

Quick Start Guide



iPano AllView Pro Gigapixel Camera Mount #3600



PACKAGE CONTENTS

- iPano AllView Pro mount
- 8.4V 2A battery charger
- RS232 serial cable (RS232-RJ9)
- Electronic trigger cables X7
- Vertical mounting dovetail plate
- Vertical mounting dovetail plate screws X2
- 1/4" to 3/8" Camera Convert Screw Adapter
- Hex key wrench
- Padded carrying bag
- One year limited warranty

ONLINE CONTENTS *(click under "Support Content" menu)* www.iOptron.com

- Manuals *(you will need to refer to the full manual for details on set-up and operation).*
- Tips for set up
- Mount firmware upgrade
- iPano Commander, a computer and wireless control center
- Reviews and feedback from other customers

¹ Actual contents, specifications and color may vary.

iPano AllView Pro Mount Parts



1. Height Lock
2. Primary Arm
3. Camera Mounting Platform
4. Dovetail Mounting Module
5. Chassis Bubble Level
6. Height Scale
7. Camera Level Indicator
8. Auxiliary Arm
9. Key Pad

10. Trigger Cable Port
11. Power Switch
12. DC Input (7.4V to 8.4V)
13. REMOTE Trigger Port
14. RS485 Port
15. RS232 Serial Port
16. Dovetail Saddle Locking Knob
17. Quick Release Plate Locking Knob
18. Camera Quick Release Plate

Mount Setup

- 0. Charge the battery:** The iPano AllView Pro uses an internal lithium rechargeable battery. Please fully charge the battery after receiving the mount using the included wall plug charger (**8.4V/2A**). The LED indicator remains RED during the charging process and will turn to GREEN when charge is complete.

DO NOT charge the mount with a 12V AC adapter/battery pack or a car cigarette plug. **ONLY** charge the mount using the included battery charger! Charge the mount battery before every operation.

A low battery warning (a flashing battery status indicator or beeps) will occur if the battery is low, charging the battery using a wall plug charger or a 7.4V-8.4V DC power source. You may keep using the mount while charging.

- 1. Attach the Mount:** Carefully thread the iPano mount onto your tripod and make sure it is securely tightened. The mount base has a 3/8" threaded socket. If your tripod only has a 1/4" threaded post, a 1/4" to 3/8" tripod adapter screw (included) is needed,



Figure 1

- 2. Install the Dovetail Mounting Module:** Release the Dovetail Saddle Locking Knob 16 under the Camera Mounting Platform 3. Retreat the tip of the Locking Knob 16 below the surface of the Platform. Slide the Dovetail Mounting Module 4 into the Camera Mounting Platform 3. Tighten the Locking Knob.



Figure 2

- 3. Attach the Camera:** Remove the Camera Quick Release Plate 18 from the Dovetail Mounting Module 4 by releasing the Plate Locking Knob 17. Install the Quick Release Plate 18 onto the camera tripod mounting hole and align the edges. Tighten the brass screw using a coin if needed, as shown in Figure 3.



Figure 3

Mount the camera onto the Dovetail Mounting Module 4 by inserting the Quick Release Plate 18 into the dovetail saddle. If the center of the lens of the camera **is aligned** with the tripod mounting hole, just align the zero mark on the Quick Release Plate to the one on the dovetail saddle (Figure 5). If the center of the lens of the camera **is off-centered** from the tripod mounting hole by a distance C, as indicated in Figure 4, you need to shift the zero mark on the Quick Release Plate by C to the zero mark on the dovetail saddle.

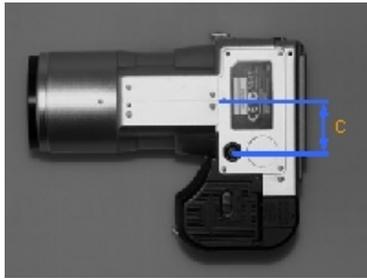


Figure 4

Turn the Quick Release Plate Locking Knob (17) to lock the camera.



Figure 5

4. **Level the Mount:** Adjust the tripod legs to level the mount by reading the Chassis Bubble Level Indicator 5 on the Mount Base, as shown in Figure 6.



Figure 6

Use arrow button ▼ or ▲ to adjust the level of Camera Mounting Platform (3) by reading the Camera Level Indicator, as shown in Figure 7.

