

OVERVIEW

The first camera on the scene remains at the center of the family; it is the keystone of a modular and upgradeable system with exceptional image performance that is simple to operate, reliable in even the most extreme environments and versatile enough to cover a wide range of workflow and budget requirements. Whether your production is destined for the cinema or television, ALEXA will empower you to tell your story in exactly the way you think it should be told, with pictures of breathtaking richness and detail.

The original ALEXA comes with a 16:9 sensor and the original SxS Module that accepts two SxS PRO or SxS PRO+ cards for recording in-camera ProRes or DNxHD. ARRIRAW recording is possible with an external recorder.

TECHNICAL DATA

Camera Type	35 format film-style digital camera with an electronic viewfinder, a 16:9 active sensor area, integrated shoulder arch and receptacles for 15 mm lightweight rods
Sensor	35 format ALEV III CMOS sensor with Bayer pattern color filter array. 16:9 2880 x 1620 used for ARRIRAW 16:9 2880 x 1620 down sampled to 1920 x 1080 for HD-SDI, ProRes HD 16:9 and DNxHD HD 16:9 2868 x 1612 down sampled to 2048 x 1152 for ProRes 2K 16:9
Photosites	For a drawing with details about the recording areas, surround views and framelines click here
Operating Modes	Regular or High Speed mode. High Speed mode requires license purchase. Switching takes approx. 20 seconds. 16:9 ARRIRAW 0.75 - 60 fps ProRes HD 0.75 - 120 fps ProRes 2K 0.75 - 60 fps DNxHD HD 0.75 - 120 fps All speeds adjustable with 1/1000 fps precision. To record above 60 fps, the camera needs to be switched to high speed mode. Note: some limitations based on recording media or recording file settings apply. For a detailed table of frame rates for ALEXA cameras click here
Frame Rates	For a detailed table of frame rates for ALEXA cameras with the XR Module Upgrade click here
Shutter	Electronic rolling shutter, 5.0° - 358.0° up to 60 fps; 5.0° to 356° above 60 fps. Shutter angle adjustable with 1/10 degree precision.
Filters	Permanent filters in front of the sensor: optical low pass, UV, IR
Exposure Latitude	14+ stops for all sensitivity settings from EI 160 to EI 3200, as measured with the ARRI Dynamic Range Test Chart (DRTC). For a graphic of how the exposure latitude shifts at different EIs, click here

EI 160 ^{+5.0}/_{-9.0} EI 200 ^{+5.3}/_{-8.7} EI 400 ^{+6.3}/_{-7.7} EI 800 ^{+7.4}/_{-6.6} EI 1600 ^{+8.4}/_{-5.6} EI 3200 ^{+9.4}/_{-4.6}

