWh		897 kWh	
	Eco Sensor	Yes		Yes		Yes		Yes		Yes		Yes	
	Auto Power Saving	Yes		Yes		Yes		Yes		Yes		Yes	
	Energy Efficiency Class	4		4		4		4		4,5		4	
	Auto Power Off	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	
	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	
	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		1892.2 x 1081.9 x 27.2 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	
	Stand (Minimum) (WxD)	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	
Weight	Package Weight	17.5 kg		22.5 kg		26.2 kg		35.4 kg		50.2 kg		63.3 kg	
	Set Weight with Stand	13.4 kg		17.6 kg		20.6 kg		27.5 kg		39.7 kg		49.9 kg	
	Set Weight without Stand	9.4 kg		13.5 kg		17.7 kg		24.2 kg		34.1 kg		43.5 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