

# Live Production System LPS-1

## USER MANUAL

Version 0.7, May 15, 2025



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## 2 About this Document

This user guide is aimed at everyone involved in using the system and provides directions on how to operate it safely and as intended. To ensure safe and correct use, all users need to read the LPS-1 Operating Manual and the ALEXA 35 Operating Manual before using the system for the first time. It contains detailed information on how to use the system safely.

This user guide is an essential part of the product and should be easily accessible and in proximity to the equipment so that users can use it as a reference anytime.

Keep the LPS-1 User Guide and the LPS-1 Operating Manual and all other instructions belonging to the system in a safe place for future reference and possible subsequent owners.

### Document Revision History

Document ID: D45 10008918

Version	Release	Date	Description
0.5		January 31, 2025	Preliminary Version
0.6		February 3, 2025	Preliminary Version
0.7		May 15, 2025	Added LLA-1 Control Module Instructions

### How To Use This Manual

All directions are given from a camera operator's point of view. For example, camera right side refers to the right side of the camera when standing behind the camera and operating it in a normal fashion.

Connectors are written in all capital letters, for example "AUDIO connector".

Buttons are written in italic typeface capital letters, for example "*PLAY* button".

Menu paths are written in italic typeface, with menu and home in capital letters, for example "*MENU > Recording > Sensor Mode*".

"EVF" refers to the OLED eyepiece of the MVF-2 viewfinder.

"Monitor" refers to the flip-out monitor of the MVF-2 viewfinder.

"VF" refers to the viewfinder connectors VF 1 and VF 2. When settings refer to VF, they affect the EVF and the flip-out monitor.

"Monitoring outputs" refers to EVF, flip-out monitor, SDI 1 and SDI 2.

"Status Info" refers collectively to the Status Info of EVF, SDI 1 and SDI 2.

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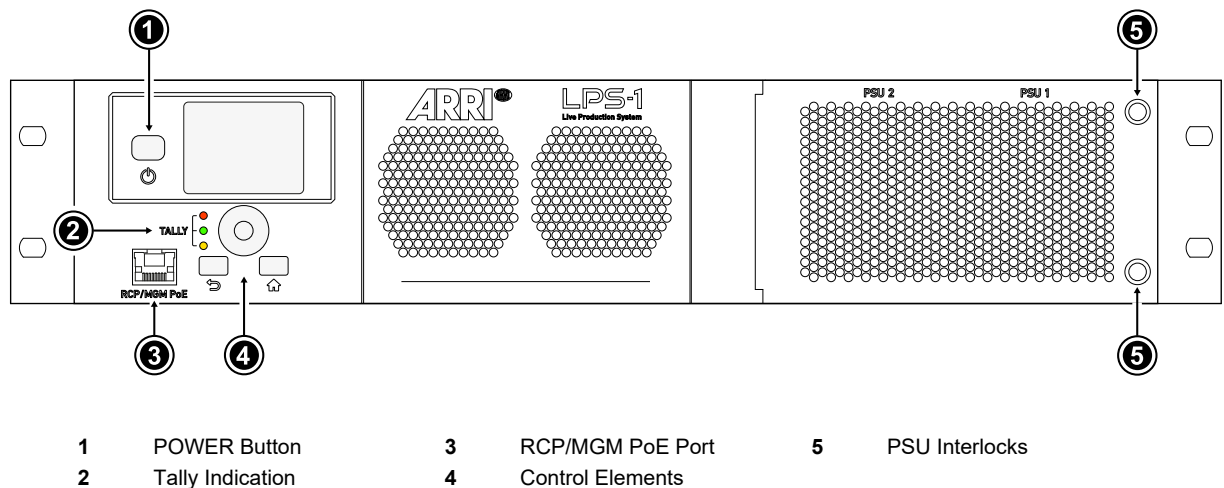
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## 3 Fiber Base Station

The LPS-1 Fiber Base Station (FBS-1) is a 19-inch, 2RU rack-mountable unit designed as part of the ARRI Live Production System LPS-1. It connects to the Fiber Camera Adapter via SMPTE 311 hybrid fiber cables or tactical fiber cables.

The Fiber Base Station provides power over SMPTE 311 hybrid fiber cables for distances up to 2 kilometers and features multiple HD/UHD outputs, four return video channels, and hot-swappable, interchangeable redundant power supplies.

### 3.1 Front Panel



#### Power Button

When the Fiber Base Station is connected to a power source but turned off, the POWER button (1) will have a red backlight, indicating standby mode. To turn on the unit, press the power button. When the unit is on, the backlight will illuminate white. To power off the unit, press and hold the power button.

#### Tally Indication

The tally indicator (2) displays the production status of the unit using red, green, and yellow lights.

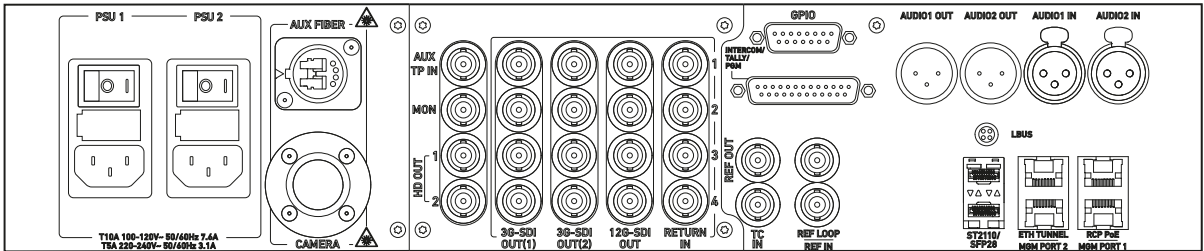
#### RCP/MGM PoE

The RCP/MGM PoE RJ45 port (3) can be used to connect a remote control panel directly to the Fiber Base Station or to access the integrated web interface with a computer.

#### PSU 1 & PSU 2

The two power supply units (PSU 1 & PSU 2) in the Fiber Base Station are identical and interchangeable, allowing them to be swapped by opening the front cover. They are designed for redundancy, so if one unit fails, the other will take over. The modules are hot-swappable, enabling users to replace one while the system is still powered on. To access the units, simply open the door by unscrewing the two interlocks (5).

### 3.2 Rear Connectors



#### PSU 1/2

The device features two built-in power supply units (PSU 1 and PSU 2) with IEC 320 universal AC mains inputs (100–240V, 50/60Hz), allowing for hot-swapping in case of failure without interrupting operation. The fuse holder is integrated into the AC mains inlet section and can be accessed using a screwdriver when the mains cable is disconnected.

#### AUX FIBER

The Auxiliary Fiber tunnel connection enables the integration of an optical receiver/transmitter with the base station, creating an additional fiber path that is multiplexed onto the fiber cable linking to the Fiber Camera Adapter. For instance, this could involve using a fiber optic to SDI converter to receive a video signal transmitted via an SDI-to-fiber optic transmitter connected to the Fiber Camera Adapter's AUX Fiber connector.

#### CAMERA (Lemo 3K SMPTE 311M Fiber Connector)

The Fiber Base Station system delivers up to 400W of power over distances of up to 2 km when using an SMPTE311 Fiber Cable. This cable combines fiber optics with copper conductors, enabling power transmission and power monitoring functions. However, when the ALEXA 35 Live is powered by an external power supply, the system can also operate with “Tactical” fiber cables. These cables are similar in design and appearance but include only fiber elements, without power conductors. Alternatively, an adapter can be used to combine both cable types: the SMPTE311 cable for a short distance and Tactical fiber cables with ST-type or LC-type fiber connectors to extend the operational range up to 10 km.



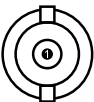
- Connector Type: Lemo 3K SMPTE 304M
- 1 Fiber A (SM17) yellow
  - 2 Fiber B (SM17) blue
  - 3 Control + (C02E) red
  - 4 Control - (C02E) clear
  - 5 Power - (P03EA) black
  - 6 Power + (P03EA) white

#### AUX TP IN (BNC)

The AUX TP IN serves as an input for an SDI video signal of up to 12G, which is transmitted to the Camera Fiber Adapter. It can be utilized for an additional return video feed or to support a teleprompter.

#### MON (BNC)

The MON BNC output offers a dedicated SDI monitor feed with status overlays displaying critical diagnostic information. This output can be configured via the Fiber Base Station menu or the LPS-1 Web UI to show either a Single Link 3G signal from the SDI 1 or 2 inputs of the ALEXA 35, or a downscaled signal that can be set to progressive or interlaced.

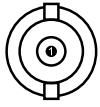


- Connector Type: BNC
- 1 Serial Digital Video 75Ω



### HD OUT 1/2 (BNC)

The HD OUT 1 and 2 outputs deliver downscaled HD signals (up to 3G) from the SDI 1 and 2 inputs of the ALEXA 35. These outputs can be routed through the LPS-1 Web UI and configured to output in either progressive or interlaced formats.

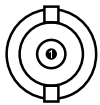


Connector Type: BNC

1 Serial Digital Video 75Ω

### 3G-SDI OUT (1) (BNC)

The 3G-SDI OUT (1) output includes a set of four SDI outputs that can be configured as either 4x Single Link 3G or 1x Quad Link 3G for 12G UHD output. The SDI 1 and 2 inputs from the ALEXA 35 can be routed to these outputs via the LPS-1 Web UI.

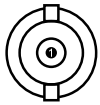


Connector Type: BNC

1 Serial Digital Video 75Ω

### 3G-SDI OUT (2) (BNC)

The 3G-SDI OUT (2) output includes a set of four SDI outputs that can be configured as either 4x Single Link 3G or 1x Quad Link 3G for 12G UHD output. The SDI 1 and 2 inputs from the ALEXA 35 can be routed to these outputs via the LPS-1 Web UI.

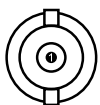


Connector Type: BNC

1 Serial Digital Video 75Ω

### 12G-SDI OUT (1-4) (BNC)

The 4 x BNC 12G-SDI outputs can be configured for Single Link SDI signals up to 12G. The SDI 1 and 2 inputs from the ALEXA 35 can be routed to these outputs using the LPS-1 Web UI.



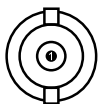
Connector Type: BNC

1 Serial Digital Video 75Ω

### RETURN IN (1-4) (BNC)

Up to 4 Return SDI signals can be connected to the Fiber Base Station. The Fiber Camera Adapter allows the assignment of each of these four Return SDI signals to two separate Return Video controls.

**Info:** The frame rate of the Return SDI should match the program video frame rate, or be a division of it within the same “domain.” For example, a 1080/25P Return SDI signal can be used if the program video is 1080/50P.

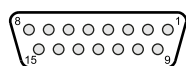


Connector Type: BNC

1 Serial Digital Video 75Ω

## GPIO (D-Sub 15pin)

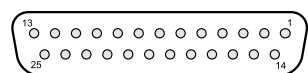
The GPIO connector serves as a versatile General Purpose Input and Output interface, enabling remote activation of functions such as a Call/Tally lamp or an external recording device. In the LPS-1 system, these GPIO signals can be managed via the GPIO matrix in the LPS-1 Web User Interface. Two signals are pre-defined for Yellow Tally and Call.



1	GPI 1	6	n.c. / GPI 6	11	GPO 2 (-)
2	GPI 2	7	GPO 1 (+)	12	GPO 3 (+)
3	GPI 3	8	GPO 1 (-)	13	GPO 3 (-)
4	GPI 4	9	GND	14	GPO 4 (+)
5	n.c. / GPI 5	10	GPO 2 (+)	15	GPO 4 (-)

## Intercom / Tally / PGM (D-Sub 25pin)

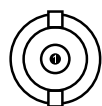
The D-sub 25-pin connector is used for multiple functions, including intercom audio in/out, program audio input, and tally control. It follows the SONY-style connector and pin assignments, offering reliable connections for audio and control signals in broadcast and production environments.



Pin	Signal	Level	Direction	Description
1	ENG (R) (X) Out	0 dBu	Out	Intercom Out balanced
2	ENG (R) (Y) Out	0 dBu	Out	Intercom Out balanced
3	ENG (G)	-	GND	GND Intercom ENG
4	ENG (T) (X) In	0 dBu	In	Intercom In balanced
5	ENG (T) (Y) In	0 dBu	In	Intercom In balanced
6	PGM1 (X) In	0 / -20 dBu	In	PGM1 In balanced
7	PGM1 (Y) In	0 / -20 dBu	In	PGM1 In balanced
8	PGM1 (G)	-	GND	GND for PGM1
9	GND	-	GND	GND for AUX
10	n.c	-	-	-
11	R TALLY (X) In	24V DC On	-	Red tally, short pins to activate
12	R TALLY (Y) In	0V Off	-	Red tally, short pins to activate
13	GND	-	GND	Chassis GND
14	PROD (R) (X) Out	0 dBu	Out	Intercom Out balanced
15	PROD (R) (Y) Out	0 dBu	Out	Intercom Out balanced
16	PROD (G)	-	GND	GND for Intercom PROD
17	PROD (T) (X) In	0 dBu	In	Intercom In balanced
18	PROD (T) (Y) In	0 dBu	In	Intercom In balanced
19	PGM2 (X) IN	0 / -20 dBu	In	PGM2 In balanced
20	PGM2 (Y) In	0 / -20 dBu	In	PGM2 In balanced
21	PGM2 (G)	-	GND	GND for PGM2
22	n.c.	-	-	-
23	n.c.	-	-	-
24	G TALLY (X) In	24V DC On	-	Green tally, short pins to activate
25	G TALLY (Y) In	0V Off	-	Green tally, short pins to activate

## REF IN (BNC)

The REF IN is a BNC connector that receives Black Bursts and Tri-level synchronization signals.



