# **iX Controller MK6**

## **Installation & Operation Guide**





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iX Controller MK6 Installation & Operation Guide 30/04/2025

This manual applies for iX Controller MK6 units with the following serial numbers: ZB001076 and higher.



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iX Controller MK6 Installation & Operation Guide 1. Introduction

### 1. Introduction

### 1.1. Scope

This manual describes how to install the iX Controller MK6 as follows:

- Section 2 iX Controller MK6 Hardware Overview
- Section 3 Unboxing the iX Controller MK6
- Section 4 Connecting System Cables to the iX Controller MK6
- Section 5 Powering up the iX Controller MK6
- Section 6 iX Controller MK6 Storage
- Section 7 Operating the iX Controller MK6
- Section 8 Shutting Down the iX Controller MK6
- Section 9 Troubleshooting
- Appendix A Technical Data
- Appendix B Configuring SFP+ Ports
- Appendix C Data Storage Management
- Appendix D Connecting the iX Controller MK6 Operator Monitor Cable to the Monitor
- Appendix E Declaration of Conformity

### **1.2. Applicable Documents**

Item	Manual
Applanix AP+	APX-15 User Guide
Phase One/Applanix	GNSS Configuration Guide for PAS Systems
Phase One iX Controller MK6	Connecting to the iX Controller Using Remote Desktop Connection
Phase One iX Flight Pro	iX Flight Pro Operation Guide
Phase One iX Process	iX Process Operation Guide
Phase One iXM Cameras	Refer to your camera operation guide for your specific camera



### 2. iX Controller MK6 Hardware Overview

### 2.1. General

The iX Controller MK6 is a new generation of aerial controller. This robust command center onboard the aircraft is designed for smooth performance of geospatial project missions. A preconfigured precision GNSS AP+ card is integrated inside the controller.

The controller has the following main ports:

- ports for transferring data between the iX Controller MK6, cameras, external IMU and an antenna.
- standard aircraft power in port.
- 2 DP and 1 HDMI ports for connecting monitors.
- three Ethernet ports
- antenna port

A high-capacity data storage SSD tray (factory provided with two 2 TB or 4 TB SSD drives) can be easily accessed or removed for rapid transfer of images and telemetry data.



iX Controller MK6 Installation & Operation Guide

2. iX Controller MK6 Hardware Overview

### 2.2. Front Panel Description

The following figure and table show the iX Controller MK6 front panel items:



- 1. Antenna port
- 2. PPS OUT port
- 3. GNSS LED
- 4. AP+ LED
- 5. SSD carrier eject button
- 6. SSD carrier keylock
- 7. SSD drive activity LEDs
- 8. SSD drive carrier
- 9. COM port
- 10. On/Off pushbutton
- 11. AUX circuit breaker (power out ports)
- 12. AUX power LED
- 13. MAIN circuit breaker

- 14. MAIN power LED
- 15. 28 VDC port (power in)
- 16. IMU port
- 17. 10GbE SFP+ ports (x4)
- 18. I/O port
- 19. DP ports (x2)
- 20. AUX1Power out ports (x3)
- 21. HDMI port
- 22. USB 3 ports (x6)
- 23. Ethernet ports (x3)
- 24. AUX 2 Power out ports (x3)
- 25. SSD carrier key



### 2.3. iX Controller MK6 Power Outputs Overview

### Note

Only Phase One approved equipment should be connected to the six power out ports.

The Auxiliary power circuit breaker controls power to the six power ports. Each set of power ports can be software-controlled using iX Capture and iX Flight Pro.

