

SONY

XR50X90J

BRAVIA XR X90J 4K HDR Full Array LED with Smart Google TV (2021)

Everything you watch becomes more detailed and immersive with true-to-life 4K HDR, powered by the all-new Cognitive Processor XR™. Feel the intensity of the sun and experience all the stars of the night sky with Full Array LED and XR Contrast Booster 5. With outstanding picture quality, a flush bezel design, and HDMI 2.1 for next-gen gaming, the X90J 4K HDR LED TV is ready for everything.



Bullets

- **COGNITIVE PROCESSOR XR™** – Revolutionary TV processing technology that understands how humans see and hear to deliver intense contrast with deep blacks, high peak brightness, and natural colors.
- **XR TRILUMINOS PRO™** - Rediscover everything you watch with billions of accurate colors and see impressive picture quality that is natural and beautiful to the human eye.
- **FULL ARRAY LED & XR CONTRAST BOOSTER 5** – Precisely controlled backlighting brings out real-life depth and detail with deep blacks and high peak brightness.
- **GOOGLE TV™** – See 700,000+ movies and TV episodes, plus live TV, all in one place. Google TV brings your favorite content from across your apps and subscriptions and organizes them just for you. Watch content from Netflix, Amazon Prime Video, Disney+, YouTube, the Apple TV app, and many more.²
- **BRAVIA CORE™** – Bring the cinematic experience home. Enjoy streaming high-quality movies included with BRAVIA CORE™, exclusively on select Sony TVs.³
- **HDMI 2.1** – Get the most out of next-gen gaming with BRAVIA XR HDMI 2.1 enabled TVs featuring 4K/120Hz and BRAVIA Game Mode for increased frame rate and reduced input lag.⁵
- **XR MOTION CLARITY™** – Intelligent motion processing for fast-moving, blur-free sports and action-packed movies.
- **XR 4K UPSCALING** – Enjoy all your HD content in close to 4K resolution and bring back lost texture and detail with intelligent TV processing.⁵
- **ACOUSTIC MULTI-AUDIO** – In addition to traditional TV speakers, two sound positioning tweeters on the sides of the TV elevate the soundstage, enabling sound to follow the action for a truly immersive experience.
- **DOLBY VISION⁷, IMAX ENHANCED⁸, NETFLIX CALIBRATED MODE⁹** – Enjoy immersive and engaging cinematic content as the creator intended.
- **GOOGLE ASSISTANT** – Use your voice to easily find your favorite movies, shows, and music. Get answers on screen, control smart home devices, and more.²
- **APPLE AIRPLAY** – Works with AirPlay 2 to easily stream content from your Apple device.¹⁰
- **ULTRA-SLIM WALL MOUNT COMPATIBLE** – Hang your TV like a work of art with the optional SU-WL855 ultra-slim wall-mount bracket available for 55" class, 65" class, and 75" class X90J series TVs.¹²

Features



XR Picture

Enjoy deep, natural, beautiful pictures from any angle with minimal light reflection. Our revolutionary processor uses human perspective analysis to cross-analyze and optimize hundreds of thousands of elements in the blink of an eye. Combined with our Full Array LED panel, this technology delivers ultra-realistic pictures full of lifelike contrast.

XR Color

See colors that are natural and beautiful to the human eye. The Cognitive Processor XR enables our unique display to access a wider palette and reproduce each color with the subtle differences seen in the real world. With extended hue and saturation, vivid shades, and realistic texture can be seen in the flowers. Even pale colors look realistic.

XR Triluminos Pro™

Powered by our Cognitive Processor XR, this TV reproduces color in a way that humans find beautiful. See a wider palette of colors with an enhanced range of hue and saturation, allowing natural shades and precise details to be seen, even in dark scenes.

XR Contrast

Feel breathtaking contrast, just as in real life. Our Cognitive Processor XR cross-analyzes data, enhancing picture quality in the same way that the human eye focuses for real life color and depth. With XR Contrast Booster, bright areas are brighter and dark areas darker—no more details overwhelmed by shadow or lost in blown-out highlights.