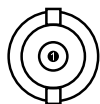
Connector Type: BNC

1 Genlock I/P Video Signal 10K  $\Omega$

### REF OUT (BNC)

The REF OUT is a BNC output connector that provides active genlock signals derived from either PTP (Precision Time Protocol) or the analog REF IN input.

**Info:** This active reference output does not support Black and Burst signals. If the Reference Input signal to the Fiber Base Station is a Black and Burst signal, the system will convert it into a tri-level sync signal and output it as a 720P tri-level sync with the same frame rate as the input.



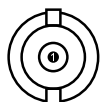
Connector Type: BNC

1 Genlock I/P Video Signal 10K  $\Omega$

### REF LOOP (BNC)

The REF Loop BNC output passes the genlock input signal (black burst or tri-level sync).

When not connected or daisy-chained to other equipment, the REF Loop should be properly terminated (75 $\Omega$  BNC terminator).

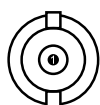


Connector Type: BNC

1 Genlock I/P Video Signal 10K  $\Omega$

### TC IN (BNC)

The Timecode In is a BNC connector that receives timecode signals, typically in LTC (Longitudinal Timecode) format.

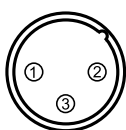


Connector Type: BNC

1 Timecode In Signal I/P 10K

### AUDIO 1/2 OUT (XLR)

The AUDIO 1/2 OUT connectors are 3-pin XLR connectors that provide balanced analog (line level) or digital audio (AES) outputs.

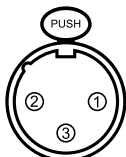


Connector Type: XLR

1 GND  
2 Output  
3 Return

### AUDIO 1/2 IN (XLR)

The AUDIO 1/2 IN inputs are 3-pin XLR connectors that support both balanced analog (line level) and digital audio (AES) signals.



Connector Type: XLR

1 GND  
2 In (+)  
3 In (-)

### LBUS (4-pin LEMO)

LBUS Lemo connector for future use.

ST2110 / SFP28

The ST2110 / SFP 28 interface is a high-speed, 25Gbps data connection. It supports the ST2110 standard for transmitting uncompressed video, audio, and metadata over IP networks. The SFP28 module provides reliable, low-latency transport, making it ideal for connecting devices like cameras, servers, and video routers in modern, IP-based broadcast systems.

For future use.

ETH TUNNEL

The ETH TUNNEL RJ45 connector is used for an auxiliary 1 Gbit/s Ethernet tunnel.

RCP PoE

The RCP PoE connector is an RJ45 Ethernet interface designed to connect a Remote Control Panel directly to the Fiber Base Station via Power over Ethernet (PoE).

MGM PORT 1/2

The device features two MGMT Ethernet ports, allowing direct access to the base station via a computer. These ports are useful for initial setup or troubleshooting.

3.3 Menu Operation

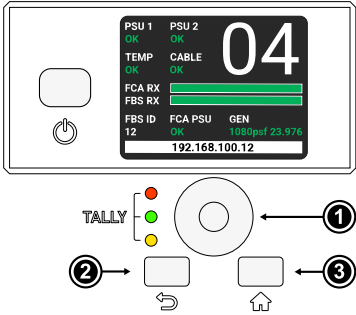
The Fiber Base Station's settings are divided into 7 sub menus:

- Presets

■ Network
- Genlock / Timecode

■ Intercom
- Video

■ Audio
- Diagnostics



The diagram shows the control panel of the Fiber Base Station. It features a central jogwheel with a power button to its left. Below the jogwheel are three buttons: a 'TALLY' button with three colored LEDs (red, green, yellow), a 'BACK' button with a left-pointing arrow, and a 'HOME' button with a house icon. Numbered callouts indicate: (1) the jogwheel, (2) the BACK button, and (3) the HOME button.

► Rotate the jogwheel (1) to open and navigate through the menu.

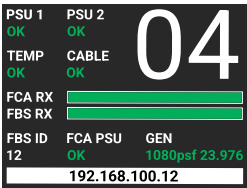
► Press the jogwheel to call up a menu page, press the BACK button (2) to return to the previous menu level.

► To edit a setting, press the jogwheel, then rotate to adjust the setting and press to confirm.

► Press the HOME button (3) to return to the HOME screen.

HOME Screen

The Fiber Base Station's HOME screen provides general information about the status of the system:

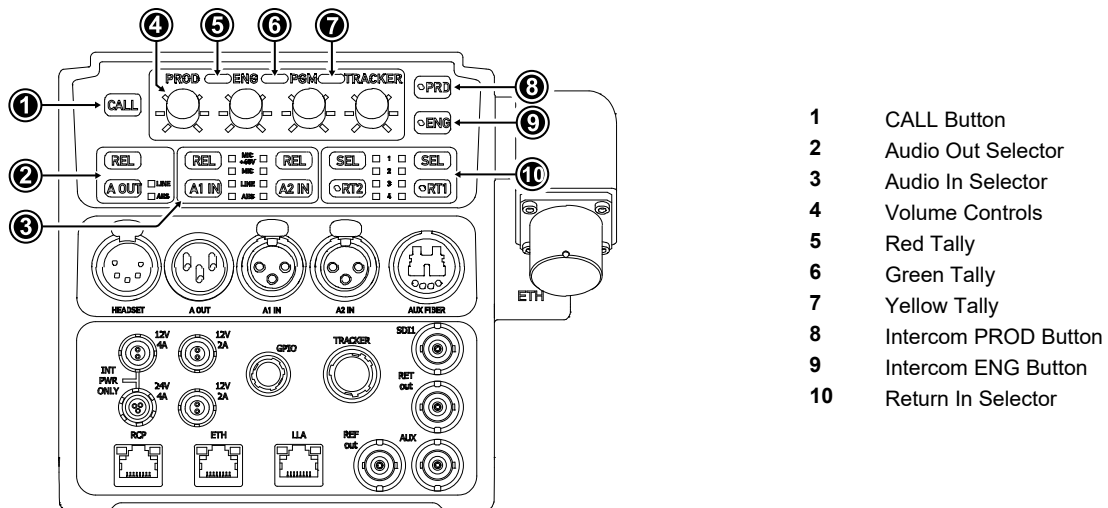
	<b>PSU 1/2</b>	Shows the status of the power supplies
	<b>TEMP</b>	Shows the status of the temperature
	<b>CABLE</b>	Shows cable status
	<b>FCA RX</b>	Shows quality of FCA fiber connection
	<b>FBS RX</b>	Shows quality of FBS fiber connection
	<b>FBS ID</b>	Shows the set FBS ID
	<b>FCA PSU</b>	Shows the status of the FCA power supply
	<b>GEN</b>	Shows the Genlock status
	<b>IP</b>	The IP address of the unit is displayed at the bottom of the HOME screen.

## 3.4 Technical Data Fiber Base Station

<b>Video Outputs</b>	2x Quad Link 3G or 8x Single Link 3G SDI (BNC) 4x Single Link 12G, Single Link 6G, Single Link 3G (BNC) 2x 1.5G or 3G SDI (down converted to HD) (BNC) 1x Monitor Out (HD, with optional Status Overlay) (BNC)
<b>Video Inputs</b>	4x 3G Return Video In (BNC) 1x 12G AUX/TP SDI In (BNC)
<b>Audio Outputs</b>	2x Line / AES (XLR) Embedded Audio on all SDI Outputs
<b>Audio Inputs</b>	2x Line / AES (XLR)
<b>Genlock</b>	1x REF IN (Black Burst / Tri-Level) (BNC) 1x REF Out (active) (BNC) 1x REF Loop (passive loop out) (BNC)
<b>SMPTE Fiber</b>	3K Series LEMO Connector (max. Cable Length 2 km)
<b>Additional Interfaces</b>	1x Fiber Tunnel (Neutrik Opticon, 2x Fiber 1550nm) 2x SMPTE 2110/2022-7 (ST2110 with Redundancy) (SFP28) 1x Timecode In (BNC) 1x RCP PoE (RJ45) 2x MGMT (Diagnostics, Configuration & Update) (RJ45) 1x Ethernet Tunnel 1 Gbps (RJ45) 4x GPIO Inputs/Outputs (15W-D) 1x Intercom/Tally/PGM (Program/Engineering, Tally, 2x Program Audio) (25W-D)
<b>Mains Input (PSU 1 &amp; 2)</b>	100-120 V 50/60 Hz - 7.6 A 220-240 V 50/60 Hz - 3.1 A
<b>Available Power Supply for Camera Head</b>	400 W
<b>Measurements (HxWxL)</b>	89 x 438 x 532 mm / 3.5 x 17.2 x 20.9"
<b>Weight</b>	12.6 kg / 27.8 lbs
<b>Operating Temperature</b>	0° C to +40° C / +32° F to +104° F
<b>Storage Temperature</b>	-30° C to +70° C / -22° F to +158° F

## 4 Fiber Camera Adapter

### 4.1 Controls



#### CALL Button

The CALL button (1) can be used to indicate a call from the camera operator to e.g. the production team.

- Press the CALL button to indicate a call, press again to withdraw.
- Press and hold the button to indicate the call temporarily for as long as the button is pressed.

The LED on the CALL button reflects the functional status (active call/off).

#### Audio Out Selector

The audio out selector (2) switch determines which audio format is output at the A OUT connector of the Fiber Camera Adapter (AES or LINE).

- Press and hold the REL button and then press the A OUT button to toggle between LINE and AES output.

The selected format is indicated with a green light.

#### Audio In Selector

The audio in selector (3) switch determines which audio format is used for the audio inputs A1 IN and A2 IN.

- Press and hold the corresponding REL button and then press the A1 IN button to select the format for the A1 IN connector (MIC +48V, MIC, LINE or AES).
- Press and hold the corresponding REL button and then press the A2 IN button to select the format for the A2 IN connector (MIC +48V, MIC, LINE or AES).

The selected format is indicated with a green light.

#### Volume Controls

Use the volume controls (4) to adjust the headset volume for the intercom channels, the program audio and the level of the Tracker talk signal that can be routed to the intercom headset.

## Intercom Buttons

The intercom buttons (8, 9) are used to enable the headset microphone to talk to the production/engineering channel. The LEDs on the buttons reflect the functional status (mic enabled/disabled).

- ▶ Press the PRD button to enable the headset microphone to talk to the production intercom channel, press again to disable the headset microphone.
- ▶ Press the ENG button to enable the headset microphone to talk to the engineering intercom channel, press again to disable the headset microphone.
- ▶ Press and hold the button to enable the headset microphone temporarily for as long as the button is pressed.

## Return In Selector

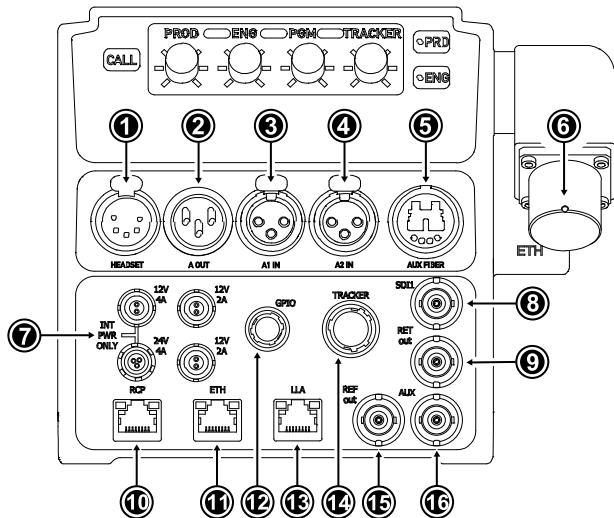
You can use the two return in buttons RT1 and RT2 to switch the camera's viewfinder outputs VF1 and VF2 from displaying the live image to displaying the return in image. The SEL buttons are used to determine which return in channel (1-4) is displayed when the buttons are pressed. The LEDs on the RT1 and RT2 buttons indicate the function status (enabled/disabled).

- ▶ Press the SEL button above the RT1 button to select which return in channel is displayed when pressing the RT1 button.
- ▶ Press the SEL button above the RT2 button to select which return in channel is displayed when pressing the RT2 button.

The selected channel is indicated with a green light.

- ▶ Press the RT1 or RT2 button to enable return in, press again to disable.
- ▶ Press and hold the button to enable return in temporarily for as long as the button is pressed.

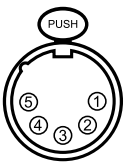
4.2 Connectors



- 1 HEADSET Connector
- 2 AUDIO OUT Connector
- 3 AUDIO 1 IN Connector
- 4 AUDIO 2 IN Connector
- 5 AUX FIBER Connector
- 6 SMPTE 311M Fiber Connector
- 7 Accessory Power Outputs
- 8 SDI 1 OUT Connector
- 9 RET OUT Connector
- 10 RCP PoE Connector
- 11 ETH Connector
- 12 GPIO Connector
- 13 LLA PoE Connector
- 14 TRACKER Connector
- 15 REF OUT Connector
- 16 AUX Connector

HEADSET Connector

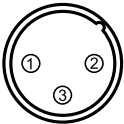
The 5-pin XLR HEADSET connector is used to connect a headset with either a dynamic or condenser microphone for intercom communication on the Production and Engineering channels, as well as for monitoring the program audio output.



