

# AMIRA

QUICK GUIDE

16 August 2018



# Imprint

## Copyright

© 2018 Arnold & Richter Cine Technik GmbH & Co. Betriebs KG. All rights reserved. No portions of this document may be reproduced without prior written consent of Arnold & Richter Cine Technik GmbH & Co. Betriebs KG. Specifications are subject to change without notice. Errors, omissions, and modifications excepted.

AMIRA, ALEXA, ALEXA XT, ALEXA SXT, ALEXA LF and ALEXA Mini are trademarks or registered trademarks of Arnold & Richter Cine Technik GmbH & Co. Betriebs KG. All other brands or products are trademarks or registered trademarks of their respective holders and should be treated as such.

Original version.

## Label

### NOTICE

This document is a Quick Guide only. For detailed operation instructions, please refer to the User Manual.

## For further assistance

Arnold & Richter Cine Technik GmbH & Co. Betriebs KG  
 Tuerkenstr. 89  
 D-80799 Munich, Germany  
 E-mail: [service@arri.com](mailto:service@arri.com)  
[www.arri.com/service](http://www.arri.com/service)

## Document revision history

Document ID: K4.0021444

Version	Release	Date
1.0	K08511	02 Apr 2014
2.0	K08781	31 Mar 2015
3.0	K08941	02 Nov 2015
4.0	K09036	23 May 2016
4.1	K09090	07 June 2016
5.3	K09696	30 May 2018
5.4	K09800	16 August 2018

# Contents

<b>1</b>	<b>For Your Safety / 为了您的安全</b> .....	<b>5</b>
1.1	Risk Levels and Alert Symbols / 危险级别和警示标志.....	5
1.2	Vital Precautions / 重要安全措施.....	6
1.3	General Precautions / 般安全措施.....	7
<b>2</b>	<b>Audience and Intended Use</b> .....	<b>9</b>
<b>3</b>	<b>Scope of Delivery and Warranty</b> .....	<b>10</b>
<b>4</b>	<b>Camera Layout</b> .....	<b>11</b>
4.1	Front Connectors & Switches.....	14
4.2	I/O Panel.....	14
4.3	Audio Connector Panel.....	16
4.4	Media Panel.....	17
4.5	Operator Panel.....	18
4.6	User Buttons Panel.....	19
4.7	Audio Control Panel.....	19
4.8	Rear Connectors.....	20
4.9	Product Identification.....	21
<b>5</b>	<b>Basic Camera Operation</b> .....	<b>22</b>
5.1	Power Supply.....	22
5.2	Powering Auxiliary Devices via the Camera.....	22
5.3	Switching On and Off.....	22
5.4	Inserting and Removing a CFast 2.0 Card.....	23
5.5	Inserting and Removing USB Medium.....	23
5.6	Starting Recording via REC button.....	24
5.7	Multi Viewfinder MVF-1.....	25
5.8	User Monitor.....	27
5.9	Camera Control Panel CCP-1.....	27
5.10	Home Screen.....	28
5.11	Camera Menu.....	29
5.12	Licensing.....	30
<b>6</b>	<b>Camera Preparation</b> .....	<b>31</b>
6.1	Changing a Lens.....	31
6.2	Changing the Lens Mount.....	32
6.3	Mounting the Camera to a Bridge Plate.....	34
6.4	Mounting the Camera to a Wedge Plate.....	34
6.5	Mounting and Unmounting a Base Adapter Plate.....	35
6.6	Mounting and Unmounting the Camera Handle.....	35

---

6.7	Mounting and Unmounting a Battery Adapter.....	35
6.8	Connecting the MVF-1.....	36
6.9	Balancing the Camera.....	37
6.10	Adjusting the Monitor.....	37
6.11	Adjusting the Viewfinder.....	37
<b>7</b>	<b>Appendix.....</b>	<b>38</b>
7.1	Technical Data.....	38
7.2	MPEG-2 Notice.....	42
7.3	Declarations of Conformity.....	42
7.4	Dimensional Drawings.....	44

# 1 For Your Safety / 为了您的安全

Before use, please ensure that all users read, understand and follow the instructions in this document fully. 使用前, 请确保所有的用户都已经阅读、理解, 并遵循本档内的操作说明。

## 1.1 Risk Levels and Alert Symbols / 危险级别和警示标志

Safety warnings, safety alert symbols, and signal words in these instructions indicate different risk levels:

### ▲ DANGER!

**DANGER** indicates an imminent hazardous situation which, if not avoided, **will result in death or serious injury**.

### ▲ WARNING!

**WARNING** indicates a potentially hazardous situation which, if not avoided, **may result in death or serious injury**.

### ▲ CAUTION!

**CAUTION** indicates a potentially hazardous situation which, if not avoided, **may result in minor or moderate injury**.

### NOTICE

**NOTICE** explains practices not related to physical injury. No safety alert symbol appears with this signal word.

**Note:** Provides additional information to clarify or simplify a procedure.

本档内的安全警告、安全警示标志和标识词语指示不同的危险级别：

### ▲ 危险

危险表示危急、有危害的情景，若不防范，则会导致死亡或严重的伤害。

### ▲ 警告

警告表示有潜在危害的情景，若不防范，则可能会导致死亡或严重的伤害。

### ▲ 小心

小心表示有潜在危害的情景，若不防范，则可能会导致中等或较轻的伤害。

### 提示

注意表示此行为不会导致人身伤害。因此此标识词语中不含警告标志。

注：注意中会提供用于解释或简化工作的额外信息。

## 1.2 Vital Precautions / 重要安全措施

### ⚠ DANGER!

#### **High voltage! Risk of electric shock and fire!**

Short-circuits may entail lethal damage!

Before use, read and follow all valid instructions.

Use solely and exclusively as described in the instructions.

Never open. Never insert objects.

For operation, always use a power source as indicated in the instructions.

Always unplug the power cable by gripping the power plug, not the cable.

Never try to repair. All repair work should be done by a qualified ARRI Service Center.

Never remove or deactivate any safety equipment (incl. warning stickers or paint-marked screws).

Always protect from moisture, cold, heat, dirt, vibration, shock, or aggressive substances.

Never cover any fan openings.

### ⚠ 危险

#### **高电压！有触电或起火风险！**

短路将引起致命危险。

使用之前，请仔细阅读所有未过期的使用说明，并严格遵循。

切勿打开机身。切勿插入任何物体。

操作时，请务必使用说明中指出的电源。

断开电源时请握住电源插头，而不是电线。

切勿尝试自行维修。所有的维修工作必须由具备资质的ARRI 维修中心进行。

切勿移除或毁坏任何安全设施（例如警告贴纸或涂漆标示的螺丝）。

务必避免潮湿、寒冷、炎热、多尘、震动、冲击或严酷的使用环境。

切勿覆盖任何风扇开口。

**▲ CAUTION!****Condensation! Risk of electric shock and fire!**

Condensation may form on the sensor and electrical connections when exposing the camera to sudden changes of temperature or humidity!

To avoid injury and damage, never operate the camera when condensation occurs.

**▲ 小心****冷凝！有触电或火灾风险！**

当将摄影机暴露于温度或湿度迅速变化的环境中时，影像传感器和电子部件连接处可能会产生冷凝。

为了避免受伤或设备损坏，在冷凝发生时切勿操作摄影机。

**▲ CAUTION!****Heavy weight! Risk of injury and damage!**

If placed on an unstable surface, the camera can fall and cause serious harm!

Always place the camera on proper support devices. Safely attach it as described in the instructions.

**▲ 小心****设备重量较大！有受伤或设备损坏风险！**

若安置于不稳定的位置，则摄影机可能会掉落，并造成严重的伤害。

务必将摄影机安装于适当的支撑设备上。请按照说明中所描述的方法来安全地安装摄影机。

## 1.3 General Precautions / 般安全措施

**NOTICE**

Even rugged cameras use components sensitive to improper use.

Direct sunlight can result in camera housing temperatures above 60 °C (140 °F). At ambient temperatures above 25 °C (77 °F), protect the camera from direct sunlight.

Protect the optical system and sensor: Never point the camera or viewfinder into direct sunlight.

Avoid permanent sensor damage: Never let any direct light or reflections from high-energy light sources (e.g. laser beams) enter the camera's optical path.

Protect the sensor: Always keep a lens or protective cap on the empty lens mount. Change lenses in dry, dust-free environments only.

Always clean the sensor cover glass according to ARRI instructions. Instructions can be downloaded from the ARRI website in the ALEXA download section.

Only use the tools, materials and procedures recommended in this document. For the correct use of other equipment, see the manufacturer's instructions.

**提示**

即使本摄影机非常坚固，也是由敏感的组件所组成的，请谨慎使用。

当改变摄影机安装支撑设备或系统时（特别是更换电缆），请务必断开摄影机电源。

注意保护光学系统和影像传感器：切勿将摄影机或取景器直接面朝直射阳光。

避免对影像传感器造成永久性伤害：切勿让任何来自高能量光源（例如激光）的直射光或反射光进入摄影机的光路系统。

注意保护影像传感器：空镜头卡口上务必安装镜头或保护盖。更换镜头时，务必在干燥、无尘的环境中进行。

请完全并仅按照用户手册中所描述的方法来清洁影像传感器保护玻璃。若清洁不成功，请咨询ARRI维修中心。切勿尝试打开保护玻璃。

清洁影像传感器保护玻璃时，务必遵守ARRI说明书中描述的方法。

仅使用本文档中建议使用的工具、材料和操作方法。若要正确地使用其他设备，请参阅其制造商的说明书。



## 2 Audience and Intended Use

### **NOTICE**

The product is solely and exclusively available for commercial costumers and shall be used by skilled personnel only. Every user should be trained according to ARRI guidelines.

Use the product only for the purpose described in this document. Always follow the valid instructions and system requirements for all equipment involved.

The AMIRA is a 35mm digital camera solely and exclusively for recording images at various resolutions suitable for a variety of distribution formats:

- ProRes 422 LT, ProRes 422, ProRes 422 HQ\*, ProRes 4444\*, ProRes 4444 XQ\*, MPEG-2 HD 422 and ARRIRAW\* codecs
- Rec 709 and Rec 2020 encoding (through use of look files), Log C or ARRIRAW\* encoding
- CFast 2.0 card recording
- Up to 200 fps\* in HD/2K with full image quality
- 35mm CMOS sensor
- EVF with OLED eyepiece
- Fold-away monitor for both live view and user interface access
- Ready out-of-the-box for single-user-centric workflow
- Slim, ruggedly built for high mobility

\* Feature requires licensing.

### 3 Scope of Delivery and Warranty

#### **NOTICE**

Product and packaging contain recyclable materials. Always store, ship and dispose according to local regulations.

