

THE BEST JUST GOT BETTER

SXT Crib Sheet 2017 04-10

16:9

For TV series or commercials using spherical lenses. Max 120 fps.

6:5

For all projects using anamorphic lenses with a 2.39:1 CinemaScope deliverable. Allows fewer processing steps in post and higher frame rates for some formats than 4:3. Max 96 fps.

4:3

For projects using spherical lenses with a 16:9 or 1.85:1 deliverable requiring extra room above and below the image for VFX markers or repositioning. Max 96 fps.

Open Gate

For all projects wanting the maximum image area and pixel count from a Super 35 format ALEXA. Best for resizing, repositioning, rotating, stabilizing, tracking and 4K up-sampling in post. Max 90 fps.

1. New recording formats

- 14 carefully fine-tuned recording options
- All sensor modes in ARRIRAW or ProRes
- 7 new recording formats

Sensor Mode	Recording File Type	Recording Resolution	
16:9	ProRes	HD	
		2K	
		3.2K	
		4K UHD	
6:5	ARRIRAW	2.8K	
		3.2K	
		2K Anamorphic	
6:5	ProRes	4K Cine Anamorphic	
		ARRIRAW	2.6K
4:3	ProRes	2.8K	
		ARRIRAW	2.8K
Open Gate	ProRes	3.4K	
		ARRIRAW	2.8K
		ARRIRAW	3.4K

16:9 ProRes 4K UHD

Easiest and fastest path to the best 4K UHD image, with the immediacy and speed of ProRes. Exactly the same format as on ALEXA Mini and AMIRA.

16:9 ARRIRAW 3.2K

The largest number of pixels that can be processed at 120 fps. Use full 3.2K image area for most ARRI Super 35 PL lenses, or use 2.8K center for lenses with a smaller image circle (and gain padding).

6:5 ProRes 2K/4K Anamorphic

The most economical path to the best overall image quality with anamorphic lenses. Camera creates a ready-to-view ProRes file in the DCI delivery format, with no de-bayering, cropping, rescaling or de-squeezing needed in post.

4:3 ProRes 2.8K

This format provides extra height for VFX tracking markers or repositioning when shooting 16:9 or 1.85 projects. Lower data rate and smaller image circle than Open Gate. Same pixel count as 4:3 ARRIRAW 2.8K.

Open Gate ProRes 3.4K

Maximum image area and photo site count from a Super 35 ALEXA in combination with the immediacy and speed of ProRes. Same pixel count as ARRIRAW Open Gate 3.4K.

Open Gate ProRes 4K Cine

Unique to ALEXA SXT. Recorded file contains 4K cine standard width with extra height for VFX tracking markers or repositioning.

2. New ARRI Look Management

- Look management from prep to post
 - maintain and share the cinematographer's intended look on set, in dailies and in editing
 - wide range of unique looks possible
 - same look file and tools for ALEXA SXT, ALEXA Mini and AMIRA
 - new ARRI Look File (ALF-2) contains name of target color space, ASC CDL values and 3D LUT
- Look file is always stored in metadata for
 - live grading on set
 - automated dailies creation
 - editing with looks



Download "ALEXA SXT - ARRI Look Management" white paper at www.ari.com/alexa/downloads

3. Super flexible on-set monitoring

- High Dynamic Range (HDR) monitoring
- Four independent monitoring outputs
 - Rec 709 or Rec 2020 output
 - Better frame grabs

4. Improved image quality

- Optional mild ARRI Noise Reduction (ANR)
- Advanced defect pixel correction
- More range for baked-in looks with 3D LUTs

Example of how the four independent monitoring outputs might be used on set



Operator: EVF-1 with custom look, frame lines, surround view and status info



Director: Rec 2020 monitor with custom look, frame lines and surround view



Assistant: Rec 709 on-board monitor with frame lines, surround view, status info and LDS info



