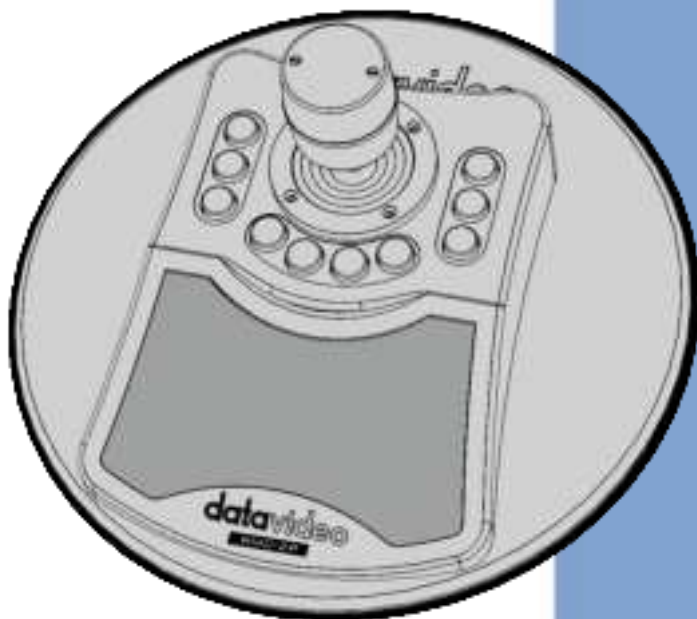


datavideo



CAMERA CONTROLLER RMC-2P

Instruction Manual

www.datavideo.com

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Disclaimer of Product and Services

The information offered in this instruction manual is intended as a guide only. At all times, Datavideo Technologies will try to give correct, complete and suitable information. However, Datavideo Technologies cannot exclude that some information in this manual, from time to time, may not be correct or may be incomplete. This manual may contain typing errors, omissions or incorrect information. Datavideo Technologies always recommend that you double check the information in this document for accuracy before making any purchase decision or using the product. Datavideo Technologies is not responsible for any omissions or errors, or for any subsequent loss or damage caused by using the information contained within this manual. Further advice on the content of this manual or on the product can be obtained by contacting your local Datavideo Office or dealer.

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Warnings and Precautions

1. Read all of these warnings and save them for later reference.
2. Follow all warnings and instructions marked on this unit.
3. Unplug this unit from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this unit in or near water.
5. Do not place this unit on an unstable cart, stand, or table. The unit may fall, causing serious damage.
6. Slots and openings on the cabinet top, back, and bottom are provided for ventilation. To ensure safe and reliable operation of this unit, and to protect it from overheating, do not block or cover these openings. Do not place this unit on a bed, sofa, rug, or similar surface, as the ventilation openings on the bottom of the cabinet will be blocked. This unit should never be placed near or over a heat register or radiator. This unit should not be placed in a built-in installation unless proper ventilation is provided.
7. This product should only be operated from the type of power source indicated on the marking label of the AC adapter. If you are not sure of the type of power available, consult your Datavideo dealer or your local power company.
8. Do not allow anything to rest on the power cord. Do not locate this unit where the power cord will be walked on, rolled over, or otherwise stressed.
9. If an extension cord must be used with this unit, make sure that the total of the ampere ratings on the products plugged into the extension cord do not exceed the extension cord's rating.
10. Make sure that the total amperes of all the units that are plugged into a single wall outlet do not exceed 15 amperes.

11. Never push objects of any kind into this unit through the cabinet ventilation slots, as they may touch dangerous voltage points or short out parts that could result in risk of fire or electric shock. Never spill liquid of any kind onto or into this unit.
12. Except as specifically explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks, and will void your warranty. Refer all service issues to qualified service personnel.
13. Unplug this product from the wall outlet and refer to qualified service personnel under the following conditions:
 - a. When the power cord is damaged or frayed;
 - b. When liquid has spilled into the unit;
 - c. When the product has been exposed to rain or water;
 - d. When the product does not operate normally under normal operating conditions. Adjust only those controls that are covered by the operating instructions in this manual; improper adjustment of other controls may result in damage to the unit and may often require extensive work by a qualified technician to restore the unit to normal operation;
 - e. When the product has been dropped or the cabinet has been damaged;
 - f. When the product exhibits a distinct change in performance, indicating a need for service.