### 2.4. iX Controller MK6 LEDs Overview

The iX Controller MK6 front panel LEDs are described in the following table (refer to Section 2.2 - Front Panel Description):

Description
• Green blinking - at least one satellite is being tracked.
<ul> <li>Green solid - iX Controller MK6 is powered.</li> </ul>
• Green blinking - data logging is active.
Note
Make sure that in iX Flight Pro, under <b>System Settings</b> > <b>GPS/IMU</b> , the <b>Applanix</b> <b>Logging File</b> parameter checkbox is selected.
• White solid - iX Controller is on.
• Green solid - power is supplied to iX Controller MK6 AUX power ports.
• Green solid - power is enabled to iX Controller MK6.
• Green solid - power to AUX1 power out ports is enabled.
• Red solid - overcurrent detected - power to AUX1 power out ports is disabled.
• Off - power is disabled in software.
<b>Note</b> For details on toggling the AUX1 power through iX Flight Pro, see Section 7.4.1 - Controlling iX Controller MK6 Power Ports through iX Flight Pro.
• Green solid - power to AUX2 power out ports is enabled.
• Red solid - overcurrent detected - power to AUX2 power out ports is disabled.
<ul> <li>Off - power is disabled in software.</li> </ul>
Note
For details on toggling the AUX2 power through iX Flight Pro, see Section 7.4.1 - Controlling iX Controller MK6 Power Ports through iX Flight Pro.



2. iX Controller MK6 Hardware Overview

### 2.5. Configuration Options

The iX Controller MK6 with its internal GNSS supports connection to the following IMUs for a range of orientation accuracies:

- Applanix IMU 57 external
- Applanix IMU 69 external
- Applanix IMU 79 internal
- Applanix IMU 82 external
- Applanix IMU 91 external
- Applanix IMU 93 external
- Applanix IMU 95 external

### Note

- Each of the above configurations requires a license.
- All GNSS-enabled configurations are provided with the Trimble AV39 FAA certified GNSS antenna.
- All GNSS-enabled configurations are provided with an interface cable between the iX Controller MK6 and the external IMU.
- If you are using an external IMU, it should be mounted on the iX Controller MK6 upper plate as follows:
  - X axis towards flight direction
  - Y axis towards the right wing

If you cannot mount the IMU in these directions, you need to configure the rotation around the Z axis accordingly as described in the GNSS Configuration Guide for PAS Systems.

- You can also use the following external GNSS solutions:
  - Applanix POS AVX 210
  - Applanix POS AV V6

For more information, refer to the GNSS Configuration Guide for PAS Systems.

### 2.6. Software

### 2.6.1 iX Flight Pro

iX Flight Pro uses iX Plan data to manage and guide the precise execution of aero-photography flight. Using the pilot and operator monitors, the pilot can easily maintain precise trajectory by following altitude and localizer instructions, while the operator manages the flight, controls the order of passes, tags images and start/stops image collection.

For detailed information on using iX Flight Pro, see the iX Flight Pro Operation Guide.



### Note

- iX Flight Pro and license is available from Phase One.
- To process images captured with iX Flight Pro, use iX Process available from Phase One.



3. Unboxing the iX Controller MK6

### 3. Unboxing the iX Controller MK6

Verify that all parts were supplied according to the specific packing list for your iX Controller MK6.

### 3.1. Product Identification

To enable support for your iX Controller MK6, you must identify and record the serial number located on the left panel.



4. Connecting System Cables to the iX Controller MK6

### 4. Connecting System Cables to the iX Controller MK6

This section describes how to connect the power and various system components to the iX Controller MK6.

### Warning

The power ports support only equipment approved Phase One, such as cameras, external GNSS and monitors. Other equipment must not be connected to the iX Controller MK6.

### 4.1. iX Controller MK6 Power Cable (P/N 73286000)

### Warning

- The iX Controller MK6 has been tested and certified for connection to a 28 VDC power supply. Installation on aircraft with other power supplies is not recommended unless special measures are taken to provide the iX Controller MK6 with a 28 VDC supply.
- On the aircraft side, a 15 A circuit breaker must be installed on the 28 VDC power supply.

### To connect the iX Controller MK6 power cable to the iX Controller MK6:

1. Connect the open end of the power cable to the aircraft power supply as follows:

### Caution

Before connecting the power cable to the aircraft power supply, verify voltage polarity.