- Connector Type: XLR 5pin
- 1 MIC H
  - 2 MIC L
  - 3 Headphone & MIC GND
  - 4 Headphone Left
  - 5 Headphone Right

AUDIO OUT Connector

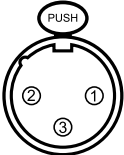
The XLR 3-pin AUDIO OUT connector can be used for both AES digital and analog line audio output, with the signal type being selectable.



- Connector Type: XLR 3pin
- 1 GND
  - 2 Output
  - 3 Return

AUDIO 1/2 IN Connectors

XLR 3-pin connectors for audio input (MIC 48V/MIC/LINE/AES).  
The XLR 3-pin AUDIO 1/2 IN connectors are used for audio input, supporting multiple signal types including MIC (with 48V phantom power), MIC, LINE, and AES.



- Connector Type: XLR 3 pin
- 1 GND
  - 2 In (+) / +48V
  - 3 In (-) / +48V



## AUX FIBER Connector

The AUX Fiber tunnel offers two additional fiber connections via the Neutrik Opticon connector. This allows equipment with a fiber optic interface to be connected, utilizing these fiber paths that are integrated with other channels over the SMPTE311 or Tactical fiber cable linking the Fiber Camera Adapter to the Fiber Base Station. For example, using an SDI to fiber converter, video from a remote camera connected to the AUX Fiber tunnel can be transmitted through the same fiber cable connecting the Fiber Camera Adapter to the Fiber Base Station, where it can be converted back to SDI by a receiver.

## SMPTE 304M Fiber Connector

The SMPTE 304M socket is a fiber optic connector designed for high-performance video and data transmission in broadcast and production environments. It supports the SMPTE 304M standard, allowing for the reliable transfer of uncompressed video, audio, and metadata over long distances using fiber optic cables.

## Accessory Power Outputs

The Fiber Camera Adapter provides multiple power outputs for accessories like monitors, teleprompters, lights, motorized support systems, and script boards. It features three 12V Lemo connectors for 12V accessories and one 24V Fischer connector for 24V accessories.

**Info:** When the camera is powered locally (instead of via SMPTE 311), the 12V/4A and 24V/4A outputs are inactive, and the 12V/2A connectors are limited to a maximum output of 1A.



Connector Type: LEMO EGG.0B.302.CLN

- 1 GND
- 2 +12V

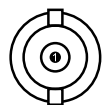


Connector Type: Fischer DBP 102A052-130

- 1 GND
- 2 +24V
- 3 n.c.

## SDI 1 OUT Connector

The 12G SDI 1 OUT BNC connector provides a duplicate video signal of the camera SDI 1 output and can be used for additional monitoring, for example, a vanity monitor or where a focus puller is needed.

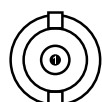


Connector Type: BNC

- 1 Serial Digital Video 75Ω

## RET OUT Connector

The 3G RET OUT BNC connector output provides a duplicate of the selected return video input to the camera.



Connector Type: BNC

- 1 Serial Digital Video 75Ω

## RCP PoE Connector


The RCP PoE RJ45 connector allows for direct connection of a Remote Control Panel (RCP). It can be used for diagnostic purposes or to test video parameter adjustments when the camera is situated remotely, far from the Fiber Base Station.

ETH Connector

The RJ45 connection for the 1 Gbit/s Ethernet tunnel offers an additional link for devices to connect between the Fiber Camera Adapter and the Fiber Base Station via the SMPTE311 or tactical fiber. This can be used, for example, for Ethernet control of a motorized platform or to transmit data from a focus assist unit.

GPIO Connector

The GPIO connector provides an interface with both inputs and outputs, allowing for the activation of external equipment or accessories. The GPI inputs on the Fiber Camera Adapter are pulled up to +5V and provide a dry contact closure, while the GPO outputs offer a voltage range between -36V and +36V. These inputs and outputs can be configured through a matrix in the LPS-1 Web UI to create custom signal paths. For example, GPI 1 on the Fiber Camera Adapter could be linked to a switch and mapped to GPO 2 on the Fiber Base Station, enabling the start of recording on an external recorder connected to the Fiber Base Station.



Connector Type: Hirose HR10A-10R-10SC

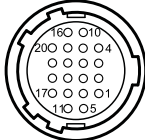
1	GPI 1	6	GPO 1 (+)
2	GPI 2	7	GPO 1 (-)
3	GPI 3	8	GPO 2 (+)
4	GPI 4	9	GPO 2 (-)
5	GND	10	+12V / 10mA

LLA PoE Connector

RJ45 Ethernet for Large Lens Adapter interface module for future use.

TRACKER Connector

The Tracker connector offers several interfaces for local users near the camera, such as a focus puller or technician. These interfaces include Intercom, Call, and Tally signals, as well as GPIO connections, which can be switched between the Tracker and GPIO connector. The GPIO ports can also be configured via the LPS-1 Web UI's GPIO matrix.

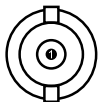


Connector Type: Hirose 20-pin HR10A-13R-20S

1	GPO 3 (+)	6	Telephone Return	11	MIC Return	16	GND
2	GPO 3 (-)	7	Telephone Right	12	MIC	17	GPO 4 (+)
3	Intercom to PROD	8	n.c.	13	GND	18	GPO 4 (-)
4	Intercom to ENG	9	GPI 5	14	GPI 6	19	On Air Green
5	Telephone Left	10	+12V / 10mA	15	Call Indication	20	On Air Red

REF OUT Connector

The REF OUT connector outputs a duplicate of the Genlock/Sync signal being input to the camera, allowing external equipment, such as recorders, to be synchronized to the same reference signal. **Info:** This reference output does not support Black and Burst signals. If the Reference Input signal to the Fiber Base Station is a Black and Burst signal, the system will convert it into a tri-level sync signal and output it as a 720P tri-level sync with the same frame rate as the input.

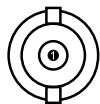


Connector Type: BNC

1	Genlock I/P Video Signal 10K $\Omega$
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## AUX Connector

The LPS-1 system offers a dedicated, transparent fiber path for an unprocessed SDI signal up to 12G UHD. This can serve as an additional, permanent, non-switching return video signal or be used for a teleprompter.

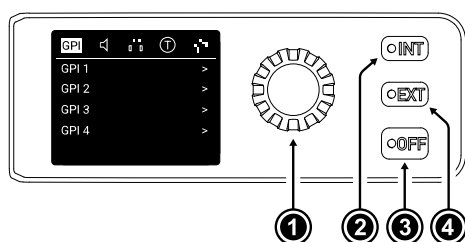


Connector Type: BNC

1 Serial Digital Video 75Ω

## 4.3 Menu Operation

The side display of the Fiber Camera Adapter allows easy access to key settings. These settings are organized into four pages, which can be navigated using the navigation bar at the top of the screen



- 1 Jogwheel
- 2 INT Internal Power Button
- 3 Power Off Button
- 4 EXT External Power Button

- ▶ Rotate the jogwheel (1) to select between pages (GPI, Audio, Intercom, Tracker, Settings).
- ▶ Press the jogwheel to access a page.
- ▶ Rotate the jogwheel to scroll up or down within the page.
- ▶ To edit a setting press the jogwheel, then rotate to select the desired value. Press to confirm the change.
- ▶ To leave a page, scroll up into the navigation bar and press the jogwheel.

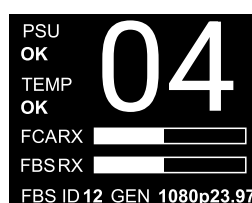
## Power On and Off

The default behavior is for the Fiber Camera Adapter to boot up on internal power (power provided over SMPTE311 fiber cable.)

- ▶ Press the INT button (2) to power the Fiber Camera Adapter from the SMPTE311 Fiber Cable.
- ▶ Press the EXT button (4) to power the Fiber Camera Adapter from the external power input to the camera.
- ▶ Press and hold the OFF button (3) to switch off the Fiber Camera Adapter.

## HOME Screen

The Fiber Camera Adapter's HOME screen provides general information about the status of the system:



**PSU**  
**TEMP**  
**FCA RX**  
**FBS RX**  
**FBS ID**  
**GEN**

Shows the status of the FCA power supply  
Shows the status of the temperature  
Shows quality of FCA fiber connection  
Shows quality of FBS fiber connection  
Shows the set FBS ID  
Shows the Genlock status

## 4.4 Technical Data Fiber Camera Adapter

<b>Video Outputs</b>	1x 12G, 3G or 1.5G Camera SDI 1 Out (BNC) 1x 3G or 1.5G Return Video SDI Out (BNC) 1x 12G, 3G or 1.5G AUX / Teleprompt Out (BNC)
<b>Video Inputs</b>	2x 12G, 3G or 1.5G SDI (BNC)
<b>Audio Outputs</b>	1x Line / AES (XLR) Embedded Audio on all SDI Outputs
<b>Audio Inputs</b>	2x Line / AES (XLR)
<b>Genlock</b>	1x REF Out (Black Burst / Tri Level) (BNC)
<b>SMPTE Fiber</b>	3K Series LEMO Connector (max. Cable Length 2 km)
<b>Additional Interfaces</b>	1x AUX Fiber (Neutrik Opticon) 1x RCP PoE for Local Camera Control (RJ45) 1x LLA PoE for Large Lens Adapter Control (RJ45) 1x Ethernet Tunnel 1Gbps (RJ45) 1x Operator Headset (XLR) 1x GPIO (Hirose) 1x Tracker (Hirose)
<b>Accessory Power Outputs</b>	2x 12V 2A (LEMO) 1x 12V 4A (LEMO) 1x 24V 4A (LEMO)
<b>Measurements (HxWxL)</b>	149 x 180 x 210 mm / 5.82 x 7.09 x 8.27"
<b>Weight</b>	3.36 kg / 7.4 lbs
<b>Operating Temperature</b>	-20° C to +45° C / -4° F to +113° F
<b>Storage Temperature</b>	-30° C to +70° C / -22° F to +158° F

## 5 Skaarhoj RCP Pro

### 5.1 Technical Data Skaarhoj RCP Pro

<b>Tally In / PV Out</b>	1x Sub-D 9P, female
<b>Networking Port</b>	RJ45 Ethernet
<b>Programming Port</b>	RJ45 Ethernet (or Micro USB for setting manual IP)
<b>Power Input</b>	External Power Supply or PoE (48V/IEEE 802.3af), 12V
<b>Power Consumption</b>	6.2 W
<b>Measurements (HxWxL)</b>	115 x 355 x 105 mm / 4.5 x 14.0 x 4.1"
<b>Weight</b>	1.3 kg / 2.7 lbs

## 6 System Setup

### 6.1 Power Supply (Camera)

The camera and the Fiber Camera Adapter can be supplied with power via the Fiber Base Station when using SMPTE 311 fiber cables. When using tactical fiber cables that do not transmit power, the camera and Fiber Camera Adapter must be supplied with power locally by connecting the power source to the camera.



Fig. 1: SMPTE 311

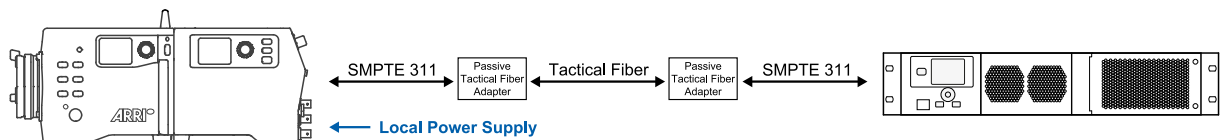


Fig. 2: Tactical Fiber

Power Source	Steps	Notes
<b>SMPTE 311 / Fiber Base Station</b>	1. Connect the SMPTE Fiber cable to the Fiber Base Station and the Fiber Camera Adapter.	SMPTE Fiber cables supply both power and data.
	2. Press the Power button on the Fiber Base Station to switch on the system.	The Fiber Base Station, Fiber Camera Adapter, and camera will power up together.
	3. To switch off the entire system, press and hold the Power button on the Fiber Base Station until it powers down.	
	4. To switch off only the Fiber Camera Adapter and camera, press and hold the OFF button on the Fiber Camera Adapter.	Press the INT button on the Fiber Camera Adapter to power them back on.
<b>Locally via the Camera</b>	1. Connect the external power source to the camera.	Tactical Fiber cables do not supply power, so this is required when using them.
	2. Press the EXT button on the Fiber Camera Adapter to power up the system.	The Fiber Camera Adapter and camera will power up.
	3. To switch off the Fiber Camera Adapter and camera, press and hold the OFF button on the Fiber Camera Adapter.	
<b>Switching Between Power Sources</b>	1. When both power sources are connected, press the EXT button to use the local power source from the camera.	This action can be performed during operation.
	2. Press the INT button to switch to power from the Fiber Base Station.	

### **Power supplied via the Fiber Base Station**

- ▶ Switch on the system by pressing the power button on the Fiber Base Station.  
Fiber Base Station, Fiber Camera Adapter and camera start up.
- ▶ To switch off the system, press and hold the power button on the Fiber Base Station until the Fiber Base Station switches off. The Fiber Camera Adapter and camera are also switched off.
- ▶ To switch off only the Fiber Camera Adapter and camera, press and hold the OFF button on the Fiber Camera Adapter until the Fiber Camera Adapter and camera are switched off. To switch Fiber Camera Adapter and camera back on, press the EXT button on the Fiber Camera Adapter.

