

# SONY

Preliminary



## Stunning AF performance 4K HDR camcorders

PXW-Z90V, HXR-NX80, FDR-AX700 4K HDR camcorders

### Fast Hybrid AF

Sony extends its line with three compact camcorders featuring Fast Hybrid AF. This breakthrough incorporates maximum of 273 phase-detection AF points covering approximately 84% of the image area. The BIONZ® X image processing engine and a new movie AF algorithm with custom focus settings maintain AF tracking under challenging conditions: sports, wildlife, and racing. The touch screen makes it easy to select the focus point. You can also adjust AF Tracking Depth and AF Subject Switching Sensitivity.

### Instant HDR workflow with Hybrid Log-Gamma in a compact camcorder

High Dynamic Range (HDR) enables vivid pictures, preserving detail even in bright highlights and deep shadows. Instant HDR takes advantage with Hybrid Log-Gamma encoding. Display your content on both HDR and non-HDR monitors – no post processing required.

### Simple Live Solution

The cameras work seamlessly with Sony's MCX-500 live producer, the compact, cost-effective switcher that makes it easy for one person to run a multi-camera live event. With the switcher and RM-30BP controller, a Tally icon appears on each camera's LCD panel and viewfinder. A red icon indicates when the shot is live (PGM) while Green indicates preview mode (PVW).

### Professional features

- 1" (1.0-type) stacked sensor: high sensitivity, resolution and dynamic range
- Stacked CMOS image sensor delivers broadcast-quality 4K and Full HD
- Sony's S-Log2 and S-Log3 recording for extended highlights
- Stunning 120 fps (NTSC)/100fps (PAL) Slow & Quick Motion in XAVC S® HD or XAVC HD
- Extended Super Slow Motion at up to 960 fps (NTSC)/1000 fps (PAL)
- Lens ring with increased depth for reliable focus and zoom
- MI Shoe for up to 2 channels of cable-free wireless audio with SMAD-P3D, URX-P03D\*2,\*3 and matching UWP-D transmitters, sold separately
- 2.4 GHz Wi-Fi capability for USTREAM™ service\*1, wireless remote control
- Touch screen monitor with 1555K dot Extra Fine LCD

- OLED Tru-Finder™ viewfinder: bright, colorful, 2359K dots
- Dual media slots: simultaneous or relay recording
- HDMI® type A connector; REMOTE terminal for connection to the MCX-500 live producer
- Wireless TC Link allow to settle synchronized TC on multiple camcorders (CBKZ-WTCL required)\*1

### Broadcast capabilities (PXW-Z90V only)

- Precise 10-bit, 4:2:2 XAVC® L recording in HD
- Professional 3G-SDI output
- 2.4 / 5 GHz Wi-Fi capability for more robust wireless connectivity
- Live streaming with having QoS (NETWORK CLIENT MODE)
- Streaming compatibility with Sony's XDCAM air service
- FTP file transfers

