

datavideo



**MULTI-CAMERA IP
CONTROLLER**

RMC-300C

Instruction Manual

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Disclaimer of Product & 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 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

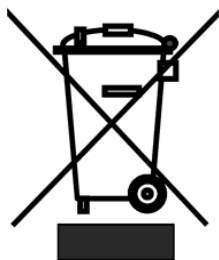
- Datavideo equipment is guaranteed against any manufacturing defects for one year from the date of purchase.
- The original purchase invoice or other documentary evidence should be supplied at the time of any request for repair under warranty.
- The product warranty period begins on the purchase date. 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, batteries, metal parts, housing, cable reel and consumable parts 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 qualify 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, Non-PCIe Card and third party provided PC components 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.

Chapter 1 Introduction

The RMC-300C is a multi-functional remote controller to control up to 24 PTC/BC series cameras via Ethernet connection.

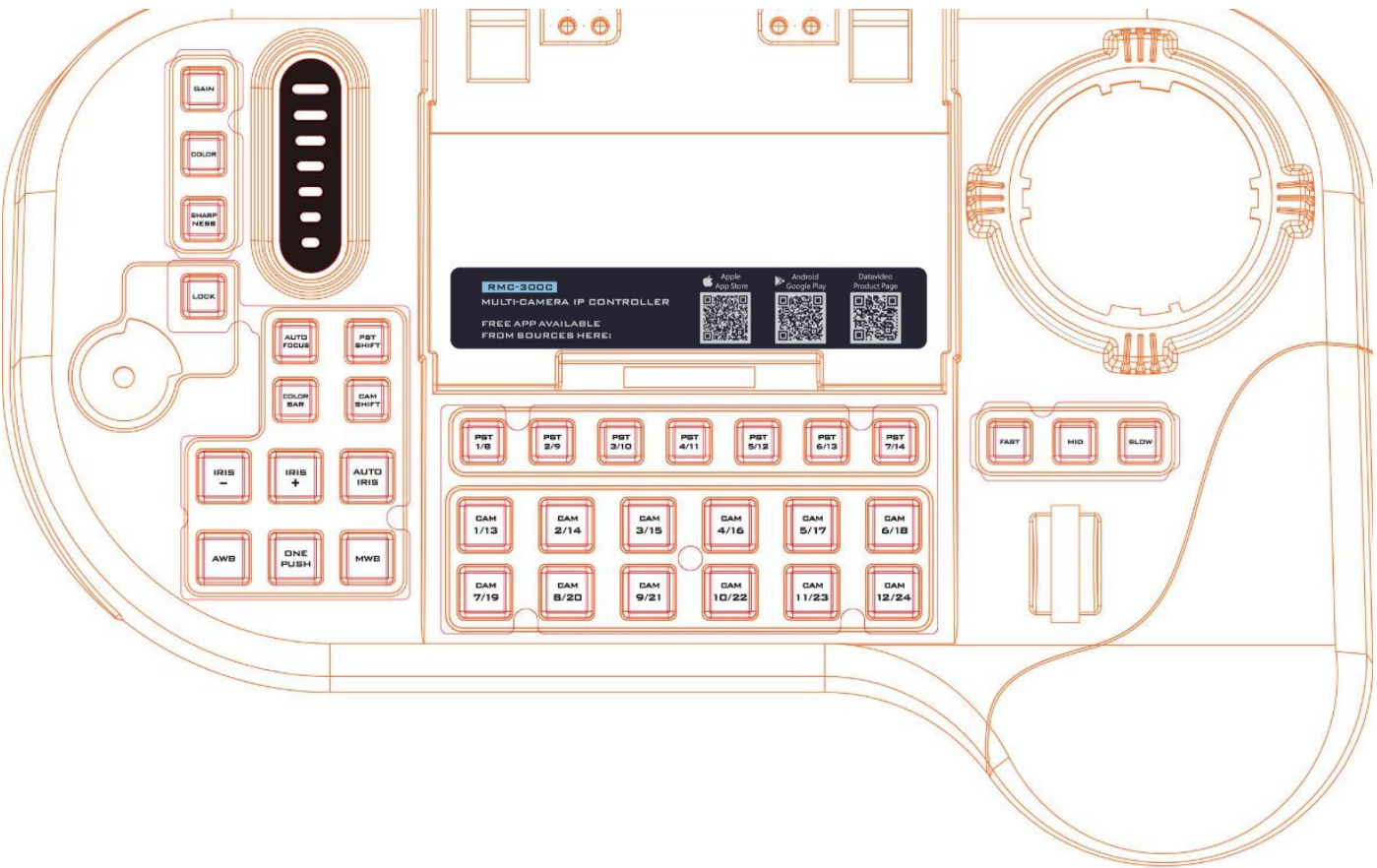
The RMC-300C can control the PTC-150/PTC-150T/PTC-200/PTC-200T and Block Camera BC-80/BC-200/BC-200T by Ethernet cable connection. Moreover, the RMC-300C allows multiple camera control by the Android/iOS tablet with the RMC-300C remote control app through Wi-Fi connection. Furthermore, the RMC-300C provides users several advantages such as affordable and easy cabling, an intuitive controller by pushing the hard keys and a friendly user interface for the iOS/Android based remote control system app.

1.1 Features

- Allows Remote Controlling for multiple cameras via Ethernet
- Allows users to control up to 24 Datavideo PTZ/block cameras and 14 presets can be set for each camera.
- All of the camera parameters can be set easily via the friendly User Interface of the RMC-300C Remote Control System App.
- Setting up the axis zoom by the knob, the axis pan/tilt by the joystick
- Allows Firmware Upgrade/Tablet Charging by multiple USB ports.

Chapter 2 I/O Interface

2.1 Keyboard Definition








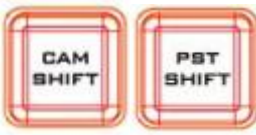
Cam 1-24







Users need to select the desired cameras at first for activating button functions of the RMC-300C. Users can select the cameras that are connected to the router. Please press the desired camera button once to select the camera. The selection is completed once the red/green light lights up. If the shift key is activated, the selected cameras will be 13 to 24.

