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FDR-AX53/B

FDR-AX53 4K Handycam® with Exmor R® CMOS sensor

Your moments deserve the stunning clarity that only 4K Ultra HD can provide. With wide-angle lens, a 20x zoom and the unrivaled stability of Balanced Optical Steady Shot, you'll always get the perfect shot. Fast Intelligent Autofocus and new 5-direction microphone ensure clean and crisp video and sound, all in a compact body.



Key Features

Stunning video in both 4k/24p/30p and Full HD 60p/30p

Capture the finest details in 4k (QFHD: 3840 x 2160), 4x Full HD resolution. A newly developed image sensor, with pixels of approximately 1.6 times bigger size¹, offers superior sensitivity for capturing beautiful high-quality images with less noise under dark as well as bright shooting conditions. The XAVC S™ codec and incredibly high resolution produces vibrant and extremely realistic images. What's more, the blazingly fast image processor is the same one employed in professional Sony models, making it possible to record 30p movies in 4K and 60p in Full HD 1080 resolution for incredibly smooth and sharp playback, with no loss in realism, even when panning the camera and shooting moving subjects.⁵ Shoot in Full HD at 120/100fps (NTSC/PAL), edit the footage after shooting, and enjoy incredibly smooth and sharp slow-motion video.

Balanced Optical SteadyShot™ image stabilization w/ Intelligent Active Mode

On standard Optical SteadyShot™ camcorders, a single "shift lens" is moved in the optical block to offset camera shake. Balanced Optical SteadyShot™ moves the entire optical block at once, maintaining the integrity of the optical path and reducing shake and distortion in videos and still photos. BOSS has now been improved to offer 5-axis stabilization from wide angle to telephoto.

Fast Intelligent AF captures the decisive moment

Fast Intelligent AF achieves incredibly rapid and accurate contrast-detection. It minimizes lens motion, predicting the AF range, and accelerates the lens drive, thereby improving response so you can capture precise moments.

Get wider on and closer to your subjects and scenery with a 26.8mm ZEISS lens with 20x Optical Zoom

This new lens helps to depict remarkable details of high-quality 4K images throughout its wide-angle-to-telephoto range. The use of an AA (advanced aspherical) lens not only keeps depiction faithful — it also keeps the lens unit compact. ED (Extra-low Dispersion) lens helps to ensure accurate reproduction of color. Multilayer ZEISS T* Coating further enhances image quality by reducing unwanted reflection, such as ghost and flare. Whether you're shooting movies or still images this professional wide-angle 26.8mm ZEISS lens captures more breathtaking landscapes and indoor scenes, when you don't have enough room to step back. With a 20x Optical zoom.

Pro features such as manual control ring and time code

Enjoy total customization with ergonomic manual controls. Use the intuitive multi-purpose manual ring to adjust zoom, focus, exposure, IRIS, shutter speed, AE shift, or white balance shift mode after using the manual button to select the mode. Time Code and User Bit can be added to movies as data elements. Time Code function records hours/minutes/seconds/frames on image data for precise advanced video editing. User Bit function records information such as date/time/scene number, etc. in eight-digit arbitrary numbers, and is useful for editing movies using two or more cameras.

Versatile shooting w/ XAVC S™³, AVCHD® and MP4 codecs

By employing XAVC S™ format,³ which was developed from the XAVC format for professional use, 4K 100Mbps and Full HD 50Mbps high-bitrate recording⁵ realize incredibly high-quality images. Yet, XAVC S data is compressed so that it is more manageable for general consumers.

High contrast 0.27" EVF and 3.0" Xtra Fine LCD™ with WhiteMagic™

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The FDR-AX53 employs a newly designed high contrast .27" EVF, using four dual-surface spherical lenses, allows for a 33-degree wide angle view that is amazingly clear through the edge of the view finder. The high-precision 3.0" Xtra Fine LCD features a WhiteMagic™ display that uses white pixels in addition to RGB pixels to boost screen brightness, allowing users to see subtle details and tones on the screen in all types of shooting environments, including outdoors.

Premium 5 directional mic for realistic sound reproduction

The FDR-AX53 has a premium mic with a new structural design that enables it to gather sound from 5 directions. This enables the camera to reproduce clearer sound, yielding up to 40%¹ less noise and is twice as effective as a 2ch stereo (for XAVC S shooting) and three times as effective as 5.1ch surround⁹ sound performance¹ This makes it possible to faithfully reproduce audio with clearly defined separation. Advanced sound features such as Auto Wind Noise Reduction and Premium Closer Voice make it even easier to attain ideal sound quality in various situations. Records high quality linear PCM (XAVC S) and AAC-LC 2ch (MP4).

