# Clifton Cameras Product Specification

## Sony Alpha A7R II Digital Camera Body Full Spec

**Size & Weight**

**Dimensions (W x H x D)**

Approx. 126.9 x 95.7 x 60.3 mm (approx. 5 x 3 7/8 x 2 3/8 inches)

**Weight**

Approx. 625 g (approx. 1 lb 6.0 oz) (with battery and Memory Stick PRO Duo)

Approx. 582 g (approx. 1 lb 4.5 oz) (body only)

**General**

**Camera type**

Interchangeable-lens digital camera

**Lens compatibility**

E-mount

**Image sensor**

**Type**

35 mm full frame (35.9 x 24.0 mm), Exmor R CMOS sensor

**Number of pixels (effective)**

Approx. 42.4 megapixels

**Number of pixels (total)**

Approx. 43.6 megapixels

**Image sensor aspect ratio**

3:2

**Anti-dust system**

Charge protection coating on optical filter and image sensor shift mechanism

**Recording system (still images)**

**Recording format**

JPEG (DCF Ver. 2.0, Exif Ver. 2.3, MPF baseline compliant), RAW (Sony ARW 2.3 format)

**Image size (pixels)**

[3:2 aspect ratio]

35 mm full frame L: 7,952 x 5304 (42M), M: 5168 x 3448 (18M), S: 3984 x 2656 (11M)

APS-C L: 5168 x 3448 (18M), M: 3984 x 2656 (11M), S: 2592 x 1728 (4.5M)

[16:9 aspect ratio]

35 mm full frame L: 7,952 x 4,472 (36M), M: 5,168 x 2,912 (15M), S: 3,984 x 2,240 (8.9M)

APS-C L: 5168 x 2912 (15M), M: 3984 x 2240 (8.9M), S: 2592 x 1456 (3.8M)

[Sweep Panorama]

Wide: Horizontal 12,416 x 1,856 (23M), vertical 5,536 x 2,160 (12M)

Standard: Horizontal 8,192 x 1,856 (15M), vertical 3,872 x 2,160 (8.4M)

**Image quality modes**

RAW, RAW & JPEG, JPEG Extra fine, JPEG Fine, JPEG Standard

**RAW output**

14 bit

**Picture Effect**

13 modes: Posterization (Color, B/W), Pop Color, Retro Photo, Partial Color (R, G, B, Y), High Contrast Monochrome, Toy Camera, Soft High-key, Soft Focus, HDR Painting, Rich-tone Monochrome, Miniature, Watercolor, Illustration

**Creative Style**

Standard, Vivid, Neutral, Clear, Deep, Light, Portrait, Landscape, Sunset, Night Scene, Autumn Leaves, Black & White, Sepia (Contrast -3 to +3 steps, Saturation -3 to +3 steps, Sharpness -3 to +3 steps) (Style Box 1-6 also provided)

**Dynamic range functions**

Off, Dynamic Range Optimizer (Auto/Level (1–5)), Auto High Dynamic Range: Auto Exposure Difference, Exposure Difference Level (1.0-6.0 EV, 1.0 EV step)

**Color space**

sRGB standard (with sYCC gamut) and Adobe RGB standard compatible with TRILUMINOS™ Color

**Recording system (movies)**

**Recording format**

XAVC S / AVCHD format Ver. 2.0 compliant / MP4

**Video compression**

XAVC S: MPEG-4 AVC/H.264

AVCHD: MPEG-4 AVC/H.264

MP4: MPEG-4 AVC/H.264

**Audio recording format**

XAVC S: LPCM, 2ch

AVCHD: Dolby Digital (AC-3), 2ch, Dolby Digital Stereo Creator

MP4: MPEG-4 AAC-LC, 2ch

**Image size (pixels)**

**[NTSC]**

XAVC S 4K: 3,840 x 2,160 (30p/100 Mbps, 30p/60 Mbps, 24p/100 Mbps, 24p/60 Mbps)

XAVC S HD: 1,920 x 1,080 (60p/50 Mbps, 30p/50 Mbps, 24p/50 Mbps), 1,280 x 720 (120p/50 Mbps)

AVCHD: 1920 x 1080 (60p/28Mbps/PS, 60i/24Mbps/FX, 60i/17Mbps/FH, 24p/24Mbps/FX, 24p/17Mbps/FH)

