

# ZWO ASIAIR Mini Wi-Fi Smart Camera Controller

Model: ASIAIR-Mini

## 1. INTRODUCTION

The ASIAIR Mini is a compact and powerful smart device designed to streamline astrophotography workflows. It serves as a central control unit for your telescope rig, enabling wireless management of various astronomical equipment.

This device simplifies complex tasks such as GoTo equatorial mount pointing, power distribution to cameras and other accessories, and control of compatible ZWO components including Electronic Automatic Focusers (EAF), filter wheels, and guide cameras.

### Product Overview



*Figure 1: ZWO ASI AIR Mini device.*

The ASI AIR Mini is engineered for portability and efficiency. Its compact design allows for easy integration into existing astrophotography setups, providing robust control capabilities in a smaller form factor.

# More Portable Than Ever

With a size smaller than the palm of your hand, the new ASI AIR Mini is just as powerful as it is portable, which allows you to capture the night sky with great ease and fun, just like what you've experienced with its predecessors.

**42%**  
Smaller

**21%**  
Lighter



\*The comparison is based on manual measurement with ASI AIR Plus.

Figure 2: Size comparison between ASI AIR Mini and ASI AIR Plus, highlighting the Mini's reduced footprint and weight.

## 2. PHYSICAL COMPONENTS AND INTERFACES

The ASI AIR Mini features a range of ports and indicators designed for comprehensive control and monitoring of your astrophotography equipment.

# 4-Output Multi-Interfaces

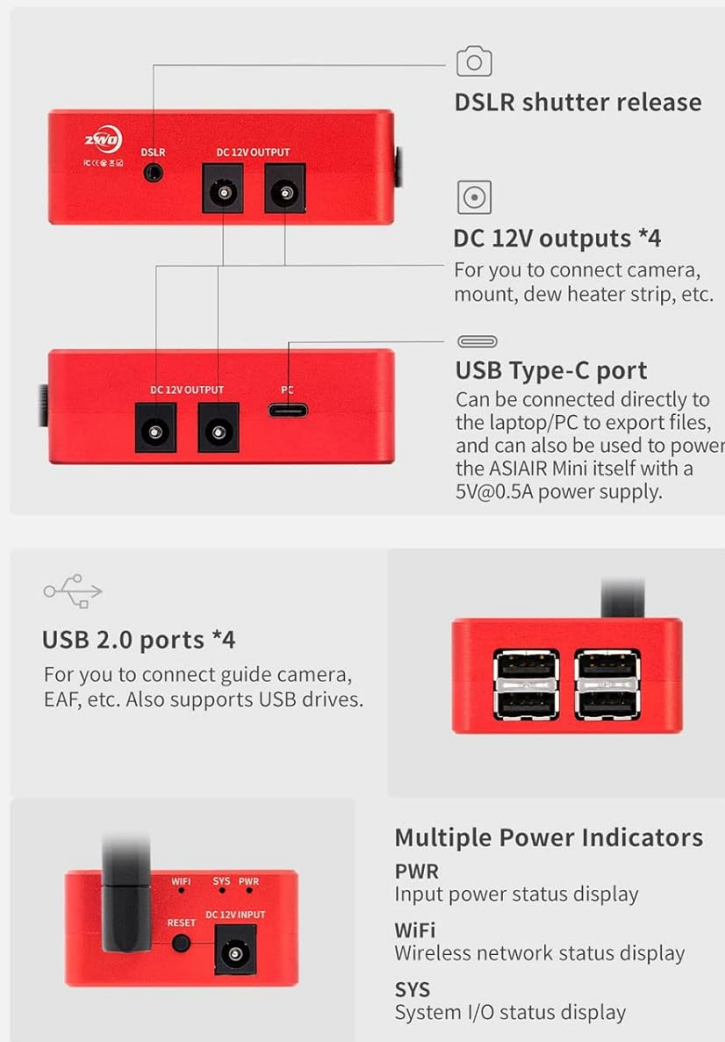


Figure 3: ASI AIR Mini Multi-Interfaces and Indicators.

- **DSL R Shutter Release:** Port for connecting a DSL R camera's shutter release cable, enabling remote control of exposures.
- **DC 12V Outputs (x4):** Four dedicated 12V DC power outputs to supply power to cameras, mounts, dew heater strips, and other accessories.
- **USB Type-C Port:** Used for connecting directly to a laptop/PC to export files. This port can also power the ASI AIR Mini with a 5V@0.5A power supply.
- **USB 2.0 Ports (x4):** Four USB 2.0 ports for connecting guide cameras, Electronic Automatic Focusers (EAF), and other USB devices, including USB drives for data storage.
- **Multiple Power Indicators:**
  - **PWR:** Indicates input power status.
  - **WiFi:** Indicates wireless network status.
  - **SYS:** Indicates system I/O status.