Produce high quality 4K Time Lapse for an immersive experience

You can capture 4K size still images continuously over an extensive period of time at a selected constant interval from each shot to the next, edit the entire sequence of still images in post-production, and enjoy playback of that series of images as a time-lapse movie.

Connect, control, backup, share and broadcast wirelessly with NFC¹³/Wi-Fi®

Easily connect to an Android or iOS smartphone or tablet with Wi-Fi® and the PlayMemories™ Mobile app to control the camcorder (Rec, photo, zoom) or instantly transfer, share movies and photos via your mobile device.¹³ NFC (Near Field Communication) makes it even easier to connect to NFC compatible mobile devices with one touch.

Share the adventure as it happens via Ustream® live streaming⁴. Now your circle of friends and family can share the excitement in real time by simply logging in to Ustream from anywhere. You can also link your favorite social accounts with the streaming to notify your friends when you start streaming video.

Add a different point of view by including other camera angles to your movies. The camcorder connects up to five compatible cameras¹²-like an Action Cam - via Wi-Fi® and uses the camcorder's LCD to preview what the other cameras are seeing and simultaneously start recording on all synced cameras. Use PlayMemories™ Home⁵ to easily edit a multi-view movie for a great video experience.³

Specifications

Camera	
Camera Type	Digital 4K Video Camera Recorder
Imaging Sensor	
Imaging Sensor	1/2.5" (7.20mm) back-illuminated Exmor R [®] CMOS Sensor
Processor	BIONZ X image processor
Pixel Gross	Approx. 8.57M pixels
Effective Picture Resolution	Movie: Approx. 8.29 MP (16:9)*1 Still: Approx. 8.29 MP (16:9) / Approx. 6.22 MP (4:3) *1. When "SteadyShot" is set to "Standard" or "Off".
Color Filter System	RGB primary color filters
Recording	
Media Type	XAVC S 4K (100Mbps): SDHC Memory Card (4GB or over, UHS-I U3 or Higher) / SDXC Memory Card (UHS-I U3 or Higher) XAVC S 4K (60Mbps): SDHC Memory Card (4GB or over, Class10 or Higher) / SDXC Memory Card (Class10 or Higher) XAVC S HD: SDHC Memory Card (4GB or over, Class10 or Higher) / SDXC Memory Card (Class10 or Higher) AVCHD, Still: Memory Stick PRO Duo (Mark 2), Memory Stick PRO-HG Duo, Memory Stick XC-HG Duo, SD/SDHC/SDXC Memory Card (Class 4 or Higher)
Still Image Mode	JPEG
Still Image Max Effective Resolution	16.6 megapixels