MP4: 1,920 x 1,080 (60p/28 Mbps, 30p/16 Mbps), 1,280 x 720 (30p/6 Mbps)

**[PAL]**

XAVC S 4K: 3,840 x 2,160 (25p/100 Mbps, 25p/60 Mbps)

XAVC S HD: 1,920 x 1,080 (50p/50 Mbps, 25p/50 Mbps), 1,280 x 720 (100p/50 Mbps)

AVCHD: 1920 x 1080 (50p/28Mbps/PS, 50i/24Mbps/FX, 50i/17Mbps/FH, 25p/24Mbps/FX, 25p/17Mbps/FH)

MP4: 1,920 x 1,080 (50p/28 Mbps, 25p/16 Mbps), 1,280 x 720 (25p/6 Mbps)

**Picture Profile**

Yes (Off/PP1-PP7) Parameters: Black level, Gamma (Movie, Still, Cine1-4, ITU709, ITU709 [800%], S-Log2), Black Gamma, Knee, Color Mode, Saturation, Color Phase, Color Depth, Detail, Copy, Reset

**Movie functions**

Audio Level Display, Audio Rec Level, AF Tracking Sensitivity, AF Drive Speed, Auto Slow Shutter, HDMI info. Display (On/Off selectable), Time Code/User Bit, Picture Profile, Creative Style, Picture Effect, Rec Control, Dual Video Rec, Marker Setting, PAL/NTSC Selector

**Color space**

xvYCC standard (x.v.Color when connected via HDMI cable) compatible with TRILUMINOS™ Color

**Clean HDMI output**

NTSC: 3,840 x 2,160 (30p/24p) / 1,920 x 1,080 (60p/24p) / 1,920 x 1,080 (60i), YCbCr 4:2:2 8 bit / RGB 8 bit

PAL: 3,840 x 2,160 (25p) / 1,920 x 1,080 (50p) / 1,920 x 1,080 (50i), YCbCr 4:2:2 8 bit/ RGB 8 bit

**Media**

**Media**

Memory Stick PRO Duo, Memory Stick PRO-HG Duo, Memory Stick Micro (M2), SD memory card, SDHC memory card (UHS-I compliant), SDXC memory card (UHS-I compliant), microSD memory card, microSDHC memory card, microSDXC memory card

**Slot**

Multi slot for Memory Stick Duo / SD memory card

**Noise reduction**

**Noise reduction**

Long exposure NR: On/Off, available at shutter speeds longer than 1 sec.

High ISO NR: Normal / Low / Off selectable

**Multi Frame NR**

Auto/ISO 100 to 102400

**White balance**

**Modes**

Auto WB / Daylight / Shade / Cloudy / Incandescent / Fluorescent (Warm White / Cool White / Day White / Daylight) / Flash / Color Temperature (2,500 to 9,900K) & Color Filter (G7 to M7: 57steps, A7 to B7: 29steps) / Custom / Underwater

**AWB micro adjustment**

G7 to M7 (57 steps), A7 to B7 (29 steps)

**Bracketing**

3 frames, H/L selectable

**Focus system**

**Type**

Fast Hybrid AF (phase-detection AF / contrast-detection AF)

**Focus point**

35 mm full frame: 399 points (phase-detection AF)

APS-C: 357 points (phase-detection AF) / 25 points (contrast-detection AF)

**Sensitivity range**

EV -2 to EV 20 (at ISO 100 equivalent with F2.0 lens attached)

**AF modes**

Automatic AF (AF-A), Single-shot AF (AF-S), Continuous AF (AF-C), Direct Manual Focus (DMF), Manual Focus

**Focus area**

Wide (399 points for phase-detection AF / 25 points for contrast-detection AF) / Center / Flexible Spot (S/M/L) / Zone / Expand Flexible Spot / Lock-on AF (Wide / Zone / Center / Flexible Spot (S/M/L) / Expand Flexible Spot)

**Other features**

Lock-on AF, Eye AF, Predictive control, Focus lock; Eye-start AF and AF micro adjustment (both only available with optional LA-EA2 or LA-EA4 attached), AF illuminator (built-in, LED type, range: Approx. 0.30–3 m), AF ON