### **Power supplied locally via the camera**

- ▶ Switch on Fiber Camera Adapter and camera by pressing the INT button on the Fiber Camera Adapter.  
Fiber Camera Adapter and camera start up.
- ▶ To switch off the Fiber Camera Adapter and camera, press and hold the OFF button on the Fiber Camera Adapter until the Fiber Camera Adapter and camera are switched off.

### **Use of both power sources**

If power is supplied both via the Fiber Base Station and locally via the camera, you can switch between the two sources using the INT and EXT buttons on the Fiber Camera Adapter. The sources can be switched during operation.

- ▶ Press the INT button if the Fiber Camera Adapter and the camera are to be supplied with power locally via the camera.
- ▶ Press the EXT button if the fiber optic camera adapter and the camera are to be supplied with power via the Fiber Base Station.

## 6.2 Camera Configuration

The following settings encompass all camera-related configurations that must be reviewed and adjusted when preparing the camera for use with the Live Production System. For more detailed information about these settings, please refer to the ALEXA 35 User Manual.

### Recording & Project Settings

Menu Path	Setting	Description
<i>MENU &gt; Recording &gt; Recording Codec</i>	e.g. <i>ProRes 422 HQ</i>	Select the desired recording codec.
<i>MENU &gt; Recording &gt; Sensor Mode</i>	e.g. <i>3.8K 16:9</i>	Set the desired sensor mode.
<i>MENU &gt; Recording &gt; Project Settings &gt; Project Rate</i>	e.g. <i>50p</i>	Set the desired project frame rate.
<i>HOME &gt; Timecode &gt; Options &gt; Timecode Mode</i>	<i>Regen (LPS-1)</i>	Sets the camera to receive the timecode from the Fiber Base Station.
<i>HOME &gt; FPS</i>	e.g. <i>50.000</i>	Set the desired sensor frame rate. Should match project frame rate for sync speed.
<i>MENU &gt; Recording &gt; Audio Recording</i>	enabled	Enable internal audio recording (if applicable).
<i>MENU &gt; Recording &gt; Audio Recording &gt; Channel 1 Source</i>	<i>LPS-1 CH1</i>	Audio channel 1 of the camera is supplied via the Fiber Base Station and the audio matrix.
<i>MENU &gt; Recording &gt; Audio Recording &gt; Channel 2 Source</i>	<i>LPS-1 CH2</i>	Audio channel 2 of the camera is supplied via the Fiber Base Station and the audio matrix.
<i>MENU &gt; Recording &gt; Audio Recording &gt; VF Headphones Routing &gt; Channel 1</i>	<i>L</i>	
<i>MENU &gt; Recording &gt; Audio Recording &gt; VF Headphones Routing &gt; Channel 2</i>	<i>R</i>	

### Image Output Configuration

Menu Path	Setting	Description
<i>MENU &gt; Monitoring &gt; SDI &gt; SDI 1 Image</i>	<i>Clean</i>	The camera transmits a clean SDI feed via the fiber connection, without any overlays applied.
<i>MENU &gt; Monitoring &gt; SDI &gt; SDI 1 Format</i>	e.g. <i>422 12G UHD</i>	Set the desired SDI 1 format.
<i>MENU &gt; Monitoring &gt; SDI &gt; SDI 1 Frame Rate</i>	e.g. <i>50p</i>	Set the desired frame rate for the SDI 1 output. Should match with project frame rate and sensor frame rate.
<i>MENU &gt; Monitoring &gt; Return In &gt; Use SDI 2 as Return In</i>	enabled	The SDI 2 connector functions as an input for return-in signals rather than as an output.
<i>MENU &gt; Monitoring &gt; Return In &gt; Show Return In on SDI 1</i>	disabled	The return-in signal is not shown on the SDI 1 output when activated.

### System Settings

Menu Path	Setting	Description
<i>MENU &gt; System &gt; Shutter Unit</i>	<i>Exposure Time</i>	Set the shutter unit to exposure time.
<i>MENU &gt; System &gt; Sensor &gt; Genlock Sync</i>	<i>Sync In</i>	Enable Genlock synchronization. The camera now requires a tri-level or black burst signal for synchronization (from the Fiber Base Station).



Menu Path	Setting	Description
<i>MENU &gt; System &gt; Buttons+Display &gt; Tally</i>	<i>On (Remote/CAP)</i>	All tally lights connected to the camera are controlled or remotely operated via the Fiber Base Station.

## Image Settings

Menu Path	Setting	Description
<i>MENU &gt; Image &gt; Look &gt; Look</i>	<i>Multicam Default</i>	Set the desired look. The "Default" look cannot be used because it is write-protected and does not allow any modifications.
<i>MENU &gt; Image &gt; Look &gt; Live Painting</i>	enabled	
<i>MENU &gt; Image &gt; Texture &gt; Texture</i>	<i>Multicam MCS0</i>	Set the desired Texture. Textures Multicam MCS0 - MCS5 are intended to be used with the Live Production System.
<i>MENU &gt; Image &gt; Texture &gt; Texture &gt; Delete</i>		Remove all unnecessary or unused textures from the list, keeping only Textures Multicam MCS0 - MCS5.

## Monitoring (Operator)

These settings determine how the camera image is displayed on the MVF-2 viewfinder and on a CCM-1 monitor. Options range from showing a clean image to displaying additional overlays and status information, with the choice of logarithmic representation or color-adjusted output. Some settings are subject to the operator's preferences, and additional configuration options are available. For more details, please refer to the camera's user manual.

Menu Path	Setting	Description
<i>MENU &gt; Monitoring &gt; VF &gt; Surround View</i>	<i>Off or Off + Colored Line</i>	Enable/disable Surround View. Info: With Surround View set to <i>On</i> , the live preview scaling may differ from the return-in image size, leading to a less smooth experience when switching between them.
<i>MENU &gt; Monitoring &gt; VF &gt; EVF Overlays &gt; Center Mark</i>	<i>Off</i>	Enable/disable a center mark.
<i>MENU &gt; Monitoring &gt; VF &gt; EVF Overlays &gt; Status Info</i>	<i>Off or Overlay</i>	Enable/disable Status Info. Info: With Status Info set to <i>Safe</i> , the live preview scaling may differ from the return-in image size, leading to a less smooth experience when switching between them.
<i>MENU &gt; Monitoring &gt; VF &gt; EVF Overlays &gt; Status Components &gt; Lens Data</i>	enable	Enable/disable the display of lens data (if applicable).
<i>MENU &gt; Monitoring &gt; VF &gt; EVF Overlays &gt; Status Components &gt; Depth of Field</i>	enable	Enable/disable the display of depth of field (if applicable).

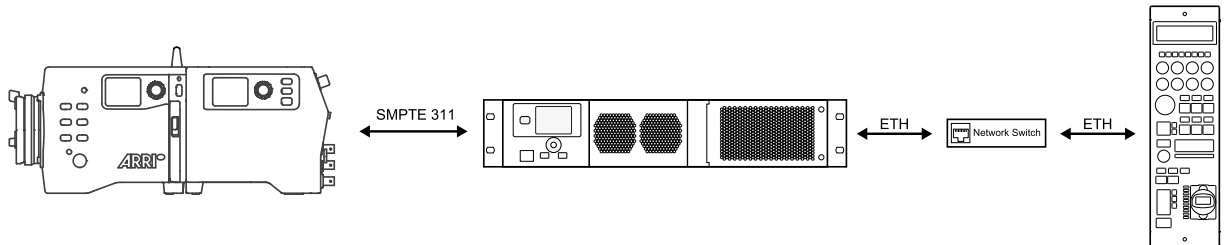
## User Buttons

Menu Path	Setting	Description
<i>MENU &gt; User Buttons &gt; Lens User Buttons &gt; Lens RET 1</i>	<i>RT1</i>	Allows the RT1 button of the Fiber Camera Adapter to be accessed via the Zoom Demand, to toggle between the live image and Return 1.
<i>MENU &gt; User Buttons &gt; Lens User Buttons &gt; Lens RET 2</i>	<i>RT2</i>	Allows the RT2 button of the Fiber Camera Adapter to be accessed via the Zoom Demand, to toggle between the live image and Return 2.
<i>MENU &gt; User Buttons &gt; Lens User Buttons &gt; Lens ENG</i>	<i>ENG</i>	Allows the ENG button of the Fiber Camera Adapter to be accessed via the Zoom Demand.

Menu Path	Setting	Description
<i>MENU &gt; User Buttons &gt; Lens User Buttons &gt; Lens PROD</i>	<i>PRD</i>	Allows the PRD button of the Fiber Camera Adapter to be accessed via the Zoom Demand.

## 6.3 Network Setup (Static IP)

Four IP addresses must be assigned for one camera chain, each for the camera, the Fiber Camera Adapter, the Fiber Base Station and the Remote Control Panel. All components must be in the same subnet and use the same subnet and gateway settings in order to establish a connection.



### Camera Network Setup

Menu Path	Setting	Description
<i>MENU &gt; System &gt; Network &gt; LAN IP Mode</i>	<i>Static</i>	Set the LAN IP Mode to <i>Static</i> to assign the camera a fixed IP address.
<i>MENU &gt; System &gt; Network &gt; LAN Static IP</i>	e.g. <i>192.168.1.12</i>	Set the IP address of the camera.
<i>MENU &gt; System &gt; Network &gt; LAN Static Subnet</i>	e.g. <i>255.255.255.0</i>	Set the subnet mask.
<i>MENU &gt; System &gt; Network &gt; LAN Static Gateway</i>	e.g. <i>192.168.1.1</i>	Set the default gateway.
<i>MENU &gt; System &gt; Camera Access Protocol &gt; CAP Server Password</i>		Set a password for the CAP server. The default password is <i>arri</i> .

### Fiber Base Station Network Setup

Menu Path	Setting	Description
<i>MENU &gt; NETWORK &gt; FBS ID</i>		Set the ID of the Fiber Base Station.
<i>MENU &gt; NETWORK &gt; CAM CHANNEL</i>		Set the camera channel number (1-99)
<i>MENU &gt; NETWORK &gt; IP MODE</i>	<i>STATIC</i>	Set the IP Mode to <i>STATIC</i> to assign the Fiber Base Station a fixed IP address.
<i>MENU &gt; NETWORK &gt; FBS IP</i>	e.g. <i>192.168.1.10</i>	Set the IP address of the Fiber Base Station.
<i>MENU &gt; NETWORK &gt; SUBNET</i>	e.g. <i>255.255.255.0</i>	Set the subnet mask.
<i>MENU &gt; NETWORK &gt; GATEWAY</i>	e.g. <i>192.168.1.1</i>	Set the default gateway.

### Skaarhoj RCP Network Setup

- Open the Skaarhoj Web UI by entering the IP address of the RCP in the address bar of a web browser. The IP address of the RCP is shown on the display during start-up or can be called up by pressing the SETUP button twice on the RCP.

Menu Path	Setting	Description
<i>SETTINGS &gt; IP Configuration &gt; IP Address</i>	e.g. <i>192.168.1.13</i>	Set the IP address of the Skaarhoj RCP.
<i>SETTINGS &gt; IP Configuration &gt; Subnet Mask</i>	e.g. <i>255.255.255.0</i>	Set the subnet mask.
<i>SETTINGS &gt; IP Configuration &gt; Gateway</i>	e.g. <i>192.168.1.1</i>	Set the default gateway.
<i>HOME &gt; Devices &gt; Add Device &gt; Add Manually</i>		Add a camera to the devices list. Select ALEXA 35, enter the IP address and CAP password of the camera to be controlled (e.g. <i>192.168.1.12</i> , <i>arri</i> ).

### LPS-1 Web UI Settings

- Open the LPS-1 Web UI by entering the IP address of the Fiber Base Station in the address bar of a web browser.

Menu Path	Setting	Description
<i>Network &gt; Camera IP Address</i>	e.g. <i>192.168.1.12</i>	Enter the IP address of the camera connected to the Fiber Base Station.
<i>Network &gt; Camera Password</i>	e.g. <i>arri</i>	Enter the CAP Password (as set on the camera connected to the Fiber Base Station). The default CAP Server password of the camera is <i>arri</i> .

## 7 Settings

### 7.1 Network Settings

Setting	Description	Default	Control from
<b>IP Mode</b>	Set the IP mode for the Fiber Base Station between <b>Static</b> and <b>DHCP</b> .	<i>Static</i>	Web, FBS
<b>FBS IP Address</b>	Set the IP address for the Fiber Base Station.		Web, FBS
<b>FCA IP Address</b>	Set the IP address for the Fiber Camera Adapter.		Web, FBS
<b>Subnet Mask</b>	Set the subnet mask.		Web, FBS
<b>Gateway</b>	Set the gateway.		Web, FBS
<b>DNS Server</b>	Set the IP address of the DNS server.		Web, FBS
<b>FBS ID</b>	Set the ID of the Fiber Base Station.	01	Web, FBS
<b>Camera Channel Number</b>	Set the camera channel number.	01	Web, FBS
<b>Camera IP Address</b>	Enter the IP address of the camera connected to the Fiber Base Station.		Web
<b>Camera CAP Server Password</b>	Enter the CAP Server Password of the camera connected to the Fiber Base Station.	arri	Web

## 7.2 Audio Settings

Routing of audio signals is not included in the table below, as this is done via the Audio Matrix in the LPS-1 Web UI.