PAS Power Cable Polarity			
Wire	Polarity		
Red	+		
Black	GND		

1. Connect the power cable with the LEMO connector to the iX Controller MK6 28 VDC port.





- iX Controller MK6 Installation & Operation Guide
- 4. Connecting System Cables to the iX Controller MK6

### 4.2. Grounding Cable

#### Connect a grounding cable (not supplied by Phase One) as follows:

1. Connect one end of the grounding cable to the uncoated underside of one of the attachment panels.



2. Connect the other end to the aircraft frame.

### 4.3. Removing the Cable Strain Relief Bracket Front Plates

The Cable Strain Relief Bracket secures the cable hoods to the iX Controller MK6.

Before connecting or removing any cables, you must loosen the Cable Strain Relief Bracket front plates.

### Note

It is recommended to connect all required cables (cameras, pilot monitor, operator monitor, keyboard/mouse) to the iX Controller MK6 before returning the Cable Strain Relief Bracket front plates to their position.



- iX Controller MK6 Installation & Operation Guide
- 4. Connecting System Cables to the iX Controller MK6

### To loosen the Cable Strain Relief Bracket front plates:

- Locate the thumb screws on the left and right front plates of the strain relief bracket.
- 2. Rotate the thumb screw counterclockwise until the front plates become loose but do not detach completely.
- Left front plate once loosened, rotate the left front plate outwards to allow free access to the cables.
- Right front plate once loosened slightly, slide the right front plate to the right to allow free access to the cable.



### 4.4. Connecting iX Controller MK6 - iX Camera Cables

### 4.4.1 iX Controller MK6 - Camera Power Cable (P/N 70364000)

The iX Controller MK6 - Camera power cable provides power to the iX camera.

### To connect iX Controller MK6 - Camera power cables:

- 1. Connect one end of the iX Controller MK6
  - Camera power cable to an iX Controller MK6 power port.



- 2. Connect the other end of the cable to the iX camera power port.
- 3. Repeat for additional cameras.



- iX Controller MK6 Installation & Operation Guide
- 4. Connecting System Cables to the iX Controller MK6

### 4.4.2 iX Controller MK6 - Camera I/O Cables (P/N 75010000)

The iX Controller MK6 - Camera I/O cable transfers trigger, camera ready, black reference and MEP signals between the iX Controller MK6 and the iX camera. In addition, it provides metadata to the camera.

#### To connect the iX Controller MK6 - Camera I/O cables:

 Connect one end of the iX Controller MK6
 - Camera I/O cable to the iX Controller MK6 I/O port.



2. Connect the other end to the camera left I/O port.

### Note

For I/O connections on additional cameras, use a Phase One camera to camera multisync cable (PN 75007000) ordered separately.

### 4.4.3 iX Controller MK6 - Camera Images/Data Cables

You can transfer the images and associated data between iX Controller MK6 and the iX cameras for storage on the SSD using either of the following methods:

- SFP+ cables (not supplied by Phase One) up to 4 cameras can be connected.
- USB cables

#### Note

Only use one method for transferring images – either SFP+ or USB. Do not use both methods simultaneously.



- iX Controller MK6 Installation & Operation Guide
- 4. Connecting System Cables to the iX Controller MK6

### 4.4.3.1 Connecting SFP+ Cables

#### To connect the iX Controller MK6 - Phase One Camera SFP+ cables:

- 1. Connect one end of the iX Controller MK6
- Phase One Camera SFP+ cable to the iX Controller MK6 SFP+ port.



2. Connect the other end to the camera SFP+ port.

### Note

For details on IP configuration of the SFP+ and camera ports, see Appendix B - Configuring SFP+ Ports

### 4.4.3.2 Connecting USB Cables (P/N 73234000)

The iX Controller MK6 - Camera USB cable (supplied with each camera) transfers control data from the iX Controller MK6 and the camera, and images from the camera for storage in the iX Controller MK6.

#### To connect iX Controller MK6 - Camera USB 3 cables:

1. Connect up to four USB 3 camera cables as required to the USB 3 ports.



2. Connect the other end of each USB 3 cable to a Phase One aerial camera.

### 4.5. Connecting Monitor Cables

Phase One recommends ordering and using the pilot and operator monitors available from Phase One. The monitors are supplied with the following cables for connection to the iX Controller MK6:

- iX Controller MK6 Pilot Monitor cable
- iX Controller MK6 Operator Monitor cable

The following sections show power and communication connections for the pilot and operator monitors.