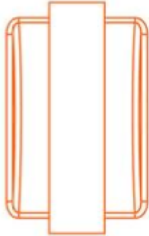


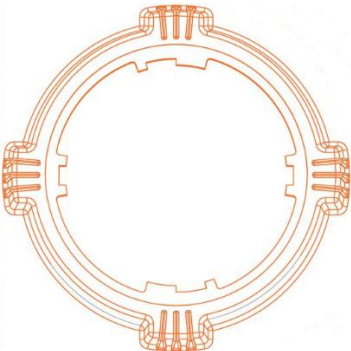



Preset 1-14

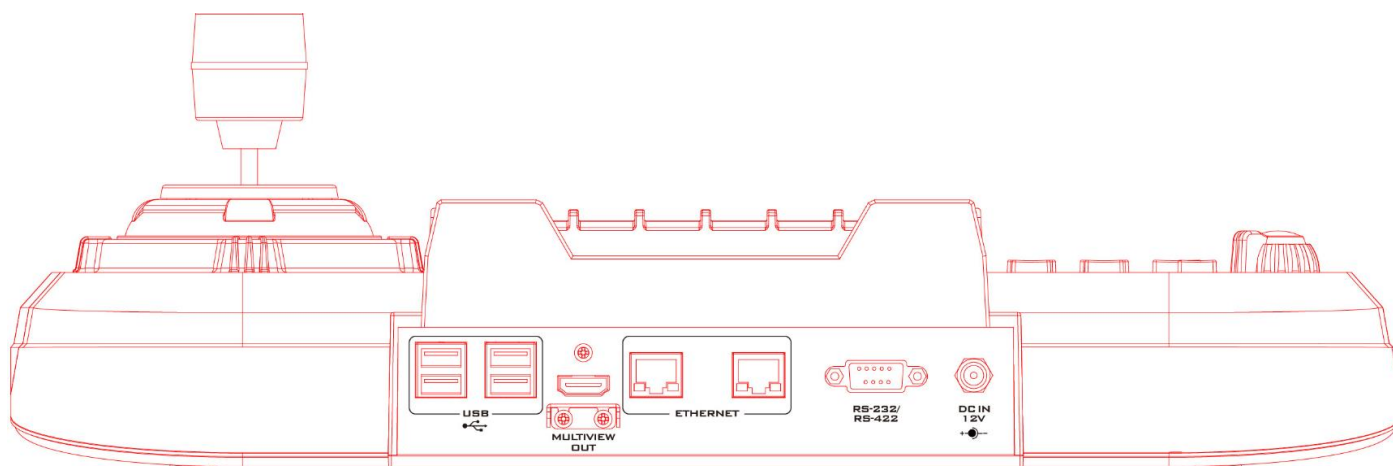
Those Preset keys allow users to select default values of the camera. Please press the Preset key once. After the blue light lights up, the selection is completed. For each default value, it includes default values for Shutter Speed, White Balance, Focus and P/T/Z positions. If the shift button is activated, the selected cameras will be 8 to 14.






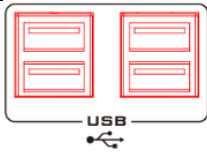
	<p>IRIS</p> <p>Manual IRIS-: When the Auto IRIS button is unlighted, press this button to shrink the IRIS. IRIS+: When the Auto IRIS button is unlighted, press this button to enlarge the IRIS.</p> <p>Auto Auto IRIS: Press this button and then it will light up, which means that the camera is set at Auto IRIS.</p>
	<p>White Balance</p> <p>Manual MWB: Please set the MWB setting from the color temperature option in the App. After the setting is done, each time when this button is pressed, the button will light up to show current manual temperature setting in the App.</p>
	<p>Auto</p> <p>AWB: Press this button once and then the AWB function will be executed once this button lights up.</p>
	<p>One Push</p> <p>Press this button to run the One Push function to adjust the White Balance. Users can calibrate the White Balance value according to the site environment by pushing the One Push button.</p>
	<p>Auto Focus</p> <p>Press this button and the Auto Focus function will be executed if the button lights up. If the Manual Focus is needed, please confirm whether this button is lighted up or not. The Manual Focus function can not be executed if this button lights up. Please press this button again and the light of the button will be off for turning off the Auto Focus function.</p>
	<p>The Shift button</p> <p>Cam Shift: Press this button once, if the button lights up, it means that Cam 13 to Cam 24 can be selected. After that, users can select their desired camera.</p> <p>Preset Shift: Press this button once, if the button lights up, it means that Preset 8 to Preset 14 can be selected. After that, users can select their desired Preset value.</p>

	<p>Lock Button</p> <p>Press this button once and this button will light up, which means that the Zoom Knob and the joystick function for Pan/Tilt will be turned off.</p>
	<p>Color Bar</p> <p>Press this button once, if the button lights up, it means that the selected camera will output color bar. Note: This color bar function doesn't support PTC-140T and BC-50 currently.</p>
	<p>Sharpness</p> <p>Press this button once, if the button lights up, it means that the sharpness can be adjusted by the joystick. Pull the joystick up to increase the sharpness value and pull the joystick down to reduce the sharpness value.</p>
	<p>Color</p> <p>Press this button once, if the button lights up, it means that the saturation of the image can be adjusted by the joystick. Pull the joystick up to increase the value and pull the joystick down to reduce the value.</p>
	<p>Gain</p> <p>Press this button once, if the button lights up, it means that the Gain of the image can be adjusted by the joystick. Pull the joystick up to increase the value and pull the joystick down to reduce the value. The Gain-adjusting function is not available for the PTC-140 and PTC-140T series.</p>
	<p>Adjusting Pan/Tilt/Zoom Speed</p> <p>Fast: Press this button once, if the button lights up, it means that when executing the Pan/Tilt/Zoom functions, the moving speed is set at high speed.</p> <p>Mid: Press this button once, if the button lights up, it means that when executing the Pan/Tilt/Zoom functions, the moving speed is set at mid speed.</p> <p>Slow: Press this button once, if the button lights up, it means that when executing the Pan/Tilt/Zoom functions, the moving speed is set at slow speed.</p>

	<p>Focus Rolling Wheel (Automatic Homing)</p> <p>Roll the rolling wheel to upside means that the focal length for the subject is getting farther (Far-Focusing). Roll the rolling wheel to downside means that the focal length for the subject is getting closer (Near-Focusing).</p>
	<p>Touch Slider</p> <p>This touch slider allows users to adjust many parameters including Gain, Saturation and Sharpness. Please slide the touch slider to upside to increase the value and please slide the touch slider to downside to reduce the value.</p>
	<p>Zoom Wheel</p> <p>Move the zoom wheel clockwise and counter-clockwise for zooming in/zooming out the camera lenses.</p>
	<p>Joystick for Controlling P/T Angles of the PTC Series Camera</p> <p>This joystick is used for users to control the Pan and Tilt angles of the PTC series camera. Users can change Pan and Tilt angles by pushing the joystick to upside, downside, left side and right side.</p>
	<p>Mounting Slot for an iPad or Android Tablet</p> <p>This mounting slot is used for users to mount their iPad or Android-based tablet for achieving multi-camera control up to 24 cameras by the RMC-300C Remote Control app through Wi-Fi Network connection.</p>

2.2 Definition for the Outputs on the Rear Panel



 DC IN 12V 	DC 12V This is used for supplying 12V DC input.
 MULTIVIEW OUT	HDMI OUT Not available yet.
 RS-232/RS-422	RS-232/RS-422 This is the D-sub 9 pin connector for controlling by the RS-232/RS-422. (Not available yet).
 ETHERNET	Ethernet This Ethernet port is used for DVIP connection.
 USB	USB These USB ports are used for firmware upgrade and tablet charging. The USB port on the bottom-left side can supply 5V/0.5A for tablet charging.

