

ALEXA

ALEXA is an extraordinary 35 format film-style digital camera system designed for the motion picture and broadcast markets, consisting of three cameras and an extensive range of primes, zooms, accessories and recording solutions.

ALEXA cameras offer exceptional image quality with the organic look and feel of film; their unequalled exposure latitude, high sensitivity and unique ARRI color processing provide sharp and natural images for HD and 2K with a cinematic look of breathtaking richness and detail.

Making them the perfect tools for a wide range of workflow and budget requirements, ALEXA cameras can simultaneously output a number of formats, all with audio and metadata. Their ability to record Apple ProRes images onto on-board SxS PRO cards offers file-based workflows of unparalleled efficiency for immediate time and cost savings. ARRIRAW delivers the pinnacle in image quality and postproduction flexibility, while the HD-SDI outputs integrate seamlessly into existing HD infrastructures.

Based on over 90 years of experience in building equipment for the motion picture industry, ALEXAs are true ARRI cameras: simple to operate, ergonomic in design and reliable in even the most extreme environments. ALEXA cameras are designed around the way you work and, like all other ARRI products, are backed by the global ARRI service network.

To provide more choice to the filmmaker, the ALEXA system is based on an open architecture with many industry-standard interfaces and compatibility with third party products. This, in combination with a number of components on the camera that can be upgraded, makes the system future-proof.

Further Resources & Online Tools

Frequently Asked Questions	http://www.arridigital.com/alexa/faq
ALEXA Manual	http://www.ari.com/goto/downloads/alexa
Digital Camera Basics	http://www.arridigital.com/creative/camerabasics
ALEXA Online Simulator	http://www.arridigital.com/technical/simulator
ALEXA Frame Line Composer	http://www.arridigital.com/technical/flc
ALEXA LUT Generator	http://www.arridigital.com/technical/luts



Main Features

Exceptional Image Performance

- Film-like, organic look
 - extended, clean highlights
 - extremely low noise floor
 - natural skin tones
 - excellent color separation
 - cinematic depth of field
- Wide exposure latitude of 14 stops
- EI 800 base sensitivity (EI 160 to EI 3200)
- Sharp, natural images for 2K DI and HD

Efficient and Versatile Workflows

- Multiple output options
 - ProRes, ARRIRAW and HD
 - Log C, Rec 709 or DCI P3
 - audio and metadata recording
- Apple ProRes
 - on-board file-based recording
 - onto SxS PRO cards
 - all five Apple ProRes codecs
 - same codec as FCP uses: Shoot > Edit
- ARRIRAW
 - best format for 2K deliverables
 - best quality for VFX productions
 - greatest flexibility in post
 - best option for archiving
- HD-SDI
 - integrates into existing HD infrastructures
 - configurable HD-SDI outputs


ARRI Product Quality

- Rugged and reliable
- Simple and safe operation
- Well balanced, ergonomic design
- Carefully considered details
- Precision sync for 3D
- Compatible with existing accessories
- Worldwide ARRI service network

Open, Future-proof Architecture

- Compatibility with industry standards
 - PL mount lenses
 - HD-SDI, ProRes, SxS PRO cards
 - Gold mount or V-lock on-board batteries
 - 12 or 24 V power inputs and outputs
 - support for third party on-board recorders
 - support for ARRIRAW by third party post tools
- Numerous upgrade options
 - upgradable Storage Interface Module
 - upgradable Electronics Interface Module
 - Exchangeable Lens Mount (ELM)
 - easy and powerful software upgrades

