

PMW-F55LIVE

Super 35mm 4K CMOS sensor
compact CineAlta camera
records HD/2K/4K on SxS
memory plus 16-bit RAW 2K/4K
output



Overview

Sony 4K sensor for gorgeous, super-sampled HD, 2K and 4K

The PMW-F55 Live System combines the PMW-F55 4K Super 35mm single sensor camera together with the CA-4000 4K fibre transmission camera system adaptor and BPU-4000 baseband processor unit. It is ideal for any live production application, such as sports, concerts and events, or studio productions.

The PMW-F55 Live System provides camera operators with the same variety of components as any Sony HD system camera, including a wide choice of viewfinders with a unique Focus Assist function specially designed for 4K live operations, video returns, tally, intercom and zoom and focus controls. Video technicians ("adders") operate in the control room with traditional RCP/MSU control panels and keep all the standard operations as with any Sony HD studio camera. All parameters are remotely available to render the best picture in any environment.

With the variety of outputs on the BPU-4000 you can have a simultaneous 4K and HD live operation, matching Sony HDC Series cameras perfectly. The PMW-F55 Live System also offers the capability to create HD cut outs from the 4K resolution images (with the SZC-2001 licence option for the BPU-4000) or operate as a 4x or 6x speed HD slow-motion camera (with the

SZC-2002 licence option for the BPU-4000).

Features

PMW-F55 Live System

The PMW-F55 Live System allows you to shoot in 4K and HD in the same way as any other studio camera. The CA-4000 optical fibre backend transmits the 4K RAW signal from the PMW-F55 to the BPU-4000, which processes the RAW signal in real time.

Simultaneous 4K and HD output

The BPU-4000 can output 4K, or QFHD, at the same time as HD. The RAW signal is processed in real time, enabling full creativity with the 7x standard Gamma, 4x HyperGamma or S-Log2 Gamma curves.

HD cut-outs from 4K

The BPU-4000 allows you to create up to 2x HD virtual camera outputs in parallel to the 4K Live signal. This enables you to create several views from a single camera, making HD live production more efficient. This feature requires the SZC-2001 license option for the BPU-4000.

HD 4x and 6x slow-motion

With the SZC-2002 license option for the BPU-4000, the PMW-F55 Live System allows you to capture HD slow-motion at 4x (max 240i or 240P) and also 6x Speed (max 360i or 360P).

Versatility of applications and accessories

The PMW-F55 Live System is suitable for many types of applications thanks to its flexibility. It also supports a wide range of accessories fully compatible with Sony HD system cameras, such as viewfinders, remote control panels and Camera Control Units. You can also adapt any 2/3'-inch lens to the PMW-F55 thanks to the LA-FZB2 lens mount adaptor.

Vast exposure latitude to 14 f-stops

Being able to render tones from the deeper shadows to the

brightest highlights is essential for live productions where lightning conditions can vary drastically. The PMW-F55 excels, with an impressive 14 stops of exposure latitude, extraordinary low-light sensitivity and extremely low noise in the blacks.

Revolutionary electronic global shutter

The traditional CMOS image sensor uses a 'rolling' shutter that can result in images with unwanted distortions like motion skew and flash banding, especially when shooting sports or any fast moving object. The PMW-F55 incorporates electronic global shutter, which completely eliminates rolling shutter distortions.

Specifications

General	
Power Requirements	DC 12 V (11 V to 17 V)
Power Consumption	Approx. 25 W (while recording XAVC 4K 60p, EVF Off, LCD monitor Off, 4K SDI On)
Operating Temperature	0°C to 40°C 32°F to 104°F
Storage Temperature	-20°C to +60°C -4°F to +140°F
Mass	2.2 kg (without lens, handle, audio box and accessories) 4 lb 14 oz (without lens, handle, audio box and accessories)
	130 x 125 x 191 mm (without

Dimensions (W x H x D) *1	protrusions) 5 1/8 x 5 x 7 5/8 inches (without protrusions)
Battery Operating Time	Approx. 150 min with BP-FL75 Approx. 210 min with BP-GL95A
Recording Format (Video)	XAVC (AVC/H.264 High 4:2:2 Intra Profile) 4K: VBR, 600 Mbps max. HD: SMPTE RP2027 Class100 compliant MPEG2 HD (MPEG-2 Long GOP) HD 422 mode: CBR, 50 Mbps max., MPEG-2 422P@HL *2
Recording Format (Audio)	LPCM 8CH (2CH recording/playback), 24-bit, 48-kHz
Recording Frame Rate	XAVC 4K (4096 x 2160): 23.98p/24p/25p/29.97p/50p/59.94p XAVC QFHD (3840 x 2160): 23.98p/25p/29.97p/50p/59.94p XAVC 2K (2048 x 1080): 23.98p/24p/25p/29.97p/50p/59.94p XAVC HD (1920x1080): 23.98p/25p/29.97p/50p/59.94p MPEG4 SStP (1920 x 1080): 23.98p/24p/25p/29.97p