Chapter 3 Basic Setup

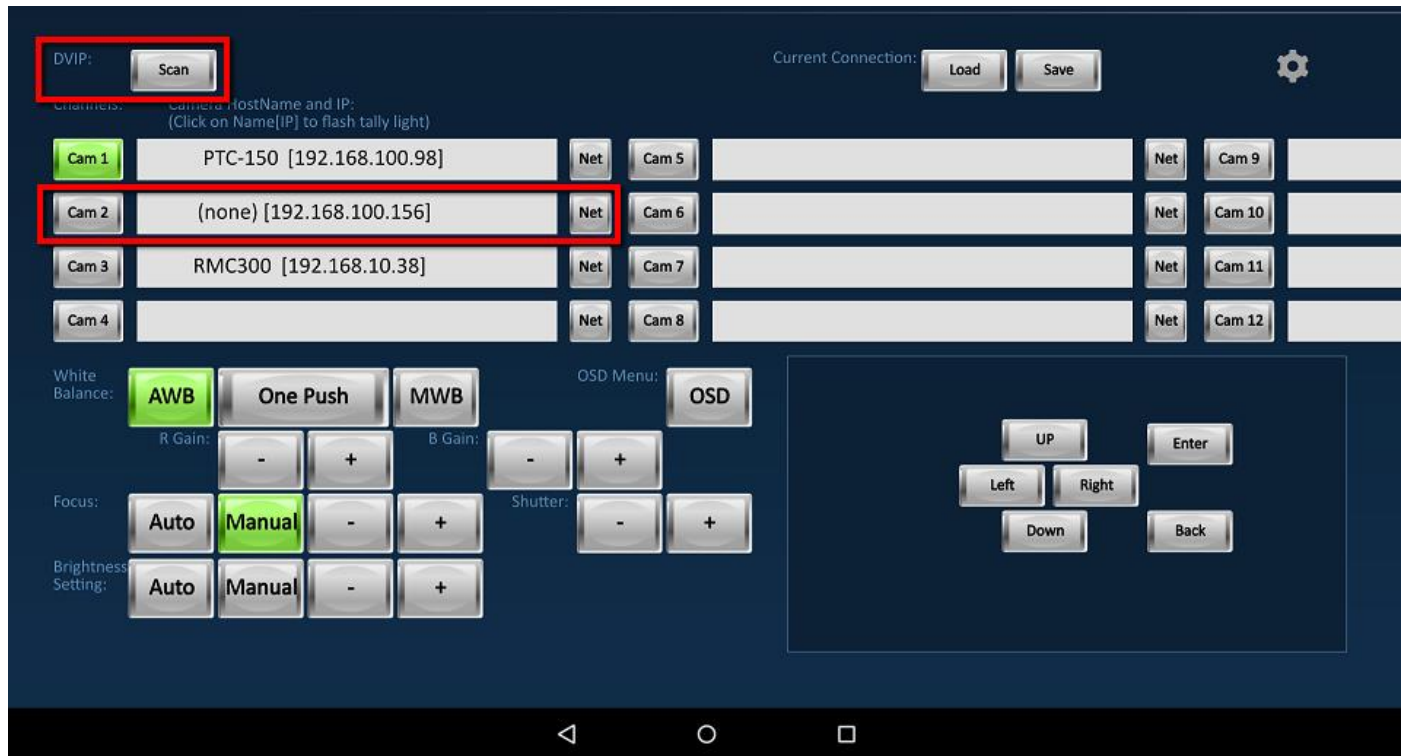
1. Please download the app “RMC-300C” from App Store or Google Play. It is recommended to use tablet for best user experience.
2. Please plug the Ethernet cable.
3. Please plug the 12V power adapter
4. Please confirm whether the white backlight for the keyboard lights up or not.
5. Please connect the tablet to the USB port by the USB cable.
6. Please open the RMC-300C app.
7. Now it is ready for you to use the RMC-300C.

Chapter 4 The Operation of the RMC-300C

User Friendly Software Interface

Scan the cameras in the same network area.

Once the cameras are scanned successfully, the device names and IP addresses will be shown. The device name can be modified by clicking the “Net” button (Supports ASCII Code only and the characters must be within 16 characters.). Click the device name of each camera (PTC-150, PTC-200, BC-80 or BC-200) to flash the tally light for easy-identification.



Host Name

PTC-150

Model Name

(VID:, PID:)