Warranty

Standard Warranty

- Datavideo equipment are guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. If the purchase date is unknown, the product warranty period begins on the thirtieth day after shipment from a Datavideo office.
- All non-Datavideo manufactured products (product without Datavideo logo) have only one year warranty from the date of purchase.

- Damage caused by accident, misuse, unauthorized repairs, sand, grit or water is not covered under warranty.
- Viruses and malware infections on the computer systems are not covered under warranty.
- Any errors that are caused by unauthorized third-party software installations, which are not required by our computer systems, are not covered under warranty.
- All mail or transportation costs including insurance are at the expense of the owner.
- All other claims of any nature are not covered.
- All accessories including headphones, cables, and batteries are not covered under warranty.
- Warranty only valid in the country or region of purchase.
- Your statutory rights are not affected.

Three Year Warranty

- All Datavideo products purchased after July 1st, 2017 are qualified for a free two years extension to the standard warranty, providing the product is registered with Datavideo within 30 days of purchase.
- Certain parts with limited lifetime expectancy such as LCD panels, DVD drives, Hard Drive, Solid State Drive, SD Card, USB Thumb Drive, Lighting, Camera module, PCIe Card are covered for 1 year.
- The three-year warranty must be registered on Datavideo's official website or with your local Datavideo office or one of its authorized distributors within 30 days of purchase.



Disposal



For EU Customers only - WEEE Marking

This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled

in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

CE Marking is the symbol as shown on the left of this page. The letters "CE" are the abbreviation of French phrase "Conformité Européene" which literally means "European Conformity". The term initially used was "EC Mark" and it was officially replaced by "CE Marking" in the Directive 93/68/EEC in 1993. "CE Marking" is now used in all EU official documents.



1. Product Overview

The Datavideo RMC-2P serves as an uncomplicated yet versatile camera controller designed specifically for managing Datavideo PTZ series cameras through the DVIP protocol. It supports up to 4 preset positions for each connected camera. The preset buttons give you direct access to the pre-saved camera positions. Additionally, the joystick facilitates the PTZ camera panning, tilting and zooming, offering a comprehensive and intuitive user experience. To further enhance user control, the RMC-2P incorporates FAST, MID and SLOW buttons so that you can change the camera's PTZ speed by simply pressing one of these buttons.

Features

- The RMC-2P is compatible with the TPC-700 or iCAST MINI through an adapter cable connected to its USB interface.
- It can be controlled using the DVIP Protocol.
- Supports PoE (PD) IEEE 802.3 af Power over Ethernet Standard.
- Capable of controlling up to 3 cameras.
- Supports up to 4 preset positions for each connected camera.
- Features a 3-axis joystick designed for controlling PTZ (Pan, Tilt and Zoom) camera positions.

2. Connections and Controls

Control Panel



Joystick

Push the three-axis joystick right/left and up/down to respectively pan and tilt the PTZ camera. Rotate or twist the joystick right or left to zoom in or out on an image.

Camera Selection Buttons (CAM 1/2/3)

The RMC-2P allows you to control up to 3 cameras. Press CAM1, CAM2 or CAM3 button to select one of the connected cameras. The buttons should illuminate in red when pushed. Steps to assign cameras to the CAM buttons are outlined as follows:

Scan the network for connected cameras (CAM1 + FAST)

Simultaneously press and hold the CAM1 and FAST buttons and while holding these buttons, connect power via the USB Type C interface to start the RMC-2P in camera scan mode.

When in camera scan mode, the CAM 1/2/3 buttons should all illuminate and you must then set the maximum number of cameras to be scanned within 5 seconds. Press CAM 1/2/3 to set the maximum number of cameras to 1, 2 and 3 respectively. The default is 4. The camera scan process will time out after approximately 1 minute and 30 seconds.

After the camera scan process is completed successfully, if the number of cameras found exceeds one, the CAM buttons will then fast flash and you can press the PST 1/2/3/4 buttons to select the cameras. The tally light of the corresponding camera should light up in red. Now, press CAM1, CAM2 or CAM3 button to assign the selected camera to one of the CAM buttons.

Note: If your video production environment changes, you will have to execute the above steps again to reconfigure the CAM buttons.

Speed Buttons (FAST/MID/SLOW)

Use the speed buttons, FAST, MID and SLOW, to select the speed of PTZ movement. The buttons should illuminate in red when pushed.

Preset Buttons (PST 1/2/3/4)

For the selected camera, press the preset buttons, PST 1/2/3/4, to recall the PTZ preset positions saved in presets 1 to 4 on iCAST MINI or TPC-700. The buttons should illuminate in red when pushed.