MPEG2 HD (1920x1080):
 23.98p/25p/29.97p/50i/59.94i
 MPEG2 HD (1280 x 720):
 50p/59.94p
 *3

Recording/Playback
 Time

XAVC 4K, 23.98p: Approx. 25 min (SBP-64B)/Approx. 50 min (SBP-128B)
 59.94p: Approx. 10 min (SBP-64B)/Approx. 20 min (SBP-128B)
 XAVC HD, 23.98p: Approx. 70 min (SBP-64B)/Approx. 140 min (SBP-128B)
 59.94p: Approx. 30 min (SBP-64B)/Approx. 60 min (SBP-128B)
 MPEG2 HD: Approx. 60 min (SBS-32G1A)/Approx. 120 min (SBS-64G1A)

Camera Section

Imaging Device (Type)	Super 35mm equivalent Single-chip CMOS
Imaging Device (Pixel Count)	11.6M (total), 8.9M (effective)
Aspect Ratio	17:9

Built-in Filters	Clear, 0.9 (1/8ND), 1.8 (1/64ND)
Sensitivity (2000 lx, 89.9% reflectance)	Video Gamma: T12@24p (3200K light source)
ISO Sensitivity	S-Log2 Gamma: ISO 1250 (D55 light source)
Lens Mount	PL mount (with supplied lens mount adapter) FZ mount (without supplied lens mount adapter)
Latitude	14-stop
S/N Ratio	57dB (Video Gamma, 24p, Noise Suppression OFF)
Shutter Speed	1/24s to 1/6,000s (23.98PsF)
Shutter Angle	4.2° to 360° (electrical shutter)
Slow Shutter (SLS)	2, 3, 4, 5, 6, 7, 8-frame accumulation
Slow & Quick Motion Function	XAVC 4K/QFHD: 1-60p (NTSC), 23.98p/29.97p XAVC 4K/QFHD: 1-50p (PAL), 25p XAVC 2K/HD: 1-180p (NTSC), 23.98p/29.97p XAVC 2K/HD: 1-150p (PAL), 25p
	Preset (3200K, 4300K, 5500K),

White Balance	Memory
Gain	-3, 0, 3, 6, 9, 12, 18 dB, AGC
Gamma Curve	Standard (x6) HG1, HG2, HG3, HG4, HG7, HG8 S-Log2 Gamma

Input/Output

Audio Input	CH-1/CH-2: XLR-type 3-pin (female) (x2), Line/Mic/Mic +48V (AES/EBU) *4 switchable
DC Input	XLR-type 4-pin (male) (x1), 11 V to 17 V DC
DC Output	4-pin (x2), 11 V to 17 V DC (max. 1.8 A) with battery adapter
Viewfinder	Digital viewfinder interface (x1)
SDI Output	BNC (x4), HD mode: SDI 1/2 Line Output, SDI 3/4 Monitor Output 4K mode: SDI 1/2/3/4 Line Output, Display On/Off switchable
Test Output	BNC (x1), HD-Y or HD Sync (tri-level) V1.0
Timecode	TC IN/OUT (x1) switchable

Input/Output

Genlock Input	BNC (x1)
Remote	8-pin (x1)
HDMI Output	A Type (x1)
USB	USB host, type-A (x1)
USB	USB device, Mini-B (x1)
Headphone Output	Stereo mini jack (x1)
Speaker Output	Monaural
Shutter	BNC (x1) *4
Wi-Fi	USB host, type-A (x1)

Media

Type	ExpressCard/34 slot (x2) SD card slot (x1)
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Supplied Accessories

- Lens mount adapter (1)
- Battery adapter (1)
- Audio input connector (1)
- Screws for the audio input connector (4)

Supplied Accessories

- Tape measure hook (1)
- USB wireless LAN module IFU-WLM3 (1) *4
- Before Using this Unit (1)
- Operating Instructions (CD-ROM) (1)

Notes

Note

*1 The values for dimensions are approximate.

*2 These are the supported formats at launch and will be added by future upgrades.

*3 Some frame rates are not supported at launch and will be supported by future upgrades.

*4 To be supported by future upgrades.

Related products



PVM-X300

30-inch 4K TRIMASTER™ LCD professional monitor



PWS-4400

4K / HD multi-port AV storage unit



CA-4000

4K fibre transmission camera adaptor



MVS-8000X

4K, HD, 3G, SD Multi-Format Production Switcher Processor



ODS- D77UA

ODS-D77UA has very high transfer speeds. Read is 1.1Gbps. Write-once is 440 Mbps and Rewritable is 160 Mbps (verify on). Performance varies based on type of cartridge.



PWA-RCT1

Recording Control Software for PWS-4500, HKCU-REC55 and HKCU-REC50



BPU- 4500A

4K/HD baseband processor unit for IP network production

Gallery