DIT: Rec 709 monitor with Log C, clean

COLOR>MON COLOR SPACES	
MON OUT 1	REC 709
MON OUT 2	REC 2020
MON OUT 3	REC 709

MENU>FRAME GRABS	
File format	Jpeg
Frame grab path	MON OUT 1
Compare grab 2 live in	MON OUT 2
	MON OUT 3
	ARRIRAW

MENU>FRAME GRABS	
File format	Jpeg
Frame grab path	MON
Compare grab 2 live image	Tiff
	Dpx



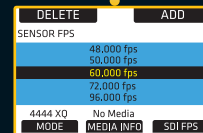
Download HDR look files at www.ari.com/goto/hdr_fa

5. Single speed mode

- SXR Capture Drives 1 TB and 2 TB
- XR Capture Drives 512 GB
- SxS PRO 64 GB cards (SBP-64A)
- SxS PRO+ 64 GB cards (SBP-64B and C)
- SxS PRO+ 128 GB cards (SBP-128B, C and D)
- LEXAR 3600x CFast 2.0 cards 256 GB

Note: every medium needs its own adapter

- ## 6. New media bay and drives
- Supports wide range of media
 - New SXR Capture Drives
 - Increased frame rates for many recording formats
 - ProRes RAID: redundant recording to XR and SXR Capture Drives



Scan the QR Code for downloading the ALEXA SXT Primer App

	XR Capture Drive 512 GB	SXR Capture Drive 1TB	SXR Capture Drive 2 TB
Color code			
16:9 ProRes 4444 HD @ 24 fps	1.7 hrs	3.5 hrs	7 hrs
Open Gate ARRIRAW 3.4K @ 24 fps	0.5 hrs	1 hr	2 hrs
Data rate	6.7 Gbit/s	20 Gbit/s	20 Gbit/s
Docks	XR Capture Drive Dock (TB) XR Capture Dock (USB-3) XR Capture Drive Dock (SAS)	SXR Capture Drive Dock (TB)	SXR Capture Drive Dock (TB)

Requires ARRI RAID driver on Mac for downloading (included in Codex Production Suite 4.1)

Not supported by ALEXA SXT
DNxHD, Fiber Remote Option, iOS SDK, SxS PRO 8, 16 and 32 GB cards, all SanDisk CFast 2.0 cards, LEXAR CFast 2.0 128 GB cards

XR and SXR Capture Drives recorded in ALEXA SXT require Codex Production Suite 4.1 for downloading