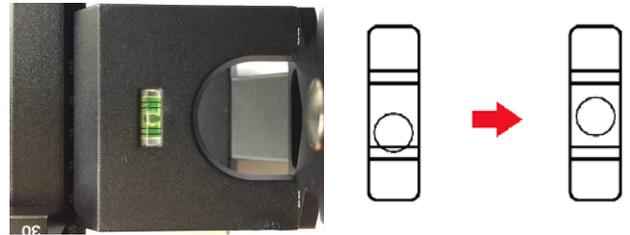


Figure 7

5. **Adjust the Camera:** When taking photographs for a stitched panorama, the entrance pupil of the camera lens needs to be kept in a constant position when the camera is rotated to point in a different direction for each shot. This point is sometimes referred to as the No-Parallax Point (NPP), which can be accomplished by adjusting the Camera Mounting Platform 3 back and forth, and Height Scale 6 up and down.



Figure 8

There are two positions for Camera Mounting Platform: 65mm and 80mm, as shown in Figure 9. If the distance from the base of the camera to the center of the lens is smaller than 65mm (see Figure 10), use the default setting (the inner scales). Otherwise, if the distance is greater than 65mm, you need to lower the Camera Mounting Platform to the 80mm position and use the outer scales.



Figure 9

Adjust Camera Height Position

Find the **height number** of the camera, the distance from the base of the camera to the center of the lens. For example, the height number of a Canon EOS 5D Mark II is 43.5mm. Release Height Locks 1 on both Primary Arm and Auxiliary Arm. Adjust the camera by moving the Camera Mounting Platform 3 up and down so that the Height Scale is set at the 43.5mm by reading the inner scale.



Figure 10

Adjust Camera Entrance Pupil Position

Adjust the camera position based on the total entrance pupil distance. This number is the sum of the camera **length number**, (the distance between the middle of the tripod mounting hole to the base of the lens base, or base for adapter tube,) and the entrance pupil distance of the lens.

For example, the length number of a Canon EOS 5D Mark II is 38.5mm. The entrance pupil distance of a Canon EF 16-35 F2.8 lens is 79mm at 16mm focal length. Therefore, the total entrance pupil distance is 38.5mm +79mm=117.5mm.



Figure 11

Slightly loosen the Dovetail Saddle Locking Knob 16. Move the Dovetail Mounting Module forward and backward so that the 117.5mm mark on the dovetail bar is aligned to the edge of the Camera Mounting Platform (refer to the inlet in Figure 11). Tighten the Dovetail Saddle Locking Screw.

Zoom lens has different entrance pupil distance at different focal length.

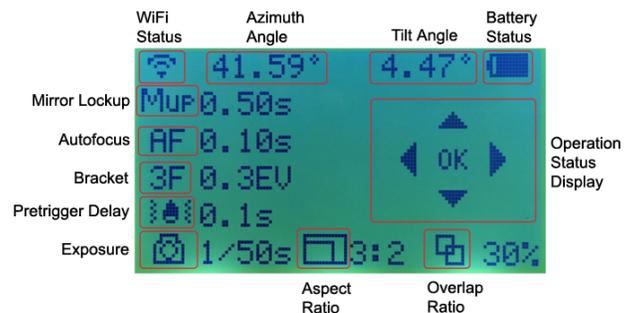
Mount Operation

Key Pads



- ▲ Camera tilt up
- ▼ Camera tilt down
- ◀ Mount slew left
- ▶ Mount slew right
- OK Confirm
- MENU Menu
- X Return

LCD Display Panel and Icons



Other icons:

- Repeat
- Burst
- Field of View
- Bulb
- Shutter Length

Operation Menu

1. First Time Use

If it is the first time operating the mount, the AllView Pro mount will ask you to set up the camera field of view (FOV).

The system will ask you to:

- Set camera's zoom, press OK;
- Align the horizon to the top of the camera view finder/display screen using the ▼ key, press OK;
- Align the horizon to the bottom of the camera view finder/display screen using the ▲ key, press OK.

Now you've set the camera FOV

2. Matrix Panorama

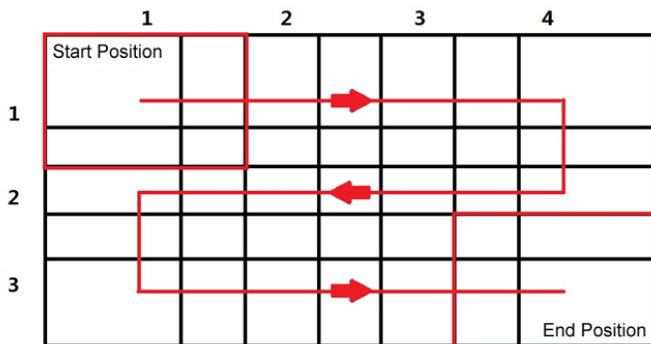
The **Matrix Panorama** will provide a rectangular panorama photo. When selecting Matrix Panorama, the system will provide 8 moving paths to choose. After choosing a moving path, move the camera to the starting diagonal corner, press OK. Then move the camera to the ending corner and press OK. The LCD will display the number of photos in each row and column the camera will take, and the total time it needs, based on the camera and mount settings.