ARRI is not liable for consequences from inadequate storage, shipment or disposal.

#### **Delivery**

On delivery, please check if package and contents are intact. Never accept a damaged/incomplete delivery. A complete delivery includes:

- AMIRA camera with lens mount according to order: PL, EF, B4
- Multi-viewfinder MVF-1 with AMIRA EVF cable
- Gold Mount or V-Lock battery adapter (if ordered)
- Camera handle with viewfinder adapter
- Four XLR connector caps (one spare; keep all four for later use)
- Four BNC connector caps
- WPA-1 or BPA-3 base adapter (if ordered)
- WiFi antenna
- Bluetooth antenna
- USB memory stick
- 3.0 mm Allen key
- Quick Guide
- Original packaging incl. drying agent

Usually, the camera comes fully assembled. In the unlikely case that a handle, viewfinder, adapter or antenna (etc.) is not assembled, see page 31 for instructions.

#### **NOTICE**

ARRI offers an increasing variety of product bundles and additional accessories.

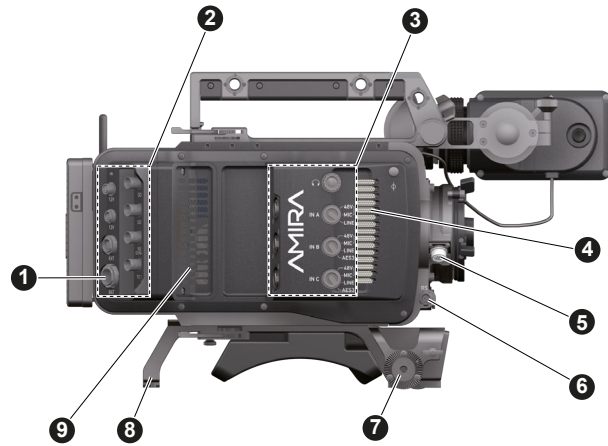
For details, please consult our website or your local ARRI Service Partner.

#### **Warranty**

For scope of warranty, please ask your local ARRI Service Partner. ARRI is not liable for any consequences of inadequate shipment, improper use or third-party products.

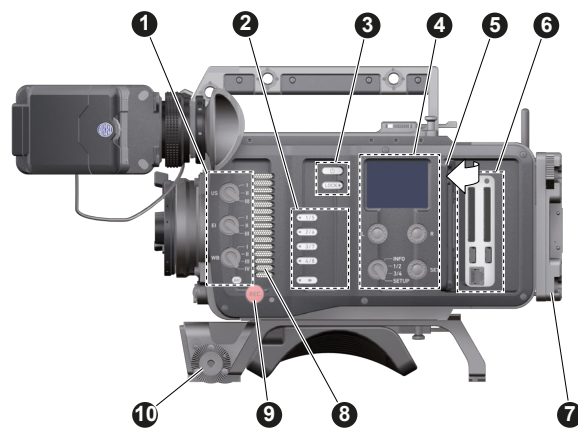
# 4 Camera Layout

## Camera Right



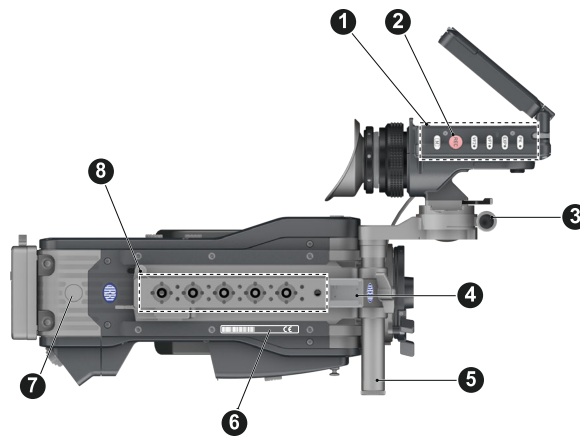
- |   |                                   |   |                                     |
|---|-----------------------------------|---|-------------------------------------|
| 1 | BAT Main Power Connector          | 6 | RS Connector                        |
| 2 | I/O Panel                         | 7 | WPA-1 Bracket Rosette               |
| 3 | Audio Connector Panel             | 8 | WPA-1 with Quick Release Connectors |
| 4 | Fan Intake                        | 9 | Fan Outlet                          |
| 5 | 12-pin Hirose for ENG type lenses |   |                                     |

## Camera Left



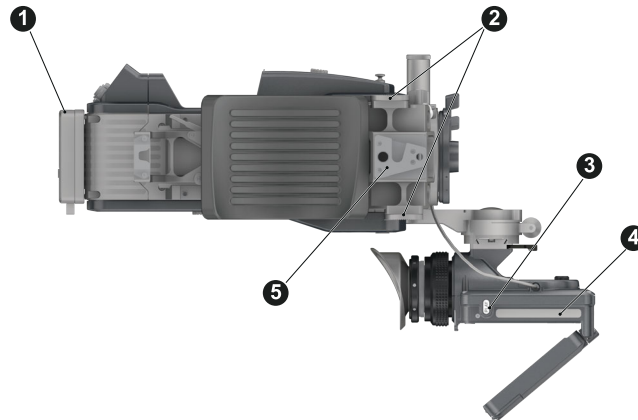
- |   |                            |    |                       |
|---|----------------------------|----|-----------------------|
| 1 | Operator Panel             | 6  | Media Panel           |
| 2 | User Buttons 1-8           | 7  | Battery Adapter Plate |
| 3 | Power Button & Camera Lock | 8  | Fan Intake            |
| 4 | Audio Control Panel        | 9  | Recording Button      |
| 5 | Media Lid                  | 10 | WPA-1 Bracket Rosette |

## Camera Top



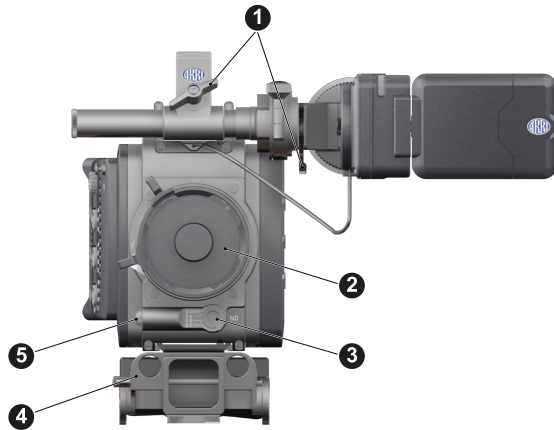
- |   |                             |   |   |
|---|-----------------------------|---|---|
| 1 | MVF-1 Top Buttons           | 5 | Adjustable Beam                         |
| 2 | MVF-1 Recording Button      | 6 | Camera Type Label                       |
| 3 | Viewfinder Hinge with Clamp | 7 | Level                                   |
| 4 | Accessory Shoe              | 8 | 3/8" Accessory Threads on Camera Handle |

## Camera Bottom



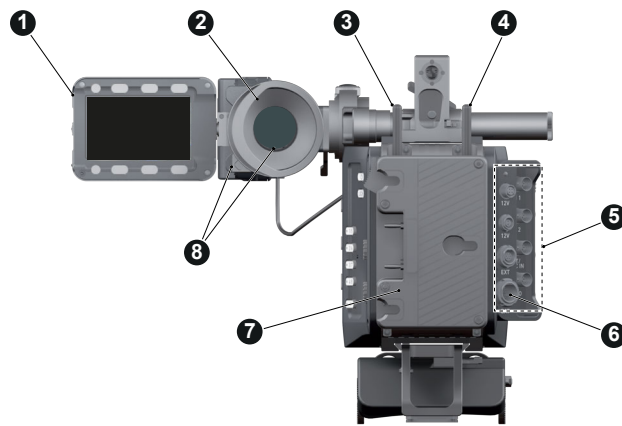
- |   |                       |   |                          |
|---|-----------------------|---|--------------------------|
| 1 | Battery Adapter Plate | 4 | MVF-1 Type Label         |
| 2 | Bracket Rosettes      | 5 | WPA-1 Quick-lock Bracket |
| 3 | MVF-1 PLAY Button     |   |                          |

### Camera Front



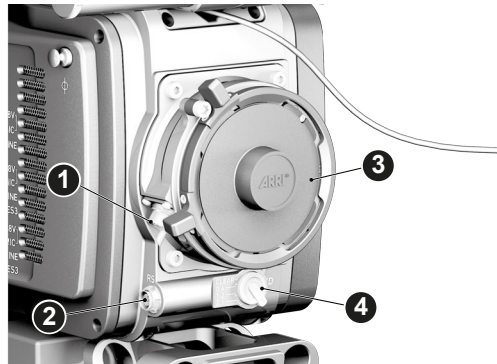
- |   |   |   |                            |
|---|---|---|----------------------------|
| 1 | Clamps  | 4 | WPA-1 15mm Rod Receptacles |
| 2 | Lens Mount (here: PL Mount with Hirose Connector) | 5 | RS Connector               |
| 3 | ND Filter Switch                                  |   |                            |

### Camera Back



- |   |                          |   |  |
|---|--------------------------|---|--|
| 1 | MVF-1 Fold-away Monitor  | 5 | I/O Panel                                |
| 2 | Viewfinder OLED Eyepiece | 6 | BAT Main Power Connector                 |
| 3 | Bluetooth Antenna        | 7 | Battery Adapter Plate (here: Gold Mount) |
| 4 | WiFi Antenna             | 8 | Proximity Sensor for OLED Eyepiece       |

## 4.1 Front Connectors & Switches



- 1 ENG 12-pin Hirose Connector
- 2 3-pin Fischer RS Connector
- 3 Lens Mount (PL mount with Hirose)
- 4 ND Filter Switch

### ENG (12-pin Hirose)



Supplies lens servos with power and provides access to lens servo functions.

### RS (3-pin Fischer)



This 3-pin Fischer socket supplies external accessories with 24 V power (2.0 A). It also carries a frame pulse output and accepts an ARRI remote start/stop trigger.

### ND Filter Switch



The ND filter switch controls the internal ND filter module. Filter densities of CLEAR, 0.6, 1.2 and 2.1 allow quick exposure changes and compensation over a range of seven stops.

## 4.2 I/O Panel



- 1 **BAT** Main Power Connector
- 2 **EXT** External Connector
- 3 D-Tap (optional)
- 4 **AUX** 12V Power Out
- 5 **SDI 1&2** SDI Outputs
- 6 **RET / SYNC IN** Connector
- 7 **TC I/O** Timecode Connector

### BAT (8-pin LEMO)



The BAT connector is the main power input of the AMIRA and accepts an input voltage range from 10.5 to 34 V DC.