## Power Monitoring Capabilities

The ASIAIR Mini integrates a monitoring unit to track its operational status, providing real-time data on power consumption and environmental conditions.

# Power Monitoring

Features a monitoring unit to track ASIAIR Mini's working status, including DC 12V input voltage & current, power consumption and real-time temperature.



Current monitor



Real-time temperature



Voltage monitor



Devices connected



WiFi setting



Total power consumption

Figure 4: ASIAIR Mini Power Monitoring Features.

- **Current Monitor:** Displays the current draw of connected devices.
- **Real-time Temperature:** Monitors the internal temperature of the ASIAIR Mini.
- **Voltage Monitor:** Shows the input voltage and output voltage to connected devices.
- **Devices Connected:** Provides an overview of all currently connected equipment.
- **WiFi Setting:** Allows configuration and monitoring of the Wi-Fi connection.
- **Total Power Consumption:** Displays the aggregate power usage of the system.

## 3. SETUP

Setting up your ASI AIR Mini involves connecting your astronomical equipment and establishing a wireless connection for control.

### 3.1 Initial Connections

1. **Power Input:** Connect a 12V DC power supply to the ASI AIR Mini's DC 12V INPUT port. Ensure the power supply meets the required specifications.
2. **Connect Devices:** Utilize the available ports to connect your equipment:
  - Connect your main camera, mount, and dew heaters to the DC 12V OUTPUT ports.
  - Connect your guide camera, EAF, and other USB accessories to the USB 2.0 ports.
  - If using a DSLR, connect its shutter release cable to the DSLR port.
3. **Power On:** Once all connections are secure, power on the ASI AIR Mini. Observe the PWR, WiFi, and SYS indicators for proper boot-up.

### 3.2 Software Installation and Wi-Fi Connection

1. **Download ASI AIR App:** Download and install the official ASI AIR application on your iOS or Android device from the respective app store.
2. **Connect to ASI AIR Wi-Fi:** On your mobile device, go to Wi-Fi settings and connect to the ASI AIR Mini's Wi-Fi network. The network name typically starts with "ASI AIR\_".
3. **Launch App:** Open the ASI AIR app. It should automatically detect and connect to your ASI AIR Mini.

## 4. OPERATION

The ASI AIR Mini provides an integrated and user-friendly workflow for various astrophotography tasks, all controlled from your mobile device.

# One-station Design

ASIAIR Mini provides an integrated and easy-to-use workflow suitable for all astrophotography amateurs, including focusing, polar alignment, filter switch, auto guiding, autorun, etc. Even if you're new to astrophotography, you can use it to produce wonderful astrophotos quickly and with ease. Interested in wide-field photography? Try the newly added feature multi-target!



Figure 5: ASIAIR Mini One-station Design for integrated control.

## 4.1 Core Functions

- **Mount Control:** Remotely control your GoTo equatorial mount for precise pointing and tracking.
- **Camera Control:** Manage exposure settings, capture sequences, and download images from your main camera.
- **Guide Control:** Utilize a guide camera and the integrated guiding software for accurate autoguiding, ensuring sharp long-exposure images.
- **EAF Control:** Control compatible Electronic Automatic Focusers for precise and automated focusing.
- **EFW Control:** Manage Electronic Filter Wheels for automated filter changes during imaging sessions.
- **Polar Alignment:** Utilize built-in tools for accurate polar alignment of your mount.
- **Plate Solving:** Automatically identify the exact celestial coordinates of your telescope's field of view.
- **Live Stacking:** Observe real-time stacked images for immediate feedback during imaging sessions (Note: ASIAIR Mini does not support cameras over 26MP pixels, including ASI6200 and ASI461, and other DSLRs for live stacking. It works fine with ASI6200 for image capture).

## 5. COMPATIBILITY

### 5.1 Minimum System Requirements for ASIAIR App

To ensure optimal performance, verify that your mobile device meets the following minimum requirements for running the ASIAAIR application:

## Minimum System Requirements for Running ASIAIR

ASIAIR is able to run on iOS and Android devices. In order to get the best usage experience, we recommend you to confirm whether your phones & tablets meet the requirements below or not first before you purchase the ASIAIR Mini.