The mount will ask if you want to preview the panorama. Press X to skip the preview or OK to preview. The mount will provide 5 positions for previewing: upper left corner, lower left corner, upper right corner, lower right corner and center position. Press OK to start taking photos after previewing. If the **Check List** is ON, the mount will ask a set of questions before take the first photo to make sure that the camera is set correctly.

Use a 3x4 Matrix Panorama as an example. The mount will take the photo with the following path, if the first path



is chosen.



The mount is set to a default 3:2 **Aspect Ratio** and 30% **Overlap**.

3. Circular Panorama

The **Circular Panorama** will provide a 360 panorama photo. Same as the Matrix Panorama, the mount can move from the start point to end point via one of eight (8) moving paths. After choosing a moving path, use the up and down button to move the camera to the starting point, press OK. Then move the camera to the ending point and press OK. The mount will calculate how many photos will be taken and if multiple paths are needed. The LCD will display the number of photos in each row and column the camera will take, and the total time it needs, based on the camera and mount settings.

The mount will ask if you want to preview the panorama. Press X to skip the preview or OK to preview. The mount will provide 5 positions for previewing: upper left corner, lower left corner, upper right corner, lower right corner and center position. Press OK to start taking photos. If the **Check List** is ON, the mount will ask a set of question to make sure that the camera is set correctly.

4. Time-lapse Photography

This **Time-lapse Photography** allows you to create time-lapse images while moving the camera. You can pan, tilt or move diagonally the camera while taking the time-lapse images. You can set the delay between each picture you are taking. *To take a time-lapse panoramas (panoramas over a period of time,) please refer to **Global Settings =>Interval Timer**.*

First move the camera to the starting position using the arrow key. Press OK to confirm. Then move the camera

to the end position. Press OK. Now you can choose either total picture numbers or angle intervals for the whole swing.

4.1. Total Number

Enter the time delays between each picture. Use the ◀ and ▶ buttons to switch between day, hour, minutes, and seconds. Use the ▲ and ▼ buttons to change the delay values where cursor is blinking. Move the cursor to **Total number** line and set the total pictures you want the camera to take. Press OK to confirm. The mount will calculate the angle intervals between each shot. Press OK to start.

4.2. Interval Degree

Enter the time delays between each picture. Use the ◀ and ▶ buttons to switch between day, hour, minutes, and seconds. Use the ▲ and ▼ buttons to change the delay values **where cursor is blinking**. **Move the cursor to Interval Degree** line and set the angle that camera will move between each picture taken. Press OK to confirm. The mount will calculate the total picture numbers. Press OK to start.

5. Customer Settings Bank

This function lets you store up to six (6) customized settings of parameters for a quick reload.

5.1. Bank

The 6 banks, numbered from A to F, are available for storing customized parameters. These parameters are AutoFocus (AF), Exposure, Mirror Lockup (Mup), Shutter Length, Repeat, Pretrigger Delay and Camera Field of View (FOV).

The cursor will be in the first line when enter this sub-menu. Use the ◀ and ▶ buttons to switch between Bank A to Bank F. Press OK to choose to **Load** the stored parameters or **Restoring Default** factory preset data.

To enter description of a customer bank, press ▲ or ▼ button to move the cursor to second line. Press OK button to enter a soft keypad. Move the cursor and press OK to enter the letter/number/sign on the cursor position. Press and HOLD the OK key to finish the entering.

To delete a character, press and hold MENU button while move the ◀ or ▶ key to the character to be deleted. Release the MENU button and press the MENU button once to complete the deleting.

To record parameters to a bank, just select the bank you like to use. Then go to settings below. At the end of the setting, the parameter will be stored in the bank you selected and it will loaded automatically next time the mount is turned on, until you change the settings or load the parameters from a different bank.

5.2. Autofocus

Turn the camera auto focus ON and OFF.

5.3. Time/Focus

If the **Autofocus** is **ON**, this will set how long the camera will take to do the auto focus. The time can be set from 0.05 seconds to 1 second, with 0.05 seconds increments.