### EXT (6-pin LEMO)



A multi-pin accessory connector for communication with various accessories, carrying two CAN buses and accessory power output at camera voltage level (2.0 A max.).

### D-Tap



A D-tap on the battery adapter supplies accessories with 12 V DC from the camera.

### 12V (4-pin Hirose)



Supplies 12 V auxiliary power with a maximum power of 2.0 A (combined output of 4-pin Hirose and 2-pin LEMO).

### 12V (2-pin LEMO)



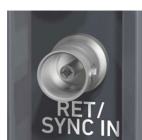
Supplies 12 V auxiliary power with a maximum power of 2.0 A (combined output of 4-pin Hirose and 2-pin LEMO).

### SDI 1 & 2 (BNC)



Both SDI BNC connectors are carrying SDI signals in 1920 x 1080 (422 1.5G, 422 3G, 444 3G) as well as 3840 x 2160 (DL 422 3G, 422 6G, DL 422 6G).

### RET/SYNC IN (BNC)



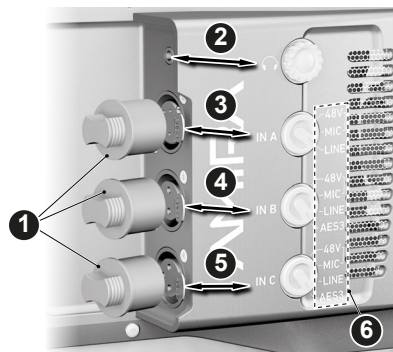
A BNC socket for Genlock input, or HD-SDI return image signal (configurable). Supports Black Burst signals, Tri-Level signals and HD-SDI genlock signals.

## TC I/O (BNC)



The TC connector is a BNC socket. It accepts and distributes LTC (Longitudinal Time Code) signals.

## 4.3 Audio Connector Panel



- 1 Protective Caps
- 2 Headphone Out & Volume Control
- 3 **IN A** XLR 5-pin Audio Input
- 4 **IN B** XLR 3-pin Audio Input
- 5 **IN C** XLR 3-pin Audio Input
- 6 Input Signal Selector

### Headphone Out



Headphone 3.5 mm stereo TRS ("Mini-jack") output for monitoring audio channels.

### IN A (5-pin XLR)



XLR input for microphone signals (including 48V phantom power supply) and line level signals.

### IN B & C (3-pin XLR)



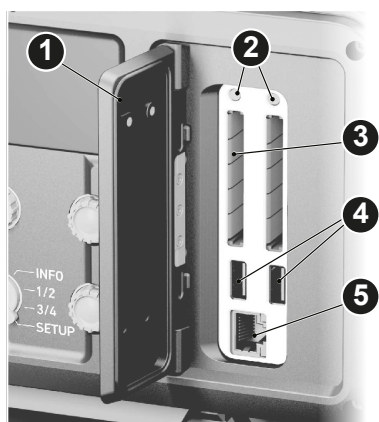
XLR input for microphone signals (including 48V phantom power supply), line level signals and AES3 digital signals.

### NOTICE

Rubber caps protect the XLR connectors from dirt and moisture. Always cap unused XLR connectors.



## 4.4 Media Panel



- 1 Media Lid
- 2 Card Status LEDs
- 3 CFast Card Slots A & B
- 4 USB Connectors 1 & 2
- 5 Ethernet Connector

### Card Status LEDs

The card status LEDs allow for a quick check of the card status:

Status LED	Card State
Off	No card inserted
Green	Ready to record
Flashing red	Recording
Solid red	Not ready to record, card full or card invalid

### CFast Card Slots A & B



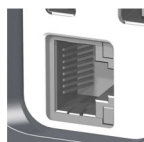
Storage media slots for CFast 2.0 recording cards.

### USB Connectors 1 & 2



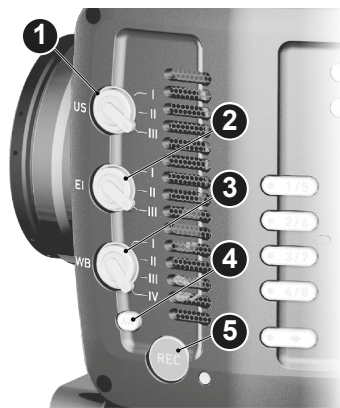
Interface for USB memory sticks with FAT file system. The camera saves data such as user setups, frame grabs and system logs to the USB memory sticks. The USB ports can also be used to charge USB devices and supplies 5V with a maximum current of 500mA.

### Ethernet Connector



RJ45 LAN interface for remote control of the camera, for multicam control and for service access.

## 4.5 Operator Panel



- 1 **US** User Switch
- 2 **EI** Exposure Index Switch
- 3 **WB** White Balance Switch
- 4 **AW** Auto White Balance Button
- 5 **REC** Recording Button & LED

The operator panel consists of the AW auto white balance button and three switches that offer quick adjustments to important camera parameters such as exposure index or white balance.

Each switch position can be assigned with an individual preset. See the User Manual for full instructions.

### US Switch

The user switch can be assigned to control either FPS, SHUTTER or LOOK presets. Per factory default the user switch is not assigned (setting NONE).

### EI Switch

The exposure index switch offers quick access to three exposure index presets. The factory default presets for the three positions are 400, 800 and 1600 ASA.

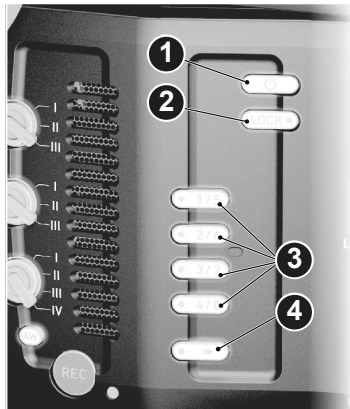
### WB Switch

The WB switch offers quick access to four white balance presets. The factory default presets for the four positions are 3200K, 4300K, 5600K and 7000K.

### AW Button

Press the AW button twice in one second to trigger automatic white balance calculation. Based on the camera's live image, AW calculates an automatic white balance and overwrites the active WB setting. The result is also stored as the preset value of the active WB switch position and in the first entry of the WB preset list.

## 4.6 User Buttons Panel



- 1 Power Button
- 2 Lock Button
- 3 User Buttons
- 4 SHIFT Button

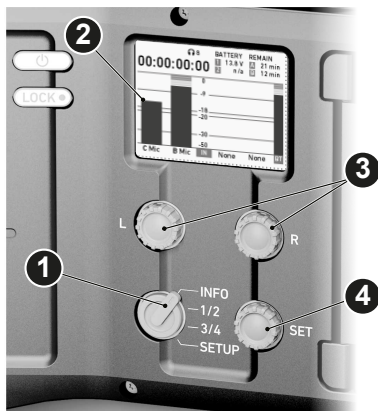
### Lock Button

Press and hold the lock button to lock camera and viewfinder buttons. The camera menu offers a lock configuration defining which buttons and switches are affected by the camera lock.

### User Buttons & SHIFT button

Eight configurable user buttons offer quick access to frequently used functions. A blue LED indicates an active button function. Each button can be assigned with two functions, e.g. user button 1 becomes user button 5 when pressed in combination with the SHIFT button.

## 4.7 Audio Control Panel



- 1 Audio Function Switch
- 2 Audio Display
- 3 L & R Gain Controls
- 4 SET Jogwheel

### Audio Function Switch

The audio function switch toggles the audio display between the *INFO* screen, the configuration screen for channels 1/2, the configuration screen for channels 3/4 and the *SETUP* menu.

### Audio Display

A second display to the user monitor, the audio display offers full control over all audio settings. The content of the display depends on the position of the audio function switch.

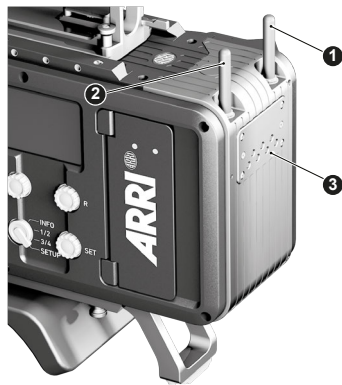
## L & R Gain Controls

Use the gain control dials to adjust the gain of the left and right audio channels.

## SET Jogwheel

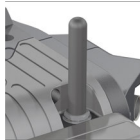
The jogwheel is used to modify settings within the audio display. Rotate the jogwheel to move through screen content, press the jogwheel to access settings and confirm changes.

## 4.8 Rear Connectors



- 1 WiFi
- 2 Bluetooth
- 3 Battery Adapter Mount

### WiFi



Connector for antenna for WiFi signal according to 802.11g. Used for remote camera access.

### Bluetooth



Connector for antenna for Bluetooth signal. Used for wireless audio monitoring and comment channel return with Bluetooth headset. Supports Handsfree and A2DP protocols.

### NOTICE

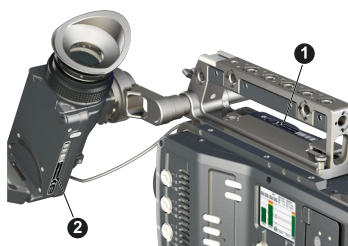
Bluetooth usage has been disabled for all cameras sold to and used in mainland China due to certification issues of the Bluetooth module.

### Battery Adapter Mount



The camera can be equipped with an adapter plate for either V-Lock or Gold Mount batteries.

## 4.9 Product Identification



CE type labels with serial number are on the camera top (1) and on the bottom of the viewfinder (2). The serial number consists of the last 5 digits of the equipment number K1.71700.0-XXXXX. An FCC conformity label can be found on the bottom of the camera.

## 5 Basic Camera Operation

### 5.1 Power Supply



The AMIRA accepts an input voltage range from 10.5 to 34 V DC. The camera can be powered through the 8-pin LEMO BAT connector located at the back of the camera or through a battery adapter plate. Do not supply power outside the specified voltage range.

You can use a KC50-S (K2.75007.0) or KC50-SP-S (K2.0001275) power cable or one of the various on-board adapter plates for V-mount and Gold Mount batteries to supply the camera with power.

#### NOTICE

For maximum operation time, always use fully charged batteries with 10.5 to 34 V DC (50 W minimum).

Always keep the BAT connector accessible so that the cable can be unplugged quickly in case of emergency. Do not use power cables longer than 4m.

### 5.2 Powering Auxiliary Devices via the Camera

You can supply power to auxiliary devices from the camera using several connectors (2.0 A max):

- **12 V** via 2-pin LEMO connector, 4-pin Hirose connector or via the D-tap connector on the battery adapter
- **24 V** via the RS connector
- **Camera voltage** via the EXT connector

**Note:** For connector pin-out information, see the user manual. When the power supply level becomes critical, the camera switches off all auxiliary power supplies first.