**Exposure control**

**Metering type**

1200-zone evaluative metering

**Metering sensor**

Exmor R CMOS sensor

**Metering sensitivity**

EV -3 to EV 20 (at ISO 100 equivalent with F2.0 lens attached)

**Metering modes**

Multi-segment, Center-weighted, Spot

**Exposure modes**

AUTO (iAUTO, Superior Auto), Programmed AE (P), Aperture priority (A), Shutter-speed priority (S), Manual (M), Scene Selection, Sweep Panorama, Movie

**Scene Selection**

Portrait, Landscape, Macro, Sports Action, Sunset, Night Portrait, Night Scene, Hand-held Twilight, Anti Motion Blur

**Exposure compensation**

+/-5.0 EV (in 1/3 EV or 1/2 EV steps), with exposure compensation dial: +/-3.0 EV (in 1/3 EV steps)

**AE bracketing**

Bracket: Single/Bracket: Cont., 3/5/9 frames selectable. With 3 or 5 frames, in 1/3, 1/2, 2/3, 1.0, 2.0 or 3.0 EV increments, with 9 frames, in 1/3, 1/2, 2/3 or 1.0 EV increments.

**AE lock**

Available with AE lock button. Locked when shutter button is pressed halfway. Can be disabled from the Menu.

**ISO sensitivity (Recommended Exposure Index)**

Still images: ISO 100-25600 (expandable to ISO 50-102400 for shooting still images), AUTO (ISO 100-6400, selectable lower limit and upper limit)

Movies: ISO 100-25600 equivalent, AUTO (ISO 100-6400 equivalent, selectable lower limit and upper limit)

**Viewfinder**

**Type**

XGA OLED, 1.3 cm (0.5 type) electronic viewfinder (color)

**Total number of dots**

2,359,296 dots

**Brightness control**

Auto/Manual (5 steps between -2 and +2)

**Color temperature control**

Manual (5 steps)

**Field coverage**

100%

**Magnification**

Approx. 0.78x (with 50 mm lens at infinity, -1 m-1)

**Diopter adjustment**

-4.0 to +3.0 m-1

**Eye point**

Approx. 23 mm from the eyepiece lens, 18.5 mm from the eyepiece frame at -1 m-1 (CIPA standard)

**Display**

Graphic Display / Display All Info. / No Disp. Info. / Histogram / Digital Level Gauge

**Real-time image-adjustment display**

On/Off

**LCD screen**

**Type**

7.5 cm (3.0 type) TFT drive

**Total number of dots**

1,228,800 dots

**Brightness control**

Manual (5 steps between -2 and +2), Sunny Weather mode

**Adjustable Angle**

Up approx. 107 degrees, down approx. 41 degrees

**Display selector (Finder/LCD)**

Auto/Manual

**Display**

Graphic Display / Display All Info. / No Disp. Info. / Histogram / Digital Level Gauge / Shooting information for viewfinder mode

**Real-time image-adjustment display**

On/Off

**Zebra**

Yes

**Peaking MF**

Yes (Level setting: High/Mid/Low/Off, Color: White/Red/Yellow)

**Other features**

**Face detection**

On / On (Regist. Faces) / Off, Face registration, Face selection (Max. number of detectable faces: 8)

**Auto Object Framing**

Yes

**Clear Image Zoom**

Still/Movie: Approx. 2x

**Digital zoom**

Smart zoom (still images) M: Approx. 1.5x, S: Approx. 2.0x

Digital zoom (still images) Approx. 4x

Digital zoom (movies) Approx. 4x

**PlayMemories Camera Apps**

Yes

**Lens compensation**

Peripheral shading, chromatic aberration, distortion

**Shutter**

**Type**

Electronically controlled, vertical-traverse, focal-plane type

**Shutter speed**

Still images: 1/8000 to 30 sec., Bulb

Movies: 1/8000 to 1/4 (1/3 step)

NTSC: Up to 1/60 in AUTO mode (up to 1/30 in Auto Slow Shutter mode)

PAL: Up to 1/50 in AUTO mode (up to 1/25 in Auto Slow Shutter mode)

**Flash sync. speed**

1/250 sec.

