

# 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.<sup>1</sup>

#### 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.<sup>2</sup>

#### 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.<sup>3</sup>

<sup>1</sup> 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.

<sup>3</sup> 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                       |

|                    |   | 43"   | 50"   | 55"   | 65"   | 75"   | 85"   | 98"   |
|--------------------|---|---|---|---|---|---|---|---|
| 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, 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) |
|                    | 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   |



|                      |  | 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  |