ALEXA – Technical Data

Camera Type	35 format film-style digital camera with integrated shoulder arch and receptacles for 15 mm lightweight rods		Sensor Size 3392 x 2200 Pixels 27.98 mm x 18.15 mm / 1.102" x 0.715"
Sensor	35 format ALEV III CMOS with Dual Gain Architecture (DGA) and Bayer pattern color filter array		Surround View 3168 x 1782 Pixels 26.14 mm x 14.70 mm / 1.013" x 0.579"
Frame Rates	ProRes 422 (Proxy), 422 (LT), 422 and 422 (HQ): 0.75 - 60 fps; ProRes 4444: 0.75 - 40 fps; HD-SDI: 0.75 - 60 fps; ARRIRAW: 0.75 - 30 fps; all speeds adjustable with 1/1000 fps precision		Image Out (16:9) 2880 x 1620 Pixels 23.76 mm x 13.37 mm / 0.935" x 0.526"
Shutter	Electronic rolling shutter, adjustable from 5.0° to 358.0° with 1/10 degree precision		
Exposure Latitude	14 stops for the entire exposure latitude from EI 160 to EI 3200, as measured with the ARRI Dynamic Range Test Chart (DRTC)		
Exposure Index	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}		
	Values behind the exposure index are the number of stops above and below 18% grey. These values are for Log C. Rec 709 and DCI P3 have 0.5 stops fewer in the low end at EI 160, 0.4 stops fewer in the low end at EI 200 and 0.2 stops fewer in the low end at EI 400. Otherwise they are the same.		
White Balance	red/blue balance: 2,000° to 11,000° Kelvin, adjustable in 100° steps, with presets of: 3200 (tungsten), 4300 (fluorescent), 5600 (daylight), 7000 (daylight cool); green/magenta balance: -8 to +8 color correction (CC). 1 CC = 035 Kodak CC values or 1/8 Rosco values.		
Sound Level	Under 20 dB(A) at <25° degrees Celsius (<77° degrees Fahrenheit) with lens, measured 1 m/3 feet from the image plane		
Power In	Three inputs: BAT connector, battery adapter back and battery adapter top. All accept 10.5 to 34 V DC. 85 W power draw for camera and EVF-1 in typical use recording to SxS PRO cards, without accessories.		
Power Out	12V connector: limited to 12 V, up to 2.2A. RS, EXT and ETHERNET: equal to input voltage, except when input <24 V it is regulated to 24 V. Both RS and EXT connectors combined: up to 2.2A. ETHERNET: up to 1.2A. Maximum power draw is also limited by the power source.		
Weight	ALEXA camera body + SxS Module: 6.3 Kg/13.8 lbs ALEXA camera body + EVF-1 + Viewfinder Mounting Bracket VMB-1 + viewfinder cable + SxS Module + Center Camera Handle CCH-1: 7.7 Kg/16.9 lbs		
Dimensions	Length: 332 mm/12.95", width: 153 mm/6.02", height: 158 mm/6.22"		
Environmental	-20° C to +45° C @ 95% humidity max, non condensing. Splash and dust proof through sealed electronics. System cooling through radiator/single fan.		
Lens Mount	ARRI Exchangeable Lens Mount (ELM); ships with Lens Adapter PL Mount w/o LDS (LA-PL-1), 54 mm stainless steel PL mount, Super 35 centered		
Flange Focal Depth	52.00 mm nominal		
Viewfinder	Low latency electronic color viewfinder ARRI EVF-1 with 1280 x 784 F-LCOS micro display and ARRI LED illumination, both temperature controlled. Customizable frame lines, surround view and camera status. 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.		
Control	Camera right: main user interface with 3" transfective 400 x 240 pixel LCD color screen, illuminated buttons and jog wheel. Camera left: operator interface with illuminated buttons and card swap button. EVF-1: viewfinder and basic camera settings, ZOOM button (2.25x pixel to pixel magnification), EXP button (false color exposure check) and jog wheel.		
In-camera Recording	Apple QuickTime/ProRes 4444, 422 (HQ), 422, 422 (LT) or 422 (Proxy) 1080p .mov HD files with embedded audio, timecode and metadata, recording to SxS PRO cards. ProRes 4444 is RGB 12 bit, all others YCbCr 10 bit. Log C (film matrix off), Log C (film matrix on), Rec 709 or DCI P3, all legal range. Minimum recording times on a 32 GB card at 24 fps: ProRes 4444 - 15 minutes, ProRes 422 (HQ) - 19 minutes		
Recording Outputs	2x REC OUT BNC connectors for uncompressed ARRIRAW or uncompressed HD-SDI video. Both with embedded audio, timecode and metadata. ARRIRAW: 2880 x 1620, 12 bit log signal without white balance or exposure index processing applied. Requires an ARRIRAW T-Link certified recorder. HD-SDI video: 1920 x 1080 4:4:4 RGB or 4:2:2 YCbCr; all Log C (film matrix off), Log C (film matrix on), Rec 709 or DCI P3, all legal or extended range. Recording frame rates other than HD standard (23.976, 24, 25, 29.97, 30, 50, 59.94, 60 fps) requires a recorder with Variflag support.		
Monitor Output	1x MON OUT BNC connector for uncompressed HD-SDI video: 1920 x 1080, 4:2:2 YCbCr. Log C (film matrix off), Log C (film matrix on), Rec 709 or DCI P3, all legal range.		
Playback	QuickTime clips can be played back from the SxS PRO cards to the EVF-1, MON OUT and REC OUT outputs		
Processing	16 bit internal image processing		
Audio	1x XLR 5 pin AUDIO IN connector for 2 channel, line level balanced audio input, 24 bit/48 kHz A/D conversion, works 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 switchable (REC OUT 1 and REC OUT 2) 1x BNC monitoring out HD-SDI 1.5G (MON OUT) 1x XLR 5 pin audio in (AUDIO IN) 1x BNC return signal/sync in HD-SDI 1.5G (RET/SYNC IN, functionality available in future software update) 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 out (AUDIO OUT) 1x LEMO custom 16 pin electronic viewfinder (EVF) 1x LEMO 10 pin Ethernet with power (ETHERNET)		
SD Card	Stores camera set up files, log files, frame line xml files and captured stills in JPEG (.jpg), TIFF (.tif) or DPX (.dpx) format. Also used for software updates.		
Upgrades	The Storage Interface Module (currently available for SxS PRO cards) can be exchanged for future storage modules. The Electronics Interface Module (available as either regular ALEXA or ALEXA Plus versions) can be exchanged for future control electronics. Exchangeable Lens Mount (ELM) allows other lenses beyond PL mount lenses to be used. Simple camera software updates.		

ALEXA Plus – Technical Data

Same as ALEXA, but with built-in wireless remote control, Lens Data System, one additional MON OUT, one additional RS, two LCS, one LDD and three lens motor connectors, built-in motion sensors and Quick Switch BNC connectors.

Weight	ALEXA Plus camera body + SxS Module: 7.0 Kg/15.4 lbs ALEXA Plus camera body + EVF-1 + Viewfinder Mounting Bracket VMB-2 + viewfinder cable + SxS Module + Center Camera Handle CCH-1: 8.4 Kg/18.5 lbs
Dimensions	Length: 332 mm/12.95", width: 175 mm/6.89", height: 158 mm/6.22"
Lens Mount	ARRI Exchangeable Lens Mount (ELM); ships with Lens Adapter PL Mount with LDS (LA-PL-2), 54 mm stainless steel PL mount, Super 35 centered

Note: In addition to ALEXA and ALEXA Plus a third camera model is in preparation with a 4:3 usable sensor area and an optical viewfinder. All technical data based on Software Update Packet (SUP) 3.0. All data subject to change without notice.