Press and hold the PST buttons to save the camera's current PTZ settings.

Activating Firmware Upgrade Mode (PST 1 + PST 4)

If your device is installed with the firmware versioned at V1.0.4.8 or later, the DVIP is enabled. Before performing a [firmware upgrade](#), first press and hold

PST 1 and 4 simultaneously to activate the device's firmware upgrade mode. The PST 1/2/3/4 should then light up in steady red.

Ergonomic anti-slip wrist support pad

Rest the wrist on the ergonomic anti-slip wrist support pad while using the RMC-2P.

Rear Panel



DVIP Port

Via the DVIP port, you can connect the RMC-2P to the network to which the cameras are connected. You are allowed to control up to three PTZ cameras. The device can function as a DHCP server or client. Follow the steps outlined below to set the RMC-2P to the DHCP server or client:

Setting DHCP Server/Client (CAM3 + SLOW)

Simultaneously press and hold the CAM3 and SLOW buttons and while holding these buttons, use a USB Type C to Type A cable and a power adapter to connect power to the USB Type C port to enable/disable the DHCP server. If the FAST button lights up in red, the DHCP server is enabled. Conversely, if the

FAST button is off, the device then functions as a DHCP client. See [3. Network Connection](#) for example connections of these two settings.

Note: If you are using non-PoE Ethernet cables, please use the USB Type C interface to power your RMC-2P.

USB Type C Interface

If you are using a non-PoE Ethernet cable for remote control of cameras via an Ethernet network or DVIP is disabled, please power your device by connecting the power to the USB Type C interface using a USB Type C to USB Type A cable and a power adapter. Alternatively, you can also connect the RMC-2P to an external controller which will also serve as a power source.

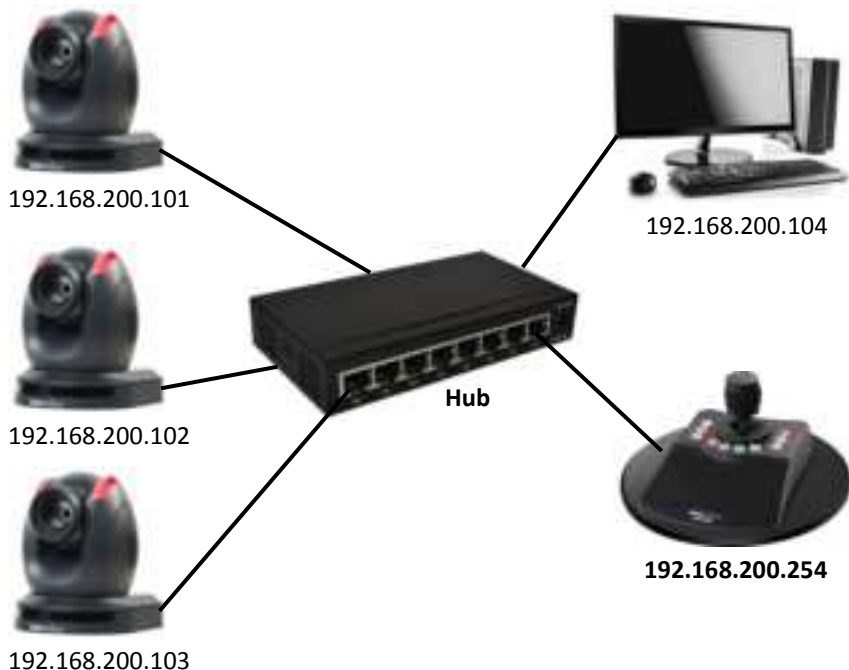
If the RMC-2P is connected to a PoE device via a PoE Ethernet cable, the USB Type C interface can be utilized to connect the RMC-2P to iCAST MINI or TPC-700 via a USB type C to USB type A adapter cable for remote control of cameras. See [3. Setup with Datavideo Devices](#) for details. Please note that if the RMC-2P and the controller (iCAST MINI or TPC-700) connect to the same network, the DVIP port will take priority over the USB Type C interface.

3. Network Connection

The RMC-2P can either work as a DHCP server or client. See the DVIP port descriptions for switching between the DHCP server/client.

DHCP Server

When the DHCP Server is enabled, the RMC-2P functions like a router, which is able to network multiple cameras via a network hub. An example network configuration is shown in the diagram below.