Recording Format				Pixel Math			Max fps (media duration in hr:min at max fps/at 24 fps)					
Sensor Mode	Recording File Type	Recording Resolution	Recording File Setting	Sensor Active Image Area (photo sites)	Recording File Container Size (pixel)	Recording File Image Content (pixel)	SXS Pro/Pro+ 64GB	SXS Pro/Pro+ 128GB	CFast 2.0 256GB	XR Capture Drive 512GB	SXR Capture Drive 1TB	SXR Capture Drive 2TB
16:9	ProRes	HD	422	2880 x 1620	1920 x 1080	1920 x 1080	120 (00:13/01:05)	120 (00:25/02:03)	120 (00:52/04:18)	120 (00:48/04:02)	120 (01:37/08:04)	120 (03:14/16:09)
			422 HQ				120 (00:09/00:43)	120 (00:16/01:22)	120 (00:34/02:52)	120 (00:32/02:42)	120 (01:05/05:23)	120 (02:09/10:46)
			4444				96 (00:07/00:29) [60]	96 (00:14/00:55) [60]	120 (00:23/01:55)	120 (00:22/01:48)	120 (00:43/03:35)	120 (01:26/07:11)
			4444 XQ				60 (00:08/00:19) [48]	60 (00:15/00:36) [48]	120 (00:15/01:17) [75]	120 (00:14/01:12) [75]	120 (00:29/02:24)	120 (00:57/04:47)
		2K	422	2880 x 1620	2048 x 1152	2048 x 1152	120 (00:11/00:57) [60]	120 (00:22/01:48) [60]	120 (00:45/03:46) [60]	120 (00:42/03:32) [60]	120 (01:25/07:04)	120 (02:50/14:08)
			422 HQ				120 (00:08/00:38) [60]	120 (00:14/01:12) [60]	120 (00:30/02:31) [60]	120 (00:28/02:21) [60]	120 (00:57/04:43)	120 (01:53/09:25)
			4444				80 (00:08/00:25) [60]	80 (00:14/00:48) [60]	120 (00:20/01:40) [60]	120 (00:19/01:34) [60]	120 (00:38/03:08)	120 (01:15/06:17)
			4444 XQ				50 (00:08/00:17) [40]	50 (00:15/00:32) [40]	120 (00:13/01:07) [60]	120 (00:13/01:03) [60]	120 (00:25/02:06)	120 (00:50/04:11)
		3.2K	422	3200 x 1800	3200 x 1824	3200 x 1800	72 (00:08/00:23) [30]	72 (00:15/00:44) [30]	72 (00:31/01:33) [30]	72 (00:29/01:27) [30]	72 (00:58/02:54)	72 (01:56/05:47)
			422 HQ				50 (00:07/00:16) [30]	50 (00:14/00:29) [30]	72 (00:21/01:02) [30]	72 (00:19/00:58) [30]	72 (00:39/01:56)	72 (01:17/03:52)
			4444				30 (00:08/00:10)	30 (00:16/00:20)	72 (00:14/00:41) [30]	72 (00:13/00:39) [30]	72 (00:26/01:17)	72 (00:51/02:34)
			4444 XQ				-	-	60 (00:13/00:27) [30]	60 (00:10/00:26) [30]	72 (00:17/00:51)	72 (00:34/01:43)
		4K UHD	422	3200 x 1800	3840 x 2160	3840 x 2160	50 (00:08/00:16)	50 (00:15/00:31)	50 (00:31/01:04)	50 (00:29/01:00)	50 (00:58/02:01)	50 (01:56/04:01)
			422 HQ				30 (00:09/00:11)	30 (00:16/00:20)	50 (00:21/00:43)	50 (00:19/00:40)	50 (00:39/01:20)	50 (01:17/02:41)
4444	-		-				50 (00:14/00:29)	50 (00:13/00:27)	50 (00:26/00:54)	50 (00:51/01:47)		
4444 XQ	-		-				30 (00:15/00:19)	40 (00:11/00:18)	50 (00:17/00:36)	50 (00:34/01:11)		
ARRIRAW	2.8K	2880 x 1620	2880 x 1620	2880 x 1620	-	-	-	-	120 (00:10/00:48)	120 (00:38/03:10)		
	3.2K	3168 x 1782*	3168 x 1782	3168 x 1782	-	-	-	-	100 (00:09/00:39)	120 (00:16/01:19)	120 (00:31/02:37)	
6:5	ProRes	2K Anamorphic	422	2560 x 2146	2048 x 858	2048 x 858	96 (00:19/01:16)	96 (00:36/02:25)	96 (01:16/05:04)	96 (01:11/04:45)	96 (02:22/09:29)	96 (04:45/18:58)