- iX Controller MK6 Installation & Operation Guide
- 4. Connecting System Cables to the iX Controller MK6

### 4.5.1 iX Controller MK6 - Pilot Monitor Cable (P/N 75098490)

#### To connect the iX Controller MK6 - Pilot Monitor cable:

- 1. Connect the cable end with 2 connectors to the pilot monitor power and video ports (video cable includes USB signal).
- 2. Connect the cable end with 3 connectors to an iX Controller MK6 power port, HDMI port and one of the USB 3 ports.



### 4.5.2 iX Controller MK6 - Operator Monitor Cable (P/N 75098530)

### Note

If the operator monitor cable is not connected to the operator monitor, see Appendix D - Connecting the iX Controller MK6 - Operator Monitor Cable to the Monitor.

1. Connect the cable end with 3 connectors to an iX Controller MK6 power port, DP port and one of the USB 3 ports.



### 4.6. Keyboard and Mouse

A Bluetooth keyboard with touchpad is provided with the iX Controller MK6.

#### To connect the keyboard to the iX Controller MK6:

1. On the iX Controller MK6, connect the keyboard's Bluetooth dongle to a USB port.





- iX Controller MK6 Installation & Operation Guide
- 4. Connecting System Cables to the iX Controller MK6

### 4.7. Closing the Cable Strain Relief Bracket Front Plates

### To close the Cable Strain Relief Bracket front plates:

1. Return the front plates to their position and secure the front plates using the thumb screws. The front plates should secure the cable hoods.

### Note

For the cable hoods to be secure, you may need to adjust the distance between each front plate and the iX Controller MK6 as follows:

- a. For the front plate that requires adjustment and open the screws securing it to the bottom plate.
- b. Adjust the distance as required.
- c. Close and tighten the screws securing the front plate to the bottom plate.





### 4.8. iX Controller MK6 - Mount COM Cable (P/N 73260000 / 73285000 / 73293000)

The iX Controller MK6 – Mount COM I/O cable transfers SOMAG V2 protocol commands and data between the mount and iX Flight Pro running on the iX Controller MK6.

### To connect the iX Controller MK6 - Mount COM cable:

 Connect one end of the iX Controller MK6
 – Mount COM cable to the iX Controller MK6 COM port.



2. Connect the other end to the mount INTERFACE port.

### 4.9. External IMU

If you are using an external IMU (see Section 2.5 - Configuration Options), you must connect it to the iX Controller MK6 using the cable supplied with the external IMU.

### To connect an external IMU to the iX Controller MK6:

1. Connect one end of the IMU cable to the IMU.



2. Connect the other end of the IMU cable to the iX Controller MK6 IMU port.



- iX Controller MK6 Installation & Operation Guide
- 4. Connecting System Cables to the iX Controller MK6

### 4.10. PPS Output

The internal GNSS provides a pulse-per-second (PPS) time synchronization output mark.

#### To use this signal:

 Connect the iX Controller MK6 PPS output cable (73263000) to the iX Controller MK6 PPS OUT port.



### iX Controller MK6 PPS Output Cable

Wire	Pin	Voltage	Description
Orange	1	PPS_OUT	PPS (Pulse Per Second) output is the signal that indicates the integer epoch of UTC/GPS time. It is a 1 msec wide, active low 5 V pulse with a
Groop	2	GND	Ground
Blue	5	AUX_Event	AUX_Event is the time marker of external pulses. It captures the exact
			time of the external event initiated by a sensor. Event inputs are 3.3 V $$
			LVTTL inputs, but 5 V tolerant.
Gray	8	GND	Ground
Black	9	GND	Ground

### 4.11. Antenna Cable (P/N 76014600)

### To connect the antenna to the iX Controller MK6:

1. Connect the antenna cable (supplied with antenna) to the Antenna port.





iX Controller MK6 Installation & Operation Guide

5. Powering up the iX Controller MK6

### 5. Powering up the iX Controller MK6

### To power up the iX Controller MK6:

- 1. Push the MAIN circuit breaker. The MAIN power LED turns on.
- 2. Press the On/Off pushbutton. The iX Controller MK6 powers up.
- 3. When the Windows login window appears, log in using the following credentials:
  - User name: user
  - No password required.