Setting	Description	Default	Control from
<b>AUDIO 1 IN Format</b>	Set the format on the AUDIO 1 IN connector of the Fiber Base Station between <b>LINE</b> and <b>AES</b> .	<i>LINE</i>	Web, FBS
<b>AUDIO 1 IN Gain</b>	Set the gain on the AUDIO 1 IN connector of the Fiber Base Station between 0 and 30 dB.	<i>0 dB</i>	Web, FBS
<b>AUDIO 2 IN Format</b>	Set the format on the AUDIO 2 IN connector of the Fiber Base Station between <b>LINE</b> and <b>AES</b> .	<i>LINE</i>	Web, FBS
<b>AUDIO 2 IN Gain</b>	Set the gain on the AUDIO 2 IN connector of the Fiber Base Station between 0 and 30 dB.	<i>0 dB</i>	Web, FBS
<b>AUDIO 1 OUT Format</b>	Set the format on the AUDIO 1 OUT connector of the Fiber Base Station between <b>LINE</b> and <b>AES</b> .	<i>LINE</i>	Web, FBS
<b>AUDIO 1 OUT Test Tone</b>	Enable/disable a test tone to be output on the AUDIO 1 OUT connector.	<i>off</i>	Web, FBS
<b>AUDIO 2 OUT Format</b>	Set the format on the AUDIO 2 OUT connector of the Fiber Base Station between <b>LINE</b> and <b>AES</b> .	<i>LINE</i>	Web, FBS
<b>AUDIO 2 OUT Test Tone</b>	Enable/disable a test tone to be output on the AUDIO 1 OUT connector.	<i>off</i>	Web, FBS
<b>A1 IN Format</b>	Set the format on the A1 IN connector of the Fiber Camera Adapter: <b>MIC +48V</b> <b>MIC</b> <b>LINE</b> <b>AES</b>		Web, FCA
<b>A1 IN Gain Control</b>	Set the gain control for the A1 IN connector of the Fiber Camera Adapter between <b>Manual</b> and <b>Auto</b> .	<i>Manual</i>	Web, FCA
<b>A1 IN Gain</b>	Set the gain on the A1 IN connector of the Fiber Camera Adapter between 0 and 30 dB.	<i>0 dB</i>	Web, FCA
<b>A1 IN Test Tone</b>	Enable/disable a test tone on the A1 IN connector of the Fiber Camera Adapter.	<i>off</i>	Web, FCA
<b>A2 IN Format</b>	Set the format on the A1 IN connector of the Fiber Camera Adapter: <b>MIC +48V</b> <b>MIC</b> <b>LINE</b> <b>AES</b>		Web, FCA
<b>A2 IN Gain Control</b>	Set the gain control for the A2 IN connector of the Fiber Camera Adapter between <b>Manual</b> and <b>Auto</b> .	<i>Manual</i>	Web, FCA
<b>A2 IN Gain</b>	Set the gain on the A2 IN connector of the Fiber Camera Adapter between 0 and 30 dB.	<i>0 dB</i>	Web, FCA
<b>A2 IN Test Tone</b>	Enable/disable a test tone on the A2 IN connector of the Fiber Camera Adapter.	<i>off</i>	Web, FCA
<b>A OUT Format</b>	Set the format on the A OUT connector of the Fiber Camera Adapter between <b>LINE</b> and <b>AES</b> .	<i>LINE</i>	Web, FCA
<b>A OUT Test Tone</b>	Enable/disable a test tone to be output on the A OUT connector of the Fiber Camera Adapter.	<i>off</i>	Web, FCA

## 7.3 Video Settings

Routing of video signals is not included in the table below, as this is done via the Video Matrix in the LPS-1 Web UI.

Setting	Description	Default	Control from
<b>3G-SDI OUT 1 Source</b>	Set the source for the 3G-SDI OUT 1 outputs 1-4 of the Fiber Base Station: <i>Camera SDI 1</i> <i>Camera SDI 2</i> <i>Color Bars</i>	<i>Camera SDI 1</i>	Web, FBS
<b>3G-SDI OUT 2 Source</b>	Set the source for the 3G-SDI OUT 2 outputs 1-4 of the Fiber Base Station: <i>Camera SDI 1</i> <i>Camera SDI 2</i> <i>Color Bars</i>	<i>Camera SDI 1</i>	Web, FBS
<b>12G-SDI OUT 1/2</b>	Set the source for the 12G-SDI OUT outputs 1 and 2 of the Fiber Base Station: <i>Camera SDI 1</i> <i>Camera SDI 2</i> <i>Color Bars</i>	Camera SDI 1	Web, FBS
<b>12G-SDI OUT 3/4</b>	Set the source for the 12G-SDI OUT outputs 3 and 4 of the Fiber Base Station: <i>Camera SDI 1</i> <i>Camera SDI 2</i> <i>Color Bars</i>	Camera SDI 1	Web, FBS
<b>HD OUT 1 Source</b>	Set the source for the HD OUT 1 output of the Fiber Base Station: <i>Camera SDI 1</i> <i>Camera SDI 2</i> <i>Color Bars</i>	<i>Camera SDI 1</i>	Web, FBS
<b>HD OUT 1 Format</b>	Set the output format for the HD OUT 2 output of the Fiber Base Station: <i>1.5G (p)</i> <i>1.5G (psf)</i> <i>1.5G (i)</i> <i>3G Level A</i> <i>3G Level B</i>	<i>1.5G (p)</i>	Web, FBS
<b>HD OUT 1 H Adjust</b>	Apply a horizontal shift (pixel) to the HD OUT 1 output of the Fiber Base Station.	0	Web, FBS
<b>HD OUT 1 V Adjust</b>	Apply a vertical shift (lines) to the HD OUT 1 output of the Fiber Base Station.	0	Web, FBS
<b>HD OUT 2 Source</b>	Set the source for the HD OUT 2 output of the Fiber Base Station: <i>Camera SDI 1</i> <i>Camera SDI 2</i> <i>Color Bars</i>	<i>Camera SDI 1</i>	Web, FBS
<b>HD OUT 2 Format</b>	Set the output format for the HD OUT 2 output of the Fiber Base Station: <i>1.5G (p)</i> <i>1.5G (psf)</i> <i>1.5G (i)</i> <i>3G Level A</i> <i>3G Level B</i>	<i>1.5G (p)</i>	Web, FBS
<b>HD OUT 2 H Adjust</b>	Apply a horizontal shift (pixel) to the HD OUT 2 output of the Fiber Base Station.	0	Web, FBS
<b>HD OUT 2 V Adjust</b>	Apply a horizontal shift (pixel) to the HD OUT 2 output of the Fiber Base Station.	0	Web, FBS
<b>AUX TP IN Source</b>	Set the source for AUX TP IN: <i>BNC</i> : The AUX TP IN BNC connector is used as the source. <i>IP</i> : IP is used as the source.	<i>BNC</i>	Web, FBS
<b>Return 1 Source</b>	Set the source for Return 1: <i>BNC</i> : The RETURN IN 1 BNC connector is used as the source. <i>IP</i> : IP is used as the source.	<i>BNC</i>	Web, FBS
<b>Return 2 Source</b>	Set the source for Return 2: <i>BNC</i> : The RETURN IN 1 BNC connector is used as the source. <i>IP</i> : IP is used as the source.	<i>BNC</i>	Web, FBS
<b>Return 3 Source</b>	Set the source for Return 3: <i>BNC</i> : The RETURN IN 1 BNC connector is used as the source. <i>IP</i> : IP is used as the source.	<i>BNC</i>	Web, FBS
<b>Return 4 Source</b>	Set the source for Return 4: <i>BNC</i> : The RETURN IN 1 BNC connector is used as the source. <i>IP</i> : IP is used as the source.	<i>BNC</i>	Web, FBS
<b>MON Status Display</b>	Enable/disable the status display on the MON output of the Fiber Base Station.	On	Web, FBS
<b>Font Color</b>	Set the font color of the status display on the MON output (red, green, blue, white, black).	white	Web, FBS
<b>Status Components</b>	Select the status components to be displayed in the status display of the status display on the MON output.	all enabled	Web, FBS

## 7.4 Genlock and Timecode Settings

Setting	Description	Default	Control From
<b>Genlock Source</b>	Set the Genlock source: <b>REF IN:</b> The REF IN BNC connector of the Fiber Base Station is used as the source. <b>IP:</b> IP is used as the source.	<i>REF IN</i>	Web, FBS
<b>Genlock Format</b>	Set the Genlock format.		Web, FBS
<b>Genlock H Adjust</b>	Apply a horizontal shift (pixel) to the genlock signal.	<i>0</i>	Web, FBS
<b>Genlock V Adjust</b>	Apply a vertical shift (pixel) to the genlock signal.	<i>0</i>	Web, FBS
<b>Timecode Source</b>	Set the timecode source: <b>TC IN:</b> The TC IN BNC connector of the Fiber Base Station is used as the source. <b>IP:</b> IP is used as the source.	<i>TC IN</i>	Web, FBS



## 7.5 Intercom Settings

Setting	Description	Default	Control from
<b>PROD Source</b>	Set the source for the PROD channel: <b>D-SUB:</b> The INTERCOM/TALLY/PGM connector of the Fiber Base Station is used as the source. <b>IP:</b> IP is used as the source.	<i>D-SUB</i>	Web, FBS
<b>PROD Input Level</b>	Set the input level for the PROD channel between <b>0 dB</b> and <b>-9dB</b> .	<i>0 dB</i>	Web, FBS
<b>PROD Gain</b>	Set the gain for the PROD channel between 0 and 30 dB.	<i>0 dB</i>	Web, FBS
<b>PROD Test Tone</b>	Enable/disable a test tone to be output on the PROD channel.	<i>off</i>	Web, FBS
<b>ENG Source</b>	Set the source for the ENG channel: <b>D-SUB:</b> The INTERCOM/TALLY/PGM connector of the Fiber Base Station is used as the source. <b>IP:</b> IP is used as the source.	<i>D-SUB</i>	Web, FBS
<b>ENG Input Level</b>	Set the input level for the ENG channel between <b>0 dB</b> and <b>-9dB</b> .	<i>0 dB</i>	Web, FBS
<b>ENG Gain</b>	Set the gain for the PROD channel between 0 and 30 dB.	<i>0 dB</i>	Web, FBS
<b>ENG Test Tone</b>	Enable/disable a test tone to be output on the PROD channel.	<i>off</i>	Web, FBS
<b>PGM 1 Input Level</b>	Set the input level for the PGM 1 channel between <b>0 dB</b> and <b>-9dB</b> .	<i>0 dB</i>	Web, FBS
<b>PGM 1 Gain</b>	Set the gain for the PGM 1 channel between 0 and 30 dB.	<i>0 dB</i>	Web, FBS
<b>PGM 2 Input Level</b>	Set the input level for the PGM 2 channel between <b>0 dB</b> and <b>-9dB</b> .	<i>0 dB</i>	Web, FBS
<b>PGM 2 Gain</b>	Set the gain for the PGM 2 channel between 0 and 30 dB.	<i>0 dB</i>	Web, FBS
<b>Headset Mic Phantom 48V</b>	Enable/disable phantom +48V power on the HEADSET connector of the Fiber Camera Adapter.	<i>off</i>	Web, FCA
<b>Headset Mic Gain</b>	Set the gain for headset microphone between -64 and -10 dB.		Web, FCA
<b>Headset Sidetone PROD</b>	Enable/disable PROD sidetone on the headset.		Web, FCA
<b>Headset Sidetone ENG</b>	Enable/disable ENG sidetone on the headset.		Web, FCA
<b>Headset Routing PROD</b>	Set the headset routing for the PROD channel: <b>Off:</b> PROD channel is not output on the headset. <b>Left:</b> PROD channel is output on the left ear. <b>Right:</b> PROD channel is output on the right ear. <b>Left + Right:</b> PROD channel is output on both ears.		Web, FCA
<b>Headset Routing ENG</b>	Set the headset routing for the ENG channel: <b>Off:</b> ENG channel is not output on the headset. <b>Left:</b> ENG channel is output on the left ear. <b>Right:</b> ENG channel is output on the right ear. <b>Left + Right:</b> ENG channel is output on both ears.		Web, FCA
<b>Headset Routing PGM 1</b>	Set the headset routing for the PGM 1 channel: <b>Off:</b> PGM 1 channel is not output on the headset <b>Left:</b> PGM 1 channel is output on the left ear. <b>Right:</b> PGM 1 channel is output on the right ear. <b>Left + Right:</b> PGM 1 channel is output on both ears.		Web, FCA
<b>Headset Routing PGM 2</b>	Set the headset routing for the PGM 2 channel: <b>Off:</b> PGM 2 channel is not output on the headset. <b>Left:</b> PGM 2 channel is output on the left ear. <b>Right:</b> PGM 2 channel is output on the right ear. <b>Left + Right:</b> PGM 2 channel is output on both ears.		Web, FCA
<b>Headset Test Tone</b>	Enable/disable a test tone on the headset.	<i>off</i>	Web, FCA
<b>Tracker Mic Phantom 48V</b>	Enable/disable phantom +48V power on the TRACKER connector of the Fiber Camera Adapter.	<i>off</i>	Web, FCA
<b>Tracker Mic Gain</b>	Set the gain for the tracker microphone between -64 and -10 dB.		Web, FCA
<b>Tracker Sidetone PROD</b>	Enable/disable PROD sidetone on the tracker.		Web, FCA
<b>Tracker Sidetone ENG</b>	Enable/disable ENG sidetone on the tracker.		Web, FCA
<b>Tracker Routing PROD</b>	Set the tracker routing for the PROD channel: <b>Off:</b> PROD channel is not output on the tracker. <b>Left:</b> PROD channel is output on the left ear. <b>Right:</b> PROD channel is output on the right ear. <b>Left + Right:</b> PROD channel is output on both ears.		Web, FCA
<b>Tracker Routing ENG</b>	Set the tracker routing for the ENG channel: <b>Off:</b> ENG channel is not output on the tracker. <b>Left:</b> ENG channel is output on the left ear. <b>Right:</b> ENG channel is output on the right ear. <b>Left + Right:</b> ENG channel is output on both ears.		Web, FCA