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Still Image Size 16:9	Movie Mode: M: 8.3 Megapixels 16:9 (3840x2160); S: 2.1 Megapixels 16:9 (1920x1080) Photo Mode: L: 16.6 Megapixels 16:9 (5440x3056); M: 8.3 Megapixels 16:9 (3840x2160); S: 2.1 Megapixels 16:9 (1920x1080)
Still Image Size 4:3	Photo Mode: L:12.5 Megapixels 4:3 (4080x3056); M: 6.2 Megapixels 4:3 (2880x2160); S: 0.3 Megapixels 4:3 (640x480)
Video Format	XAVC S format:MPEG4-AVC/H.264 AVCHD format ver.2.0 compatible:MPEG4-AVC/H.264 MP4: MPEG-4 AVC/H.264
Video Resolution	XAVC S 4K : 3840 x 2160/30p, 24p XAVC S HD : 1920 x 1080/60p, 30p, 24p AVCHD : 1920 x 1080/60p(PS),24p(FX,FH),60i(FX,FH), 1440 x 1080/60i(HQ,LP) MP4: 1280 x 720 30p
Video Actual (Pixel)	Approx. 8.29 M pixels(16:9) *1 *1.When "SteadyShot" is set to "Standard" or "Off".
Video Signal	UHDTV, HDTV, NTSC color, EIA standards
Photo Capture from Movie	XAVC S 4K: 8.3 Megapixels 16:9 (3840x2160) XAVC S HD: 2.1 Megapixels 16:9 (1920x1080) AVCHD: 2.1 Megapixels 16:9 (1920x1080)
Dual Record	M: 8.3 Megapixels 16:9 (3840x2160) S: 2.1 Megapixels 16:9 (1920x1080)
Audio Format	MPEG-4 Linear PCM 2ch(48kHz/16bit) *10 Dolby Digital 5.1ch, Dolby Digital 5.1Creator *11 Dolby Digital 2ch Stereo, Dolby Digital Stereo Creator *12 MPEG-4 AAC-LC 2ch *12 *10. Video Mode is XAVC S HD or 4K. *11. Video Mode is AVCHD. *12. Video Mode is MP4.
Microphone/Speaker	Built-in Zoom Microphone; Monoroal Speaker
Dual Video Recording	Yes *13 *13. Dual Video Recording "doesn't work in "AVCHD PS" mode or "XAVC S HD 60p" mode.
Mic Level Control	Yes (31steps)
Movie Recording Rate(Average Bit Rate/VBR)	XAVC S 4K: approx.100Mbps XAVC S 4K: approx.60Mbps XAVC S HD: approx.50Mbps AVCHD PS: approx.28Mbps / FX: approx.24Mbps / FH: approx.17Mbps / HQ: approx.9Mbps / LP: approx.5Mbps MP4: approx.3Mbps
Still Image File Format	DCF Ver.2.0 compatible, Exif Ver.2.3 compatible, MPF Baseline compatible
Wind Noise Reduction	Yes (On/Off)
Optics/Lens	
Lens Type	ZEISS Vario-Sonnar T*
Lens Stabilization	Balanced Optical SteadyShot™ image stabilization w/ Intelligent Active Mode
Aperture	F2.0 - 3.8
Optical Zoom	20x
Digital Zoom	250x
Focal Length (35mm equivalent)	Movie: f=1 1/16 - 21 1/8 inch *1 (f=26.8-536.0mm) (16:9) Photo: f=1 1/16 - 21 1/8 inch (16:9), f=1 5/16 - 25 7/8 (4:3) (f=26.8-536.0mm(16:9) f=32.8-656.0mm (4:3) *1.When "SteadyShot" is set to "Standard" or "Off".
Filter Diameter	2 1/4" (55 mm)
Minimum Focus Distance	Approx.1cm - 13/32inch (Wide), Approx.80cm - 31 1/2inch (Tele)
Aperture Blade	6 blades
Clear Image Zoom	4K : 30x; HD : 40x *15 *15. When "SteadyShot" is set to "Active" or "Intelligent Active".
Focal Distance	f=3/16 - 3 1/2 inch (f = 4.4-88mm)

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Steady Shot Mode:Active	4K : f=27.3 -818.4mm, HD : f=27.3 -1091.2mm Intelligent active: f=28.1-1122.6mm
Viewfinder	
Type	0.24" (0.6cm) / Color 1 555 200 dots equivalent
Diopter Adjustment	Yes (-4.0 to +3.0 m ⁻¹)
Field of View	100%
LCD Display	
LCD Type	3.0" (7.5cm) Xtra Fine LCD™ display (921 600 dots) Wide (16:9)
Angle Adjustment	Opening Angle:max.90 deg., Turning Angle: max.270 deg.
Brightness Control	Yes (Menu)
Coverage	100%
Grid Display	Grid Line
Touch Panel	Yes
Focus Control	
Focus System	Contrast AF
AF Modes	Auto / Manual (Touch Panel / Ring)
Focus Area	Full range Focus / Spot Focus
Manual Focus Assist	Magnified display for precise manual focus; Peaking Display
Focus Features	Lock-on AF
Exposure System	
Metering Modes	Multi-segment / Spot
Exposure Compensation	AE Shift (Touch Panel / Ring)
Exposure Settings	Auto; Flexible Spot (Touch Panel); Manual (Ring / Menu)
Scene Mode(s)	Auto / Night Scene / Sunrise & Sunset / Fireworks / Landscape / Portrait / Spotlight / Beach / Snow
Noise Reduction	Yes
White Balance Mode	Auto / Onepush / Outdoor / Indoor
Minimum Illumination	4K: Standard:9 lux (1/60 Shutter Speed) HD: Standard:6 lux (1/60 Shutter Speed) 4K: Low Lux 1.8 lux (1/30 Shutter Speed) HD: Low Lux 1.2 lux (1/30 Shutter Speed) NightShot: 0 lux (1/60 Shutter Speed)
Auto Iris Control	F2.0-F11
Backlight Compensation	Yes (Auto)
LOW LUX Mode	Yes
Manual Exposure Assist	Zebra Pattern Display
Manual Iris Control	F2.0-F11
WB Shift	Yes
Drive System	
Drive Mode	Photo Mode: Single-shot / Self-timer
Self-timer	Approx.10sec.(Still Image / Golf Shot)
Shutter Speeds	Auto Control Range: 1/8-1/10000 Standard: 1/60-1/10000 Manual Iris Control: 1/30-1/10000 Manual Shutter: 1/8-1/10000 Smooth Slow Rec: 1/250-1/10000
Flash	
Flash Metering System	Pre-flash TTL (w/ Optional Flash)
Flash Modes	Auto / On / OFF (w/ Optional Flash)
Flash Compensation	Yes (3 steps) (w/ Optional Flash)
Convenience Features	