### Note

To remotely login to the iX Controller MK6, see Connecting to the iX Controller Using Remote Desktop Connection available for download at <a href="https://www.phaseone.com/download-categories/geo-guides-documentation/">https://www.phaseone.com/download-categories/geo-guides-documentation/</a>



### 6. iX Controller MK6 Storage

### 6.1. Disk Management

The iX Controller MK6 storage consists of a built-in frame with a removable carrier containing two SSD drives. The drives store the images captured by cameras connected to the iX Controller MK6.

The carrier front panel contains the following LEDs:

LED	Color	State	Description	
Drive power	Green	Solid	The drive is powered on.	
Drive activity	Amber	Blinking	The drive is being accessed by the iX Controller MK6.	

The drives are assigned the following drive letters:

- D top drive
- E bottom drive

### Note

For information on transferring data from the SSDs to the processing computer, see the iX Process Operations Guide

### 6.2. Locking the Carrier

### Note

The carrier must be locked with the SSD carrier key for the iX Controller MK6 to recognize the drives.

To lock the carrier in the SSD drive bay frame:

### Note

The SSD carrier key is stored on the left side of the iX Controller MK6 front panel.





iX Controller MK6 Installation & Operation Guide 6. iX Controller MK6 Storage

 Insert the SSD carrier key into the SSD carrier keylock and turn it 90° clockwise. The yellow and green SSD drive LEDs turn on momentarily and the green LED remains on.



An additional frame is provided with the iX Controller MK6. This frame should be installed in the computer used for post-flight processing. You can then transfer the carrier with its SSD drives between the iX Controller MK6 and the processing computer.

### Note

Additional carriers (with or without SSD drives) with SATA or USB 3 based frames can be ordered through your Phase One sales representative.

### 6.3. Removing the SSD Drive Carrier

#### To remove the SSD drive carrier from the iX Controller MK6:

- 1. Shutdown the iX Controller MK6 as described in Section 8 Shutting Down the iX Controller MK6.
- 2. Insert the SSD carrier key into the SSD carrier keylock and turn it 90° counterclockwise.
- 3. Push the SSD carrier eject button once to release the button, and again to eject the carrier from the frame.
- 4. Gently remove the SSD carrier from the iX Controller MK6.

### 6.4. Inserting the SSD Drive Carrier

#### To insert the SSD drive carrier into the iX Controller MK6:

- 1. Shutdown the iX Controller MK6 as described in Section 8 Shutting Down the iX Controller MK6.
- 2. If the SSD carrier eject button is protruding, push it all the way in.
- 3. Gently insert the SSD carrier into the iX Controller MK6.
- 4. Insert the SSD carrier key into the SSD carrier keylock and turn it 90° clockwise.
- 5. Power up the iX Controller MK6 as described in Section 5 Powering up the iX Controller MK6
- 6. Verify that the green SSD drive LED turns on.



### 7. Operating the iX Controller MK6

### 7.1. Powering Equipment

### To activate equipment connected to the iX Controller MK6:

1. Push the AUX circuit breaker. The AUX power LED turns on.

### To deactivate equipment connected to the iX Controller MK6:

1. Pull out the AUX circuit breaker. The AUX power LED turns off.

### 7.2. Using iX Flight Pro

- 1. If you purchased a license and installed it: on the operator monitor run iX Flight Pro.
- 2. Follow instructions for setup and use of iX Flight Pro as described in the iX Flight Pro Operation Guide.

### 7.3. Using iX Capture

- 1. On the operator monitor, run iX Capture.
- 2. Follow instructions for setup and use of iX Capture as described in the iX Capture User Guide available for download at: https://www.phaseone.com/download-categories/geo-guides-documentation/

### 7.4. Controlling iX Controller MK6 Power Ports

### 7.4.1 Controlling iX Controller MK6 Power Ports through iX Flight Pro

Through iX Flight Pro, you can control both sets of iX Controller MK6 power ports.