Exposure Index	Values behind the exposure index are the number of stops above and below 18% grey. These values are for Log C. Rec 709 is the same except for 0.3 stops fewer in the low end at EI 160, 200 and 400.
White Balance	Presets for 3200 (tungsten), 4300 (fluorescent), 5600 (daylight) and 7000 (daylight cool). Automatic calculation or manual white balance for 2000 to 11000 Kelvin, adjustable in 100 K steps
Color Correction	While white balance changes the red/blue hue of the image, color correction changes green/magenta. Adjustable range from -12 to +12 CC. 1 CC corresponds to 035 Kodak CC values or 1/8 Rosco values.
Sound Level	Under 20 db(A) while recording ProRes 4444 16:9 HD @ 24 fps and ≤ +30° Celsius (≤ +86° Fahrenheit) with lens attached and fan mode set to 'Regular', measured 1 m/3 feet in front of the lens. Silent operation at higher temperatures possible with fan mode set to 'Rec low'.
Power In	Three possible inputs: BAT connector, optional battery adapter back or optional battery adapter top. All inputs accept 10.5 to 34 V DC. Approx. 85 W power draw for camera and EVF-1 in typical use recording ProRes at 24 fps to an SxS PRO card at room temperature, without accessories. Initial power draw during power up is higher.
Power Out	12 V connector: limited to 12 V, up to 2.2 A. RS, EXT and ETHERNET: input below 24 V is regulated up to 24 V; above 24 V: input voltage = output voltage. RS and EXT connectors combined are limited to 2.2 A. ETHERNET is limited to 1.2 A. Maximum power draw is also limited by the power source.
Weight	ALEXA body with SxS Module: 6.3 Kg/13.8 lbs. ALEXA body with SxS Module, electronic viewfinder and handle: 7.7 Kg/16.9 lbs.
Dimensions	Length: 332 mm/12.95", width: 153 mm/6.02", height: 158 mm/6.22". Dimensional drawings available at www.arri.com/alexas/downloads
Environmental	-20° C to +45° C (-4° F to +113° F) @ 95% humidity max, non-condensing. Splash and dust proof through sealed electronics. System cooling through radiator/single fan.
Lens Mount	54 mm stainless steel PL mount, Super 35 centered. 52.00 mm nominal flange focal depth.
Viewfinder	Low latency (≤1 frame delay) electronic color viewfinder ARRI EVF-1 with 1280 x 784 F-LCOS micro display (image: 1280 x 720, status bars: 1280 x 32 above and 1280 x 32 below image) and ARRI LED illumination, both temperature controlled. Image can be flipped for use of viewfinder on camera left or right. Viewfinder Mounting Bracket allows movement of viewfinder forward/backwards, left/right, up/down, 360 degree rotation and placement on camera left or right. EVF-1 controls: viewfinder and basic camera settings, ZOOM button (2.25x magnification 'pixel to pixel'), EXP button (false color exposure check) and jog wheel.
Assistive Displays	For EVF-1 and MON OUT: preset and custom frame lines, user rectangles, surround view, 180° image rotation, camera status, false color exposure check, peaking focus check, compare stored image with live image, RETURN IN video and optional anamorphic de-squeeze (license key required). For MON OUT additionally: Reel & clip number.

For a graphic of which false color indicates which exposure level, [click here](#)

Control
Camera right: Main user interface with a 3" transfective 400 x 240 pixel LCD color screen, illuminated buttons, button lock and jog wheel. Camera left: Operator interface with illuminated buttons and button lock. Optional accessory Remote Control Unit RCU-4 for cabled remote control via camera ETHERNET connector. Optional accessory Wireless Compact Unit WCU-4 for wireless remote control (UMC-3A or UMC-4 required).

In-camera Recording
QuickTime/ProRes or MXF/DNxHD recording onto one or two (Dual Recording) SxS PRO or SxS PRO+ cards. All formats include embedded audio, timecode and metadata.

For more details, [click here](#)

2x 1.5G or 3G REC OUT BNC connectors for ARRIRAW T-Link or HD-SDI video. Both with embedded audio, timecode, metadata and recording flag.

ARRIRAW: 2880 x 1620 (16:9), uncompressed, unencrypted 12 bit log without white balance or exposure index processing applied. Requires an ARRIRAW T-Link certified recorder.

HD-SDI video: uncompressed 1920 x 1080 (16:9) 4:4:4 RGB or 4:2:2 YCbCr at 23.976, 24, 25, 29.97, 30, 50, 59.94, or 60 fps. Recording other speeds requires a recorder with Variflag support. Legal or extended range signal mapping.

Recording Outputs
For a detailed table of REC OUT options [click here](#)
For a detailed table of 'REC OUT = Clean MON OUT' behavior [click here](#)

Monitor Output
1x MON OUT BNC connector for uncompressed 1.5 G HD-SDI video: 1920 x 1080 (16:9), 4:2:2 YCbCr; legal range HD video at 23.976, 24, 25, 29.97, or 30 fps. Embedded audio, time code, metadata and recording flag.

