



Camera Access Protocol (CAP) Version 2.5

for

ALEXA SXT/LF/65 2.0, ALEXA Mini & AMIRA 5.3

TECHNICAL INFORMATION

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1 Introduction

The Camera Access Protocol (CAP) is used to control and monitor the ARRI cameras via a network connection. The protocol incorporates functions to perform color grading, query and set variables such as the exposure index, start and stop a recording and much more. It is currently available for the ALEXA SXT, ALEXA LF, ALEXA 65, ALEXA Mini and AMIRA camera lines.

2 Available CAP Features

Note that not all functions are available on all camera models. (for availability see column ALEXA SXT/LF/65 and ALEXA Mini/AMIRA)

2.1 List of Commands

Nr.	NAME	ALEXA SXT/LF/65	ALEXA Mini /AMIRA
1	Live	SUP 1.0	SUP 5.0
2	RequestPwdChallenge	SUP 1.0	SUP 5.0
3	Password	SUP 1.0	SUP 5.0
4	ClientName	SUP 1.0	SUP 5.0
5	RequestVariables	SUP 1.0	SUP 5.0
6	Un-RequestVariables	SUP 1.0	SUP 5.0

7	SetVariable	SUP 1.0	SUP 5.0
8	Welcome	SUP 1.0	SUP 5.0
9	GetFrameGrab	SUP 1.0	SUP 5.0
10	Get3DLutFile	SUP 1.0	SUP 5.0
11	Set3DLutFile	SUP 1.0	SUP 5.0
12	Get3DLutData	SUP 1.0	SUP 5.0
13	Set3DLutData	SUP 1.0	SUP 5.0
14	SaveLookFile	SUP 1.0	SUP 5.0
15	ImgCompareUpload	SUP 1.0	SUP 5.0
16	ImgCompareSwitch	SUP 1.0	SUP 5.0
17	GetVariable	SUP 1.0	SUP 5.0
18	AutoWhiteBalance	no	SUP 5.1
19	RecordStart	no	SUP 5.1
20	RecordStop	no	SUP 5.1
21	StopMotionTrigger	no	SUP 5.1
22	LoadSetupFile	no	SUP 5.1
23	LoadLookFile	no	SUP 5.1
24	Playback control	no	new in SUP 5.3
25	Set & read TC	no	new in SUP 5.3
26	Set & read Project Rate	no	new in SUP 5.3
27	Install Look file from Lool Library	no	new in SUP 5.3
28	Access to camera alerts & events	no	new in SUP 5.3
29	SDI Frame grabs in JPG format	no	new in SUP 5.3
30	Read & set system date/time	no	new in SUP 5.3
31	Read Clip List from medium	no	new in SUP 5.3
32	Generate ALE Clip List from medium	no	new in SUP 5.3

2.2 List of Variables

Nr.	NAME	ALEXA SXT/LF/65	ALEXA Mini /AMIRA
1	Camera Type	SUP 1.0	SUP 5.0
2	Camera Serial	SUP 1.0	SUP 5.0
3	Camera State	SUP 1.0	SUP 5.0
4	Look Filename	SUP 1.0	SUP 5.0
5	CDL Values	SUP 1.0	SUP 5.0
6	Color Temperature	SUP 1.0	SUP 5.0
7	Tint	SUP 1.0	SUP 5.0
8	Exposure Index	SUP 1.0	SUP 5.0
9	LookSwitch EVF	SUP 1.0	SUP 5.0
10	Look Switch Mon1	SUP 1.0	SUP 5.0
11	Look Switch Mon2	SUP 1.0	SUP 5.0
12	Look Switch Mon3	SUP 1.0	SUP 5.0
13	Sensor FPS List	no	SUP 5.1
14	Sensor FPS	no	SUP 5.1
15	Shutter Angle List	no	SUP 5.1
16	Shutter Angle	no	SUP 5.1
17	Exposure Time List	no	SUP 5.1
18	Exposure Time	no	SUP 5.1
19	Exposure Index List	no	SUP 5.1
20	ND Filter List	no	SUP 5.1
21	ND Filter	no	SUP 5.1
22	White Balance List	no	SUP 5.1
23	Focus Tool Mon	no	SUP 5.1
24	Exposure Tool Mon	no	SUP 5.1

25	Test Image	no	SUP 5.1
26	Media Status	no	SUP 5.1
27	User Setup List	no	SUP 5.1
28	Look File List	no	SUP 5.1
29	Recording Mode	no	SUP 5.1
30	send all variables of last recorded clip	no	new in SUP 5.3
31	Lens Model	no	new in SUP 5.3
32	Lens Serial Number	no	new in SUP 5.3
33	Lens Focus	no	new in SUP 5.3
34	Lens Iris	no	new in SUP 5.3
35	Lens Focal	no	new in SUP 5.3
36	Clip Scene	no	new in SUP 5.3
37	Clip Take	no	new in SUP 5.3
38	Production	no	new in SUP 5.3
39	Production Company	no	new in SUP 5.3
40	Director	no	new in SUP 5.3
41	Cinematographer	no	new in SUP 5.3
42	Camera Operator	no	new in SUP 5.3
43	Location	no	new in SUP 5.3
44	User Info 1	no	new in SUP 5.3
45	User Info 2	no	new in SUP 5.3

2.3 List of Media Status Information

Nr.	NAME	ALEXA SXT/LF/65	ALEXA Mini /AMIRA
1	Medium Type	no	SUP 5.1
2	Model Name	no	SUP 5.1
3	Firmware Version	no	SUP 5.1
4	Serial Number	no	SUP 5.1
5	Clip Count	no	SUP 5.1
6	Current Reel	no	SUP 5.1
7	Medium Size	no	SUP 5.1
8	Medium Status	no	SUP 5.1
9	Write Protection	no	SUP 5.1
10	Clip Count	no	SUP 5.1
11	Current Reel	no	SUP 5.1
12	Free Capacity	no	SUP 5.1

2.4 List of Metadata from GetClipList

Nr.	NAME	ALEXA SXT/LF/65	ALEXA Mini /AMIRA
1	Clip Filename	no	new in SUP 5.3
2	Clip UUID	no	new in SUP 5.3
3	Clip Project Rate	no	new in SUP 5.3
4	Clip Start TC	no	new in SUP 5.3
5	Clip Duration TC	no	new in SUP 5.3

3 Contact

If you have any questions regarding the Camera Access Protocol (CAP) in ARRI cameras, please feel free to contact us via email at digitalworkflow@arri.de.