	OS Version	Phone	iPad/Tablet
<b>iOS/ipadOS</b>	12 and upper	iPhone 6s and later series	iPad/iPad Mini/iPad AIR iPad Pro
<b>Android</b>	8 and upper	All Android phones RAM $\geq$ 4GB	Tables with Android os RAM $\geq$ 4GB

Figure 6: Minimum System Requirements for ASIAIR App.

	OS Version	Phone	iPad/Tablet
iOS/iPadOS	12 and upper	iPhone 6s and later series	iPad/iPad Mini/iPad Air/iPad Pro
Android	8 and upper	All Android phones RAM $\geq$ 4GB	Tables with Android OS RAM $\geq$ 4GB

### 5.2 Supported DSLR List

The ASIAIR Mini supports a wide range of Canon and Nikon DSLR cameras. Refer to the table below for a comprehensive list of tested models and their compatibility with Live Mode and cable shutter release.

## ASIAIR Mini Supported DSLR List

Canon			Nikon		
MODEL	STATUS	Live Mode	MODEL	STATUS	Live Mode
Canon EOS 100D	Tested	Y	Nikon D3300	Tested	Y

Canon EOS 1000D	Tested	Y
Canon EOS 100D	Tested	Y
Canon EOS 1100D	Tested	Y
Canon EOS 1200D	Tested	Y
Canon EOS 1300D	Tested	Y
Canon EOS 1500D	Tested	Y
Canon EOS 1D Mark III	①	Y
Canon EOS 1D Mark IV	①	Y
Canon EOS 1D X	Tested	Y
Canon EOS 1D X Mark II	Tested	Y
Canon EOS 2000D	Tested	Y
Canon EOS 200D	Tested	Y
Canon EOS 250D	Tested	Y
Canon EOS 4000D	Tested	Y
Canon EOS 40D	Tested	Y
Canon EOS 450D	Tested	Y
Canon EOS 500D	Tested	Y
Canon EOS 50D	Tested	Y
Canon EOS 550D	Tested	Y
Canon EOS 5D Mark II	Tested	Y
Canon EOS 5D Mark III	Tested	Y
Canon EOS 5D Mark IV	Tested	Ⓝ
Canon EOS 600D	Tested	Y
Canon EOS 60D	Tested	Y
Canon EOS 650D	Tested	Y
Canon EOS 6D	Tested	Y
Canon EOS 6D Mark II	①	Y
Canon EOS 700D	Tested	Y
Canon EOS 70D	Tested	Y
Canon EOS 750D	Tested	Y
Canon EOS 760D	Tested	Y
Canon EOS 77D	Tested	Y
Canon EOS 7D	Tested	Y
Canon EOS 7D Mark II	Tested	Y
Canon EOS 800D	Tested	Y
Canon EOS 80D	Tested	Y
Canon EOS 90D	Tested	Ⓝ
Canon EOS M6 Mark II	Tested	Ⓝ
Canon EOS R	Tested	Ⓝ
Canon EOS R5	Tested	Ⓝ
Canon EOS R6	Tested	Y
Canon EOS Ra	Tested	Ⓝ
Canon EOS Rebel SL3 250D	①	Y
Canon EOS Rebel T1i 500D	Tested	Y
Canon EOS Rebel T7 2000D, 1500D	Tested	Y
Canon EOS Rebel T7i 800D / Kiss X9i	Tested	Y
Canon EOS RP	Tested	Y
Nikon D/80	Tested	Y
Nikon DSC D3	Tested ②	Y
Nikon DSC D300	Tested ②	Y
Nikon DSC D300s	① ②	Y
Nikon DSC D3200	Tested ②	Y
Nikon DSC D3300	Tested ②	Y
Nikon DSC D3400	① ②	Y
Nikon DSC D3s	Tested ②	Y
Nikon DSC D3x	Tested ②	Y
Nikon DSC D4	①	Y
Nikon DSC D5	①	Y
Nikon DSC D500	①	Y
Nikon DSC D5000	① ②	Y
Nikon DSC D5100	Tested ②	Y
Nikon DSC D5200	Tested	Y
Nikon DSC D5300	Tested	Y
Nikon DSC D5500	Tested	Y
Nikon DSC D5600	Tested	Y
Nikon DSC D600	Tested	Y
Nikon DSC D610	Tested	Y
Nikon DSC D700	Tested ②	Y
Nikon DSC D7000	Tested ②	Y
Nikon DSC D7100	Tested	Y
Nikon DSC D7200	①	Y
Nikon DSC D750	Tested	Y
Nikon DSC D7500	Tested	Y
Nikon DSC D800	Tested	Ⓝ
Nikon DSC D800E	Tested	Ⓝ
Nikon DSC D810	Tested	Ⓝ
Nikon DSC D810A	Tested	Ⓝ
Nikon DSC D850	Tested	Ⓝ
Nikon DSC D90	① ②	Y
Nikon DSC Df	①	Y
Nikon Z5	Tested	Y
Nikon Z6	Tested	Y
Nikon Z6 II	Tested	Y
Nikon Z7	Tested	Ⓝ

① Untested

② It means you need to use cable shutter release with ASIAIR Mini

Ⓝ Live Mode is not supported

#Live stack mode requires the DSLR/mirrorless camera equipping with a total pixel number less than 26M.