### 5.3 Switching On and Off



The power button (1) is located on the user panel on the left side of the camera.

#### Switching On the Camera

- ▶ Press the power button (1).

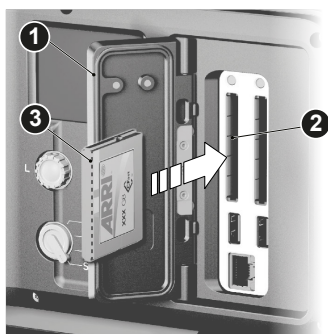
The camera starts booting. While the camera is booting up, the ARRI logo is shown in the monitor of the MVF-1 and the CCP-1 (if connected) and an AMIRA logo is shown on the audio display.

### Switching Off the Camera

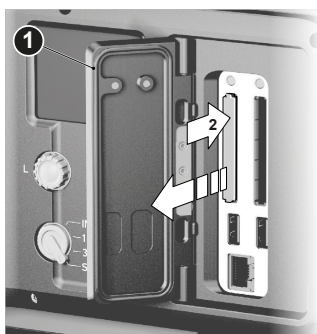
- ▶ Press and hold the power button (1) until the camera has switched off.

On the monitor of the MVF-1 and CCP-1 as well as in the viewfinder and the SDI outputs, a countdown appears while you press and hold the power button. On reaching zero, the camera switches off.

## 5.4 Inserting and Removing a CFast 2.0 Card



1. To insert the card, open the media lid (1).
2. Align the card's positive edge (3) facing the camera rear.
3. With the contact pins first, gently insert the card until it audibly locks (2).
4. Close the lid gently (1). **Never** force it closed on an unlocked card.



1. To remove the card, open the media lid (1).
2. Gently push on the card until it audibly unlocks (2).
3. Remove the card.

### NOTICE

AMIRA does not accept ALEXA-formatted CFast 2.0 cards, and vice versa.

Before using a CFast 2.0 card with AMIRA, you **must** erase it in-camera to create the required file system.

Avoid damage to the contacts of both camera and card. Always insert cards as described in this document.

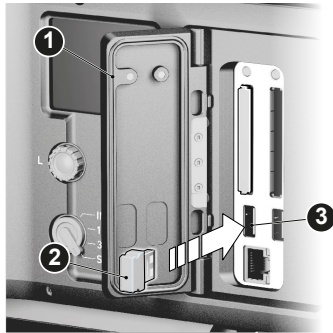
Never change memory cards when recording - this may damage the recorded clip.

## 5.5 Inserting and Removing USB Medium

The AMIRA saves data such as user setups, frame grabs and system logs to an USB memory stick. Firmware, additional frame lines and ARRI Look File 2 files are loaded onto the camera from the USB memory stick. The two USB slots are located below the CFast 2.0 card slots. To access the USB slot, open the media lid.

The USB memory stick needs to be FAT-formatted and requires a special folder structure in order to work with the camera. This folder structure can be prepared in camera and the folder preparation will not alter existing folders and files on the USB medium.

The USB icon in the status section on the HOME screen of the user interface reflects the USB medium status (useable, read/write, write-protected, invalid).



1. Open the media lid (1).
2. Connect a FAT-formatted USB stick (2) to the camera's USB slot (3).

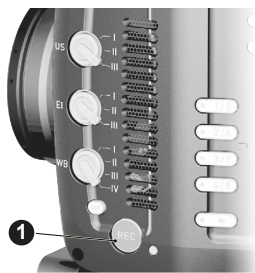
You can remove the stick from the camera without unmounting it.

### NOTICE

The camera only supports USB memory sticks or pendrives, FAT-formatted with MBR partition table and with a maximum capacity of 16GB. Hard drives or similar can not be recognized.

## 5.6 Starting Recording via REC button

The REC button (1) is located on the left side of the camera, on the MVF-1 and the Camera Control Panel CCP-1. The camera status LED (2) next to the REC button reflects the camera's status. Recording can only be started with a valid CFast card inserted.



Camera Status LED state	Camera State
Solid green	Ready for recording
Solid red	Recording, Pre-recording
Off	Idle and not ready for recording (CFast card is full, no CFast card is inserted or CFast card is not valid).
Flashing red/green	Camera is in an error state.



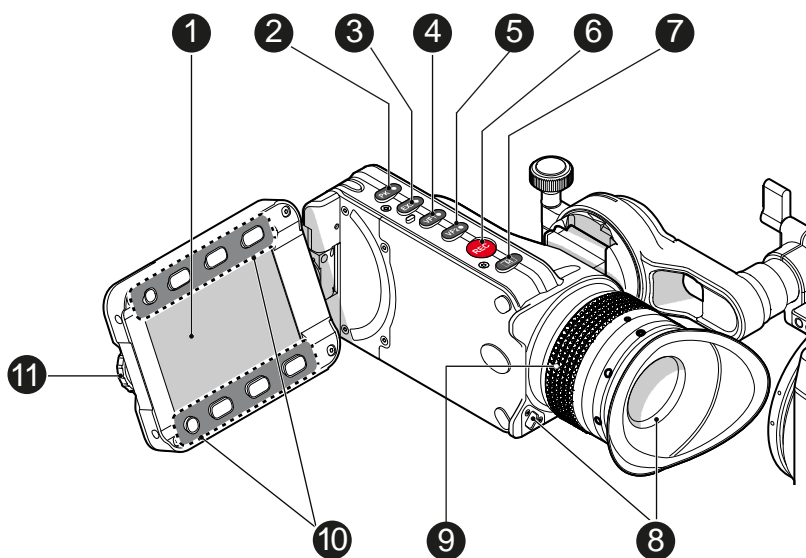
**NOTICE**

Pressing the record button returns the MVF-1 user interface to the home screen and disables the menu access.

Recording disables the *US* switch and the home screen buttons for *FPS*, *TC*, *Shutter*, and *Look* settings.

Connecting or disconnecting devices or cables while recording can disturb the audio/image signal due to static electricity.

## 5.7 Multi Viewfinder MVF-1



1	User Monitor (Live & UI)	7	<b>M</b> Monitor Button
2	<b>PK</b> Peaking Button	8	Proximity Sensor
3	<b>EXP</b> Exposure Tool Button	9	Diopter Adjustment
4	<b>VF-1</b> User Button	10	Screen Buttons
5	<b>VF-2</b> User Button	11	Jogwheel
6	<b>REC</b> Recording Button		

### User Monitor (Live View and User Interface)

The 3.2" fold-away monitor with up-and-down tilt function can display the camera live image or the main user interface, providing full access to camera functions and menus. Use the monitor button (7) to toggle between live view and user interface.

### PK (Peaking Button)

The peaking button activates and deactivates the peaking tool on the viewfinder and the monitor.

For more information on peaking please refer to the user manual.

### EXP (Exposure Tool Button)

The EXP button activates and deactivates the exposure tool for the viewfinder and the monitor.

For more information on the exposure tool please refer to the user manual.

### VF-1 and VF-2 User Buttons

The MVF-1 has two user buttons, VF1 and VF2 (4, 5). You can assign frequently used functions to each button.

For more information on how to assign user buttons please refer to the user manual.

### REC Button

The recording button starts and stops recording to the CFast 2.0 card. With no CFast 2.0 card inserted, the button is inactive.

### M (Monitor Button)

Press the M (Monitor) button (7) to change the monitor mode between live view and user interface.

### Proximity Sensor

This infrared sensor automatically deactivates the MVF-1's internal OLED panel when you withdraw your eye. The sensor is placed either on the bottom left-hand side of the viewfinder (generation 1), or it is integrated into the eye cup (generation 2).

### Diopter Adjustment

With the camera switched on and looking into the viewfinder, twist the ring (9) left or right to adapt the viewfinder image to your visual acuity. The diopter adjustment can compensate from -5 to +5 diopters.

### Screen Buttons

The functionality of the screen buttons (10) depends on the monitor mode. With the monitor in live view mode, press the lower screen buttons to toggle the status bar content. When the monitor is set to show the user interface, the screen buttons give quick access to main camera settings and allow for various other adjustments in the camera menu.

### Jogwheel

Using the jogwheel (11), you can scroll or navigate through lists and menus to change and confirm settings.

### PLAY Button

The PLAY button is located on the bottom side of the MVF-1. Press and hold the PLAY button for two seconds to start in-camera playback from the CFast 2.0 card.

#### NOTICE

Constantly covering the proximity sensor of the MVF-1 can cause an irreversible burn-in on the viewfinder OLED display. If you need to cover the viewfinder, please disable the EVF OLED first using the EVF power setting:

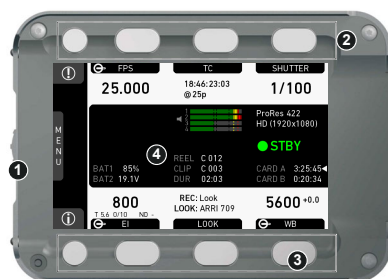
*MENU > Monitoring > EVF/MONITOR > Settings > EVF Power.*

**NOTICE**

Heated Eyecup HE-6 is not compatible with the MVF-1 viewfinder. When using the heated eyecup HE-6, the proximity sensor that activates the OLED display will always be covered. In this state, the OLED display will not switch off when not in use, this can cause an irreversible burn-in on the OLED display.

Please use the Heated Eyecup HE-7 instead. This is compatible with all MVF-1 viewfinders starting with serial number 2151, or viewfinders with the eyepiece upgrade installed (proximity sensor is located at the eyepiece).

## 5.8 User Monitor



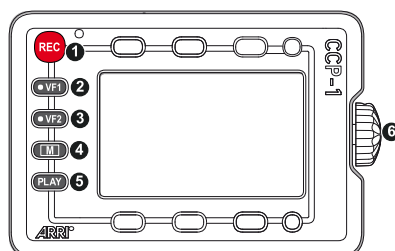
- 1 Jogwheel
- 2 Upper Screen Buttons
- 3 Lower Screen Buttons
- 4 HOME Screen

The MVF-1 user monitor has eight screen buttons, four above (2) and four below (3) the screen (4). Their function depends on the screen content and is labeled directly above or below each button. Unlabeled buttons do not have a function for that screen. A grayed-out label indicates that the function is currently not available. Using the jogwheel (1), you can do the following:

- Scroll or navigate through lists and menus
- Change values (by scrolling up or down)
- Access and confirm settings (by pressing the jogwheel)

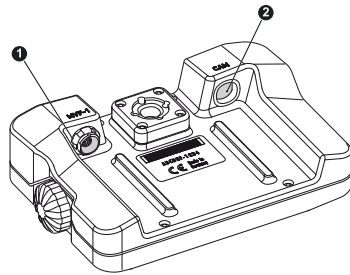
## 5.9 Camera Control Panel CCP-1

The Camera Control Panel 1 (CCP-1) is a standalone control panel, containing the display and a subset of the buttons of the MVF-1. Like the MVF-1, it can display the camera's live image or the main user interface, and the buttons reflect the behavior of the equivalent buttons of the MVF-1. It can be used as the only control panel or with a MVF-1 daisy-chained to it.