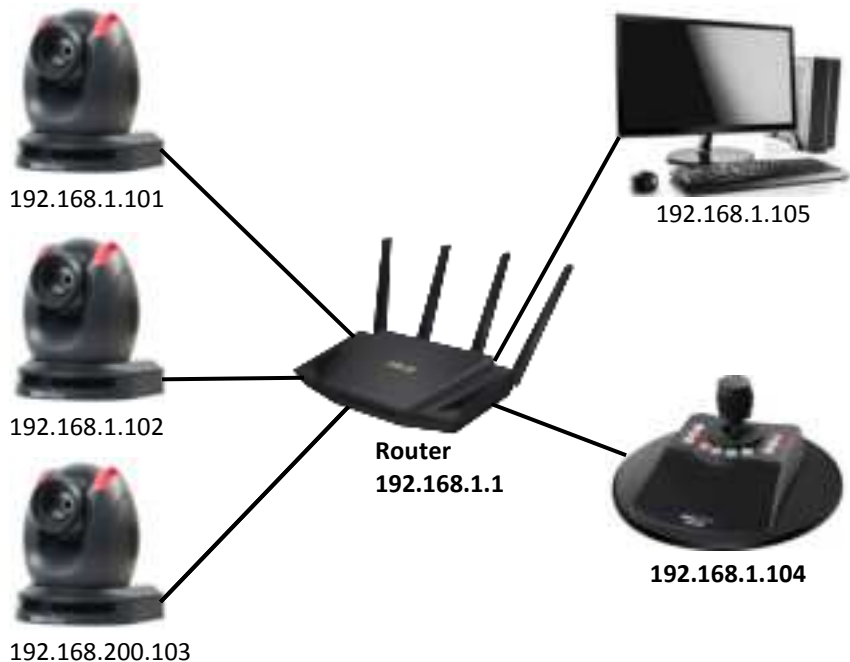


RMC-2P: DHCP server on with an IP address of 192.168.200.254.

Cameras: DHCP mode on with IP addresses assigned within the range 192.168.200.2 to 192.168.200.253 by RMC-2P.

DHCP Client

When the RMC-2P functions as a DHCP client, please use a router to establish connections between the RMC-2P and all cameras. An example network configuration is shown in the diagram below.



RMC-2P: DHCP server off so the IP address is assigned by the router.

Cameras: DHCP mode on with IP addresses assigned by the router.

If necessary, you can also connect a PC installed with the DVIP configuration tool to the same network to modify network settings of all connected devices. See the section below for descriptions of the tool.

DVIP

DVIP is an Ethernet-based protocol designed by Datavideo to connect a network of Datavideo devices. DVIP Configuration Tool is a special network configuration software tool designed for DVIP device search on the same network and configuring device network settings such as Hostname, DHCP mode, IP address, subnet mask, gateway IP, and primary and secondary DNS.

Depending on your operating system, download DVIP Configuration Tool from the respective sites listed as follows:

PC: <https://www.microsoft.com/en-us/p/dvip-network-config/9p6gtz839k6s?activetab=pivot%3Aoverviewtab>

Android:

https://play.google.com/store/apps/details?id=com.datavideo.dvipnetconfig&hl=en_US

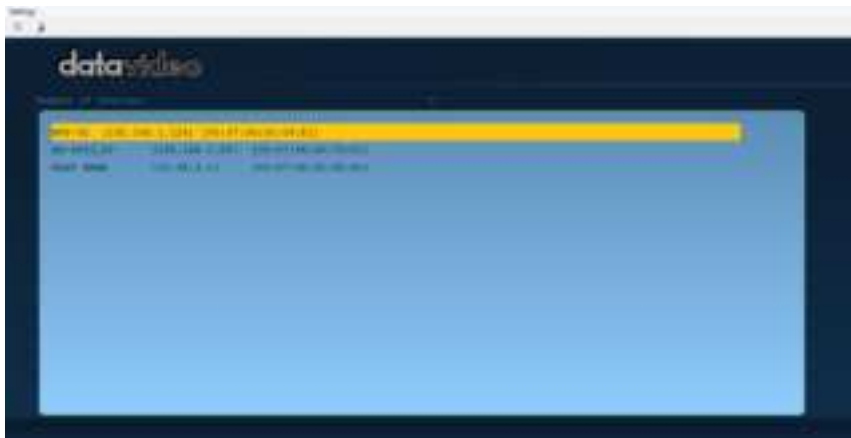
iOS: <https://itunes.apple.com/tw/app/dvip-network-config/id1177895983?mt=8>

After you've installed the DVIP Network Configuration Tool, follow the steps outlined below to scan for online DVIP devices and configure their corresponding settings.