### To control power to the power ports through iX Flight Pro:

- 1. Navigate to Camera Settings.
- 2. Select or clear the checkboxes as follows:
  - Accessories Power to toggle AUX1 power.
  - Camera to toggle AUX2 power.

### 7.4.2 Controlling iX Controller MK6 Power Ports through iX Capture

Through iX Capture, you can control both sets of iX Controller MK6 power ports.

### To control power to the power ports through iX Capture:

- 1. Navigate to System > Settings.
- 2. Select or clear the AUX1 and/or AUX2 checkboxes.



### 8. Shutting Down the iX Controller MK6

### Warning

To avoid any damage to the iX Controller MK6 when shutting it down, make sure you follow the following procedure.

### To shut down the iX Controller MK6:

- 1. Perform **one** of the following:
  - On iX Controller MK6, press the On/Off pushbutton.

OR

• On the operator monitor, shut down Windows.

### Warning

Make sure you shut down Windows properly before powering down the iX Controller.

2. After the On/Off pushbutton white LED turns off: on the iX Controller MK6, pull the **MAIN** circuit breaker out. The **MAIN** power LED turns off.



### 9. Troubleshooting

### 9.1. General Faults

The following table details how to troubleshoot common iX Controller MK6 faults.

Faults	Solution
Cannot close iX Capture with mouse.	On the keyboard, press Alt+F4.
iX Controller MK6 MAIN Power LED is on, but Windows 10 does not appear.	Press the On/Off pushbutton and verify that pushbutton white LED is on.
The HW trigger is grayed out / GPS GUI windows does not come up	Restart iX Capture.
GPS does not lock onto satellites.	Check antenna cable.
SSD drive is not recognized.	Make sure that SSD is properly inserted and locked (see Section 6.4 - Inserting the SSD Drive Carrier).

### 9.2. iX Controller MK6 POST Beep Codes

The following table lists the iX Controller MK6 POST (Power On Self-Test) beep codes issued by the motherboard.

POST BeepCode	Description	
1	Normal POST, iX Controller MK6 is OK.	
3	Memory not installed	
5	No console output devices found	



### Appendix A. Technical Data

### A.1 Physical Dimensions

- Width: 310 mm / 12.2 in
- Height: 130 mm / 5.1 in
- Depth: 230 mm / 9.1 in

### A.2 iX Controller MK6 Weight

• Weight: 5.4 kg / 11.9 lb

### A.3 Power Input Specifications

### A.3.1 Power Requirements

- Voltage: 24 30 VDC
- Maximum current: 20 A

### A.3.2 Power Consumption

• Controller, four cameras and external IMU (without mount connected): 250 W (max)

### Note

For power consumption data in PAS systems, refer to the operation guide of your specific system.



### Appendix B. Configuring SFP+ Ports

You must configure each iX Controller MK6 SFP+ port and its corresponding camera SFP+ port on separate subnets with unique IP addresses within their respective subnets. This prevents IP conflicts and ensures smooth network communication.

### Use the following example as a reference:

iX Controller SFP+ Port Number	iX ControllerSFP+ Port IP	Camera IP
1	10.10.10	10.10.10.11
2	10.10.20.10	10.10.20.11
3	10.10.30.10	10.10.30.11
4	10.10.40.10	10.10.40.11

### 9.3. Configuring SFP+ Ports on iX Controller

#### To configure the iX Controller SFP+ ports:

- 1. On the iX Controller, in Windows, open the Control Panel.
- 2. Click Network and Internet.
- 3. Click Network Connections.
- 4. Click Change Adapter settings.
- Validate that the network connections representing the ports are named as marked on the iX Controller front panel as shown at right.



If necessary:

- a. Right-click a connection.
- b. Click Rename.
- c. Enter the required name.





iX Controller MK6 Installation & Operation Guide Appendix B. Configuring SFP+ Ports

### 6. For each port perform the following:

- a. Right-click the connection.
- b. Click Properties.



c. Click Internet Protocol Version 4 (TCP/IPv4) and click Properties.