- 1 **REC** Recording Button
- 2 **VF-1** User Button
- 3 **VF-2** User Button
- 4 **M** Monitor Button
- 5 **PLAY** Button
- 6 Jogwheel

## Connecting the CCP-1



- 1 MVF-1 Connector
- 2 CAM Connector

Connect the CCP-1 CAM connector with the HDMI connector on camera top side, located underneath the camera handle.

When it is used alone with the camera, the CCP-1 always shows an image.

When a MVF-1 is daisy-chained to the CCP-1, the MVF-1 will show an image in the EVF, but only one of the two monitors, either of the MVF-1 or the CCP-1 is active.

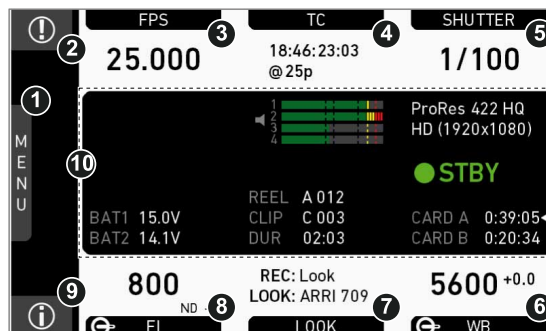
If the monitor of the MVF-1 is closed, the CCP-1 is activated.

If the monitor of the MVF-1 is opened, the monitor will be activated.

- Activate the MVF-1 by pressing a screen button on the MVF-1.
- Activate the CCP-1 by pressing any button except the *REC* button on the CCP-1.

## 5.10 Home Screen

The HOME screen is the AMIRA's default screen. It shows the most important camera parameters and gives quick access to changing them through the screen buttons:



- 1 **MENU** Button/Access
- 2 **ALERT** Screen
- 3 **FPS** Frame Rate Settings
- 4 **TC** Timecode Settings
- 5 **SHUTTER** Settings
- 6 **WB** White Balance Settings
- 7 **LOOK** Settings
- 8 **EI** Exposure Index Settings
- 9 **INFO** Camera Info Screens
- 10 Status Section

### MENU

While the monitor is showing the HOME screen, press the jogwheel to access the camera menu.

### ALERT Screen

The ALERT screen communicates critical system states to the user. They require immediate attention and remain active until the state returns to normal. A red exclamation mark, visible on the home screen, the monitor, EVF and SDI overlays (if active) indicates active alert messages, press the round '!' button to read them.

### FPS Sensor Frame Rate Setting

FPS shows the sensor frame rate, allowing adjustments from 0.75 to 100 fps (200 fps with valid license).

**Note:** The maximum frame rate is dependent on the recording resolution and the codec.

**Note:** The switch icon in the black label is only shown if the *US* user switch is set to *FPS*.

### TC Timecode Settings

Shows the current timecode value and the active project rate, allows adjustment of timecode format and values.

### SHUTTER Settings

Sets the shutter angle of the sensor. Shutter angle and sensor FPS determine exposure time of the sensor in seconds by the following equation:  $\text{angle} / (360 * \text{FPS})$ . Shutter unit can be set to display settings either as angle (5.0° to 356.0°) or exposure time (1s to 1/8000s). The maximum shutter angle is limited by the resulting exposure time (1s max).

### WB White Balance Settings

Sets the camera's white balance. This is the color temperature of the light source that the camera is currently adjusted for. In addition to the red/blue correction of the white balance, the ALEXA Mini can also compensate for a green/magenta tint. This value, called CC (color compensation), is shown as an exponent of the WB value. Positive values are marked with a "+" and negative values with a "-".

You can adjust WB from 2,000 to 11,000 Kelvin (here: 5,600) in steps of 10 K for red/blue correction. You can also color-compensate for green/magenta tints in a range from -16.0 to +16.0. Positive or negative CC color compensation values then appear in superscript (here: +0.0).

For automatic white balance: Press AW (on operator panel) twice in one second. This stores the auto-white balance result in the currently active switch position.

### LOOK Settings

Shows the REC path processing setting and the name of the active look. Opens the look screen, which provides further access to processing settings of all image paths and global look as well as in-camera look editing.

### EI Exposure Index Settings

Shows the current EI rating and ND filter value. Base sensitivity for the AMIRA is 800 ASA. The EI rating can be adjusted from 160 to 3200 ASA.

### INFO Camera Info Screens

Provides access to various info screens such as camera system info, card info, network info or user button info.

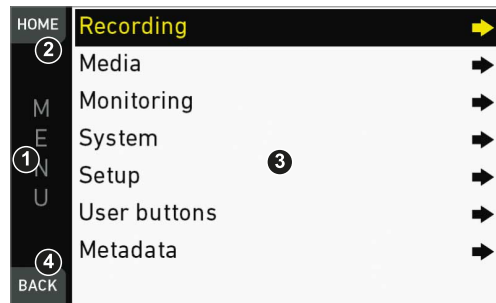
### Status Section

The status section gives an overview of other important camera settings such as recording resolution, remaining recording time and battery voltage.

## 5.11 Camera Menu

The camera menu contains parameters for basic camera setup. It has a tree structure and the name of the current submenu is displayed across the top of every screen. To access the menu, press the jogwheel while the camera is showing the HOME screen.

There are seven submenus in the main menu (3) for setting up the AMIRA:



### Basic Menu Operation

1. Rotate the jogwheel (1) to scroll up or down to select the desired entry.
2. Entries with an arrow navigate to a lower menu level:
  - To navigate to the submenu: press the jogwheel (1).
  - To return to a higher menu level: press *BACK* (4).
3. Entries with a value allow direct editing:
  - To edit a value: press the jogwheel (1), then rotate the jogwheel to select the desired value.
  - To confirm and end editing: press the jogwheel.
  - To cancel editing: press *BACK* (4).
4. To leave the menu: press *HOME* (2).

## 5.12 Licensing

You can further enhance the camera's capabilities through licensed features available to purchase online. Visit the [ARRI License Shop](#) and follow the instructions for purchasing and downloading license keys.

Following license keys are available for the AMIRA:

- AMIRA Advanced License Key
- AMIRA Premium License Key
- AMIRA 4K UHD License key
- ARRI Look Library License Key
- AMIRA ARRIRAW License Key

License keys are linked to the camera's serial number and cannot be transferred from one camera to another. The active camera license model (incl. contained features) is available under: *Menu > System > Licensed features*

#### NOTICE

Licenses are also available as timed temporary licenses. After installation, the license is valid for a defined period past the installation time. After this period, the license becomes invalid.

A temporary license shows Valid until: YY-MM-DD HH:MM:SS in the licensed features screen.

For full instructions, see the user manual.

## 6 Camera Preparation

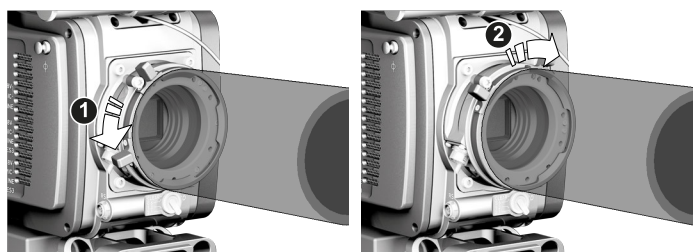
The following chapters provide information on how to attach commonly used accessories to the camera. ARRI offers a wide range of electronic and mechanical accessories, please see our [Camera and Accessories Configuration Overviews](#).

### NOTICE

To avoid damage while assembling and retrofitting, always place the camera on a padded, firm, flat and level surface.

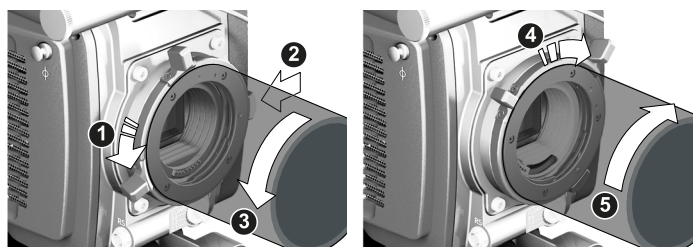
### 6.1 Changing a Lens

#### PL Mount Lenses



1. Observe maximum lens dimensions (see User Manual).
2. To remove a lens (or a lens port cap), rotate the two bayonet levers of the lens mount anti-clockwise (1) as far as possible while grasping the lens firmly. Then carefully slide the lens out of the port.
3. To fit a lens, align the notch in the lens flange with the index pin on the mount, keeping the lens rotated into a position where the lens markings are visible from either side of the camera.
4. Gently press the lens flange flat onto the lens mount.
5. Rotate the two bayonet levers clockwise (2) until the lens is seated properly and locked securely. Do not use any force!

#### EF Mount Lenses



1. To remove a lens (or a lens port cap), rotate the two bayonet levers of the lens mount anti-clockwise (1) as far as possible while grasping the lens firmly.
2. Press and hold the button (2) to unlock the lens.
3. Turn the lens (3) counter-clockwise, then remove it.
4. To fit a lens, align the red dots of both lens and lens mount. Then gently push the lens into the mount.
5. Rotate the two bayonet levers clockwise (5) until the lens is seated properly and locked securely. Do not use any force!

5. Turn the lens clockwise (5) until the bayonet locks.
6. Turn the two bayonet levers clockwise (4) to tighten the lens to the lens mount.

### NOTICE

Protect the sensor: Always keep a lens or a lens cap on the empty lens mount.  
 Change lenses in dry, dust-free environments only.  
 Never exceed the maximum lens dimensions.  
 Have every lens properly shimmed as prescribed by the manufacturer.

### Lens Support

Heavy lenses (above 3kg/6.6lbs) require additional lens support. Using a lens support guarantees that the weight of the lens will not influence the flange focal depth and reduces stress on the lens mount. ARRI offers a wide range of lens supports for 15mm and 19mm studio rods.

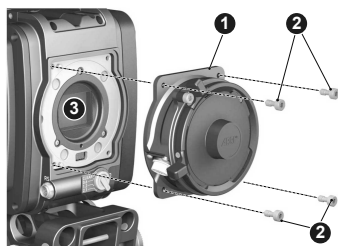
## 6.2 Changing the Lens Mount

The AMIRA's interchangeable PL lens mount can be easily replaced, allowing the use of B4 video and EF mount lenses.