MAC address

00:07:36:06:00:13

IP address

192.168.100.98

☐ Using Fixed IP Mode

Mask

255.255.255.0

Gateway

192.168.100.1

Primary DNS

192.168.100.1

Secondary DNS

0.0.0.0

Save

System Setting

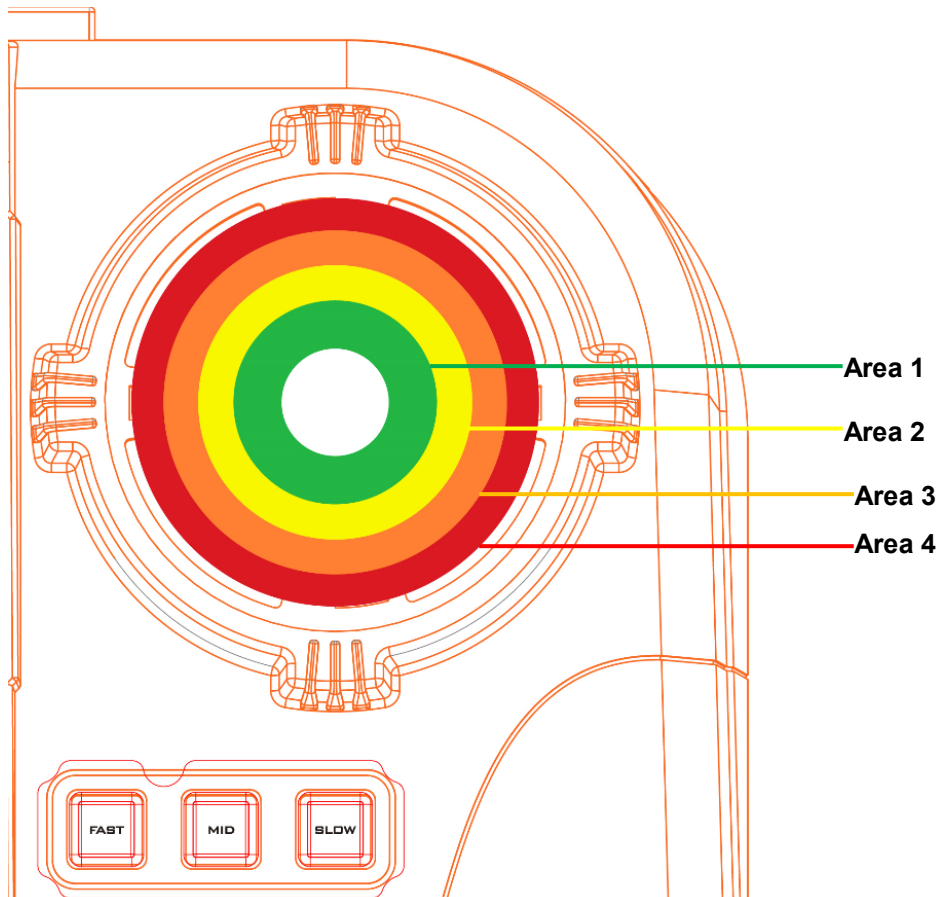
Speed Options for Joystick and Zoom Wheel



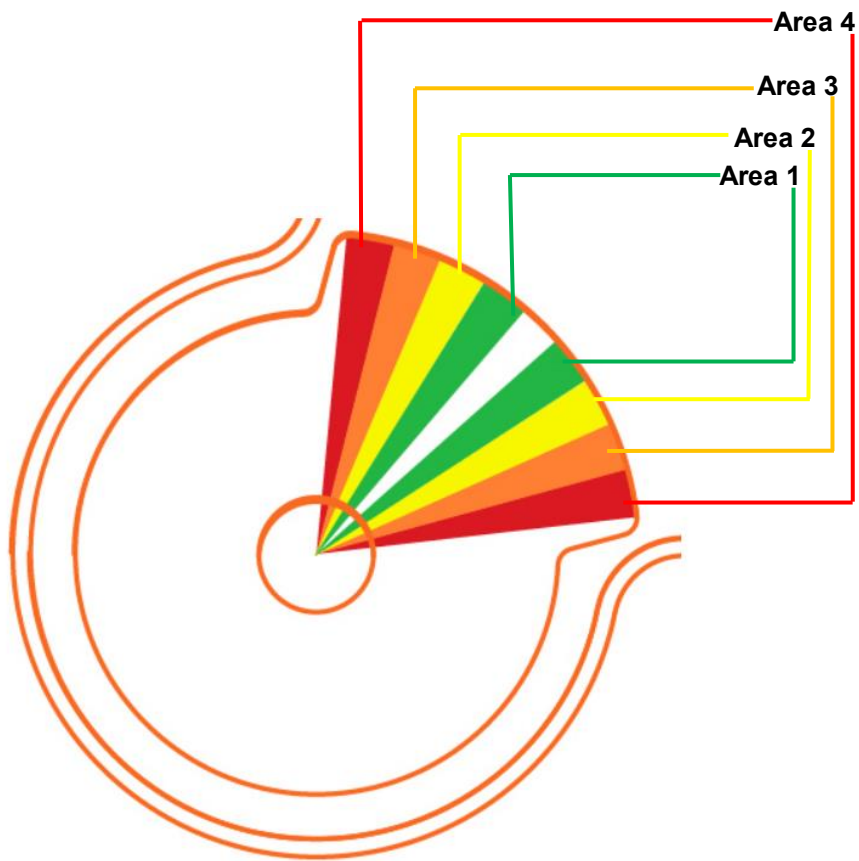
The Description of the Speeds for the PT Joystick and Zoom Wheel

The ranges of Area 1 to Area 4 in following curves are shown as following diagram