<b>Tracker Routing PGM 1</b>	Set the tracker routing for the PGM 1 channel: <b>Off:</b> PGM 1 channel is not output on the tracker. <b>Left:</b> PGM 1 channel is output on the left ear. <b>Right:</b> PGM 1 channel is output on the right ear. <b>Left + Right:</b> PGM 1 channel is output on both ears.		Web, FCA
<b>Tracker Routing PGM 2</b>	Set the tracker routing for the PGM 2 channel: <b>Off:</b> PGM 2 channel is not output on the tracker. <b>Left:</b> PGM 2 channel is output on the left ear. <b>Right:</b> PGM 2 channel is output on the right ear. <b>Left + Right:</b> PGM 2 channel is output on both ears.		Web, FCA
<b>Tracker Test Tone</b>	Enable/disable a test tone on the tracker.	<i>off</i>	Web, FCA

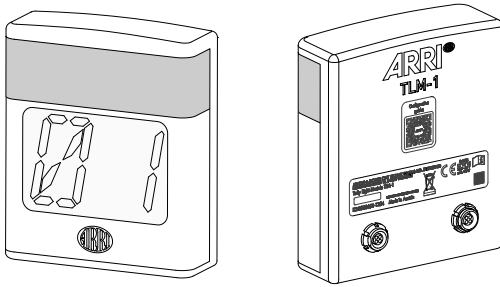
## 7.6 GPI/O Settings

Routing of GPI/O is not included in the table below, as this is done via the GPI/O Matrix in the LPS-1 Web UI.

Setting	Description	Default	Control from
<b>GPI 1 Sense</b>	Set GPI 1 Sense for the GPIO connector on the Fiber Base Station: <b>High:</b> Sets the GPI polarity to be active high (+5 V applied). <b>Low:</b> Sets the GPI polarity to be active low (contact closure 0 V).	<i>Low</i>	Web
<b>GPI 1 Test</b>	Enable/disable GPI 1 test.	<i>off</i>	Web
<b>GPI 2 Sense</b>	Set GPI 2 Sense for the GPIO connector on the Fiber Base Station: <b>High:</b> Sets the GPI polarity to be active high (+5 V applied). <b>Low:</b> Sets the GPI polarity to be active low (contact closure 0 V).	<i>Low</i>	Web
<b>GPI 2 Test</b>	Enable/disable GPI 2 test.	<i>off</i>	Web
<b>GPI 3 Sense</b>	Set GPI 3 Sense for the GPIO connector on the Fiber Base Station: <b>High:</b> Sets the GPI polarity to be active high (+5 V applied). <b>Low:</b> Sets the GPI polarity to be active low (contact closure 0 V).	<i>Low</i>	Web
<b>GPI 3 Test</b>	Enable/disable GPI 3 test.	<i>off</i>	Web
<b>GPI 4 Sense</b>	Set GPI 4 Sense for the GPIO connector on the Fiber Base Station: <b>High:</b> Sets the GPI polarity to be active high (+5 V applied). <b>Low:</b> Sets the GPI polarity to be active low (contact closure 0 V).	<i>Low</i>	Web
<b>GPI 4 Test</b>	Enable/disable GPI 4 test.	<i>off</i>	Web
<b>GPO 1 Sense</b>	Set GPO 1 Sense for the GPIO connector on the Fiber Base Station: <b>High:</b> Sets the GPO polarity to output a voltage to trigger a device. <b>Low:</b> Sets the GPO polarity to be 0 V to trigger a device.	<i>Low</i>	Web
<b>GPO 1 Test</b>	Enable/disable GPO 1 test.	<i>off</i>	Web
<b>GPO 2 Sense</b>	Set GPO 2 Sense for the GPIO connector on the Fiber Base Station: <b>High:</b> Sets the GPO polarity to output a voltage to trigger a device. <b>Low:</b> Sets the GPO polarity to be 0 V to trigger a device.	<i>Low</i>	Web
<b>GPO2 Test</b>	Enable/disable GPO 2 test.	<i>off</i>	Web
<b>GPO 3 Sense</b>	Set GPO 3 Sense for the GPIO connector on the Fiber Base Station: <b>High:</b> Sets the GPO polarity to output a voltage to trigger a device. <b>Low:</b> Sets the GPO polarity to be 0 V to trigger a device.	<i>Low</i>	Web
<b>GPO 3 Test</b>	Enable/disable GPO 3 test.	<i>off</i>	Web
<b>GPO 4 Sense</b>	Set GPO 4 Sense for the GPIO connector on the Fiber Base Station: <b>High:</b> Sets the GPO polarity to output a voltage to trigger a device. <b>Low:</b> Sets the GPO polarity to be 0 V to trigger a device.	<i>Low</i>	Web
<b>GPO 4 Test</b>	Enable/disable GPO 4 test.	<i>off</i>	Web
<b>Yellow Tally</b>	tbd		Web
<b>GPI 1 Sense</b>	Set GPI 1 Sense for the GPIO connector on the Fiber Camera Adapter: <b>High:</b> Sets the GPI polarity to be active high (+5 V applied). <b>Low:</b> Sets the GPI polarity to be active low (contact closure 0 V).	<i>Low</i>	Web, FCA
<b>GPI 1 Test</b>	Enable/disable GPI 1 test.	<i>off</i>	Web, FCA
<b>GPI 2 Sense</b>	Set GPI 2 Sense for the GPIO connector on the Fiber Camera Adapter: <b>High:</b> Sets the GPI polarity to be active high (+5 V applied). <b>Low:</b> Sets the GPI polarity to be active low (contact closure 0 V).	<i>Low</i>	Web, FCA
<b>GPI 2 Test</b>	Enable/disable GPI 2 test.	<i>off</i>	Web, FCA
<b>GPI 3 Sense</b>	Set GPI 3 Sense for the GPIO connector on the Fiber Camera Adapter: <b>High:</b> Sets the GPI polarity to be active high (+5 V applied). <b>Low:</b> Sets the GPI polarity to be active low (contact closure 0 V).	<i>Low</i>	Web, FCA
<b>GPI 3 Test</b>	Enable/disable GPI 3 test.	<i>off</i>	Web, FCA
<b>GPI 4 Sense</b>	Set GPI 4 Sense for the GPIO connector on the Fiber Camera Adapter: <b>High:</b> Sets the GPI polarity to be active high (+5 V applied). <b>Low:</b> Sets the GPI polarity to be active low (contact closure 0 V).	<i>Low</i>	Web, FCA
<b>GPI 4 Test</b>	Enable/disable GPI 4 test.	<i>off</i>	Web, FCA
<b>GPO 1 Sense</b>	Set GPO 1 Sense for the GPIO connector on the Fiber Camera Adapter: <b>High:</b> Sets the GPO polarity to output a voltage to trigger a device. <b>Low:</b> Sets the GPO polarity to be 0 V to trigger a device.	<i>Low</i>	Web, FCA

<b>GPO 1 Test</b>	Enable/disable GPO 1 test.	<i>off</i>	Web, FCA
<b>GPO 2 Sense</b>	Set GPO 2 Sense for the GPIO connector on the Fiber Camera Adapter: <b>High:</b> Sets the GPO polarity to output a voltage to trigger a device. <b>Low:</b> Sets the GPO polarity to be 0 V to trigger a device.	<i>Low</i>	Web, FCA
<b>GPO 2 Test</b>	Enable/disable GPO 2 test.	<i>off</i>	Web, FCA
<b>GPO 3 Sense</b>	Set GPO 3 Sense for the GPIO connector on the Fiber Camera Adapter: <b>High:</b> Sets the GPO polarity to output a voltage to trigger a device. <b>Low:</b> Sets the GPO polarity to be 0 V to trigger a device.	<i>Low</i>	Web, FCA
<b>GPO 3 Test</b>	Enable/disable GPO 3 test.	<i>off</i>	Web, FCA
<b>GPO 4 Sense</b>	Set GPO 4 Sense for the GPIO connector on the Fiber Camera Adapter: <b>High:</b> Sets the GPO polarity to output a voltage to trigger a device. <b>Low:</b> Sets the GPO polarity to be 0 V to trigger a device.	<i>Low</i>	Web, FCA
<b>GPO 4 Test</b>	Enable/disable GPO 4 test.	<i>off</i>	Web, FCA
<b>Yellow Tally</b>	tbd		Web

## 8 Tally Light Module TLM-1



The Tally Light Module TLM-1 is equipped with a 16-segment, alphanumeric camera ID display and a versatile mounting interface and connects to the camera via an LBUS cable.

### Installation

- ▶ Use the RIA-1 Bracket (K2.0039465) to mount the TLM-1 to the camera handle.
- ▶ Connect the TLM-1 to the camera using an LBUS cable. As LBUS devices support daisy-chaining, the TLM-1 can be connected at any point in the LBUS chain or directly to the LBUS connector on the front of the camera or the LBUS connector on the lens mount (if applicable).

### Operation

The camera menu provides a setting to define the behavior of all connected tally lights. This includes the tally on the MVF-2, the Tally Light Module TLM-1, and the built-in tally of a box lens. Through this setting, tally functionality can be disabled, set to respond to the camera's internal recording state, or configured to react to a remote control signal.

- ▶ Select *MENU > System > Buttons + Display > Tally* and set to *On (Remote/CAP)*.

### Brightness Control

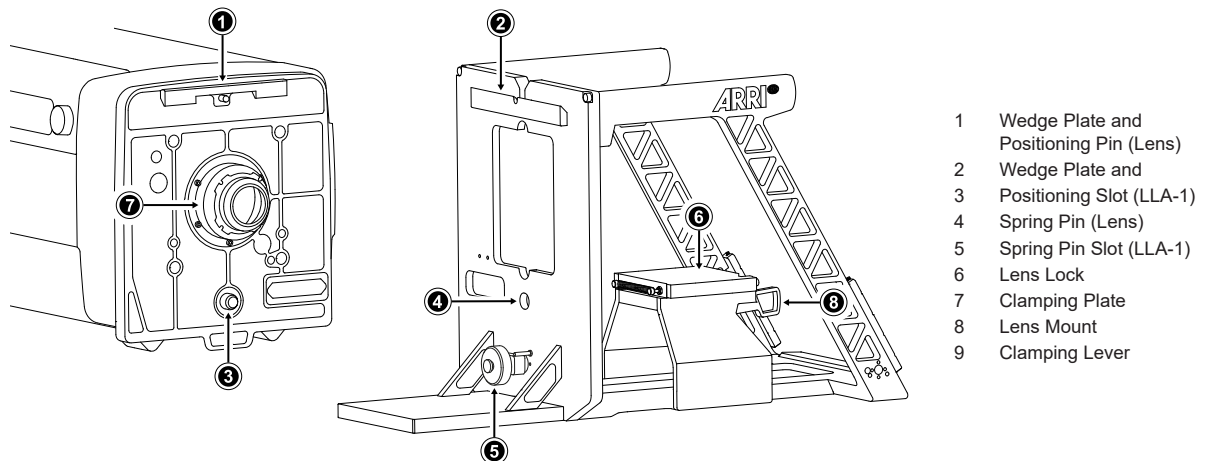
The brightness of both tally light and camera ID display can be adjusted in the camera menu.

- ▶ Select *MENU > System > Buttons + Display > Tally Brightness* to adjust the brightness of the tally.
- ▶ Select *MENU > System > Buttons + Display > Tally ID Brightness* to adjust the brightness of the camera ID display.

## 9 Large Lens Adapter LLA-1

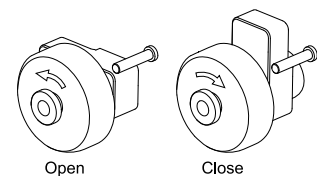
### 9.1 Installation of Large Lens Adapter LLA-1

The Large Lens Adapter LLA-1 enables large box lenses to be quickly and seamlessly mounted onto ARRI cameras, eliminating the need for time-consuming alignment processes. Designed to be both lightweight and robust, the LLA-1 offers various mounting options for accessories and efficient cable management. Compatible with all PL and B4 box lenses, it comes with a cable for connecting a box lens to a PL mount (Hirose), along with a rain cover and a flight case for added convenience.