### Required Tools and Precautions

- 3.0 mm Allen key
- Camera switched off and power source disconnected
- Lens removed and properly stored
- Make sure to protect all optical surfaces when changing a lens mount

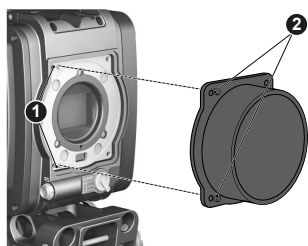
### Deinstalling a Lens Mount (here: PL Mount)



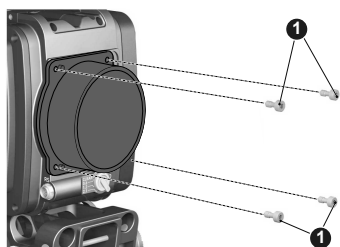
1. Crosswise, loosen all four screws (2) with an Allen key.
2. Carefully remove the mount (1).
3. Store the mount in a case for dust protection.
4. **Note:** To protect the sensor (3), immediately install another original lens mount.



## Installing a Lens Mount



1. Properly align the two guiding pins (1) for correct lens mount fit (2).



2. Crosswise, hand-tighten all four screws (1).
3. Only then, tighten all screws crosswise with the Allen key.

**Note:** Always store the camera with a lens mount properly installed and capped.

### ⚠ WARNING!

#### Condensation! Risk of electric shock and damage!

Humidity may ingress due to misinstalled lens mounts!

When installing a lens mount, always align and attach properly; never apply force.

Hand-tighten all screws crosswise before final tightening.

Always tighten crosswise with the prescribed tool.

### ⚠ DANGER!

#### High voltage! Risk of electric shock and fire!

Short circuits may entail lethal injury and damage!

Use original ALEXA-Mini or AMIRA lens mounts only.

Before each lens mount change, always switch the camera off and disconnect all power sources.

Changing the lens mount while the camera is powered may permanently damage the camera and lens mount.

Protect sensor and electrical system: Always store the camera with a lens mount properly installed and capped.

Immediately replace each lens mount after removal.

Change lens mounts in dust-free environment only.

### NOTICE

After each lens mount change, always check the back focus of the camera.

Have the back focus always corrected by properly skilled personnel.

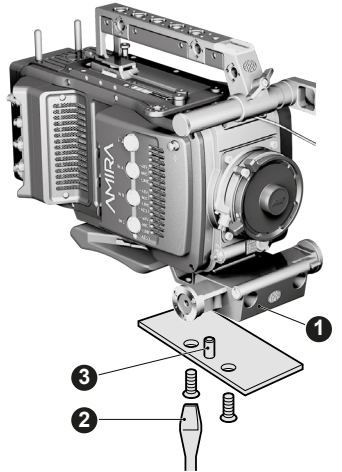
Back focus correction requires special tools and training that meet ARRI guidelines.

For all back focus issues, contact a qualified ARRI Service Center.

## 6.3 Mounting the Camera to a Bridge Plate

### Required Tools

- Flat screwdriver

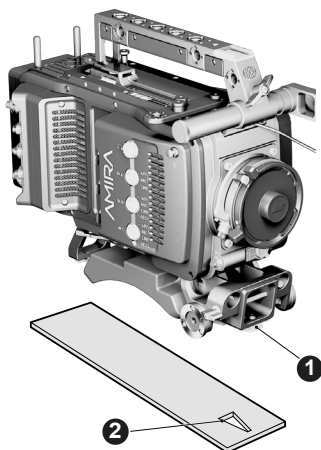


1. For mounting to a bridge plate, use the BPA-3 bridge plate adapter.
2. Place the bridge plate under the adapter (1).
3. Adjust the bridge plate's nose (3) to the adapter's aperture.
4. With a flat screwdriver, attach the screws to the adapter and tighten (2).
5. **Note:** Always ensure a proper lock.

### NOTICE

Always use a flat screwdriver to connect the BPA-3 to a bridge plate. Never use a coin. A coin does not deliver enough force to ensure a proper lock.

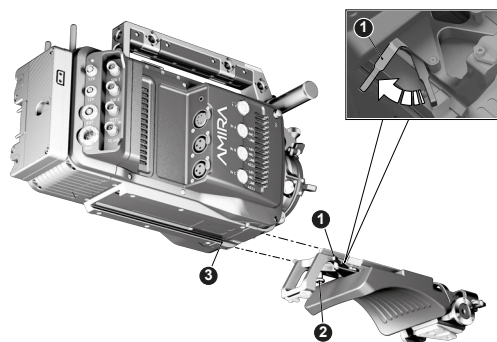
## 6.4 Mounting the Camera to a Wedge Plate



1. For mounting to a wedge plate, use the WPA-1 wedge plate adapter.
2. Open the quick-release base plate.
3. Place the adapter (1) into the quick-lock plate slightly behind the connection points.
4. Slide the camera forward until the quick-lock audibly locks (2).
5. **Note:** The lock must be closed.

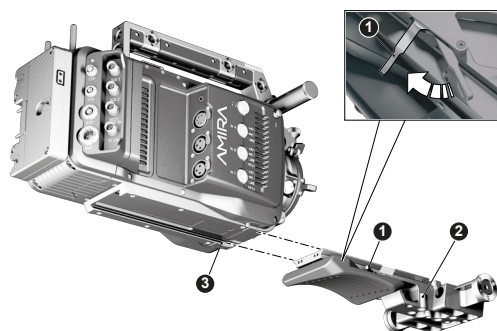
## 6.5 Mounting and Unmounting a Base Adapter Plate

### Mounting (here: Wedge Plate Adapter WPA-1)



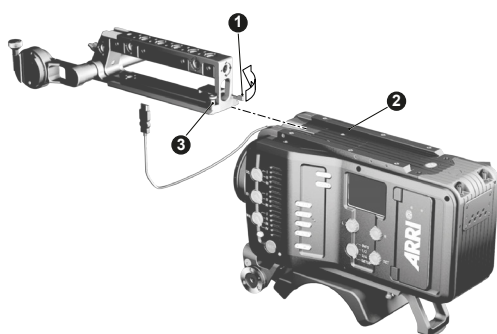
1. Open the clamp (1).
2. Slide the adapter under the camera (3).
3. **Note:** The safety pin (2) must audibly lock.
4. Close the clamp (1).

### Unmounting (here: Bridge Plate Adapter BPA-3)



1. Open the clamp (1).
2. With the safety pin pulled (2), slide the adapter off the camera (3).

## 6.6 Mounting and Unmounting the Camera Handle



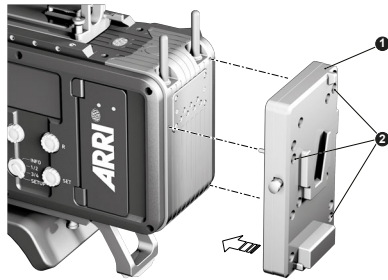
1. Open the clamp (1).
2. Slide the handle onto the camera (2).
3. **Note:** The safety pin (3) must audibly lock.
4. Close the clamp (1).
5. **To unmount:** Open the clamp (1).
6. With the safety pin pulled (3), slide the handle off the camera (2).

## 6.7 Mounting and Unmounting a Battery Adapter

### Required Tools

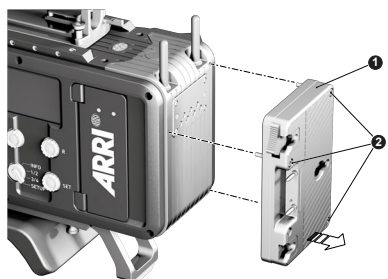
- 2.5 mm Allen key

### Mounting (here: V-Lock Battery Adapter)



1. Switch off; interrupt the power supply.
2. Pin the battery adapter (1) to the camera.
3. With a 2.5 mm Allen key, fasten all three screws (2) handtight until the adapter fits tightly.

### Unmounting (here: Gold Mount Battery Adapter)



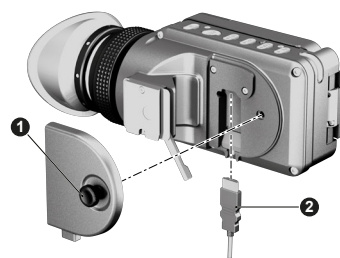
1. Switch off; interrupt the power supply.
2. With a 2.5 mm Allen key, unfasten all three screws (2).
3. Remove the battery adapter (1).

## 6.8 Connecting the MVF-1

### Required Tools

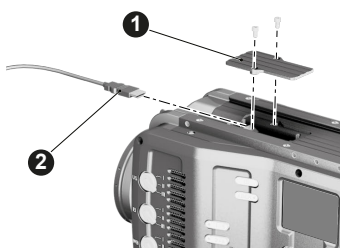
- 2.0 mm Allen key

### Connecting the EVF Cable to the MVF-1



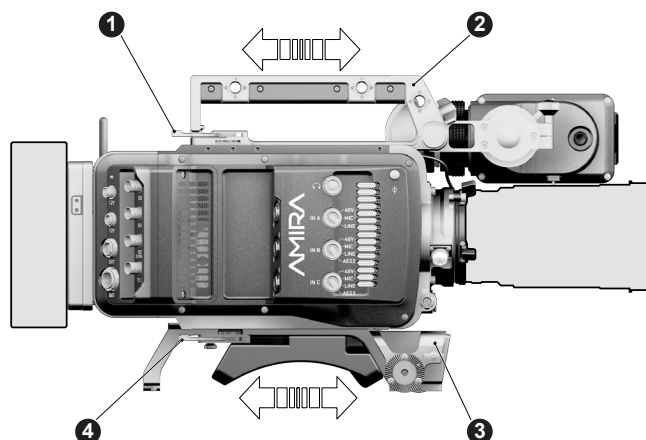
1. With your fingers, unscrew and remove the viewfinder's lid (1).
2. Connect the viewfinder cable (2) to the EVF port.
3. Or: Disconnect the cable (2).
4. Reattach the lid (1).

### Connecting the EVF Cable to the Camera



1. Place the camera bottom-down.
2. Remove the camera handle.
3. With a 2.0 mm Allen key, unscrew and remove the lid (1).
4. Connect the viewfinder cable (2) to the EVF port.
5. Reattach lid (1) and camera handle.