XR Contrast Booster 5

By precisely balancing light output across the screen, dimming some areas and boosting others, XR Contrast Booster adjusts brightness for higher peaks in glare and deeper blacks in shadow. As bright areas are brighter and dark areas darker, scenes look more real with extra depth and detail.

XR HDR Remaster

With XR HDR Remaster, this TV can detect each object on screen, analyze its color and adjust contrast for even more realistic pictures. Object-based processing, powered by BRAVIA XR, takes precision to a whole new level by adding adjustment of hue, saturation, brightness, motion vector, bandwidth, and more. The result is exceptionally real scenes with greater depth, lifelike textures, and natural colors.

XR Clarity

Whatever the content or source, you'll enjoy entertainment close to 4K resolution with XR 4K Upscaling. Our Cognitive Processor XR accesses a vast amount of data, intelligently recreating lost textures and detail for real-world pictures. See details such as naturally defined animal fur and sharply outlined rock.

XR 4K Upscaling

Powered by our Cognitive Processor XR, this TV takes 2K signals close to true 4K quality for incredibly real and immersive viewing. XR 4K Upscaling accesses and utilizes a vast amount of data, analyzing patterns in scenes and recreating subtle details.



4K XR Super Resolution

XR Super Resolution detects individual objects in a picture and reproduces virtually real-world textures on screen. Our BRAVIA XR processor precisely analyzes and processes data to power 4K pictures with four times the resolution of Full HD to enrich scenes with real-world detail and texture.

4K XR Smoothing

XR Smoothing creates smooth, natural 4K pictures as you watch, without the "banding" that can occur on other TVs. Scenes are reproduced with thousands of tones, shades, and gradations, making them look incredibly real.

XR Motion

Watching sports and fast-moving movies just got a whole lot better. Our Cognitive Processor XR with XR Motion Clarity™ cross-analyzes data to ensure action stays smooth, bright, and clear.

XR Motion Clarity

On some screens, sports, and fast-action scenes can seem to go by in a blur. Our latest LED XR Motion Clarity™ technology keeps everything smooth, bright, and clear. Each 'blink' is individually controlled and its duration optimized, while brightness is boosted when needed, so you won't miss a thing.

4K/120fps

Get the edge on the competition with BRAVIA. With HDMI2.1 you can get a 120fps frame rate on compatible games, so you'll have the advantage in shooting, sports, and high-performance games with instant on-screen action. You'll also enjoy ultra-smooth gaming with reduced input lag less than 8.5 ms with 4K/120fps and dedicated Game Mode.

XR Sound Position

For an audio experience that matches how we sense the world, XR Sound Position brings you the reality of sound behind the picture. With sound-positioning tweeters on this BRAVIA XR Full Array LED TV, sound matches precisely with what's on the screen for a truly immersive experience.

Acoustic Multi-Audio™

Our Acoustic Multi-Audio™ includes sound-positioning tweeters at the back of the TV that enable sound to follow the action for a truly immersive experience.

XR Surround

With BRAVIA XR, everything you watch gets the true surround-sound treatment. XR Surround creates surround sound from the sides and vertically so you can experience 3D audio without the need for in-ceiling or up-firing speakers.

3D Surround Upscaling

Our BRAVIA XR signal processing technology enables this TV to reproduce multi-dimensional sound for a truly immersive experience. Feel the sound surround you, not only from left and right but also from a vertical dimension. With 3D Surround Upscaling, you can experience the

SONY

cinematic thrills of latest audio formats such as Dolby Atmos® at home, as well as enjoying vertical surround with content not compatible with Dolby Atmos.

Google TV

Browse 700,000+ movies and TV episodes from across your streaming services, all in one place and organized into topics and genres based on what interests you.

Voice Search

Find your favorite content faster than ever using the power of your voice. With Voice Search, there's no more complicated navigation or tiresome typing — you just have to ask.