\*1 PXW-Z90V and HXR-NX80 only

\*2 FDR-AX700 requires individual power supply for URX-P03D

\*3 URX-P03D cannot be used while 5GHz WiFi® is in used



# Specifications

		PXW-Z90V	HXR-NX80	FDR-AX700
Imaging Sensor	Imaging Sensor	1.0-type back-illuminated Exmor RS CMOS sensor		
	Effective Picture Elements	Approx. 14.2M megapixels (16:9)*1/ Approx. 12.0M megapixels (3:2)		
Processor	Image Processor	BIONZ X image processor		
Lens	Lens Type	ZEISS Vario-Sonar T*		
	Aperture	F2.8-4.5		
	Optical Zoom	12x		
	Digital Zoom**	192x		
	Clear Image Zoom	4K: 18x/ HD: 24x		
	Focal Distance	f = 9.3-111.6 mm, f = 3/8-4 1/2 in.		
	Focal Length (35 mm equivalent)	f = 29.0-348.0 mm, f = 1 1/16-13 3/4 in. (16:9)*1		
	Filter Diameter	62 mm, 2 1/2 in.		
	Minimum Focus Distance	Approx. 1 cm (Wide), Approx. 100 cm (Tele), Approx. 13/32 in. (Wide), Approx. 39 3/8 in. (Tele)		
	Aperture Blade	7 blades		
	ND Filter	OFF, 1/4, 1/16, 1/64		
	View Finder	Type	1.0 cm (0.39 type) OLED / Color 2,359,296 dots equivalent	
LCD	LCD Type	8.8 cm (3.5 type) Xtra Fine LCD (1555K) Wide (16:9)		
	Touch Panel	Yes		
Image Stabilization	Image Stabilization Type	Optical SteadyShot® image stabilization with Active mode		
	Focus System	Fast Hybrid AF (phase-detection AF / contrast-detection AF)		
Focus Control	Focus Points	Max. 273 points (phase-detection AF)		
	AF Drive Speed	Yes (7 steps)		
	AF Subject Track Set	Yes (AF Tracking Depth (5 steps), AF Subject Switching Sensitivity (5 steps))		
	AF Modes	Auto/Manual (Touch Panel / Dial)		
	Focus Area	Wide/Zone/Center/Flexible Spot		
	Phase AF Frames	Yes (On/Off)		
	White Balance Mode	Auto / Onepush A / Onepush B / Outdoor / Indoor / WB Temp		
Exposure	Minimum Illumination	[NTSC] Standard: 3 lux (1/60 Shutter Speed); Low Lux 1.7lux (1/30 Shutter Speed); NightShot: 0 lux (1/60 Shutter Speed) [PAL] Standard: 3 lux (1/50 Shutter Speed); Low Lux 1.7lux (1/25 Shutter Speed); NightShot: 0 lux (1/50 Shutter Speed)		
	Auto Iris Control/Manual Iris Control	F2.8-F11		
Shutter Speed	Manual Exposure Assist	Zebra Pattern Display		
	Auto Control Rnage	[NTSC] 1/8-1/10000 [PAL] 1/6-1/10000		
Advanced Features	Standard	[NTSC] 1/60-1/10000 [PAL] 1/50-1/10000		
	Manual Iris Control	[NTSC] 1/60-1/10000 [PAL] 1/50-1/10000		
	Manual Shutter	[NTSC] 1/8-1/10000 [PAL] 1/6-1/10000		
	Picture Profile	Yes (Off / PPI-PP10) Parameters: Black level, Gamma (Standard, Still, Cine1-4, ITU709, ITU709 (800%), S-Log2, S-Log3, HLG, HLG1-3), Black Gamma, Knee, Color Mode (Standard, Still, Cinema, Pro, ITU709 Matrix, B/W, S-Gamut3-Gamut3.Cine, S-Gamut3, BT.2020, 709)		
	Media/Battery Indicator	Yes (recordable time, free and used media space) / Yes (remaining capacity)		
Interface	Wi-Fi (built-in)	Control with Smartphone		
	NFC	One-touch remote		
	Manual Ring	Yes (Zoom/Focus)		
	Assignable Dial	Yes (Iris/Gain/Shutter Speed)		
	Face Detection	Yes		
	NightShot Infrared System	Yes		
	Assignable Button	Yes		
	Color Bar	Yes		
	Streaming Sompability with XDCAM air	Yes		
	Wireless LAN (built-in)	2.4 GHz bandwidth / 5.2/5.3/5.6/5.8 GHz bandwidth**		2.4 GHz bandwidth
	NFC	Yes (NFC forum Type 3 Tag compliant)		
	Memory Card Slot	Slot A: Memory Stick PRO Duo and SD/SDHC/SDXC cards compatible Slot B: SD/SDHC/SDXC cards compatible		
	Multi/Micro USB Terminal**	Yes		
	Headphone Jack	Stereo Minijack		
	Microphone Input	Stereo Minijack		
DC IN	Yes			
Remote Terminal	integrated into Multi/Micro USB Terminal** Stereo mini-mini jack (2.5mm)			
HDMI Terminal	Yes (HDMI Type A)**			
Accessory Shoe	Yes (Multi Interface Shoe)			
Audio Input	XLR-type 3-pin (female) (x2), line/mic/mic +48 V selectable		XLR-type 3-pin (female) (x2), line/mic/mic +48 V selectable	
SDI Output	BNC (x1) 3G/HD/SD SMPTE 424M/282M/259M standard			
Weights and Measurements	Dimensions (approx.) (W x H x D including supplied battery)**	5 1/8 x 7 1/4 x 11 3/8 inches (With the accessories (lens hood, large eyecup, XLR handle unit), excluding the grip belt and including the projecting parts) 130.0 x 181.5 x 287.0 mm (With the accessories (lens hood, large eyecup, XLR handle unit), excluding the grip belt and including the projecting parts)	5 1/8 x 7 1/4 x 11 3/8 inches (With the accessories (lens hood, large eyecup, XLR handle unit), excluding the grip belt and including the projecting parts) 130.0 x 181.5 x 287.0 mm (With the accessories (lens hood, large eyecup, XLR handle unit), excluding the grip belt and including the projecting parts)	Approx. 4 5/8 x 3 5/8 x 7 3/4 in. (Approx. 4 7/8 x 4 1/8 x 10 7/8 in. (including Lens Hood and Large Eyecup)) Approx. 116 x 89.5 x 196.5 mm (Approx. 121 x 104 x 274.5 mm (including Lens Hood and Large Eyecup))
	Weight (approx.) (main unit only)	Approx. 2 lb 40 oz, Approx. 1020g (including Lens Hood and Large Eyecup)	Approx. 2 lb 17 oz, Approx. 955g (including Lens Hood and Large Eyecup)	Approx. 2 lb 1 oz, Approx. 935g (including Lens Hood and Large Eyecup)
	Weight (approx.) (Total)**	Approx. 3 lb 10z, Approx. 1390g (with lens hood, handle, eyecup, NP-FV70A) (supplied battery)	Approx. 2 lb 14.6 oz, Approx. 1320g (with lens hood, handle, eyecup, NP-FV70A) (supplied battery)	Approx. 2 lb 4.3 oz, Approx. 1030g (NP-FV70A) (supplied battery)
Power	Battery Type	InfoLITHIUM with AccuPower Meter System (V Series)**		
	Charge on camcorder (charging time with supplied Battery)**	Yes (Approx. 2 hr. 50 min.)		
	Power Consumption (in viewfinder operation)**	QFHD: 6.6 W	4K: 5.7 W	4K: 4.8 W
	Power Consumption (in LCD operation)**	QFHD: 7.0 W	4K: 6.1 W	4K: 5.1 W
Power Requirements	7.4V (battery pack); 8.4V (AC Adaptor)			
In the Box	Supplied Accessory**	XLR Handle Unit (1)		
		Rechargeable Battery Pack (NP-FV70A) (1)		
		AC Adaptor (1)		
		Power Cord (1)		
		Remote Commander (RMT-845 with Battery (CR2025)) (1)	Remote Commander (RMT-845 with Battery (CR2025)) (1)	Remote Commander (RMT-835 with Battery (CR2025)) (1)
		Lens Hood (1)		
		Lens Cap (1)		
		Large Eyecup (1)		
		Accessory Shoekit (1)		
		USB Cable (1)		