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**Ethernet Properties** 

Networking Sharing	
Connect using:	
Intel(R) Ethemet Connection (2) I219-LM	
Configure	]
This connection uses the following items:	
🗹 🐙 QoS Packet Scheduler 🛛 🔺	
Ridge Driver	
Internet Protocol Version 4 (TCP/IPv4)	
L Microsoft Network Adapter Multiplexor Protocol	
Microsoft LLDP Protocol Driver	
Internet Protocol Version 6 (TCP/IPv6)	
Link-Layer Topology Discovery Responder	
< >	
	_
Install Uninstall Properties	1
Install Uninstall Properties	1
Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	
Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	



 $\times$ 

- d. In IP address: enter the following × Internet Protocol Version 4 (TCP/IPv4) Properties addresses: • For port 1: 10.10.10.10 General You can get IP settings assigned automatically if your network supports • For port 2: 10.10.20.10 this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings. • For port 3: 10.10.30.10 Obtain an IP address automatically • For port 4: 10.10.40.10 Use the following IP address: IP address: e. In Subnet mask: enter the following 10 . 10 . 10 . 10 address for all connections: Subnet mask: 255.255.255.0 255.255.255.0 Default gateway: f. Click OK. g. Click Close. Obtain DNS server address automatically Ouse the following DNS server addresses: Preferred DNS server: Alternate DNS server: Validate settings upon exit Advanced... OK Cancel
- 7. Close the Windows Control Panel.
- 8. Press Windows + R, type cmd, and hit Enter to open the Command Prompt.
- 9. In the Command Prompt, type ipconfig /all and press Enter.
- 10. For each port you configured, confirm that the following details are correct:
  - IPv4 Address matches the settings listed above.
  - Subnet Mask matches the settings listed above.

### 9.4. Configuring SFP+ Ports on Cameras

#### Note

This section assumes you are familiar with iX Flight Pro. For details, see the latest iX Flight Pro Operation Guide.

### 9.4.1 Configuring a Camera Currently Configured for 10G Connection

#### To configure a camera already configured for a SFP+ (Ethernet) connection:

- 1. Using a suitable SFP+ module and cable, connect the Phase One camera to a iX Controller SFP+ port.
- 2. Run iX Flight Pro.
- 3. In Camera Settings, click Add Camera.



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- 4. In the IP Address window that appears, enter the IP address as follows:
  - For a camera connected to iX Controller SFP port 1: 10.10.10.11
  - For a camera connected to iX Controller SFP port 2: 10.10.20.11
  - For a camera connected to iX Controller SFP port 3: 10.10.30.11
  - For a camera connected to iX Controller SFP port 4: 10.10.40.11
- 5. Click OK.
- 6. On the iX Controller:
  - a. In Windows, open Control Panel.
  - b. Click Network and Internet.
  - c. Click Network Connections.
  - d. Click Change Adapter settings.
  - e. Make sure that the connection for that iX Controller SFP+ port is working, as indicated by the

computer icon with a cable 💘 (not 📌 or a warning sign ).

### 9.4.2 Configuring a Camera Currently Configured for USB Connection

#### To configure a camera currently configured for a USB connection to use an SFP+ (Ethernet) connection:

- 1. Using a USB cable supplied with your Phase One system, connect the Phase One camera to an iX Controller USB port.
- 2. Run iX Flight Pro.
- 3. In **Camera Settings**, under **Ethernet**, configure the following:
  - 10G Enable
  - IP address enter the following addresses:
    - For a camera connected to iX Controller SFP port 1: 10.10.10.11
    - For a camera connected to iX Controller SFP port 2: 10.10.20.11
    - For a camera connected to iX Controller SFP port 3: 10.10.30.11
    - For a camera connected to iX Controller SFP port 4: 10.10.40.11
  - Netmask enter the following address for all connections: 255.255.255.0
  - DHCP No
- 4. In Apply Now, click Apply.