Figure 7: ASIAIR Mini Supported DSLR List.

**Note:** ① indicates Untested. ② indicates it means you need to use cable shutter release with ASIAIR Mini. ③ indicates Live Mode is not supported. Live stack mode requires the DSLR/mirrorless camera equipping with a total pixel number less than 26M.

### 5.3 ASIAIR Mini vs. ASIAIR Plus Feature Comparison

Understand the differences between the ASIAIR Mini and its predecessor, the ASIAIR Plus, to better utilize its

# ASIAIR Mini VS ASIAIR Plus

Feature	ASIAIR Plus	ASIAIR Mini
Live stack	Support	Support (except ASI6200)
Video mode	Support (except DSLR)	Support (except DSLR)
Multi-target mode	Support	Support
New plate solving algorithm	Support	Support
Monitor unit	Support	Support
FOV for plate solve	0.2° ~ 33°	0.2° ~ 33°
Wired LAN	Support	—
Dual band Antenna 2.4G/5G	Support	Support
20m WiFi coverage	Support	Support
Power ON/OFF switch	Support	—
Input current & voltage monitor	Support	Support
Output voltage monitor	Support	—
Power consumption monitor	Support	Support
High temperature/low voltage warning	Support	Support
SD card	Support	—
USB drives	Support	Support
eMMC	Support	Support
ASI6200 series	Support	Support
DSLR shutter release	Support	Support
Power external devices	Support	Support
USB ports	USB 3.0*2/USB2.0*2	USB 2.0*4
Type-C port	Support	Support
Installation method	via finder shoe	via finder shoe

\*In terms of live stacking, ASIAIR Mini does not support cameras with over 26MP pixels, including ASI cameras (ASI6200 and ASI461) and other DSLRs. But it works fine with ASI6200 for image capture.

Figure 8: Feature Comparison: ASIAIR Mini vs. ASIAIR Plus.

Feature	ASIAIR Plus	ASIAIR Mini
Live stack	Support	Support (except ASI6200)
Video mode	Support (except DSLR)	Support (except DSLR)
Multi-target mode	Support	Support
New plate solving algorithm	Support	Support
Monitor unit	Support	Support
FOV for plate solve	0.2° ~ 33°	0.2° ~ 33°
Wired LAN	Support	–
Dual band Antenna 2.4G/5G	Support	Support
20M WiFi coverage	Support	Support
Power ON/OFF switch	Support	–
Input current & voltage monitor	Support	Support
Output voltage monitor	Support	–
Power consumption monitor	Support	Support
High temperature/low voltage warning	Support	Support
SD card	Support	–
USB drives	Support	Support
eMMC	Support	Support
ASI6200 series	Support	Support
DSLR shutter release	Support	Support
Power external devices	Support	Support
USB ports	USB 3.0*2/USB2.0*2	USB 2.0*4
Type-C port	Support	Support
Installation method	via finder shoe	via finder shoe

## 6. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your ASIAIR Mini.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the device. Avoid using liquid cleaners or solvents, as they may damage the casing or internal components.
- **Storage:** When not in use, store the ASIAIR Mini in a cool, dry place, away from direct sunlight and extreme temperatures. Protect it from dust and moisture.
- **Cable Management:** Ensure all cables are connected securely and are not under undue strain. Avoid sharp bends or kinks in cables, which can lead to damage.
- **Firmware Updates:** Regularly check for and install firmware updates for the ASIAIR Mini via the app. Updates often include performance improvements, bug fixes, and new features.

## 7. TROUBLESHOOTING

This section provides general guidance for common issues you might encounter with your ASIAIR Mini.