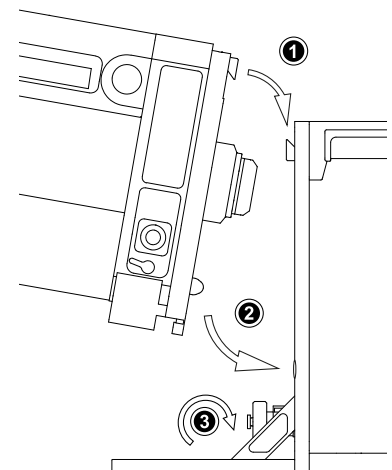


1. Using a 3.0 mm Allen key, attach the LLA-1 camera adapter plate to the camera.

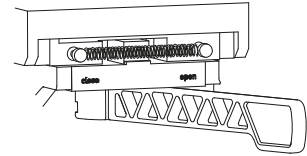
2. Make sure that the LLA-1 lens lock (5) is in the *Open* position. Turn the knob to open/close.



3. Tilt the lens slightly and place the wedge plate of the lens on the wedge plate of the camera. Make sure that the positioning pin of the lens fits into the positioning slot of the LLA-1.
4. Lower the lens onto the front plate of the LLA-1 and make sure that the spring pin of the lens is inserted into the spring pin slot of the LLA-1.
5. Turn the lens lock knob clockwise to close the lens lock and secure the lens.

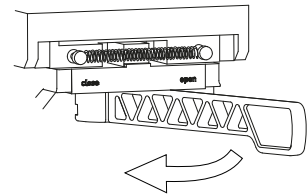


6. Make sure that the LLA-1 clamping lever (8) is in the open position.



7. Place the camera on the clamping plate (6) and attach the lens to the camera. Close the lens mount.

8. Secure the camera on the clamping plate by engaging the clamping lever (8).



#### **⚠ WARNING**



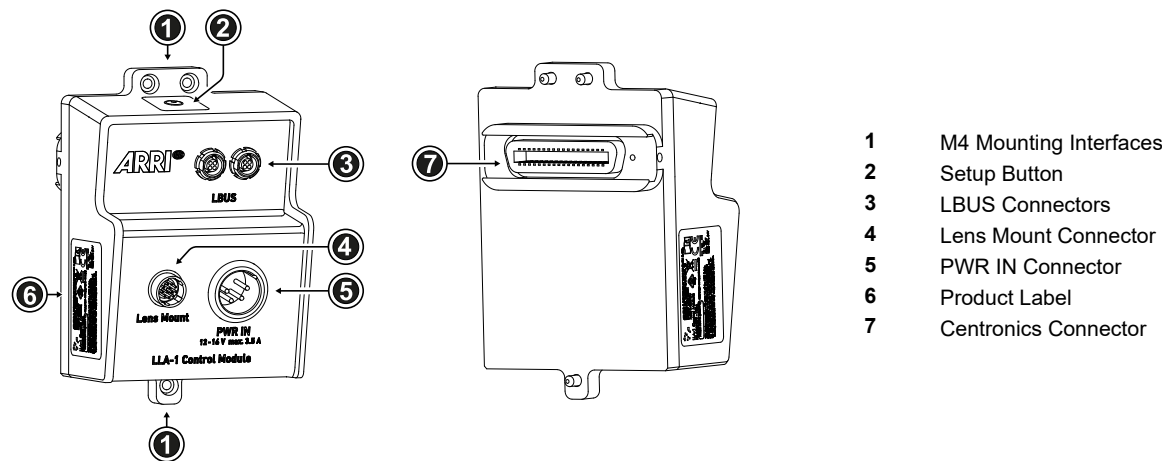
##### **Falling System Parts**

If the system is inadequately built up or assembled, it can fall down and cause serious injuries and damage to the system or property.

- ▶ Installation and operation may only be carried out by trained personnel who are familiar with the system. Observe accident prevention regulations.
- ▶ Do not place the camera system on an unstable trolley or hand truck, stand, tripod, bracket, table or any other unstable support device.
- ▶ Always place the camera on dedicated support devices.
- ▶ Secure the camera system and its accessories against falling and tipping over. Observe the general and local safety regulations.
- ▶ When using the camera system on camera cranes, a suitable safety rope must be used.

## 9.2 Control Module for Large Lens Adapter LLA-1

The LLA-1 Control Module is part of the ARRI Live Production System LPS-1 and is mounted on the Large Lens Adapter LLA-1. It enables the connection of box lenses with a 36-pin Centronics connector to the camera, allowing control of focus, zoom, and iris via the camera or connected accessories. The module converts the Centronics interface of the box lens to LBUS and Hirose, enabling electronic lens control. The module itself connects to the camera via LBUS or, when using a compatible mount, via Hirose, allowing seamless integration of the lens into the system. Make sure that the camera body, lens, and LLA-1 Control Module are all updated to the latest firmware versions to ensure full compatibility.



### Setup Button

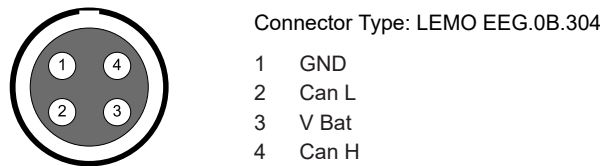
The connection type is determined by the cable used, either a Hirose connection or an LBUS connection. The setup button allows you to manually select the appropriate cable type (Hirose or LBUS) to ensure the correct configuration, as this is not automatically detected. The background illumination of the button indicates the selected mode:

Green (solid)	LBUS connection is selected and communication is established (ready for operation).
Blue (solid)	Hirose connection is selected and communication is established (ready for operation).
Green (flashing)	No communication with the lens.
Red (flashing)	Power supply is insufficient.
Green/Blue (flashing)	LBUS standalone control (No connection to the camera).
Green/Red (flashing)	No data available from either LBUS or Hirose.
Blue (flashing)	Device is executing the bootloader (device update).

► Press the Setup button to toggle the connection type between LBUS and Hirose.

### LBUS

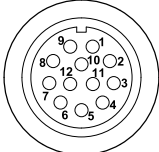
LBUS connectors are generally used to connect daisy chainable LBUS devices of the ECS Electronic Control System (e.g. lens motors) to the camera and supply regulated 24.0 V with a maximum current of 4.0 A. When using the camera with the PL Mount (LBUS), the LLA-1 Control Module and the camera can be connected via a LBUS cable using one of the LBUS connectors on the control module.





**Lens Mount Connector (Hirose)**

Hirose connectors are widely used in the broadcast industry for power and data transmission in professional camera systems. When using the camera with the PL Mount (Hirose), the LLA-1 Control Module and the camera can be connected via a Hirose cable using the lens mount connector on the control module.

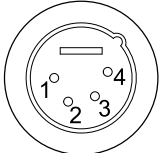


Connector Type: Hirose

1	N.C	5	N.C.	9	N.C.
2	N.C.	6	+12 V	10	N.C.
3	GND	7	N.C.	11	RXD (to Lens)
4	N.C.	8	N.C.	12	TXD (from Lens)

**PWR IN (4-pin XLR)**

The 4-pin XLR Power IN connector is used to supply DC power to high-power lenses, providing a nominal current of up to 2.0 A via the Hirose interface. It ensures a stable and reliable connection for powering lenses from external power sources.




Connector Type: XLR

1	GND
2	N.C.
3	N.C.
4	+12 V

**Centronics Connector**

Box lenses, commonly used in broadcast and live production, are high-performance zoom lenses designed for long-range and precision shooting. These lenses are typically equipped with a standard 36-pin Centronics connector, which facilitates communication and power transmission between the lens and the camera system. The box lens connects directly to the LLA-1 Control Module, with the Centronics connector on the lens docking into the Centronics socket on the module.

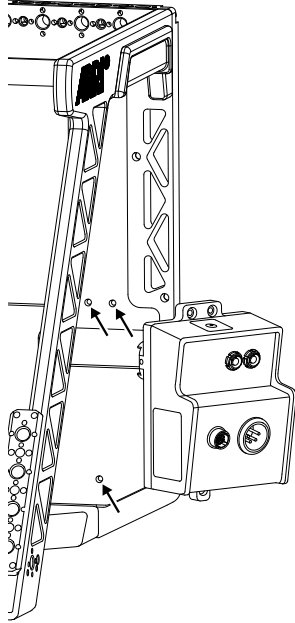


Connector Type: Centronics

4	Lens Power	8	RXD	18	TXD
5	GND				
6	GND				

### Mounting the Control Module to the Large Lens Adapter LLA-1

The control module is mounted to the Large Lens Adapter LLA-1 using three M4 screw points. Once attached, the Centronics connector of the lens automatically docks with the Centronics socket on the control module when the lens is mounted to the Large Lens Adapter.



1. Attach the module to the Large Lens Adapter using three M4 screws and a 3.0 mm hex key.
2. Connect the module to the camera via the Hi-rose or LBUS connector, depending on the lens mount in use.
3. Press the module's Setup button to configure the connection type accordingly.

## 10 Update

### 10.1 Update of Camera Software

The camera is updated via a USB-C memory stick and the process can be initiated either through the MVF-2 viewfinder menu or the camera Web Remote. When the MVF-2 viewfinder and the lens mount are connected to the camera, they will automatically update during the camera update. If they were not connected at that time, they can be updated individually through the camera later. If you are using the camera Web Remote to perform the update, it is recommended to use a 'private' or 'incognito' browser window to avoid potential issues or unexpected behavior.

The installed software version can be checked via the camera menu at *MENU > Info > Version*.

#### Installed Version

- ▶ Select *MENU > Info > Version* to check the currently installed software version.

#### Update Procedure

- ▶ After downloading the update file from the [Software Update Packages](#) section of the ARRI website, double-click the downloaded .zip file to unpack it, or unpack it manually. This will extract two update files to your computer (\*.SWU and \*.lic).
- ▶ If not done beforehand, prepare the USB-C memory stick for use with the ALEXA 35 by connecting it to the camera. Then, go to *MENU > Media > Prepare USB Medium...* on the MVF-2 viewfinder menu or the Web Remote and press CONFIRM. This will create the required folder structure on the USB-C stick.
- ▶ Connect the USB-C stick to your computer. Place the downloaded \*.SWU file in the ARRI/ALEXA35/SUP folder. Place the downloaded \*.lic file in the ARRI/ALEXA35/LICENSES folder.
- ▶ The camera Software Update Package includes updates not only for the camera body but also for the MVF-2 viewfinder and the lens mount. Therefore, ensure that the MVF-2 viewfinder and the lens mount are connected to the camera during the update process.
- ▶ Ensure the camera is connected to a power supply or powered by a fully charged battery to prevent power loss during the update.
- ▶ Perform a factory reset on the camera with the menu item *MENU > Setup > Factory Reset...*
- ▶ Connect the USB-C stick to the camera and navigate to the menu item *MENU > System > Update > Update Camera...*
- ▶ Select the SUP file from the list and start the installation.

The MVF-2 as well as the camera side display will show a screen displaying the update progress. Please note, that the update can take up to 20 minutes. The MVF-2 viewfinder may turn off during the update process and will not provide continuous visual feedback, refer to the camera side display for the update status in this case.

Do not power off or unplug the camera until it has rebooted. After the update process has finished, a success message is displayed.

- ▶ Ensure that the correct time and date is set in *MENU > System > System Time + Date*.
- ▶ If the MVF-2 viewfinder or lens mount were not connected during the update, the camera will still store the updated software for these devices. The next time they are connected and have an older software version than the one stored in the camera, the camera will prompt you to update them.

In the rare event of an interrupted or failed update the camera may enter a state where the MVF-2 is unresponsive. In this situation, use the side display to enable Wi-Fi, connect to the camera, and reinstall the update using the Web Remote.

## 10.2 Update of Fiber Base Station and Fiber Camera Adapter

The Fiber Base Station and Fiber Camera Adapter software are updated using a computer and the LPS-1 Web UI.