Google Assistant

Your TV is more helpful than ever. Use your voice to find movies, stream apps, play music, and control the TV. Ask Google to find a specific title, search by genre, or get personalized recommendations by saying, "what should I watch?" Even get answers like sports scores, control smart-home devices, and more. Talk to Google to get started.

Works with Alexa

Connect your Alexa-enabled devices for seamless hands-free control of a Sony TV. With Alexa, you can power up your TV, change channels, control volume, and more.

Works with Hey Google

Connect to a Google Assistant-enabled device for hands-free control of your Sony TV. You can find and cast your favorite videos to your Sony TV, all with just your voice. Just start with, "Hey Google."

Works with Apple AirPlay / Apple HomeKit

With Apple AirPlay, you can stream video and audio to your television right from your iPhone, iPad, or Mac. Watch movies and shows from Apple TV app, your favourite apps, or even Safari. Share your photos with everyone in the room.

Chromecast built-in

Chromecast lets you cast your favorite videos, games, and apps from your mobile device, in full quality, to your Chromecast built in TV. Just one tap of the Cast button on your Android or iOS screen is all you need to supersize the things you love. Cast your content then continue browsing on your phone or tablet.

Smart remote

All your connected devices can be controlled with our smart commander. One button access to video on-demand services brings shows and movies into your room in seconds.

Flush Surface design

As the bezel is extremely narrow, your eyes naturally focus on the picture, not what's around it.

Living Decor

Our Living Decor turns your TV into an essential part of your living space with on-screen artwork,

SONY

personal photos, screensaver themes, and clock functions.

Light Sensor

On conventional TVs, brightness stays the same regardless of light in a room, resulting in pictures that are too dark or bright. This TV includes a light sensor that optimizes picture brightness to room conditions, boosting brightness in light rooms and reducing it in dark ones so you get the perfect view.

Acoustic Auto Calibration

No matter where you're sitting, this TV detects your position and optimizes sound so you'll enjoy the same sound quality as if you're sitting right in front of the TV. Sound can change depending on your room environment. Curtains, for example, absorb sound while objects in front of the TV can disturb the passage of sound, compromising the quality of what you hear. This TV detects objects and reproduces sound that's enhanced and optimized to your room.

Netflix Calibrated Mode

This mode was specially developed to enjoy Netflix originals and reproduce the same picture quality on a TV as on a studio evaluation master. With Netflix Calibrated Mode, the creator's vision and intent is faithfully preserved.

IMAX Enhanced

This Sony 4K smart TV is IMAX Enhanced certified, meaning it's optimized for high-fidelity picture and sound. Enjoy a more immersive at-home entertainment experience with IMAX Enhanced picture mode, which takes full advantage of all IMAX Enhanced remastered content.

Dolby Vision® and Dolby Atmos®

Enjoy cinematic thrills at home. Dolby Vision® brings scenes vividly to life for authentic viewing, while Dolby Atmos® fills the room with immersive surround sound.

BRAVIA CORE™

A huge number of movies are included and waiting for you. With BRAVIA XR technology, Pure Stream, and IMAX Enhanced, everything you watch is delivered with stunning visuals and expressive sound quality.

Specification

Accessibility	
Accessibility Shortcut	Yes
Audio Description (Audio key)	Yes
Closed Caption	Closed Caption
Screen Reader	Yes
Text Magnification	Yes