\*1 When "STEADYSHOT" is set to "STANDARD" or "OFF". \*2 Bit Rate is described by system rate (including movie, sounds and others). \*3 FX mod e(24Mbps) are peak bitrate. \*4 Video mode is AVCHD. \*5 Firmware update may be necessary for XAVC S. \*6 The factory setting is "Off". Digital zoom ratio includes optical zoom ratio. \*7 Backlight brightness will automatically be set "Bright" when connected to AC adaptor. \*8 (Configuration method / Access method) WPS or manually /infrastructure mode. When connecting to smartphones, the camera can always work as a base without a wireless access point. (Security: WEP/WPA-PSK/WPA2-PSK) \*9 Depending on country/regional regulation \*10 Supports Micro USB compatible device. \*11 Output only \*12 Including lens hood if it is supplied \*13 Including a battery pack and a media (if a lens hood is supplied, including it too). \*14 Except for NP-FV30 \*15 When using supplied AC adaptor. When the AC adaptor is not supplied, using USB charging. \*16 Recording mode and media are default settings. \*17 The numbers in ( ) are the supplied quantity

## Recording Modes

FILE FORMAT	Resolution	REC FORMAT		Bit Rate	XDCAM	NXCAM	HANDYCAM	
		NTSC	PAL					
XAVC QFHD	3840x2160	30/24p	25p	100/60Mbps	✓	-	-	
		60i	50i	50/35/25Mbps				
XAVC HD	1920x1080	60/30/24p	50/25p	50/35Mbps	✓	-	-	
		1280x720	60p	50p				50Mbps
MPEG HD 422	1920x1080	60i, 30/24p	50i, 25p	50Mbps	*Required CBKZ-SLMP	-	-	
		1280x720	60p	50p				
MPEG HD 420	1920x1080	60i, 30/24p	50i, 25p	HQ (35Mbps)	✓	-	-	
		1440x1080	60i	50i				
XAVC S 4K	3840x2160	30/24p	25p	100/60Mbps	-	✓	✓	
		120p	100p	100/60Mbps				
XAVC S HD	1920x1080	60p	50p	50/25Mbps	-	-	-	
		30p	25p	50/16Mbps				
		24p	-	50Mbps				
		60p	50p	PS (28Mbps)				
AVCHD	1920x1080	60i	50i	FX (24Mbps)/FH (17Mbps)	✓	✓	-	
		30/24p	25p	FX (24Mbps)				
		1440x1080	60i	50i				LP (5Mbps)
		1280x720	60p	50p				HQ (9Mbps)

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