Ethernet		
10G	Enable	$\equiv$
Static Setup	Yes	≡
IP Address	10 . 10 . 10 . 11	Ξ
Netmask	255 . 255 . 255 . 0	≡
Gateway	· · · ·	Ξ
DHCP	No	Ξ
DHCP Address	· · · ·	Ξ
Setup Status	Changed	Ξ
Apply Now	Apply	Ξ





iX Controller MK6 Installation & Operation Guide Appendix B. Configuring SFP+ Ports

- 5. Disconnect the USB cable from the iX Controller and from the camera.
- 6. Using a suitable SFP+ module and cable, connect the Phase One camera to the correct iX Controller SFP+ port (as per the camera IP address as described above).
- 7. On the iX Controller:
  - a. In Windows, open Control Panel.
  - b. Click Network and Internet.
  - c. Click Network Connections.
  - d. Click Change Adapter settings.
  - e. Make sure that the connection for that iX Controller SFP+ port is working, as indicated by the

computer icon with a cable 💘 (not 🐙 or a warning sign ).



### Appendix C. Data Storage Management

### C.1 Replacing SSD Drives

The iX Controller MK6 is factory provided with 2 x 2TB or 2 x 4TB SSD drives installed in a removable carrier.

You can replace the SSDs as required. To achieve optimal performance, both SSDs should have a high writing speed (>500 MB/S). Drive capacities can be different.

### To replace the SSD drives:

- 1. Shutdown the iX Controller MK6 as described in Section 8 Shutting Down the iX Controller MK6.
- 2. Remove the carrier from the iX Controller MK6 as described in Section 6.3 Removing the SSD Drive Carrier.
- 3. Remove both cover screws at the rear of the carrier.



4. Slide the carrier out from the carrier cover.



5. Remove all screws securing the SSD drives to the carrier.



6. Replace the SSD(s) in the carrier.



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- 7. Secure the SSD(s) to the carrier.
- 8. Slide the cover back on to the carrier and secure it with the cover screws.
- 9. Insert the carrier into the iX Controller MK6 as described in Section 6.4 Inserting the SSD Drive Carrier.



# Appendix D. Connecting the iX Controller MK6 - Operator Monitor Cable to the Monitor

### Note

If the operator monitor cable is not connected to the operator monitor, perform the procedure in this appendix.

The iX Controller MK6 – Operator Monitor Cable is connected to the operator monitor through the cable bracket on the rear of the monitor.

### To connect the iX Controller MK6 - Operator Monitor Cable to the operator monitor:

- 1. Locate the cable bracket on the rear panel of the operator monitor.
- 2. Using a 2 mm Allen key, remove all three screws securing the cover to the cable bracket.
- 3. Remove the cover.





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- 4. Insert the iX Controller Operator Monitor cable into the cable bracket and connect the following connectors:
  - HDMI
  - USB
  - Power



- 5. Place the cover on the housing.
- 6. Replace the three screws securing the cover to the cable bracket as follows:
  - a. Place a drop of Loctite 222 on the screw thread and insert the screw in position.
  - b. Tighten the screw with a torque of 60 cNm.





### Appendix E. Declaration of Conformity



#### EU Declaration of Conformity

Phase One A/S issues this Declaration of Conformity under our sole responsibility, covering the following product(s):

Product:	Phase One	iX Controller
Manufactur	er:Phase One	A/S
Models:	Phase One	iX Controller mk 6
	Phase One	iX Controller mk 6 OEM

The product is in conformity with the following standards and/or other normative documents:

EMC:

EN 61000-6-3:2020, EN 61000-6-1:2019 EN 55035:2017 + A1:2015, EN 55032:2015

FCC CFR 47 Part 15:2017 subpart B, class A ANSI C63.4:2014 ICES-003:2020 issue 7 CISPR 32, AS/NZS CISPR 32:2012 VCCI Technical Requirements, V-3/2016.11

#### Environmental:

RTCA/DO-160G Environmental Conditions and Test Procedures for Airborne Equipment

RoHS:

Article 4 (1)

Technical Documentation relevant to the product is available from:

Phase One, Roskildevej 39, DK-2000 Frederiksberg, Denmark

Frederiksberg, Denmark, March 14, 2024

Morten Bruun-Larsen VP R&D and Quality

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