SONY

Voice Search	Yes
Built-in Tuner	
CI+	-
Number of Tuners (Sat)	-
Number of Tuners (Terrestrial/Cable)	1(Digital/Analog)
TV System (Analog)	M
TV System (Digital Cable)	Clear QAM
TV System (Digital Sat)	-
TV System (Digital Terrestrial)	ATSC/ATSC 3.0(NEXTGEN TV)
Tuner Channel Coverage (Analog)	VHF: 2-13/UHF: 14-69/CATV: 1-135
Tuner Channel Coverage (Digital Cable)	CATV: 1-135
Tuner Channel Coverage (Digital Terrestrial)	VHF: 2-13/UHF: 14-69 (14-36 for ATSC 3.0)
Connectivity	
APPLE AIRPLAY	Yes
APPLE HOMEKIT	Yes
Audio Output(s)	-
Auto Low Latency Mode (ALLM)	Yes (for HDMI™3/4)
Bluetooth profile support	version 4.2; HID (mouse/keyboard connectivity)/HOGP (Low Energy device connectivity)/SPP(Serial Port Profile)/A2DP (stereo audio) /AVRCP (AV remote control)
CHROMECAST BUILT-IN	Yes
Component Video (Y/Pb/Pr) Input(s)	No
Composite Video Input(s)	1 (Side, Mini jack)
Digital Audio Output(s)	1 (Side)
Ethernet inputs	1 (Side)
Features specified in HDMI2.1	4K120/eARC/VRR/ALLM
HDCP	HDCP 2.3 (for HDMI™ 1/2/3/4)

SONY

HDMI Audio Return Channel (ARC)	Yes (eARC/ARC)
HDMI inputs total	4 (4 side)
HDMI-CEC	Yes
Headphone Output(s)	1 (Side)
IF (satellite) input(s)	No
RF (Terrestrial/Cable) Connection Input(s)	1 (Side)
RS-232C Input(s)	1 (Side)
Subwoofer Output(s)	-
USB HDD Recording	No
USB drive format support	FAT16/FAT32/exFAT/NTFS
USB playback codecs	MPEG1: MPEG1/MPEG2PS: MPEG2/MPEG2TS (HDV, AVCHD): MPEG2, AVC/MP4 (XAVC S): AVC, MPEG4, HEVC/AVI: Xvid, MotionJpeg/ASF (WMV): VC1/MOV: AVC, MPEG4, MotionJpeg/MKV: Xvid, AVC, MPEG4, VP8. HEVC/WEBM: VP8/3GPP: MPEG4, AVC/MP3/ASF (WMA)/LPCM/WAV/MP4AAC/FLAC/JPEG; WEBM: VP9/AC4/ogg/AAC/ARW (Screen nail only)
USB ports	2 (side)
Variable Refresh Rate (VRR)	Yes (for HDMI™3/4)
Wi-Fi Standard	Wi-Fi Certified 802.11a/b/g/n/ac
Design	
BEZEL COLOR	Black
BEZEL DESIGN	Flush Surface
REMOTE CONTROL	Standard Remote
STAND COLOR	Titanium Black
STAND POSITION	-
Stand design	Slim Blade stand
Dimensions and Weight	
DIMENSION OF TV WITH STAND (STANDARD POSITION) (W x H x D)	44.06 x 28.15 x 11.26 inch (1,119 x 715 x 286 mm)

SONY

Dimension of Package Carton (W x H x D)	48.23 x 30.79 x 5.55 inch (1,225 x 782 x 141 mm)
Dimension of TV without Stand (W x H x D)	44.06 x 25.55 x 2.76 inch (1,119 x 649 x 70 mm)
SCREEN SIZE (CM, MEASURED DIAGONALLY)	126 cm
STAND WIDTH (STANDARD POSITION)	26.18 inch (665 mm)
Screen Size (inch, measured diagonally)	50" (49.5")
VESA® Hole Pitch(W x H)	7.87 x 7.87 inch (200 x 200 mm)
Weight of Package Carton (Gross)	41.9lb (19 kg)
Weight of TV without Stand	29.8 lb (13.5 kg)
Model year	
Model year	2021
Picture (Panel)	
Backlight dimming type	Local Dimming
Backlight type	Direct (Full Array LED)
Display resolution (H x V, pixels)	3840 x 2160
Display type	LCD
Viewing Angle (X-Wide Angle)	-
Picture (processing)	
Clarity enhancement	XR 4K Upscaling Dual database processing XR Super Resolution
Color enhancement	XR Triluminos Pro™ XR Smoothing Live Color™ Technology
Contrast enhancement	XR Contrast Booster XR HDR Remaster Dynamic Contrast Enhancer
HDR (High Dynamic Range) compatibility	Yes (HDR10, HLG, Dolby Vision)
Motion enhancer (Native Hz)	XR Motion Clarity, Auto mode