Step 1: Open the DVIP Network Configuration Tool then select your PC or laptop's network interface card from the drop-down menu as shown in the diagram below.



Step 2: The DVIP Network Configuration Tool interface is shown below and you should see a list of the connected devices.



Step 3: Click one of the connected device to show its information and network settings in the pop-up window shown in the diagram below.



Step 4: You are allowed to change the device name in the Host Name field and modify the device's network settings accordingly. Click the Save button to confirm the change. To reset, simply click the Default button.

Host Name	sp-0100_03
Model Name	sp-0100 00000000, 00000000
MAC address	00:00:00:00:00:00
IP address	192.168.1.00
☒ Using Fixed IP Mode	
Host	192.168.1.0
Gateway	192.168.1.1
Primary DNS	8.8.8.8
Secondary DNS	168.80.1.1
Apply Done	

4. Setup with Datavideo Devices

Use the RMC-2P with other Datavideo controllers such as iCAST MINI and TPC-700.

iCAST MINI 4K Dual Channel Presentation Switcher

iCAST MINI is designed for single-operator applications. Set up the iCAST MINI video production system according to the system diagram shown below.



Follow the steps outlined below to set up RMC-2P in the iCAST MINI video production system:

1. Connect the RMC-2P and a monitor to iCAST MINI using a USB type C to USB type A adapter cable and an HDMI cable respectively
2. With Ethernet cables, connect your cameras and the iCAST MINI to a router.

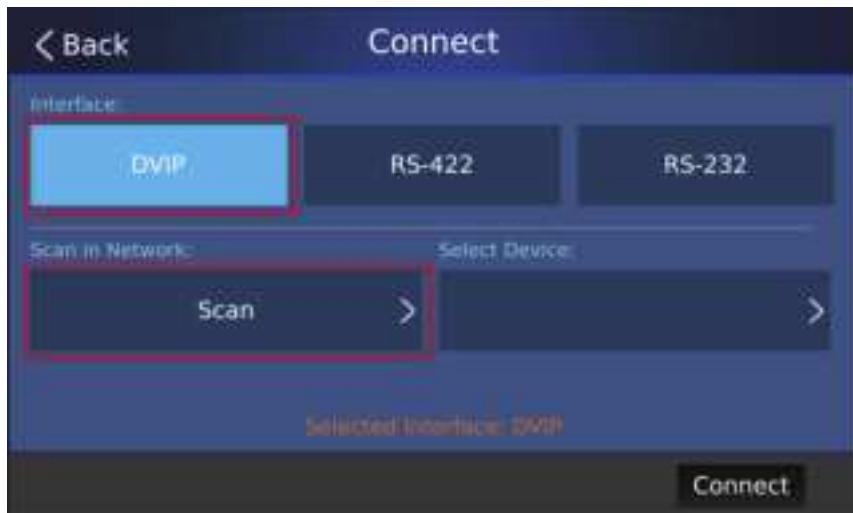
Please note that iCAST MINI and PTZ cameras should connect in DHCP mode by default.

3. Power on all devices.

4. On the iCAST MINI's UI, locate and tap the camera icon at the top right corner.



5. Tap "DVIP → Scan" to search for all cameras connected to the same network.



6. Tap the "Select Device" drop-down menu to view a list of cameras found. Select the camera that you would like to control then tap the Connect button.

Please note that you can only control one camera at a time with iCAST MINI.



7. You've established connection with the camera successfully after the camera icon at the top right corner of the UI Home transitions to the enabled state.



8. Start using the RMC-2P to control the camera.

TPC-700 Touch Panel Controller

With ZR-1 installed, the TPC-700 will be able to provide you with a total solution for hybrid video production. Set up the ZR-1 video production system according to the system diagram shown below.



Follow the steps outlined below to set up RMC-2P in the ZR-1 video production system:

1. Connect the RMC-2P to TPC-700 using a USB type C to USB type A adapter cable.
2. Connect three PTZ cameras to iCAST 10NDI using three HDMI cables.
3. With Ethernet cables, connect the three cameras, TPC-700 and iCAST 10NDI to a router.