- **Device Not Powering On:**
  - Verify that the 12V DC power supply is correctly connected and providing power.
  - Ensure the power adapter is functional and plugged into a live outlet.
- **Cannot Connect to ASIAIR Wi-Fi:**
  - Ensure the ASIAIR Mini is powered on and the WiFi indicator light is active.
  - Restart both the ASIAIR Mini and your mobile device.
  - Check that your mobile device's Wi-Fi is enabled and you are selecting the correct ASIAIR network.
  - Try resetting the ASIAIR Mini's network settings if issues persist (refer to advanced settings in the app or device manual for specific reset procedures).
- **Connected Devices Not Recognized:**
  - Ensure all cables (USB, DC 12V) are securely connected to both the ASIAIR Mini and the peripheral device.
  - Verify that the peripheral device is powered on and functioning independently.
  - Check the ASIAIR app for device recognition status. If a device is not listed, try reconnecting it or restarting the ASIAIR Mini.
  - Confirm compatibility of your devices with the ASIAIR Mini (refer to compatibility sections).
- **App Freezes or Crashes:**
  - Ensure your mobile device meets the minimum system requirements.
  - Close and restart the ASIAIR app.
  - Clear the app's cache or reinstall the app if necessary.
  - Ensure your ASIAIR Mini firmware and app are updated to the latest versions.

## 8. SPECIFICATIONS

Detailed technical specifications for the ZWO ASIAIR Mini.

# Structural Dimension Diagram

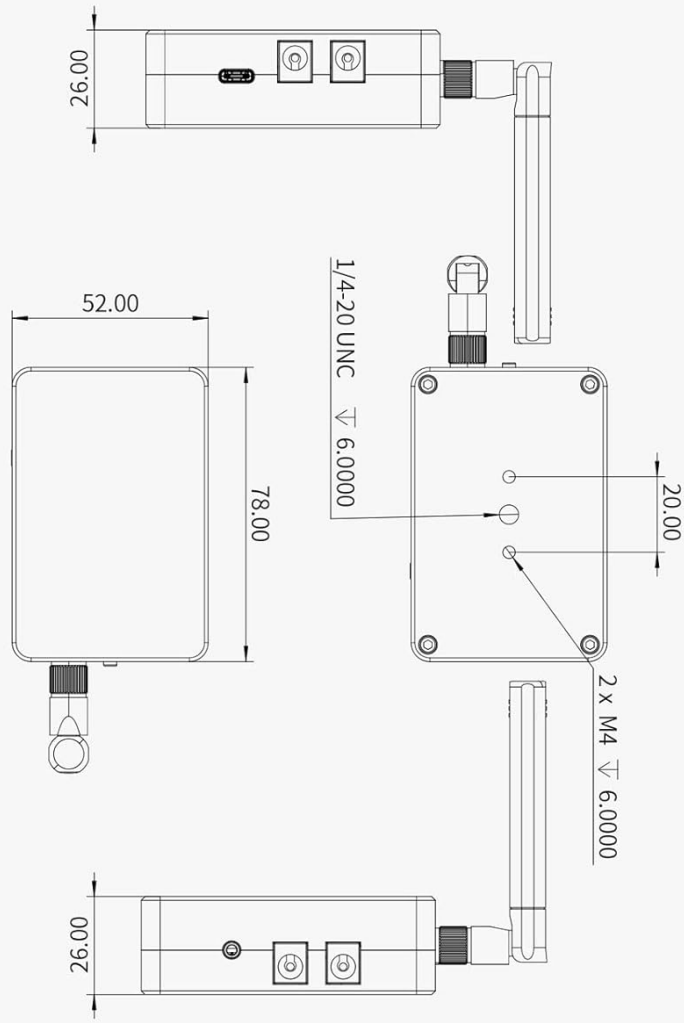


Figure 9: Structural Dimension Diagram of ASI AIR Mini.

Specification	Value
Model	ASIAIR-Mini
Package Dimensions	9.84 x 7.87 x 5.91 inches
Item Weight	2.2 pounds
ASIN	B0BV2BCV44
Date First Available	February 7, 2023
Manufacturer	Suzhou ZWO CO.,LTD
USB Ports	4 x USB 2.0
DC 12V Outputs	4
Wi-Fi	Dual band Antenna 2.4G/5G, 20M coverage
Power Input	DC 12V
Type-C Port	Yes (for data export and 5V@0.5A power input)

## 9. WARRANTY INFORMATION

This product comes with a limited manufacturer's warranty. Please refer to the official product website or contact customer support for detailed warranty terms and conditions. Keep your proof of purchase for warranty claims.

## 10. CUSTOMER SUPPORT

For technical assistance, troubleshooting, or product inquiries, please contact the manufacturer's customer support. Support contact information can typically be found on the official brand website or within the ASIAIR application.

**Manufacturer:** Suzhou ZWO CO.,LTD

Please visit the official ZWO website for the most up-to-date support resources, FAQs, and contact details.