			422 HQ				96 (00:13/00:51)	96 (00:24/01:36)	96 (00:50/03:22)	96 (00:47/03:09)	96 (01:35/06:18)	96 (03:09/12:37)
			4444				96 (00:08/00:34)	96 (00:16/01:04)	96 (00:34/02:15)	96 (00:32/02:06)	96 (01:03/04:13)	96 (02:06/08:25)
			4444 XQ				70 (00:08/00:23)	70 (00:15/00:43)	96 (00:22/01:30)	96 (00:21/01:24)	96 (00:42/02:48)	96 (01:24/05:37)
		4K Cine Anamorphic	422	2560 x 2146	4096 x 1716	4096 x 1716	60 (00:08/00:19)	60 (00:14/00:36)	60 (00:30/01:16)	60 (00:28/01:11)	60 (00:57/02:22)	60 (01:54/04:45)
			422 HQ				40 (00:08/00:13)	40 (00:14/00:24)	60 (00:20/00:51)	60 (00:19/00:47)	60 (00:38/01:35)	60 (01:16/03:10)
			4444				25 (00:08/00:08)	25 (00:15/00:16)	60 (00:13/00:34)	60 (00:13/00:32)	60 (00:25/01:03)	60 (00:51/02:06)
			4444 XQ				-	-	40 (00:13/00:22)	50 (00:10/00:21)	60 (00:17/00:42)	60 (00:34/01:24)
		ARRIRAW	2.6K	2578 x 2160	2592 x 2160	2578 x 2160	-	-	-	96 (00:10/00:40)	96 (00:20/01:19)	96 (00:40/02:38)
		4:3	ProRes	2.8K	2880 x 2160	2944 x 2176	2880 x 2160	60 (00:09/00:22)	60 (00:16/00:41)	60 (00:34/01:26)	60 (00:32/01:20)	60 (01:04/02:41)
422 HQ	45 (00:08/00:14)							45 (00:15/00:27)	60 (00:23/00:57)	60 (00:21/00:54)	60 (00:43/01:47)	60 (01:26/03:34)
4444	30 (00:08/00:10)							30 (00:15/00:18)	60 (00:15/00:38)	60 (00:14/00:36)	60 (00:29/01:11)	60 (00:57/02:23)
4444 XQ	-							-	50 (00:12/00:25)	60 (00:10/00:24)	60 (00:19/00:48)	60 (00:38/01:35)
ARRIRAW	2.8K	2880 x 2160	2944 x 2176	2880 x 2160	-	-	-	90 (00:10/00:36)	96 (00:18/01:11)	96 (00:36/02:35)		
Open Gate	ProRes	3.4K	3424 x 2202	3456 x 2202	3424 x 2202	55 (00:08/00:18)	55 (00:15/00:34)	60 (00:28/01:11)	60 (00:27/01:07)	60 (00:53/02:13)	60 (01:47/04:26)	
						422 HQ	35 (00:08/00:12)	35 (00:15/00:22)	60 (00:19/00:47)	60 (00:18/00:44)	60 (00:36/01:29)	60 (01:11/02:58)
						4444	25 (00:08/00:08)	25 (00:14/00:15)	60 (00:12/00:32)	60 (00:12/00:30)	60 (00:24/00:59)	60 (00:47/01:58)
						4444 XQ	-	-	40 (00:13/00:21)	50 (00:09/00:20)	60 (00:16/00:39)	60 (00:32/01:19)
		4K Cine	422	3414 x 2198**	4096 x 2636	4096 x 2636	40 (00:07/00:12)	40 (00:14/00:24)	48 (00:25/00:49)	48 (00:23/00:46)	48 (00:46/01:33)	48 (01:33/03:05)
			422 HQ				25 (00:08/00:08)	25 (00:15/00:16)	48 (00:16/00:33)	48 (00:15/00:31)	48 (00:31/01:02)	48 (01:02/02:03)
			4444				-	-	40 (00:13/00:22)	48 (00:10/00:21)	48 (00:21/00:41)	48 (00:41/01:22)
			4444 XQ				-	-	25 (00:14/00:15)	30 (00:11/00:14)	48 (00:14/00:27)	48 (00:27/00:55)
		ARRIRAW	3.4K	3424 x 2202	3424 x 2202	3424 x 2202	-	-	-	75 (00:09/00:29)	90 (00:16/00:59)	90 (00:31/01:58)

Dark green fill = higher maximum fps than ALEXA XT [XT maximum fps in square brackets] / Light green fill = higher maximum fps than ALEXA SXT with XR Capture Drive
*3168 x 1782 (instead of 3200 x 1800) was necessary to make 120 fps possible **3414 x 2198 (instead of 3424 x 2202) was chosen for the best up-sampling factor to 4096 x 2636