Please note that PTZ cameras should connect in DHCP mode by default. You should manually enable DHCP mode for iCAST 10NDI and TPC-700.

4. Power on all devices.
5. Start using the RMC-2P to control the cameras.

Please note that pressing CAM 1/2/3 buttons respectively selects the cameras connected to HDMI input ports 1/2/3 of iCAST 10NDI.

5. Firmware Update

Datavideo usually releases new firmware containing new features or reported bug fixes from time to time. Customers can either download the firmware as they wish or contact their local dealer or reseller for assistance.

This section outlines the firmware upgrade process which should take ***approximately few minutes to complete***.

The existing settings should persist through the *firmware upgrade process, which should not be interrupted once started* as this could result in a non-responsive unit.

Requirements

- A Windows computer
- Latest firmware file
- DVIP Upgrade Utility (DVIP_UpgradeTool.exe)
- An RMC-2P device

Procedure

1. Download the latest firmware file from the product page to a Windows PC. Unzip the file, and make sure the folder contains the config file, application firmware, and the DVIP upgrade utility (DVIP_UpgradeTool.exe).
2. Enable DHCP server for the RMC-2P, then establish point-to-point connection with your Windows PC.
3. If your device is installed with the firmware version V1.0.4.8 or before, you can skip this step and proceed to step 4. If the device's firmware version is later than V1.0.4.8 (not inclusive), press and hold PST 1 and 4 simultaneously to activate the firmware upgrade mode before performing a firmware upgrade.

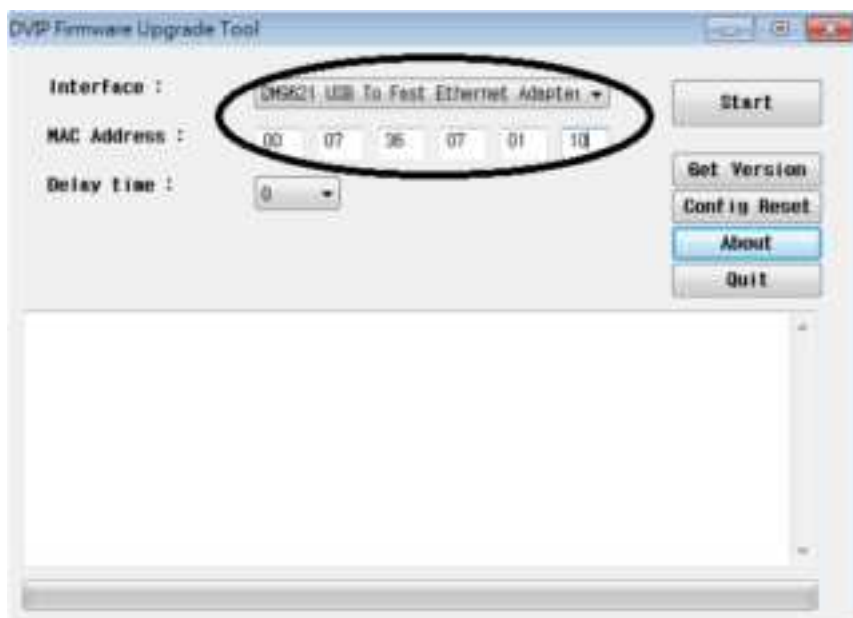
Note: The PST 1/2/3/4 should light up in steady red after the firmware upgrade mode is activated.