Image Processing
16 bit linear internal image processing in full ALEXA native color space. Target output color spaces for ProRes, DNxHD, REC OUT and MON OUT: Log C or Rec 709. For Rec 709, a customized look can be applied during record and playback with ARRI Look Files. Optional horizontal image mirroring.

Synchronization
Master/Slave mode for precision sync of settings, sensor, processing, HD-SDI outputs and QuickTime/ProRes or MXF/DNxHD recording for 3D applications. PHASE user button for shifting camera phase to move phase artifacts out of frame, i.e. when shooting a CRT monitor or rear screen projector (works in Rec Run TC mode).

Playback
Playback of ProRes or DNxHD from SxS PRO or SxS PRO+ cards visible on EVF-1, MON OUT and REC OUT. Playback audio available over headphone jack and embedded in the MON OUT and REC OUT signal.

Audio
1x XLR 5 pin AUDIO IN for 2 channel, line level, balanced audio. 24 bit/48 kHz A/D conversion. Uncompressed PCM audio recording to ARRIRAW, ProRes, DNxHD and embedded in all HD-SDI outputs. Only available with same project/sensor speed at 23.976, 24, 25, 29.97 and 30 fps. Max of 2.5 dBm output from AUDIO OUT headphones connector.

Connectors
2x slots for SxS PRO cards (SxS)

2x BNC recording out HD-SDI, 1.5G/3G (REC OUT 1 and REC OUT 2)
1x BNC monitoring out HD-SDI, 1.5G (MON OUT)
1x XLR 5-pin analog audio in (AUDIO IN)
1x BNC return video in HD-SDI, 1.5G (RET/SYNC IN)
1x LEMO 16-pin external accessory interface (EXT)
1x Fischer 2-pin 24 V power in (BAT)
2x Fischer 3-pin 24 V remote start and accessory power out (RS)
1x LEMO 2-pin 12 V accessory power out (12 V)
1x LEMO 5-pin timecode in/out (TC)
1x TRS 3.5 mm headphone mini stereo jack (AUDIO OUT)
1x custom LEMO 16-pin electronic viewfinder (EVF)
1x custom LEMO 10-pin Ethernet with 24 V power (ETHERNET)
BNC connectors designed for fast exchange without camera disassembly have been used for ALEXA since approximately mid 2012. These connectors require a special tool.

SD Card For importing and storing ARRI Look Files, camera set up files, frame line files, feature license keys and user pixel masks. Stores captured stills from the REC OUT image path in ARRIRAW (.ari, 12 bit), TIFF (.tif, 16 bit), DPX (.dpx, 10 bit) or JPEG (.jpg, 8 bit) format (1). Stores log files. Also used for installing Software Update Packets (SUPs).

Upgrades The Storage Interface Module (SxS Module) can be exchanged for future storage modules (i.e. XR Module). The Electronics Interface Module can be exchanged for future control electronics (i.e. Plus upgrade). Exchangeable Lens Mount (ELM) allows other lenses beyond PL mount lenses to be used. Simple camera software updates via free-of-charge Software Update Packets (SUPs) and payable license keys – Anamorphic De-squeeze, High Speed and DNxHD.

Software Tools (apps) [ARRIRAW Converter \(ARC\)](#)
[ARRI Look Creator \(ALC\)](#)
[ARRI Meta Extract](#)

Software Tools (online) [ALEXA Camera Simulator](#)
[ALEXA Frame Line Composer \(AFC\)](#)
[LUT Generator](#)
[ALEXA Pocket Guide WebApp](#)

(1) When REC OUT is set to 'ARRIRAW', frame grabs are only possible in the .ari format. Frame grabs are not possible during High Speed, 16:9 2K or when the option 'REC OUT = MON OUT Clone' is chosen.

Note: Technical data based on Software Update Packet SUP 10.0.1 (ALEXA Classic).
All data subject to change without notice.