Joystick

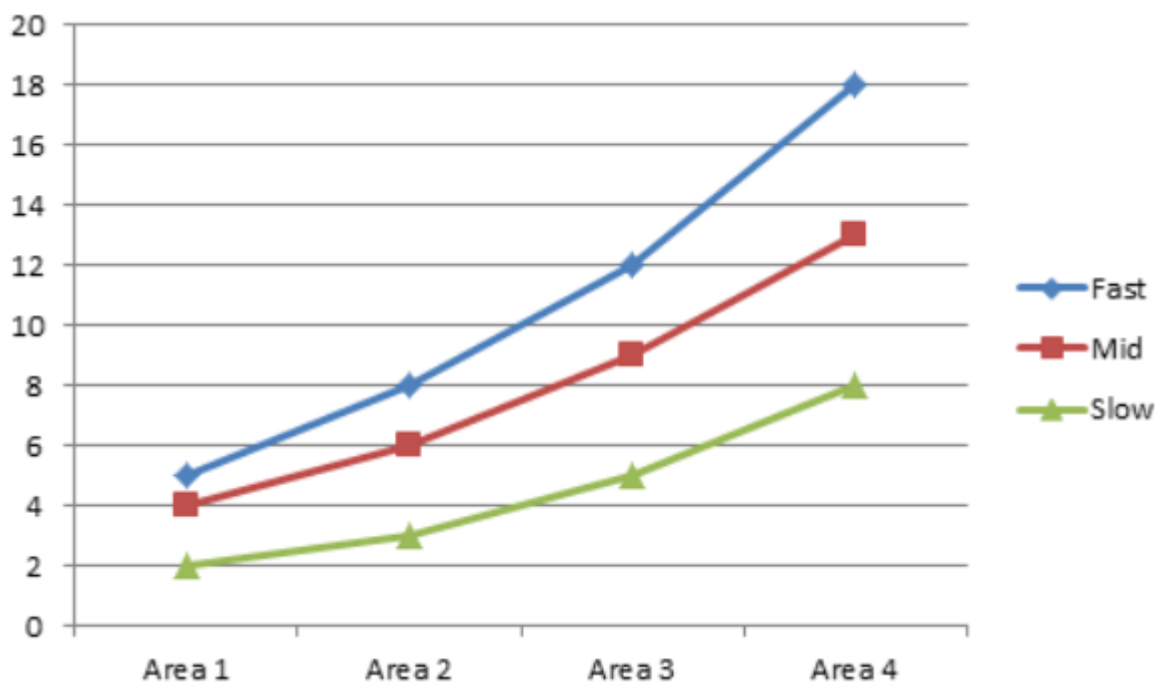


Zoom Wheel

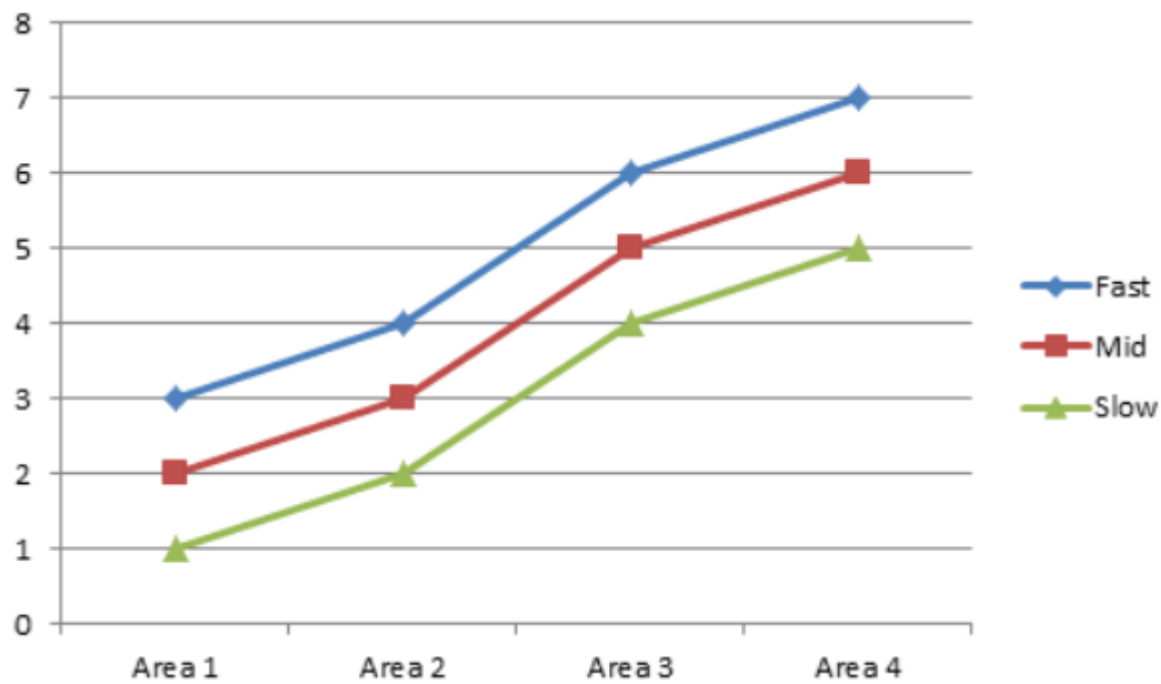


Non-linear: For joystick, the larger the tilt angle, the larger the variation of the Pan/Tilt speeds. For knob, the more the knob is turned, the larger the variation of the Zoom speed. The Non-linear option is the default value.

