

ALEXA WORKFLOW OVERVIEW

The ARRI ALEXA provides uncompressed image output via HD-SDI or compressed recording to the optional memory card storage module. Next to different variations of the HD signal (4:4:4/4:2:2 with video or LogC characteristic), the choice of having a compact unit with internal recording versus a universal unit with external/onboard recording makes this camera an ideal choice for a very wide range of productions. The amount of options ALEXA offers, however, makes it a little hard to identify which recording option and HD format is the best for a project at hand. This document is intended to help finding the right way by linking a few typical production scenarios to available formats and workflows.

Different Situations Require Different Workflows

The following chapters will introduce the main ALEXA workflows and the type of production scenario they could be used in.

[Direct To Edit \(DTE\)](#)

Productions that need today's shot material to be in editing "yesterday" should look no further and go with the camera's ability to record ready to edit material to removable memory cards. The DTE workflow is also recommended for applications which require an untethered, compact camera setup such as e.g. documentary style shooting.

[HD Video](#)

Productions with special requirements for recording formats or delivery of material may prefer the HD Video workflow. Using the uncompressed HD-SDI video output enables a great selection of third party recording solutions for any application between e.g. uncompressed file-based capturing directly into a studio infrastructure to industry standard HD tape recording. Currently, using the HD video workflow is also required for shooting high speed, i.e. at frame rates over 30 fps.

[Hybrid DTE/HD Video](#)

Rather than a different workflow, this approach combines DTE and HD Video workflow to dramatically reduce the time until material is available for editing while the "online version" of the material can be captured to the recording solution of choice.

Direct To Edit (DTE)

By recording directly to the same high quality codecs as used by Apple's Final Cut Pro editing software, ALEXA offers the most streamlined and cost effective workflow possible. And if that was not enough, using the integrated memory card storage module also makes ALEXA just about as portable as her older sisters ARRIFLEX 416 and 235.

DTE Facts

- Available Formats:
 - Apple ProRes 422 (HQ) (approx 220 Mbit/s @ 24 fps)
1920 x 1080 Full HD resolution
10 bit 4:2:2 YCbCr color space
Legal/extended range Rec709 video or Log C
 - Apple ProRes 4444 (approx 330 Mbit/s @ 24 fps)
1920 x 1080 Full HD resolution
12 bit 4:4:4 RGB color space
Legal/extended range Rec709 video or Log C
- Speed range:
0.750 to 30 fps
- Storage media:
 - Sony SxS Pro memory cards
Capacity currently max 32 GB (approx. 20 min ProRes 422 HQ/15 min ProRes 4444 @ 24 fps)

Pros

- Material immediately available for editing in online/production quality. Easy as Drag'n'Drop.
- No time consuming, processor-hungry and quality-degrading transcoding or codec cascading.
- Material can be natively edited using widely popular editing systems from Apple and AVID.
- 12 bit ProRes 4444 material provides 4 times as many tonal steps as standard 10 bit HD material.
- Camera can be run in off-speeds.
- Compact, lightweight camera setup.
- Look Ma, NO cables! (untethered operation)

Cons

- Frame rate limited to max 30 fps.

HD Video

ALEXA's HD-SDI output provides uncompressed production quality HD video which can be recorded with a plethora of compatible recording systems. This allows recording material that will suit nearly any standard or custom HD tape or file workflow.

HD Video Facts

- Available Formats:
 - Uncompressed HD video – SMPTE standards 274M, 292M, 372M and 425M
 - 1920 x 1080 Full HD resolution
 - 10 bit 4:4:4 RGB or 4:2:2 YCbCr color space
 - Legal/extended range Rec709 video or Log C
- Available speeds:
 - 23.976, 24, 25, 29.97, 30, 50, 59.94 and 60 fps @ 4:2:2
 - 23.976, 24, 25, 29.97 and 30 fps @ 4:4:4
- Selection of available recording systems (alphabetical order):
 - AJA KiPro** - onboard/field recorder using exchangeable magazines
Capacity @ 24 fps several hours compressed HD
 - Codex Onboard** - onboard recorder using exchangeable magazines
Capacity @ 24 fps currently up to 40 minutes uncompressed HD, several hours compressed HD
 - Codex Portable** - field recorder using exchangeable magazines
Capacity @ 24 fps several hours compressed HD
 - Codex Studio** - studio recorder using exchangeable magazines
Capacity @ 24 fps currently up to 160 minutes uncompressed HD
 - Keisoku Giken UDR100** - onboard/field recorder using exchangeable magazines
Capacity @ 24 fps currently up to 130 minutes uncompressed HD
 - Panasonic AG-HPG20** - onboard/field recorder using P2 memory cards
Capacity @ 24 fps currently up to 30 minutes compressed HD
 - S.two DFR2K** - field recorder using exchangeable magazines
Capacity @ 24 fps currently up to 70 minutes uncompressed HD
 - S.two OB-1** - onboard recorder using exchangeable magazines
Capacity @ 24 fps currently up to 30 minutes uncompressed HD
 - Sony SRW-1/ SRPC-1** - field recorder using HDCAM SR tape (size S)
Capacity @ 24 fps currently up to 45 minutes compressed HD

Pros

- Material immediately available for editing in online/production quality.
- Very wide selection of available recording systems for almost any application.
- Some recording systems offer functions far beyond just recording.

Cons

- Frame rate limited to fixed standard speeds.