SONY

NETFLIX CALIBRATED MODE	Yes
Picture modes	Vivid, Standard, Cinema, IMAX Enhanced, Game, Graphics, Photo, Custom, Dolby Vision Bright, Dolby Vision Dark, Netflix calibrated
Picture processor	Cognitive Processor XR
SENSOR	Light
Video signal support	HDMI™ signal: 4096 x 2160p (24, 60 Hz), 3840 x 2160p (24, 30, 60, 120 Hz), 1080p (30, 60, 120 Hz), 1080/24p, 1080i (60 Hz), 720p (30, 60 Hz), 720/24p, 480p
Power and Energy saving	
Dynamic Backlight Control	Yes
ECO FRIENDLY	Yes
Mercury content (mg)	0.0 oz
Power Consumption (On Mode) for Energy Star	-
Power Consumption (Standby Mode) for Energy Star	-
Power Consumption (in Standby)	0.5 W
Power Requirements (voltage/frequency)	60 Hz for UL cUL 50/60 Hz for other AC 120 V for UL cUL AC 110-240 V for other
Power Saving Mode/Back Light Off Mode	Yes
Presence of lead	-
SCREEN SIZE (CM, MEASURED DIAGONALLY)	126 cm
Screen Size (inch, measured diagonally)	50" (49.5")
Software	
Application Store	Yes (Google Play Store)
Auto Calibration with CalMAN®	Yes
BUILT-IN MIC SWITCH	-

SONY

Closed Captions (Analog/Digital)	(Analog) Closed Caption (Digital) Closed Caption
Display Language	AFRIKAANS, AMH, ARABIC, ASSAMESE, AZE, BEL, BULGARIAN, BENGALI, BOSNIAN, CATALAN, CZECH, DANISH, DEU, GREEK, ENGLISH, SPANISH, ESTONIAN, BAQ, PER, FINNISH, FRENCH, GLG, GUJARATI, HINDI, CROATIAN, HUNGARIAN, INDONESIAN, ISL, ITALIAN, HEBREW, JAPANESE, KAZAKH, KANNADA, KOR, KIR, LAO, LITHUANIAN, LATVIAN, MACEDONIAN, MALAYALAM, MON, MARATHI, MAY, BUR, NOB, NEP, NLD, ORIYA, PANJABI, POLISH, PORTUGUESE, ROMANIAN, RUSSIAN, SOL, SLOVENIAN, ALB, SERBIAN, SWEDISH, SWAHILI, TAMIL, TELUGU, THAI, TGL, TURKISH, UKRAINIAN, URD, UZB, VIETNAMESE, SIMPLIFIED CHINESE, TRADITIONAL CHINESE , ZULU
Electronic Program Guide (EPG)	Yes
Internet Browser	Vewd (not pre-installed)
On-board Storage (GB)	16 GB
On/Off Timer	Yes
Operating System	Android TV™
Sleep Timer	Yes
Teletext	No
Text Input Language	ENGLISH / FRENCH / GERMAN / HEBREW / ITALIAN / RUSSIAN / SPANISH / VIETNAMESE / JAPANESE
Voice Search	Yes
Sound (Processing)	
ACOUSTIC AUTO CALIBRATION	Room & User Position Compensation
DTS audio format support	DTS Digital Surround
Dolby audio format support	Dolby™ Audio, Dolby™ Atmos
FM Radio	No
Simulated surround sound	3D Surround Upscaling
Sound modes	Standard, Dialog, Theater, Music, Sports, Dolby Audio
Sound processing	No
VOICE ZOOM	Voice Zoom 2
Sound (Speakers and Amplifier)	



Audio Power Output	10 W + 10 W
Speaker Configuration	Full Range (Bass Reflex) x 2, Tweeter x 2
Speaker Type	Acoustic Multi-Audio Sound Positioning Tweeter, X-Balanced Speaker

¹As of 11/18/20, Cognitive Processor XR cross-analyses multiple picture elements combined with focal points; recreating human perspective. Verified by Strategy Analytics.