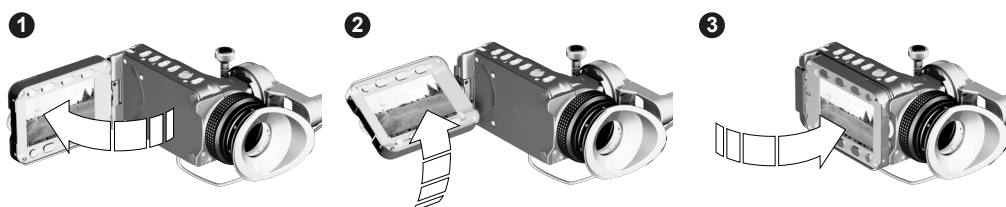
## 6.9 Balancing the Camera



1. Unlock (4) and slide the base adapter (3) until the camera is balanced.
2. Close the clamp (4).
3. Unlock (1) and slide the handle (2) until the camera is balanced.
4. Close the clamp (1).

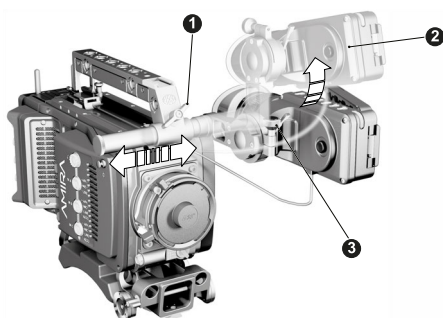
## 6.10 Adjusting the Monitor

The 3.2" monitor of the MVF-1 is a fold-away monitor with an up-and-down tilt function.



- Fold out (1), swivel (2) and fold in (3) the monitor to put the display visible in the folded-in position.

## 6.11 Adjusting the Viewfinder



1. Slightly loosen the clamp (1) to move the viewfinder (2) left/right and up/down.
2. Unclamp the hinge (3) to swivel the viewfinder horizontally.
3. Close all clamps (1, 3) when the viewfinder is in the desired position (2).

## 7 Appendix

### 7.1 Technical Data

<b>Camera Type</b>	35 mm format film-style digital camera with integrated shoulder arch and receptacles for 15 mm lightweight rods, switchable active sensor area, support for ARRI MVF-1 viewfinder, built-in remote control capabilities via Wi-Fi, built-in motorized ND filters, interchangeable lens mounts and ARRI Lens Data System.	
<b>Dimensions</b>	Length: 309 mm Height: 149 mm Width: 139 mm	
<b>Weight</b>	4.1 kg / 9 lbs (camera body with PL mount)	
<b>Sensor</b>	35 mm format ARRI ALEV III CMOS with Bayer pattern color filter array	
<b>Active Photo Sites</b> (with surround view)	ProRes S16 HD	1760x980
	ProRes HD	2880x1620
	ProRes 2K	2867x1613
	ProRes 3.2K	3200x1800
	ProRes 4K UHD	3200x1800
	ARRIRAW 2.8K	2880x1620
<b>Shutter</b>	Electronic shutter, 5.0°-356.0°, 1s - 1/8000s	
<b>Exposure Latitude</b>	14+ stops over the entire sensitivity range from EI 160 to EI 3200 as measured with the ARRI Dynamic Range Test Chart (DRTC-1)	
<b>Exposure Index</b>	adjustable from EI 160-3200 in 1/3 stops EI 800 base sensitivity	
<b>Filters</b>	Built-in motorized FSND filters 0.6, 1.2, 2.1	
<b>Lens Mounts</b>	PL mount with Hirose connector and LDS Titanium PL mount with L-Bus connector and LDS ( <b>Note:</b> LBUS motors are not supported by AMIRA) EF mount B4 mount with Hirose connector	
<b>Recording Media</b>	CFast 2.0 memory cards	
<b>Recording Modes</b>	Standard, Pre-recording, Intervalometer, Stop Motion	
<b>Recording Formats</b>	ProRes S16 HD	1920 x 1080
	ProRes HD	1920 x 1080
	ProRes 2K	2048 x 1152
	ProRes 3.2K <sup>1</sup>	3200 x 1800
	ProRes 4K UHD <sup>1</sup>	3840 x 2160
	ARRIRAW 2.8K <sup>2</sup>	2880 x 1620

<sup>1</sup> requires 4K UHD License Key

<sup>2</sup> requires ARRIRAW license key

<b>Recording Codecs</b>	ProRes 4444 XQ <sup>1</sup> , 4444i, 422 HQ <sup>2</sup> , 422, 422 LT MPEG-2 HD 422P@HL, 50 Mbps GOP structure: 12 (23,976, 25 and 50i FPS) or 15 (29,97, 59,94i FPS) frames/GOP, M = 3, closed GOP ARRIRAW <sup>3</sup> 1 requires AMIRA Premium license key 2 requires AMIRA Advanced license key 3 requires ARRIRAW license key
<b>Color Output</b>	REC 709, custom look or Log C
<b>Look Control</b>	Import of custom 3D LUT, ASC CDL parameters (slope, offset, power, saturation)
<b>Adjustable Image Parameters</b>	Knee, gamma, saturation, black gamma, saturation by hue
<b>Focus and Exposure Control</b>	Peaking, Zebra, False color, Waveform
<b>White Balance</b>	Manual and auto white balance, adjustable from 2000K to 11000K in 10K steps. Color correction adjustable range from -16 to +16 CC. 1 CC corresponds to 035 Kodak CC values or 1/8 Rosco values.
<b>Sound Level</b>	< 20 dB(A) at standard frame rates
<b>Environmental</b>	-20° C to +50° C (-4° F to +113° F) @ 95% humidity max, non-condensing splash and dust-proof through sealed electronics
<b>Viewfinder</b>	Multi Viewfinder MVF-1 (OLED and LCD) with flip-out LCD screen and military-grade connector to camera Camera Control Panel (CCP-1) LCD control panel with option to daisy-chain MVF-1
<b>Wireless Interfaces</b>	Built-in WiFi and bluetooth modules
<b>WiFi Remote Control</b>	Built-in Wi-Fi interface and web-based remote control from phones, tablets and laptops
<b>Custom Control</b>	Optional GPIO interface for integration with custom control interfaces
<b>Power Input</b>	Lemo 8-pin, 10.5-34 V DC Socket for battery adapter plate
<b>Power Output</b>	10.5 to 12 V (RS: 24 V) / 2.0 A
<b>Video Outputs</b>	2x HD-SDI out 1.5G and 3G: uncompressed HD video with embedded audio and metadata, 6G SDI in UHD and 3.2K recording modes.
<b>Inputs</b>	Genlock, Return In, Timecode (in and output)
<b>Other Interfaces</b>	USB 2.0 (for user setups, look files etc.) Ethernet for service and web remote control EXT accessory interface w. RS pin and unregulated power output (outputs battery voltage)

## Maximum Recording Frame Rates

Resolution	Codec	CFAST 60 GB	CFAST 120+ GB
------------	-------	-------------	---------------

S16 HD	ProRes 422 LT	200	200
	ProRes 422	200	200
	ProRes 422 HQ	200	200
	ProRes 4444	137	200
	ProRes 4444 XQ	91	120
HD	ProRes 422 LT	200	200
	ProRes 422	200	200
	ProRes 422 HQ	200	200
	ProRes 4444	137	200
	ProRes 4444 XQ	91	120
	MPEG-2 HD	59.940	59.940
2K	ProRes 422 LT	200	200
	ProRes 422	200	200
	ProRes 422 HQ	181	200
	ProRes 4444	120	200
	ProRes 4444 XQ	80	120
2.8K	ARRIRAW	27	48
3.2K	ProRes 422 LT	60	60
	ProRes 422	60	60
	ProRes 422 HQ	60	60
	ProRes 4444	49	60
	ProRes 4444 XQ	30	30
4K UHD	ProRes 422 LT	60	60
	ProRes 422	60	60
	ProRes 422 HQ	51	60
	ProRes 4444	34	60
	ProRes 4444 XQ	22	30

## Audio Data

<b>External Interfaces</b>	2x 3-pin XLR in (In B, C), 1x 5-pin XLR in (In A), 1x 3.5mm TRS out
<b>Input Formats</b>	Mic level (optional phantom power) Line level AES3 EBU (32, 44.1, 48, 96 kHz) <i>Note: In B, C only</i>
<b>Recording Format (embedded in video file)</b>	Linear PCM, 24 bit 48 kHz
<b>Number of Recording Channels</b>	4+1
<b>Gain Adjustment</b>	0 - +30 dB, independently per input
<b>Line Input max. Level</b>	+8 / +24* dBu, correlating to 0 dBFS *requires IOAU2 audio board
<b>Limiters/Auto Level Features</b>	18 dB fixed gain (for AUTO level) -6 dBFS threshold 3ms attack time for 63% effect 360ms release time for 63% effect $\infty$ :1 ratio



---

<b>Metering</b>	From -50 to 0 dBFS Markers at -20, -18 and -9 dBFS Warnings from -5 dBFS (yellow) and -2 dBFS (red) to 0 dBFS Input clipping indication through red frame around audio meter
<b>Internal Test Tone Generator</b>	1 kHz sine @ -9 dBFS / -18 dBFS / -20 dBFS

## 7.2 MPEG-2 Notice

This product contains MPEG-2 functionality.

ANY USE OF THIS PRODUCT IN ANY MANNER OTHER THAN PERSONAL USE THAT COMPLIES WITH THE MPEG-2 STANDARD FOR ENCODING VIDEO INFORMATION FOR PACKAGED MEDIA IS EXPRESSLY PROHIBITED WITHOUT A LICENSE UNDER APPLICABLE PATENTS IN THE MPEG-2 PATENT PORTFOLIO, WHICH LICENSE IS AVAILABLE FROM MPEG LA; LLC; 4600S. ULSTER ST., SUITE 400, DENVER, CO 80237.