Nonlinear PT

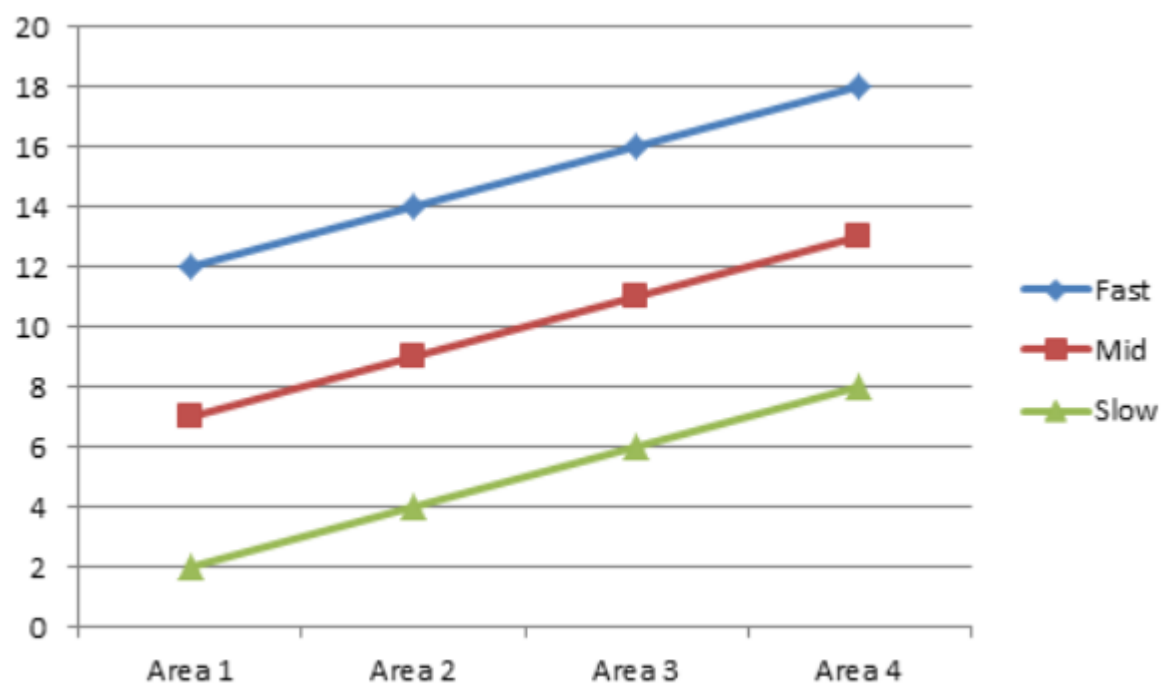


Nonlinear Z

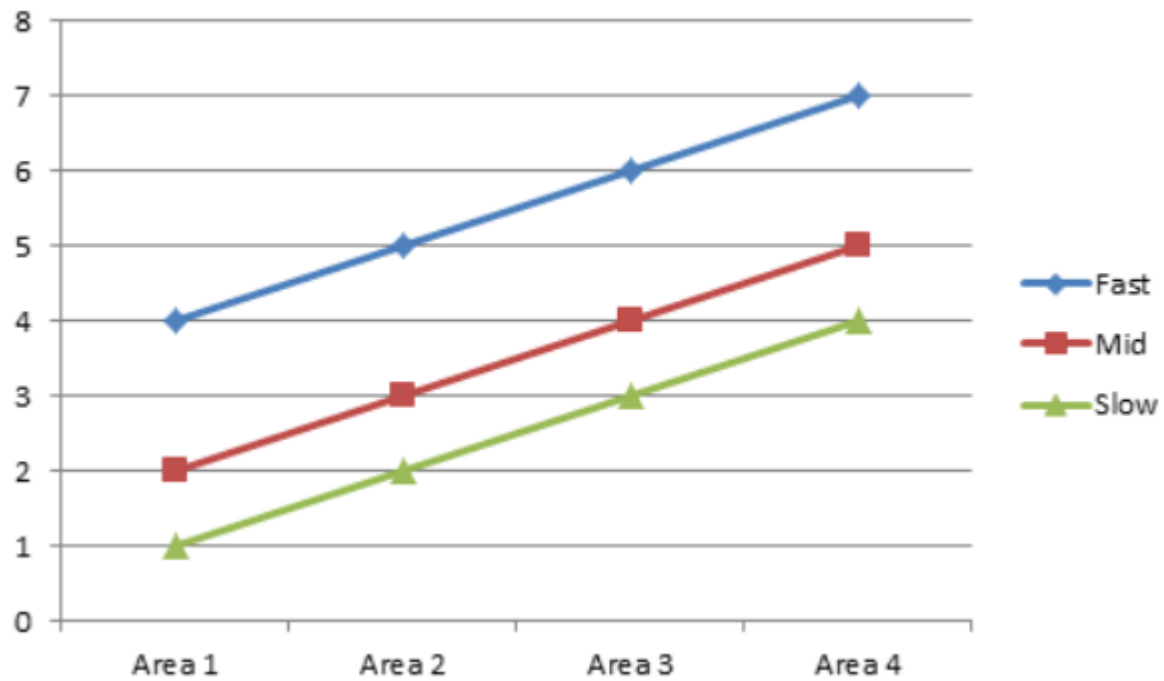


Equal Difference: The Fast/Mid/Slow speeds of the joystick/Knob will be distributed equally. The speed of the Pan/Tilt/Zoom will be changed in linear.

Arithmetic PT

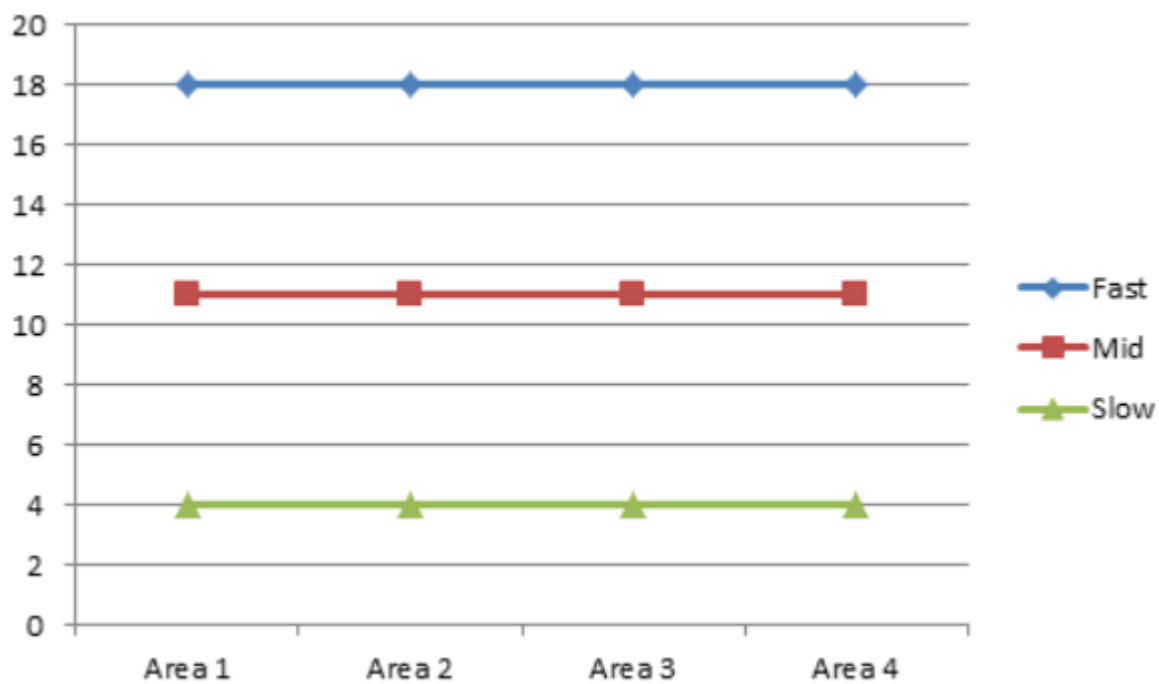


Arithmetic Z

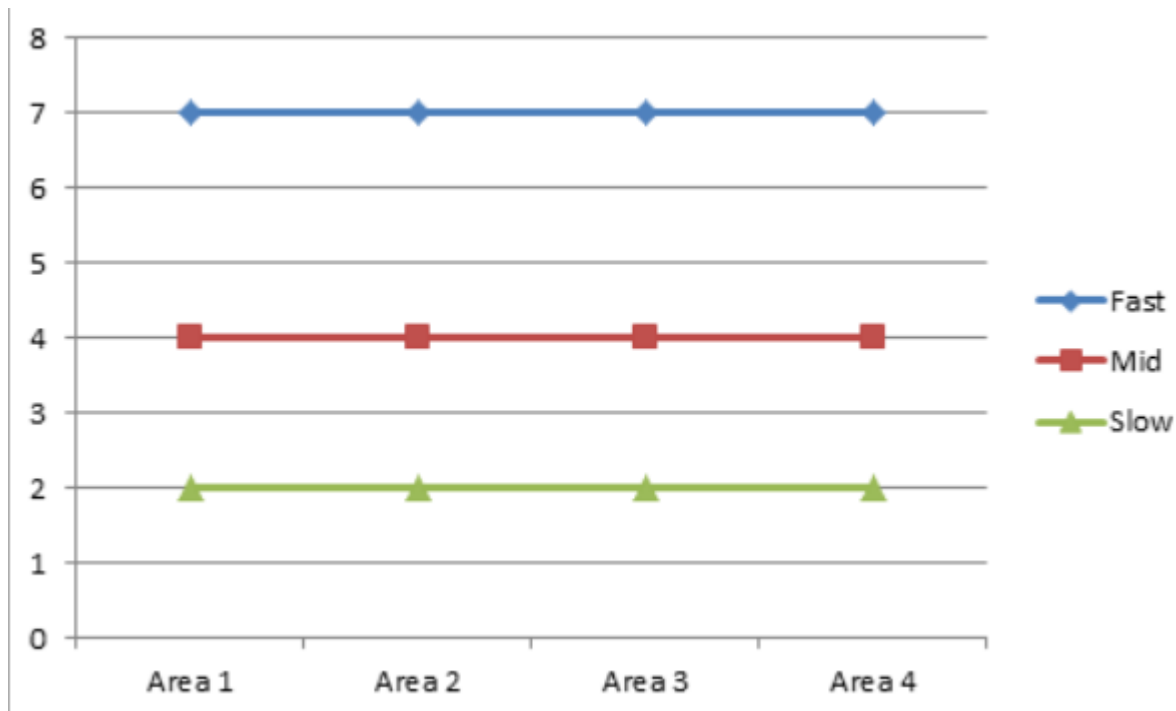


Fixed Value: If this option is set, users can select Fast/Mid/Slow speeds only no matter the tilt angle of the joystick or the level of the knob rotation.