### Installed Version

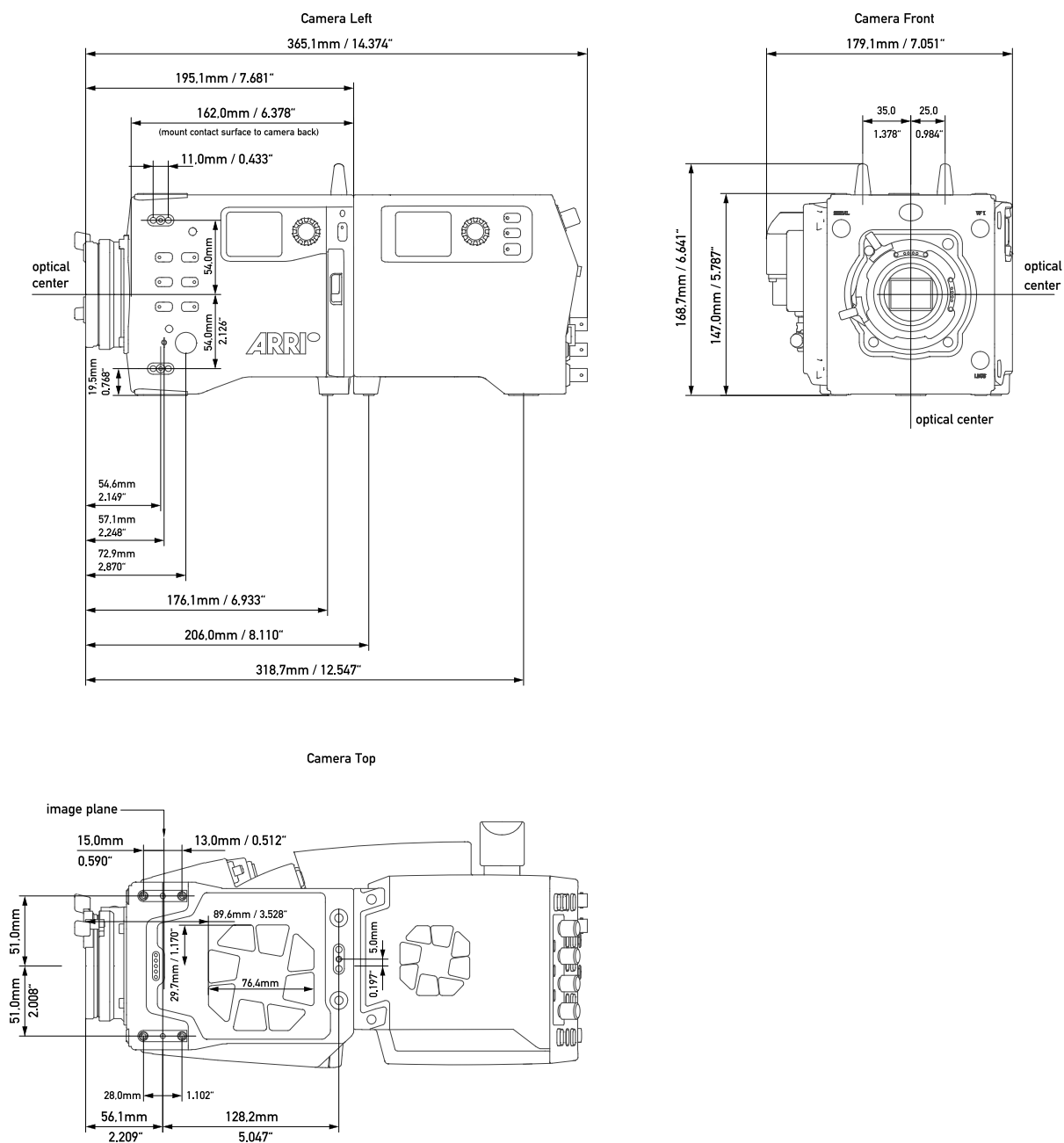
- ▶ Open the LPS-1 Web UI by entering the IP address of the Fiber Base Station in the address bar of a web browser.
- ▶ Select *Settings > Firmware Updater* to check the currently installed versions of the Fiber Base Station and the Fiber Camera Adapter.

### Update Procedure

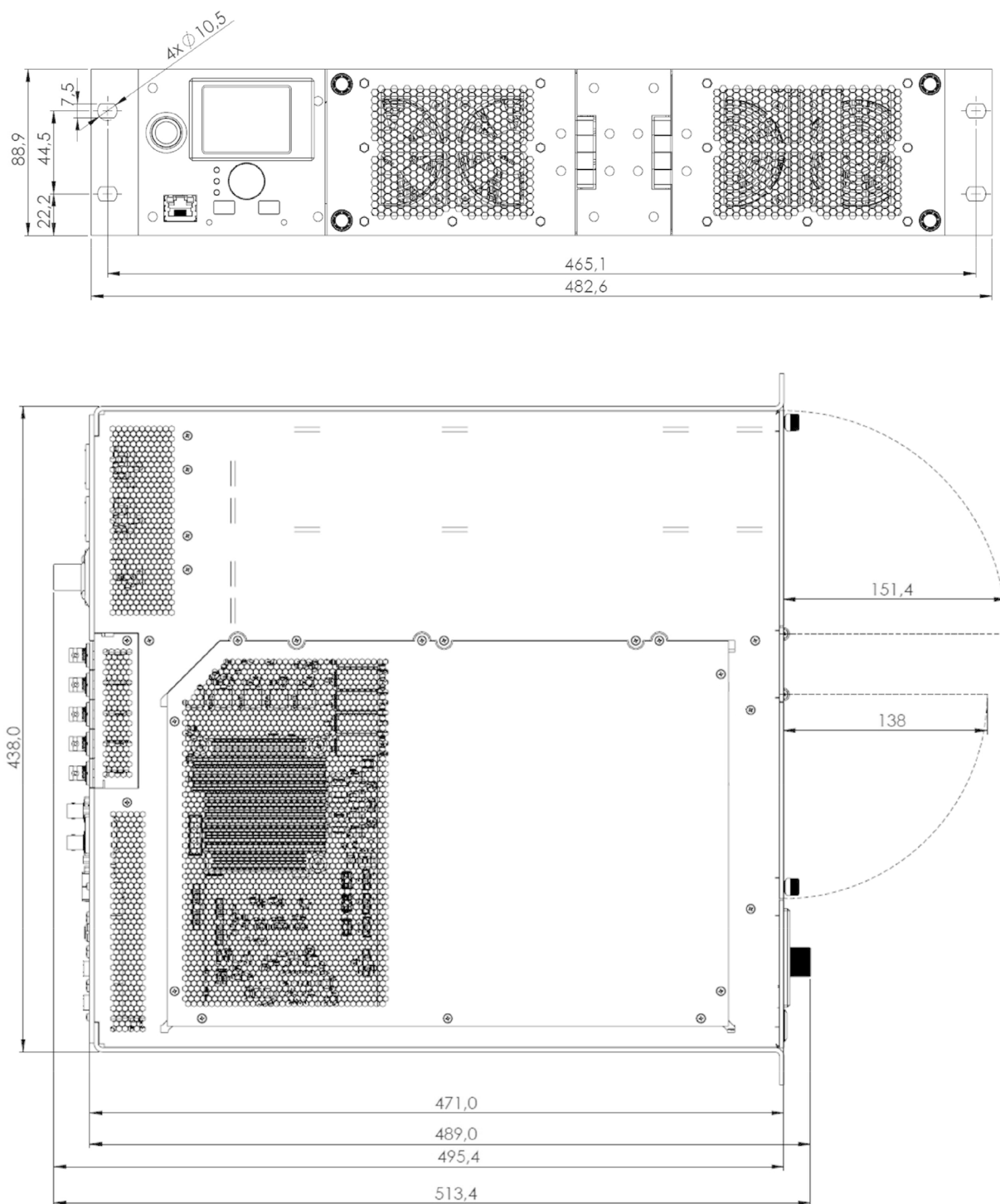
- ▶ After downloading the update file from the [Software Update Packages](#) section of our website, double-click the downloaded .zip file to unpack it, or unpack it manually. This will extract one update file to your computer (\*.raucb).
- ▶ Open the LPS-1 Web UI by entering the IP address of the Fiber Base Station in the address bar of a web browser.
- ▶ Select *Settings > Firmware Updater > Update All* if the update file name does not include the identifier "FCA".  
Select *Settings > Firmware Updater > Fiber Camera Adapter > Upload* if the update file name includes the identifier "FCA".
- ▶ Select the required update file from your computer and start the update.  
Wait for the update process to finish. The update procedure takes about five minutes.
- ▶ After the update has finished, reboot the Fiber Base Station.  
Do not initiate the reboot via the button on the LPS-1 Web UI but instead use the power button on the Fiber Base Station.
- ▶ After the reboot, reload the Settings page of the LPS-1 Web UI and check the Installed Firmware version.

# 11 Appendix

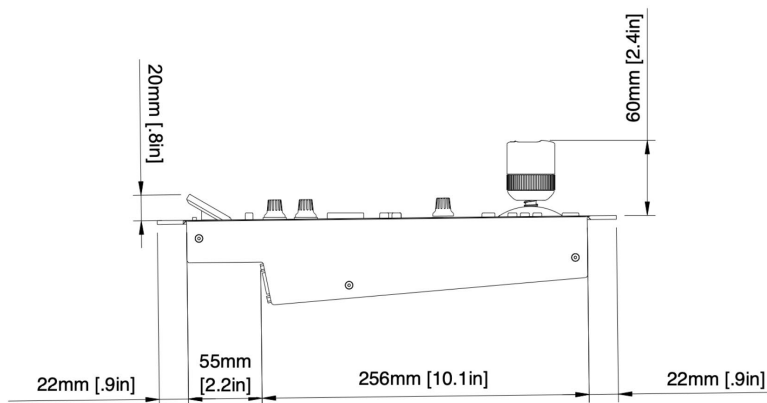
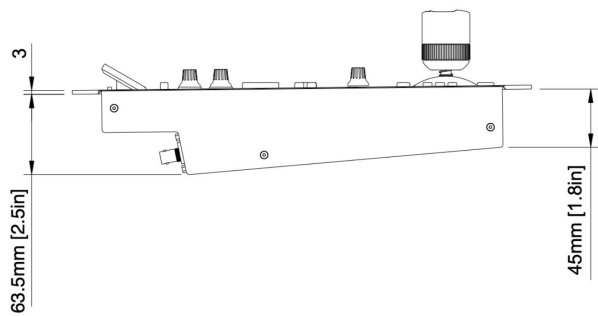
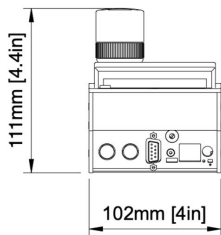
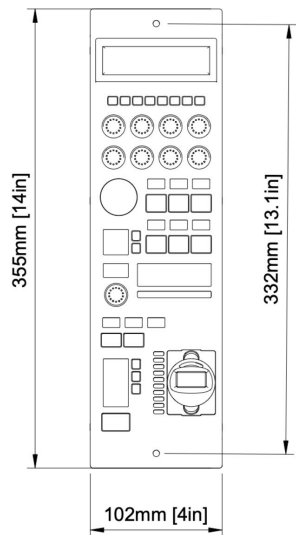
## 11.1 Dimensions Camera with Camera Fiber Adapter



## 11.2 Dimensions Fiber Base Station



11.3 Dimensions Skaarhoj RCP



## 11.4 LPS-1 Accessories



### **Touchdown Base Plate TBP-1** K2.0049959

The Touchdown System comprises the Touchdown Receiver Plate TRP-1 and the Touchdown Base Plate TBP-1, with built-in long shoulder pad, 15 mm rod support, and ARRI rosettes. Together, they offer a new camera mounting system that is lightweight, self-aligning, super-stable when used on a tripod, and capable of rapid transitions to handheld operation.



### **Touchdown Receiver Plate TRP-1** K2.0049960

The TRP-1, in combination with the TBP-1, is a new system for attaching a camera to a tripod that is faster to use and more secure than the traditional VCT-14. It has less side-to-side wobble and is self-aligning, making it easy to attach when the camera is mounted high or low.



### **Live Production Handle LPH-1** K2.0050634

Combining minimal weight with exceptional strength, the LPH-1 perfectly complements the ALEXA 35 Live camera, extending over the Fiber Camera Adapter for better monitor ergonomics and offering numerous accessory mounting points. The LPH-1 is compatible with the LWS-6 for 15 mm rod support and with various viewfinder mounting brackets, including the MVB-1 and VMB-5.



### **Monitor Yoke Support MYS-1L** K2.0051078

The Monitor Yoke Support MYS-1L supports the ARRI Camera Control Monitor CCM-1, and allows for one-handed, counterbalanced, four-axis adjustment of the monitor, which is lockable in any position.



### **Tally Light Module TLM-1** K2.0050656

This LBUS tally light with 16-segment, alphanumeric camera ID display has a versatile mounting interface and connects to the camera via an LBUS cable. Rugged and durable, the TLM-1 offers daisy-chainable LBUS connectivity.



### **RIA-1 Bracket** K2.0039465

L-shaped bracket with two 3/8" screws and anti-twist locating pins. Can be used to mount the Tally Light Module TLM-1 to the camera.



**Large Lens Adapter LLA-1 K2.0050774-2**

The Large Lens Adapter LLA-1 allows instant mounting of ARRI cameras to large box lenses, without tedious alignment procedures. The LLA-1 is lightweight and strong, providing multiple mounting options for accessories and cable management. Compatible with all PL and B4 box lenses, it is available with a cable to connect a PL mount (Hirose) to a box lens, as well as a rain cover and a flight case.

**LLA-1 Control Module K2.0051099**

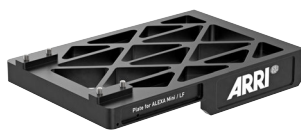
The LLA-1 Control Module enables the connection of box lenses with a 36-pin Centronics connector to the camera, allowing control of focus, zoom, and iris via the camera or a remote control panel. It converts the Centronics interface to LBUS and Hirose, enabling electronic control of the lens when using a PL Mount (Hirose), a PL Mount (LBUS), or an LPL Mount (LBUS).

**Cable Hirose to Box Lens K2.0050125**

This 35 cm long cable connects the Hirose 12-pin connector of the ARRI PL Mount (Hirose) to a large box lens mounted to the ARRI Large Lens Adapter LLA-1. The cable is secured to the LLA-1 by a custom bracket screwed on the large lens adapter unit.

**LLA-1 Plate for ALEXA 35 K2.0050777**

This adapter plate enables all ALEXA 35 cameras to mount on the ARRI Large Lens Adapter LLA-1.

**LLA-1 Plate for ALEXA Mini/LF K2.0050776**

This adapter plate enables all ALEXA Mini and ALEXA Mini LF cameras to mount on the ARRI Large Lens Adapter LLA-1.

**LLA-1 Plate for AMIRA K2.0050775**

This adapter plate enables all AMIRA cameras to mount on the ARRI Large Lens Adapter LLA-1.

**camRade rainCover OB-EFP Large K2.0050817**

A rain cover that fits over camera, Large Lens Adapter and box lens.

# **LPS-1**

## **Live Production System**