## 7.3 Declarations of Conformity

### EU Declaration of Conformity

Brand Name: ARRI

Product Description: Digital Camera System

- **ARRI AMIRA + Viewfinder MVF1 + Camera Control Panel CCP-1**
- + Europe Setting for Software 5.4 or later, Primes following Appendix I and Antenna following Appendix II

The designated products conform to the specifications of the following European directives:

*For cameras delivered before 13 June 2016:*

- 1 DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity
- 2 DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast)

*For cameras delivered from 13 June 2016:*

- 1 DIRECTIVE 2014/53/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment - OJ L 153, 22 May 2014, p. 62–106
- 2 DIRECTIVE 2011/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment - OJ L 174, 1 July 2011, p. 88–110

The compliance with the requirements of the European Directives was proved by the application of the following standards:

Essential Requirements regarding No 1:

Following 2014/35/EU	EN 62368-1:2014
	AC:2015-05
	AC:2015-11

Following 2014/30/EU      EN 301 489-1 V1.9.2  
    EN 301 489-17 V2.2.1  
    EN 55032:2015  
    EN 55103-2:2009  
  
    EN 300 328 V2.1.1

Essential Requirements regarding No 2:  
 EN 50581:2012

To evaluate the respective information, we used: [http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/index\\_en.htm](http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/index_en.htm)

Year of affixed CE-marking: 2015

#### APPENDIX I - List of Primes

Item	Model Name
1	PL-LDS Mount + ARRI Lenses with Lens Data System 1
2	ARRI LPL Mount ALEXA Mini/AMIRA + ARRI - Signatures Primes with Lens Data System 2 with focal length 18-125mm

#### APPENDIX II - List of Antennas

Item	Manufacturer	Model Name	Gain (dBi)	Radiation Pattern	Type	Connector
1	Proant	333 (Ex-it 2400 Fold-able)	2.0	Omni-directional	Dipole	Reverse SMA

#### FCC Compliance Statement

**Class A Statement:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

**Note:** This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

- **WiFi:** FCC ID: PD962205ANH or PPD-AR5B22
- **Bluetooth:** FCC ID: QQQWT32AE

#### Industry Canada Compliance Statement

Complies with the Canadian ICES-003 Class A specifications.

*Cet appareil numérique de la Classe A est conforme à la norme NMB-003 du Canada.*

This device complies with RSS-210 of Industry Canada.

*Cet appareil est conforme à CNR-210 d'Industrie Canada.*

This Class A device meets all the requirements of the Canadian interference-causing equipment regulations

*Cet appareil numérique de la Classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.*

- **WiFi:** IC ID: 1000M-62205ANH or 4104A-AR5B22
- **Bluetooth:** IC ID: 5123A-BGTWT32AE

### China

- **WiFi Module:** 本设备包含型号核准代码（分别）为：  
CMIIT ID: 2012AJ0219 (M)  
... 的无线电发射模块。

- **AMIRA:**

### South Korea

Statement for 2.4 GHz Devices:	"해당무선설비는 운용 중 전파혼신 가능성이 있음" Translation for reference only: This radio device has the possibility of radio interference.
-----------------------------------	--

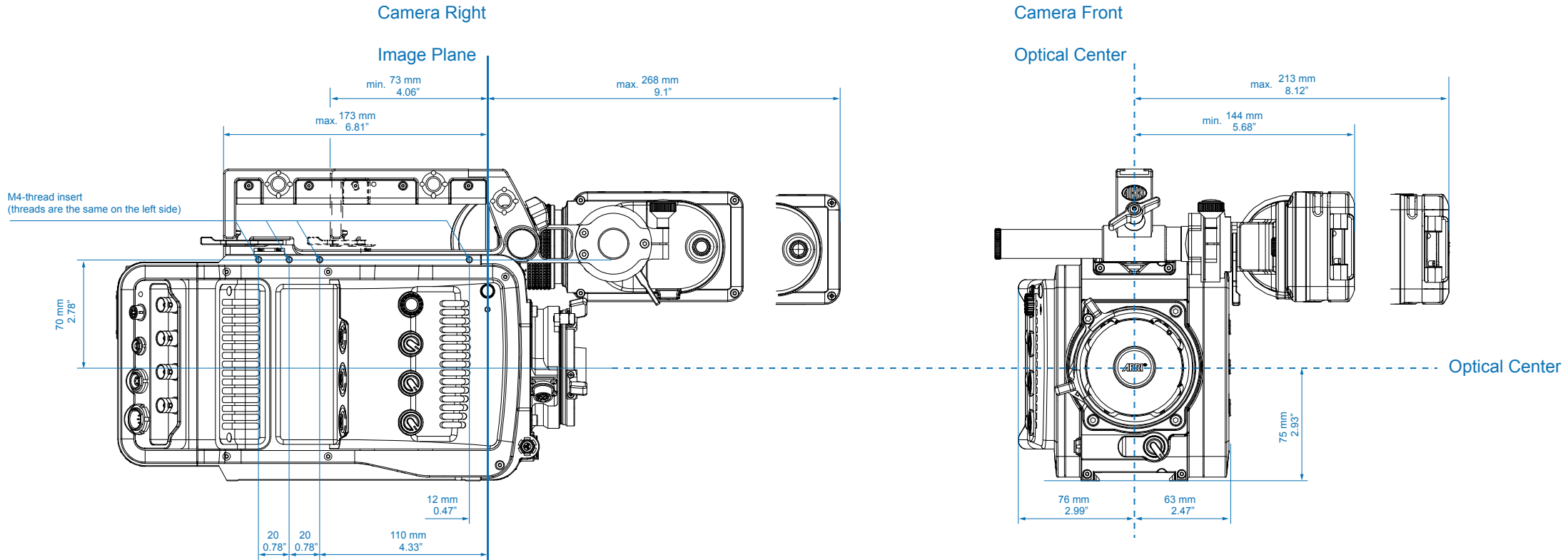
- **AMIRA:** Certification No: MSIP-REM-AXP-K1717000
- **WiFi Module:** Certification No: KCC-CRM-ATH-AR5B22



## 7.4 Dimensional Drawings

Dimensional drawings of the camera are attached to the end of this document. They can also be downloaded from the ARRI website:

<https://www.arri.com/camera/amira/downloads/>



## AMIRA

Body (with LDS PL-Mount)

## Length

309 mm - 12.1"

## Width

139 mm - 5.4"

## Height

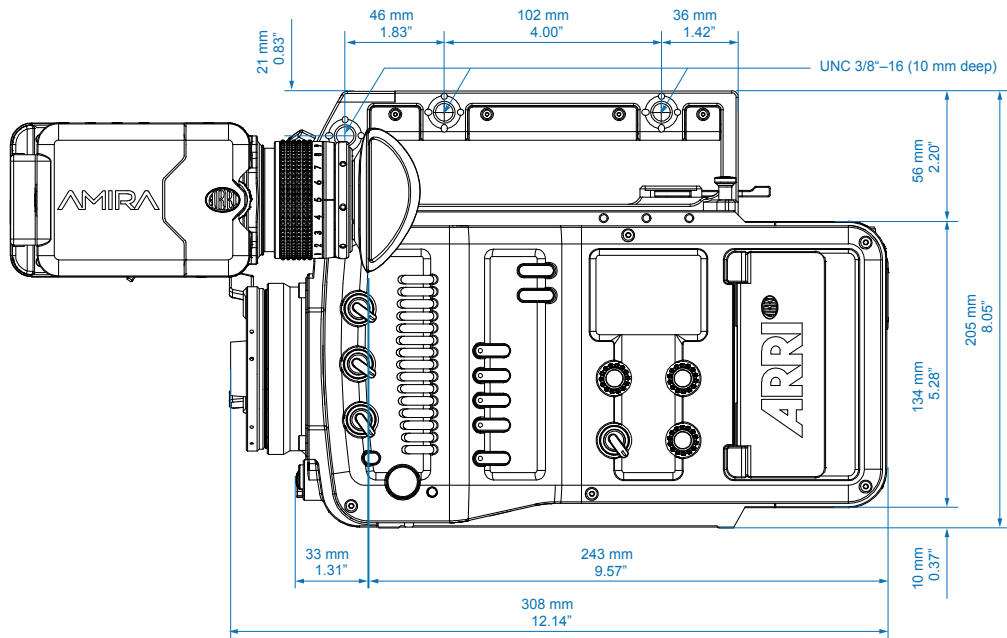
149 mm - 5.8"

## Weight

~ 4.1 kg - 9.2 lb

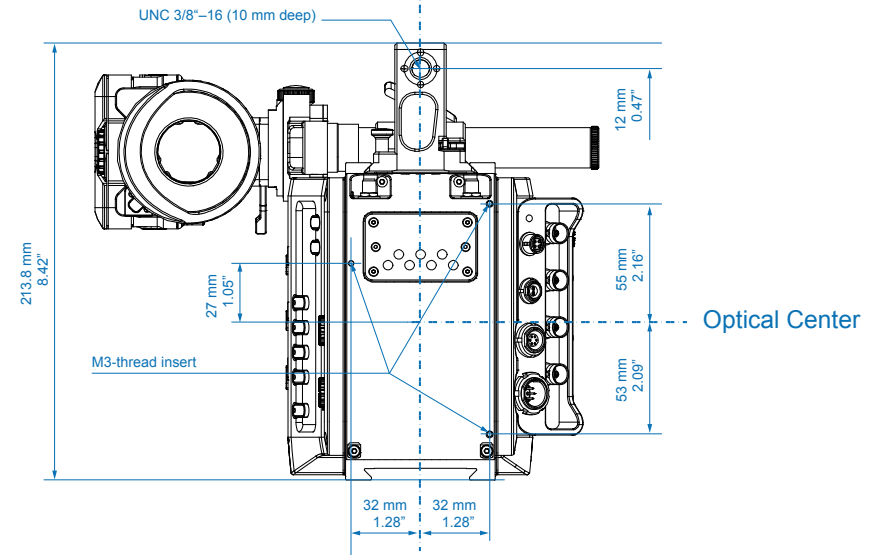
Camera Left

Image Plane



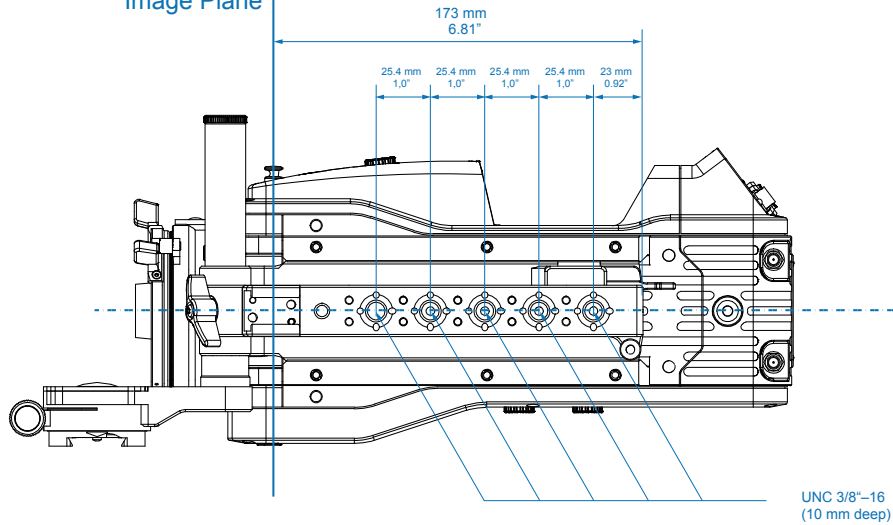
Camera Back

Optical Center



Camera Top

Image Plane



Camera Bottom

Image Plane