5.4. Mirror Lock-up

Turn the camera Mirror Lock-up function ON and OFF.

5.5. Lock-up Time

If **Mirror Lock-up** is set to ON, this will set how long the mirror will be flipped up and delayed before the shutter is triggered. The delay ranges from 0.25 seconds to 3 seconds with 0.25 seconds increments.

5.6. Period/Exposure

Set the total time between the start of the shutter triggering and the next mount movement.

5.7. Shutter Length

The amount of time that shutter signal is asserted ranging from bulb (**B**), 0.1 to 8 seconds.

5.8. Shutter Feedback

This function is used to automatically detect a missed shutter trigger, hence a missed photograph at each position.

5.9. Shutter Retries

If the **Shutter Feedback** is turned ON, this function will allow you to set how many times the camera will try to trig the shutter until it takes a photo successfully. It can set to try up to 10 times.

5.10. Pretrigger Delay

This delay is between the end of the mount movement and beginning of the trigger signal to your camera. It will allow the camera to settle after mount movement. The delay time can be set between 0 to 3 seconds.

5.11. Camera Setup

This will work through you to set the camera FOV. If you have a zoom lens, you need to set the zoom first. Follow the instruction on the screen to set up the camera FOV.

6. Global Settings

6.1. Aspect Ratio

Set the ratio of the width to height of the camera system. The default setting is 3:2. You may set the

aspect ratio to 1:1, 3:2, 4:3 and 16:9, as well as customer values from 0.50:1 to 2:00:1.

6.2. Picture Overlap

Set the overlap between each photos for panorama stitch. The overlap can be selected from 25% to 75%, with 5% increments. The default setting is 30%.

6.3. Rotate Tall

Choose take the photo in landscape (normal) or portrait orientation.

6.4. Multi Picture

This function will let you set the number of photographs that will be triggered per position.

6.5. Interval Timer

This will set the mount to take a series of panoramas over a period of time. If **Disable** is selected, the mount will stop at the end of a session. If **Ext. Trigger** is selected, the mount will wait for the remote signal to start the panorama again. If **Timer** is selected, you can enter how long the mount will wait until next session is started, until you stop the mount.

6.6. Brackets

Set exposure bracketing of 1, 3, 5, 7, or 9 photographs for HDR images by working with the camera AEB (automatic exposure bracketing) firmware. Use the **EV Step Size** setting to set the separation of exposure values.

6.7. EV Step Size

Set the separation of exposure values (EVs) to 0.3, 0.7, 1.0, 1.3, 1.7 or 2.0.

6.8. Bracket Delay

Set time delay between **Brackets** to allow your camera enough time to transfer the images. The delay can be set between 0.1 and 8 seconds.

6.9. Start Del/Trig

This function will enable an external or timer delay trigger before the panorama capture begins.

6.10. Check List

If **Check List** is selected, the mount will prompt you to check the camera before panorama capture begins.

6.11. Shutter Mode

This function allows you to choose how the mount will operate the camera's shutter. If **Remote** is selected, the mount will trigger the shutter via the electronic trigger cable connected to the remote shutter port on

the camera. If **Manual** is chosen, you'll need to manually actuate the camera shutter and press the OK button on the mount to advance to the next photograph.

7. System

7.1. Language

Select system language. Currently it has **English** and **Chinese**.

7.2. Firmware Information

Display system firmware version.

7.3. Factory Reset

Reset the system to factory default value.

7.4. Wi-Fi Switch

Turn ON/OFF built-in Wi-Fi receiver.

7.5. Wi-Fi Option

Information will display the basic information of the Wi-Fi module. It can be changed through a computer via RS232 port.

Reset Wi-Fi will restart the Wi-Fi module.

Factory Wi-Fi will reset all the Wi-Fi information and settings to factory default.

7.6. Set Beep

Set when the mount will beep.

7.7. LCD Contrast

Adjust LCD display contrast.

8. Camera Parameter

For storing your camera and lens' basic parameters, such as Center Position, Camera Height, Entry Pupil Positions for the camera and lens.

9. Short Cut Key

9.1. Latest Project

To run last panorama project.

9.2. Camera Setup

To set up the camera zoom and FOV.

9.3. Goto Zero Position

Send the mount back to zero position.