Fixed PT



Fixed Z



Ethernet Connection and Setting

Please click “Connect RMC-300C” and then the RMC-300C can be connected manually.

If the “Auto Scan and Connect RMC-300C” is ticked, the app will re-connect the RMC-300 automatically for every 10 seconds.

If the “RMC-300C Network” is clicked, users can set the network configuration of the RMC-300C and the device name can be changed (Supports ASCII only, the characters must be within 16 characters).

RMC-300 Camera Controller
v1.1.3
Copyright (c) 2018 Datavideo Tech. Co. Ltd.

Connect RMC-300 ☐ Auto scan and connect RMC-300

RMC-300 Network

RMC-300 IP:
RMC-300 Version:
RMC-300 MCU Version:

Upgrade FW

Language:
☒ English(EN-US)
☐ 繁體中文(ZH-TW)
☐ 简体中文(ZH-CN)

Joystick speed diversity:
☒ Nonlinear
☐ Arithmetic
☐ Fixed

Controls up to 24 Cameras

Users need to select the desired cameras at first for activating button functions of the RMC-300C. Users can select the cameras that are connected to the router. Please press the desired camera button once to select the camera. The selection is completed once the red/green light lights up. If the shift key is activated, the selected cameras will be 13 to 24. Press the Cam Shift button once, if the buttons light up, it is ready for users to select from Cam 13 to Cam 24. After that, users can select their desired camera.

Allows Users to Save up to 14 Presets

Users can select the default value of the camera. Press the PST key once, if the blue light of the button lights up, the selection is completed. Each default value includes Shutter Speed, White Balance, Focus and P/T/Z positions. If the PST Shift button is activated, the default value that can be selected by users will be preset 8 to preset 14.

Chapter 5 Ethernet Control

5.1 DVIP

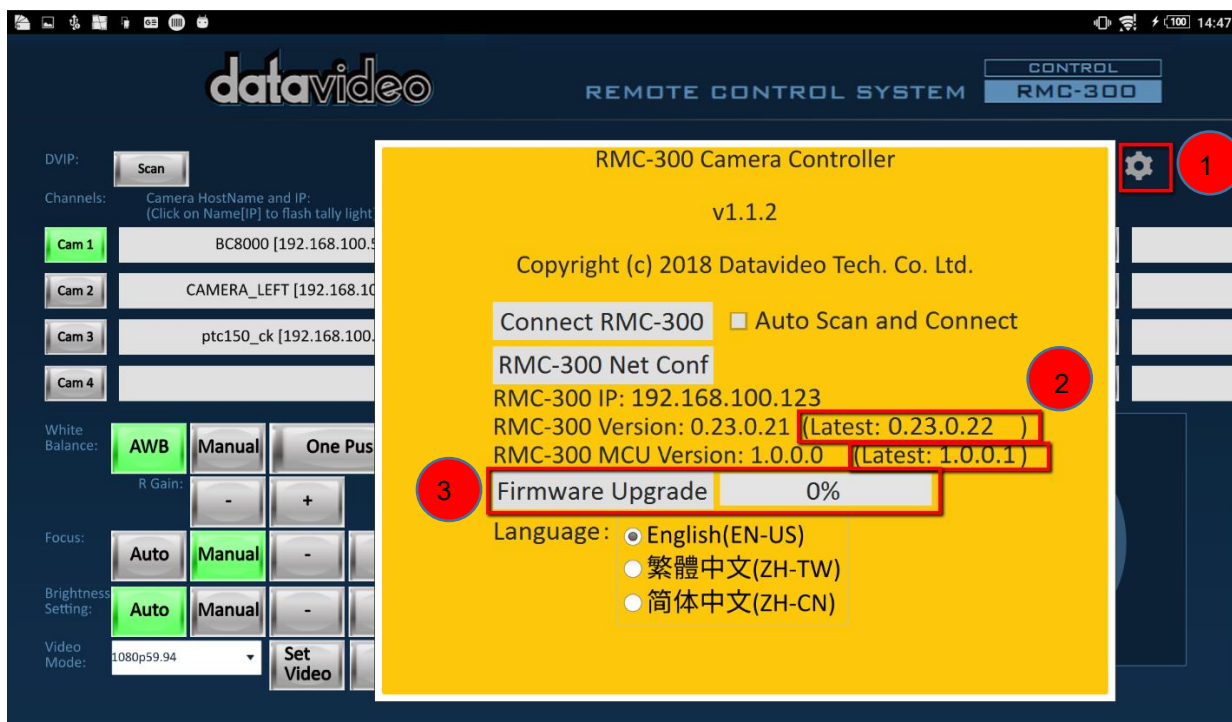
What is DVIP? DVIP is a proprietary protocol for Datavideo products. The DVIP allows users to broadcast through UDP socket for searching Datavideo products and setting Ethernet configurations. After that, the related control commands can be transmitted through the TCP socket according to the type of the devices. Please refer to the URL <https://datavideocorporation.desk.com/customer/en/portal/articles/2202330-datavideo-ptc-and-bc-series-dvip-setup-and-troubleshooting-guide> for the latest DVIP protocol information.

Chapter 6 Firmware Upgrade

Firmware Upgrade Procedure

Please follow following steps for updating the RMC-300 firmware.

- 1) Copy the latest RMC-300C firmware into the root directory of a USB hard drive and insert it into the USB Upgrade port on the rear panel of the RMC-300C.
- 2) Please open the RMC-300C Remote Control System app and then press the setting button at the No.1 of following diagram.
- 3) After that, a pop-up window will be shown for showing the latest RMC-300C firmware version/MCU version at the No. 2.
- 4) Please press the Firmware Upgrade button, and then the firmware upgrade progress bar will be shown. After that, the RMC-300C will start firmware upgrading automatically.
- 5) After the firmware upgrade progress bar reaches 100%, the whole procedure for RMC-300C firmware upgrade is completed.
- 6) Please reboot the RMC-300C.