4. Run the DVIP Upgrade Utility as an administrator.

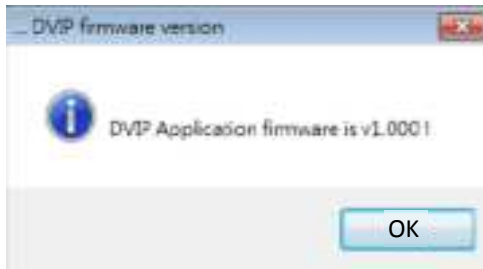


5. Select a network interface card that has established connection with the RMC-2P and enter the RMC-2P's MAC address.

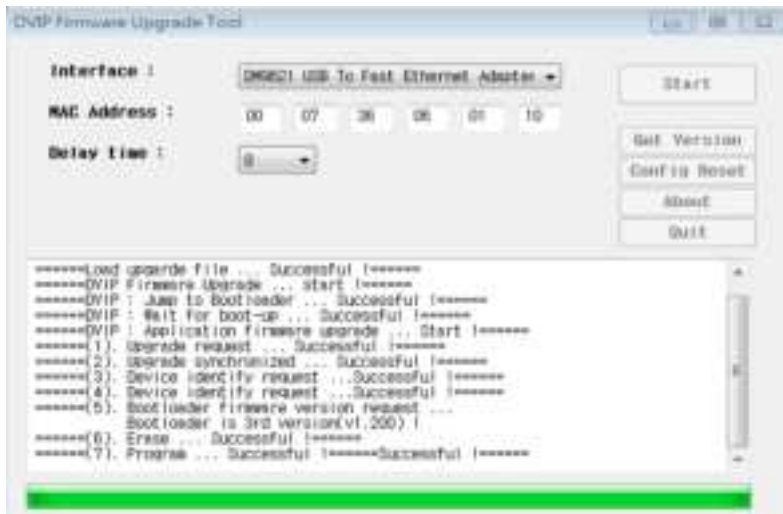
Note: Please do not click the Config Reset button as it will erase the RMC-2P's MAC address.



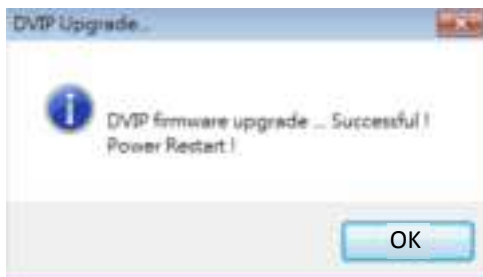
- Click **Get Version** to display the RMC-2P's firmware version.



- Click **Start** to begin the firmware upgrade process.



- After the firmware upgrade process is finished, you will see the following pop-up dialogue box. Click OK to shut down the tool then reboot the RMC-2P to complete the firmware upgrade.