9.4. Set Zero Position

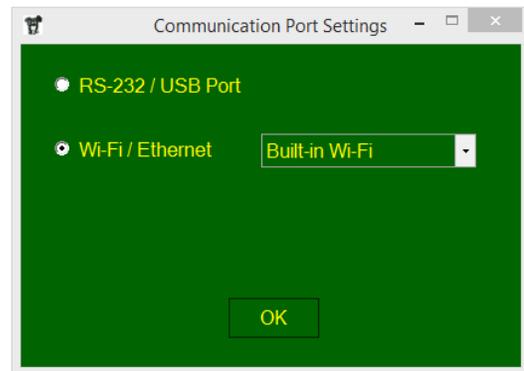
Set the zero position of the mount.

10. Computer Control

The iPano AllView Pro mount can be connected to a computer for setting up the parameter and to control the mount operation. Please refer to the online instruction for more detail information.

10.1. Connect to a Computer

Download and install **iPano Commander**. Connect the mount via RS232 port on the mount or WiFi connection. Click on downloaded iPano Commander to run it. When a Communication Port Settings screen is opened on your computer screen, select either RS232/USB Port or Wi-Fi/Ethernet based on the connection you set and click OK to connect the mount to the computer.



10.2. iPano Commander

After the mount is connected, iPano Commander will be loaded. Now you can set the parameter on your computer. Some parameter changes need select Change Setting button first before any change can be made.

Now enjoy the panorama!

iPano Commander 1.0

Mount model Alview Pro Current Progress 00000/00009

Status Stopped

Battery 45%

Coordinates
 Altitude 008.62°
 Azimuth 143.24°

Movement

Basic Parameters
 Aspect Ratio 3:2 Exposure Time 3s
 Picture Overlap 30% Shutter Length 0.2s
 Multi-Picture 6 Brackets 3
 Field of View 24.2 EV Step Size 1/3s

Advanced Parameters
 Enable Focus Time Enable Mirror Lockup Enable Shutter Feedback Pre-Trigger Delay 0.1s Enable Wi-Fi Module
 Focus Time 0.10s Lockup Time 0.50s Shutter Retries 5 Timelapse Series Disable
 Enable Check List Shutter Mode Remote Bracker Delay 0.1s Start Delay Trigger 15s

Photograph Control
 Matrix Panorama Stop Current Task Query Last Task
 Circular Panorama Pause Current Task Restart Last Task
 Timelapse Photography Zero Position Waiting for Trigger

Miscellaneous
 Firmware Info Communication Stats
 Preferences Test Shutter
 Wi-Fi Options English

IOPTRON ONE YEAR LIMITED WARRANTY

A. iOptron warrants your telescope, mount, or controller to be free from defects in materials and workmanship for one year. iOptron will repair or replace such product or part which, upon inspection by iOptron, is found to be defective in materials or workmanship. As a condition to the obligation of iOptron to repair or replace such product, the product must be returned to iOptron together with proof-of-purchase satisfactory to iOptron.

B. The proper Return Merchant Authorization (RMA) number must be obtained from iOptron in advance of return. Contact iOptron via e-mail at support@ioptron.com or call at 1.781.569.0200 to receive the RMA number to be displayed on the outside of your shipping container.

All returns must be accompanied by a written statement stating the name, address, and daytime telephone number of the owner, together with a brief description of any claimed defects. Parts or product for which replacement is made shall become the property of iOptron.

The customer shall be responsible for all costs of transportation and insurance, both to and from the factory of iOptron, and shall be required to prepay such costs.

iOptron shall use reasonable efforts to repair or replace any telescope, mount, or controller covered by this warranty within thirty days of receipt. In the event repair or replacement shall require more than thirty days, iOptron shall notify the customer accordingly. iOptron reserves the right to replace any product which has been discontinued from its product line with a new product of comparable value and function.

This warranty shall be void and of no force of effect in the event a covered product has been modified in design or function, or subjected to abuse, misuse, mishandling or unauthorized repair. Further, product malfunction or deterioration due to normal wear is not covered by this warranty.

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This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

iOptron reserves the right to modify or discontinue, without prior notice to you, any model or style telescope.

If warranty problems arise, or if you need assistance in using your telescope, mount, or controller contact:

iOptron Corporation
Customer Service Department
6E Gill Street
Woburn, MA 01801
www.ioptron.com
support@ioptron.com
Tel. (781)569-0200
Fax. (781)935-2860
Monday-Friday 9AM-5PM EST

NOTE: This warranty is valid to U.S.A. and Canadian customers who have purchased this product from an authorized iOptron dealer in the U.S.A. or Canada or directly from iOptron. Warranty outside the U.S.A. and Canada is valid only to customers who purchased from an iOptron Distributor or Authorized iOptron Dealer in the specific country. Please contact them for any warranty.