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Manual / Auto Lens Cover	Auto
S/S & Zoom button on LCD	Yes (Touch Panel)
Red-Eye Reduction	Yes *18 *18 w/ Optional Flash Accessory
Fader Effect(s)	White / Black
Date / Time Stamp	Yes (Rec Date and Time, Camera info)
Erase/Protect	Yes / Yes
Media/Battery Indicator	Yes (recordable time, free and used media space) / Yes (recordable time, remaining capacity)
Power Save Mode	Yes
Still Image Playback Options	Slide Show
Video Playback Options	Highlight Movie Maker*11; Highlight background music (Preinstalled 6 music files, Music transfer compatible *20) *11. Video Mode is AVCHD. *20. PlayMemories Home Ver.4.1 or later is required.
Multiple Language Display	English; French; Spanish; Brazilian Portugese
Picture Effects	Yes
Remote Control	Yes (Optional)
Self Recording	Yes
AGC Limit	Yes
Airplane Mode	Yes
Advanced Features	
Audio Level Display	Yes
CinemaTone Gamma/Color	Yes
Face Detection	Yes
Golf Shot	Yes (AVCHD only)
Intelligent Auto	Portrait / Baby / Walk / Tripod / Backlight / Landscape / Spotlight / Twilight / Macro / Low light / Auto wind noise reduction
Motion Shot Video	Yes (AVCHD / XAVC S HD or MP4 only)
My Voice Canceling	Yes
NightShot® Infrared System	Yes
Smile Shutter™ technology	Off / Dual Capture / Always On
Smooth Slow Rec	Yes (AVCHD only)
Wi-Fi	Built-In: Send to Smartphone; Control with Smartphone; Multi Camera Control; Live Streaming
x.v.Color™	Yes
Interface	
Memory Card Slot	Memory Stick PRO Duo and SD/SDHC/SDXC compatible
NFC	Yes (NFC forum Type 3 Tag compatible)
Wi-Fi	Yes (Wi-Fi Compatible, IEEE 802.11b/g/n (2.4GHz band))
SD Output	Composite Video Out (AV CABLE (sold separately))
HD Output	HDMI Out (micro)(supplied)
BRAVIA® Sync™	Yes
PhotoTV HD	Yes
Headphone Jack	Stereo Minijack
Microphone Input	Stereo Minijack
Direct Copy	Yes
Accessory Shoe	Yes (Multi Interface Shoe)
DC IN	Yes
HDMI Terminal	Yes (HDMI micro) (output only)
Multi/Micro USB Terminal	Yes

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Weights and Measurements	
Dimensions (Approx.)	Approx. 2 7/8 x 3 1/4 x 6 5/8" (Approx. 73 x 80.5 x 166.5mm) (including supplied battery)
Weight (Approx.)	Approx. 1lb 2.9oz (Approx. 535g) unit only; Approx. 1lb 4.8oz (Approx. 590g) with NP-FV50 supplied battery
Power	
Supplied Battery Charger	Charging Time: Approx. 3h 25min
Power Consumption (in Operation)	View Finder Operation: 4K: 4.9W LCD Operation: 4K: 4.9W
Power Requirements	6.8V / 7.4V (battery pack); 8.4V (AC Adaptor)
Battery Type	Infolithium with AccuPower Meter System (V Series) (Except for NP-FV30)
Accessories	
Supplied Accessories	Rechargeable Battery Pack (NP-FV70) (1) AC Adaptor (1) Power Cord (1) Operating Guide (1) HDMI(micro) Cable (1) Micro USB Cable (1)

1. Compared to FDR-AX33

2. When SteadyShot™ is set to "STANDARD" or "OFF".

3. Requires editing with PlayMemories Home™ (free software for PCs). Ver. 5.1 (available in January 2016) or later version is required to create time-lapse movie.

4. Requires Ustream ID, password and Wi-Fi setting need to be stored in the camcorder

5. Requires SDXC/SDHC memory card UHS-I U3 or higher for XAVC S 4K 100Mbps recording, and SDXC/SDHC memory card Class 10 or higher for XAVCS 4K 60Mbps and XAVCS HD 50Mbps recording.

8. Available in AVCHD only.

9. Recording in 5.1ch is available in AVCHD only.

12. Requires a Wi-Fi router or smartphone capable of tethering.

13. Requires NFC-compatible mobile device. Check device's user manual for compatibility

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