²User must connect to a Google account to use certain advertised features, including voice to activate linked apps, install software, certain apps and operating software during setup. User may opt out and use basic TV operation that does not include certain advertised features such as Google and third-party apps. Wireless connectivity requires 802.11n home network (802.11n recommended). Network services, content, operating system and software of this product may be subject to separate or third-party terms and conditions and changed, interrupted or discontinued at any time and may require fees, registration and credit card information. Apps must be compatible with TV. App availability varies by region and device. Upon opt in, Google Terms of Service (<http://www.google.com/policies/terms/>) and Privacy Policy (<http://www.google.com/policies/privacy/>) apply to use of this TV.

³Number of titles, credits & redemption/viewing period & selection differ per TV model & subject to change. For full details visit <https://www.sony.com/electronics/bravia-core>. BRAVIA CORE streaming membership reqd. Network services, content, and operating system and software of product may be subject to separate or third-party terms and conditions and changed, interrupted or discontinued at any time and may require fees, registration and credit card information. For BRAVIA CORE Terms of Service visit <https://www.sony.com/electronics/bravia-core>.

⁴User must setup broadband network environment. By default, Pure Stream setting is turned OFF and can be turned ON in BRAVIA CORE settings. BRAVIA CORE offers streaming between 30Mbps-80Mbps once user turns ON Pure Stream. To access Pure Stream at 30Mbps, user must have a minimum internet speed of 43Mbps over Wi-Fi. To access highest quality Pure Stream available at 80Mbps user must have minimum internet speed of 115Mbps over WiFi. Subject to user's network operator's video streaming restrictions, BRAVIA CORE automatically selects the best bitrate as following with adaptive streaming functionality based on the internet speed at user's home.

⁵4K: 3,840 x 2,160 pixels. Game title supporting 4K/120fps required. VRR will be available via future firmware update.

⁶4K: 3,840 x 2,160 pixels. Upscaled, simulated and enhanced 4K images will vary based on source content.

⁷Requires HDR compatible content from supported streaming services or HDR compatible content device connected via HDMI input (sold separately).

⁸Dolby Vision content compatible with streaming services or compatible content device connected via HDMI input (sold separately).

⁹IMAX Enhanced content enables full IMAX Enhanced experience with compatible streaming services such as Fandango Now (US only) and BRAVIA CORE, or compatible content device connected via HDMI input (sold separately).

¹⁰Netflix streaming membership required. 4K Ultra HD availability subject to your Netflix subscription plan, internet service, device capabilities, and content availability. www.netflix.com/termsfuse

¹¹This Sony TV is compatible with AirPlay 2 and HomeKit. iOS 12.2 or later or macOS 10.14.4 or later is required. Apple ID account required. Subscriptions may be required to access certain content.

¹²SU-WL855 wall-mount bracket is available for select Sony OLED and LED models ranging from 55" class to 77" class. TV and wall mount system sold separately. Hardware included with wall-mount bracket.

© 2021 Sony Electronics Inc. All rights reserved. Reproduction in whole or in part without written permission is prohibited. Sony, BRAVIA, BRAVIA XR, Cognitive Processor XR, XR Triluminos Pro, XR Motion Clarity, BRAVIA CORE, and the Sony logo are trademarks of Sony Corporation. Google, Google TV and related logos are trademarks of Google LLC. All other trademarks are trademarks of their respective owners. Features and specifications are subject to change without notice. Screen images simulated.