RMC-300C Remote Control System Tablet Charging

For keeping the RMC-300C Remote Control System app in the working mode, Please connect a short USB cable from the RMC-300C Remote Control System Tablet to the USB port of the RMC-300C on its rear panel for tablet charging.

Chapter 7 Frequently-Asked Questions

This section describes problems that you may encounter while using the RMC-300C. If you have questions, please refer to related sections and follow all the suggested solutions. If problem still exists, please contact your distributor or the service center.

No	Problems	Solutions
1.	The RMC-300C can not be found?	<p>Users can try three ways to find the RMC-300.</p> <ol style="list-style-type: none">1. Please check that whether the network segment of the router is 192.168.100.xx or not. The factory default value of the RMC-300 IP address is 192.168.100.200.2. Please download DVIP Net Config tool from Datavideo website to see whether the DVIP devices can be found or not.3. Please refer to following website https://datavideocorporation.desk.com/customer/en/portal/articles/2202330-datavideo-ptc-and-bc-series-dvip-setup-and-troubleshooting-guide for Datavideo PTC and BC series DVIP Setup and Troubleshooting Guide.
2.	The RMC-300C is connected correctly, however, the PTC series cameras can not be controlled?	<p>Please check whether the IP addresses are shown in red (If the IP address is shown in red, it means that the network segment is different). Please check that whether the position 1 and position 4 of the dip switch on the bottom of the PTC series cameras are set at “On” position.</p> <p>If the IP addresses are shown in red, please modify those IP addresses by using the DVIP Net Config Tool. If the IP addresses are not shown in red, it is possible that the position 1 and position 4 of the dip switch on the bottom of the camera are not set at “On” position.</p>

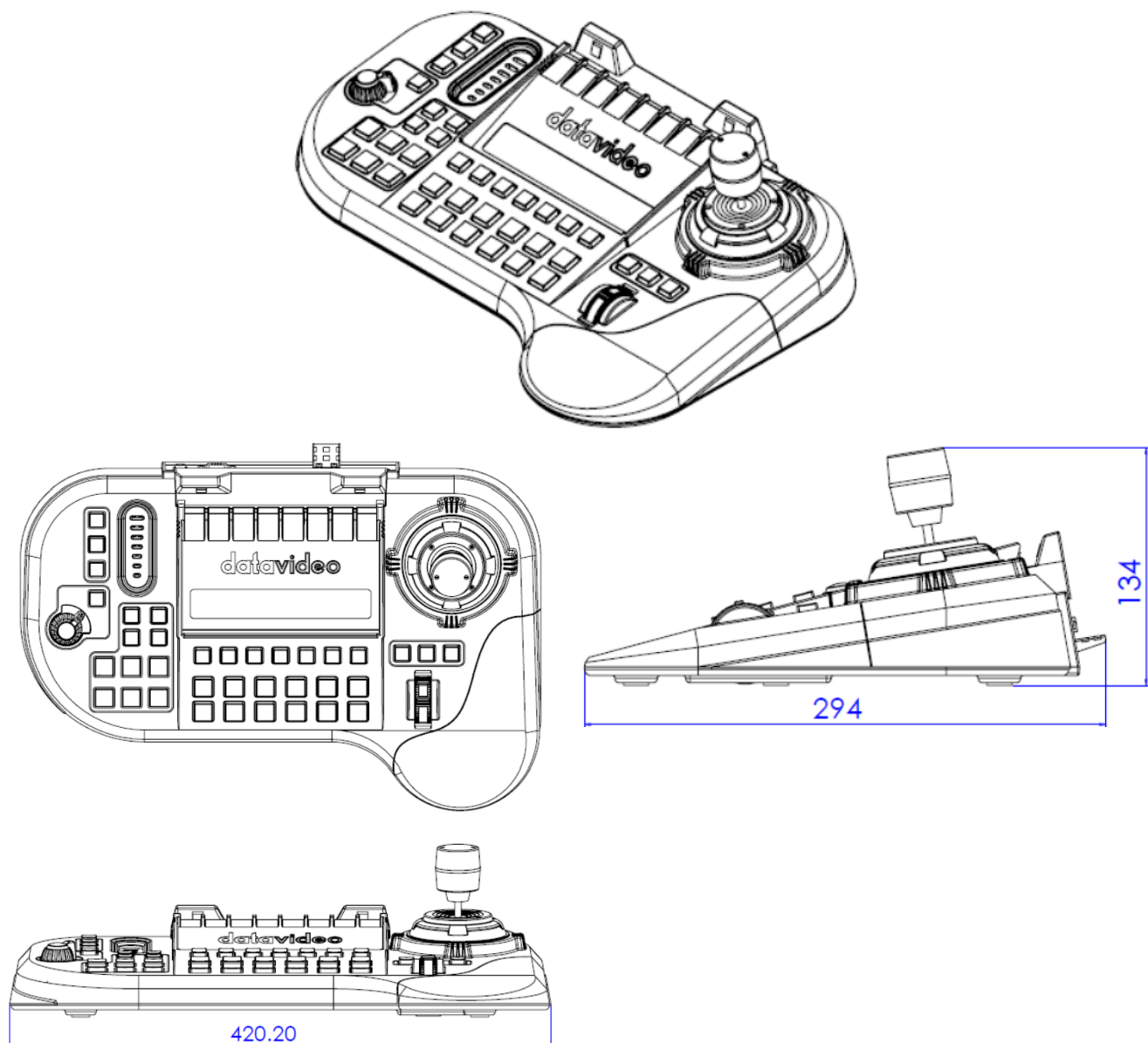
Chapter 8 Specifications

Input/Output	
Video Output	HDMI x 1
Other Interfaces	USB 2.0 x4, 10/100 Mbps Ethernet (RJ-45 connector x 2), RS-232/RS-422 D-sub 9 pin connector x 1

Control	
Control Protocol	DVIP/DHCP Client
Remote Control	RS-232/RS-422/Ethernet

Others	
Firmware Upgrade	By USB ports
Input Voltage	DC 12V
Power Consumption	DC 12V/23W
Accessory	DC 12V adapter
Dimension (W x D x H)	420.2 mm x 294 mm x 134 mm
Weight	1.24Kg
Operating Temperature	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)

Chapter 9 Dimensions



All measurements in millimetres (mm)

Service & Support

It is our goal to make owning and using Datavideo products a satisfying experience. Our support staff is available to assist you to set up and operate your system. Contact your local office for specific support requests. Plus, please visit www.datavideo.com to access our FAQ section.

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