**Electronic front curtain shutter**

Yes, On/Off

**Silent Shooting**

Yes, On/Off

**SteadyShot INSIDE (image stabilization)**

**Type**

Image Sensor-Shift mechanism with 5-axis compensation (Compensation depends on lens specifications)

**Compensation effect**

4.5 steps (Based on CIPA standard. Pitch/yaw shake only. With Sonnar T\* FE 55 mm F1.8 ZA lens mounted. Long exposure NR off)

**Flash Control (with optional external flash)**

**Control**

Pre-flash TTL

**Flash compensation**

+/-3.0 EV (switchable between 1/3 and 1/2 EV steps)

**Flash bracketing**

3/5/9 frames selectable. With 3 or 5 frames, in 1/3, 1/2, 2/3, 1.0, 2.0, 3.0 EV increments, with 9 frames, in 1/3, 1/2, 2/3, 1.0 EV increments.

**Flash modes**

Flash off, Autoflash, Fill-flash, Rear Sync., Slow Sync., Red-eye reduction (On/Off selectable), Hi-speed sync\*1, Wireless\*1

**External flash**

Sony α System Flash compatible with Multi Interface Shoe. Attach the shoe adaptor for flash compatible with Auto-lock Accessory Shoe.

**FE level lock**

Yes

**Drive**

**Drive modes**

Single shooting, Continuous shooting, Self-timer, Self-timer (Cont.), Bracketing (Cont., Single, White Balance, DRO)

**Self-timer**

10 sec. delay/5 sec. delay/2 sec. delay/Continuous self-timer (3 frames after 10 sec. delay/5 frames after 10 sec. delay/3 frames after 5 sec. delay/5 frames after 5 sec. delay/3 frames after 2 sec. delay/5 frames after 2 sec. delay)/Bracketing self-timer (Off/2 sec. delay/5 sec. delay/10 sec. delay)

**Speed (approx., max.)\*2**

Continuous shooting Hi: Max. 5fps, Continuous shooting Lo: Max. 2.5fps

**No. of recordable frames\*2 (approx.)**

Continuous shooting Hi: 24 frames (JPEG Extra Fine L), 30 frames (JPEG Fine L), 37 frames (JPEG Standard L), 23 frames (RAW), 22 frames (RAW & JPEG)

**Playback**

**Modes**

Single (with or without shooting information, Y RGB histogram & highlight/shadow warning), 9/25-frame index view, Enlarged display mode (Maximum magnification L: 24.9x, M: 16.2x, S: 9.4x), Auto Review (10/5/2 sec, off), Image orientation (Auto/Manual/Off selectable), Slideshow, Panorama scrolling, Folder selection (Still / Date / MP4 / AVCHD / XAVC S HD / XAVC S 4K), Forward/Rewind (Movie), Delete, Protect

**Interface**

**PC interface**

Mass-storage, MTP, PC remote

**Multi/Micro USB Terminal**

Yes\*3

**Wireless LAN (built-in)**

Wi-Fi Compatible, IEEE802.11b/g/n (2.4GHz band)\*4

Playback of still images and movies on smartphones, PCs and TVs

**NFC™**

Yes (NFC Forum Type 3 Tag compatible, One-touch remote, One-touch sharing)

**HD output**

HDMI micro connector (Type-D), BRAVIA Sync (link menu), PhotoTV HD, 4K still image playback

**Multi Interface Shoe**

Yes

**Others**

Auto-lock Accessory Shoe compatible with supplied shoe adaptor, Microphone terminal (3.5 mm Stereo minijack), Headphone terminal (3.5 mm Stereo minijack), Vertical Grip Connector

**Audio**

**Microphone**

Built-in stereo microphone or ECM-XYST1M / XLR-K2M (sold separately)

**Speaker**

Built-in, monaural

**Print**

**Compatible standards**

Exif Print, Print Image Matching III, DPOF setting

**Custom function**

**Type**

Custom key settings, Programmable setting

**Memory function**

Yes (2 sets)

**Power**

**Battery**

Rechargeable battery pack NP-FW50

**Still images**

Approx. 290 shots (viewfinder) / approx. 340 shots (LCD screen) (CIPA standard)

**Movies**

Actual\*5\*6: Approx. 50 min. with viewfinder, approx. 55 min. with LCD screen (CIPA standard)

Continuous\*5\*7: Approx. 95 min. with viewfinder, approx. 95 min. with LCD screen (CIPA standard)

**External power**

AC Adaptor AC-PW20 (optional)

**Operating temperature**

**Range**

32–104°F/0–40°C