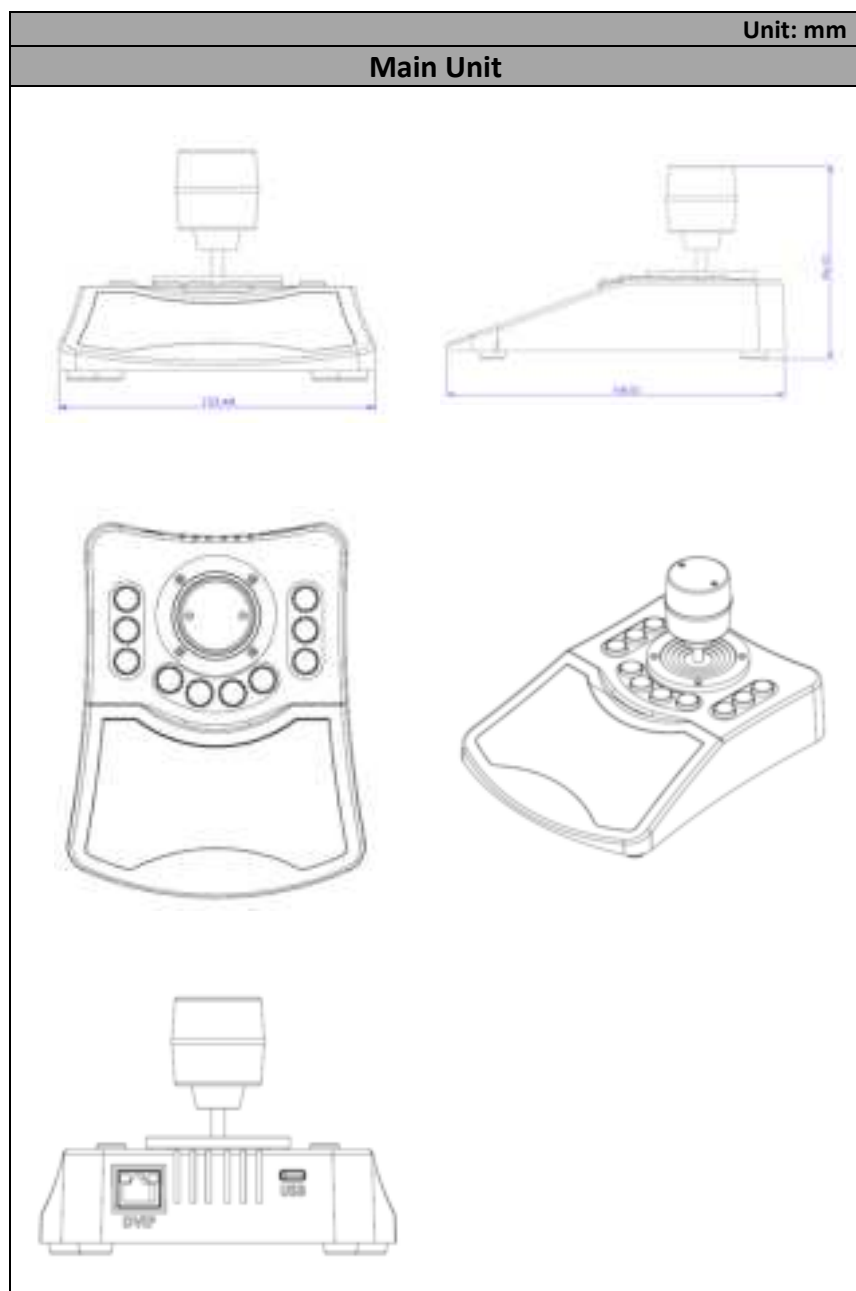


6. Frequently-Asked Questions

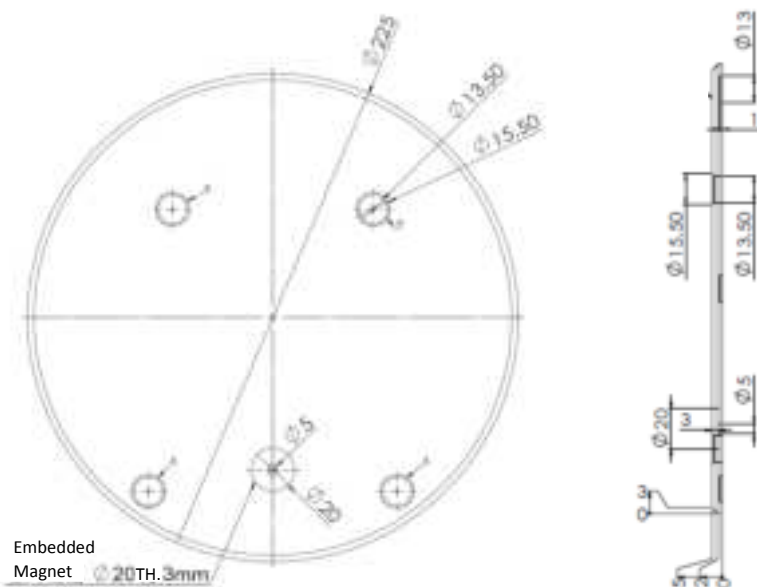
This section describes problems that you may encounter while using RMC-2P. If you have any questions, please refer to related sections and follow all suggested solutions. If problem still exists, please contact your distributor or the service center.

No.	Problems	Solutions
1.	The RMC-2P is unable to find auto-tracking PTZ cameras.	Please turn off the auto-tracking feature.
2.	The device fails to upgrade the firmware.	Check your device firmware version, if it is later than V1.0.4.8 (not inclusive), press and hold PST 1 and 4 simultaneously to activate the firmware upgrade mode before performing a firmware upgrade. Note: The PST 1/2/3/4 should light up in steady red after the firmware upgrade mode is activated.

7. Dimensions



Bottom Plate



8. Specifications

Model Name	RMC-2P
Product Name	3 Camera Controller
Main Unit	
Maximum Camera Control	3
Present (Position)	4 for each camera
Control Protocol	Datavideo DVIP
Connection to Cameras	Ethernet
Input/Output	USB 2.0 x1 10/100Mbps Ethernet (RJ-45 connector) x1
Firmware Upgrade	Via USB
Dimensions	134x169x97 mm
Weight	0.36kg
Operating Temp. Range	0°C ~ 40°C (32°F~104°F)
Storage Temperature	- 10°C ~ 60°C (14°F~140°F)
Operating Humidity	10% to 80% (non-condensing)
Power	DC 5V, 8W or IEEE 802.3af
What's in the Box	1 X RMC-2P main unit 1 X USB type C to type A cable 1 X Bottom Plate
Bottom Plate	
Material	Aluminum
Dimensions	225 x 225 x 5 (mm)
Weight	516g

Notes

Notes

Notes

Service & Support

It is our goal to make your products ownership a satisfying experience. Our supporting staff is available to assist you in setting up and operating your system. Please refer to our web site www.datavideo.com for answers to common questions, support requests or contact your local office below.

Please visit our website for latest manual update.

www.datavideo.com/product/RMC-2P



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