VIP-CAM-20-10x-USB2
PTZ CAMERA w/HDMI & USB Output
USER MANUAL
Safety Precautions

■ Before installing the device, please read this manual carefully and follow instructions indicated to ensure proper operation. Please keep this manual for future reference.

■ Before powering on the device, please check the input power voltage carefully, the camera accepts DC5V, otherwise, it may cause damage to the camera.

■ Please install USB cable, HDMI and control cables clear from devices or other cables that might cause malfunction to the device.

■ Please the working environment meets the conditions of the device operating temperatures of 0°C~+40°C , and humidity at < 90%.

■ Please avoid shock, and vibration that may cause damage to the camera.

■ Please only refer to authorized personnel to repair the device, do not disassemble the camera by yourself.

■ Do not aim the camera lens at direct sunlight or strong lights that may cause damage to the imaging system of the device.

■ Please use soft optics rated cloth to clean the device, do not use strong or abrasive detergent to clean that will damage the device’s housing / lens.
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PRODUCT OVERVIEW

Features

- 2.12MP, 1/2. 9” CMOS sensor;
- Standard UVC protocol;
- USB2.0 high speed output, up to 1920x1080P30;
- Support H.264, MJPEG compressed video output;
- Supports one channel audio input;
- 3x optical zoom, synchronized focus lens;
- 80 ° horizontal view;
- With multi-function IR remote control;
- Power consumption <2W, support USB direct power supply;

Packing List

When you open the package, please make sure below items are included. If any items are missing, please contact your supplier.

PTZ Camera (1)

Remote Control x 1

USB Cable x 1

110-240 VAC 50/60Hz 12Vdc power adapter X 1
Main Parts and Control Interfaces

PTZ Camera

Front View

1 Camera Module
2 Power Indicator

Rear View

Bottom View

4 Power
5 HDMI
6 USB interface
7 RJ45 Control Port (RS232)
8 Tripod Mounting hole 1/4"

Pin Definition of Control Port

<table>
<thead>
<tr>
<th>Pin No</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>/</td>
</tr>
<tr>
<td>2</td>
<td>/</td>
</tr>
<tr>
<td>3</td>
<td>TX</td>
</tr>
<tr>
<td>4</td>
<td>GND</td>
</tr>
<tr>
<td>5</td>
<td>RX</td>
</tr>
<tr>
<td>6</td>
<td>/</td>
</tr>
<tr>
<td>7</td>
<td>/</td>
</tr>
<tr>
<td>8</td>
<td>/</td>
</tr>
</tbody>
</table>
1 HOME button

Press **HOME** button, camera moves to initial position where both pan and tilt angle is zero.

2 Camera Selection Button

Used to switch among 4 cameras, press 1-4 number buttons to control cameras with 1-4 address respectively. For example, press button 1 to control the camera with address 1.

3 Focus

Press  for near focus.

Press  for far focus.

Press   to trigger auto focus

4 Iris

Press “” button to reset brightness value to default. “” button to increase brightness, “” button to decrease brightness.

5 Menu

Displays OSD setup menu on both USB and HDMI outputs.

6 Data

Reserved for VIP-CAM-100 series.

7 Number Keys

Used to input numbers, for example, preset number.

8 Cancel

Used to delete number inputted.

9 Power
After the camera has been connected to power source, press this button to turn on/off the camera.

10 Reserved buttons (F1, F2, F3, F4)
These buttons are reserved for future use.

11 Pattern
Reserved for VIP-CAM-100 series.

12 BLC
Used to open/close back light compensation.

13 Zoom
Used to adjust zooming times.

button to zoom in
button to zoom out.

14 Back
Return function for OSD.

15 OK
OSD confirmation.

16 Direction Operation
Press these four buttons to pan left/right and tilt up/down.

17 Preset Setting
button to call a preset.

Input number key(s), and press to call a preset.
button to set a preset.
button to clear a preset.
Input preset number and press to clear a preset.

18 Enter
After entering numbers, press this button to confirm.
INSTALLATION

The camera has 3 installation types: desktop, wall mount, and ceiling mount.

**Note**

Make sure the installed place is strong and safe enough to hold the camera and relative parts.

**Desktop Mount Installation**

1. Put the camera on a flat surface. In case the camera has to be placed on an inclined surface, make sure the cline angle is less than 15 degrees to ensure proper pan/tilt operation.

**Note**

Avoid dropping camera
- Do not grab the camera by the head
- Do not rotate the camera head with hand. It may cause the camera to malfunction.

1. According to diameter and position of the 2 installation holes (As shown below) on the bracket, drill 2 holes on the wall and fix the bracket.

2. Use screws to fix the camera on the bracket. Make sure the camera is tightly fixed onto the bracket before your hands leave the camera.
Connections

USB: Video and control

Connect the supplied USB-A to USB-A cable.

RS232 control

Please see the diagram for correct wiring of the RS232 control using the RJ45 jack.

Power

Connect the supplied 12VDC power adapter

HDMI

Connect an HDMI cable
On Screen Display Menus

Top Level Menu
VIDEO
EXPOSURE
WHITE BALANCE
PAN TILT ZOOM
SYSTEM
STATUS
RESTORE DEFAULT

VIDEO Menu

SHARPNESS 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

CONTRAST 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

SATURATION 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

HUE 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

2DNR LEVEL ON, OFF

3DNR LEVEL AUTO, 1, 2, 3, 4, OFF

WIDE DYNAMIC ON, OFF
EXPOSURE Menu

- MODE
  - FULL AUTO
  - MANUAL
  - GAIN: -0, +2, +4, +6, +8, +10, +12, +14, +16, +18, +20, +22, +24, +26, +28, +30
  - SPEED: 1/1, 1/2, 1/3, 1/6, 1/12, 1/25, 1/50, 1/75, 1/100, 1/120, 1/150, 1/215, 1/300, 1/425, 1/600, 1/1000, 1/1250, 1/1750, 1/2500, 1/3500, 1/6000, 1/10000

- SHUTTER
  - PRI
  - SPEED: 1/1, 1/2, 1/3, 1/6, 1/12, 1/25, 1/50, 1/75, 1/100, 1/120, 1/150, 1/215, 1/300, 1/425, 1/600, 1/1000, 1/1250, 1/1750, 1/2500, 1/3500, 1/6000, 1/10000

- IRIS
  - PRI
  - IRIS: F1.4, F1.1, F9.6, F8, F6.8, F5.6, F4.8, F4, F3.4, F2.8, F2.4, F2, F1.6, CLOSE

- BRIGHT
  - PRI
  - BRIGHT: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27
  - ANTI-FLICKER: OFF, 50Hz, 60Hz

- EXP-COMP
  - ON
  - OFF

- BLC
  - ON, OFF

WHITE BALANCE Menu (COLOR)

- MANUAL
  - R.GAIN: 0~255
  - G.GAIN: 0~255
  - B.GAIN: 0~255
Pan Tilt Zoom Menu

- PAN/TILT SPEED: 1, 2, 3, 4, 5, 6, 7, 8
- PAN/TILT LIMIT: ON, OFF
  - UP: -30°~+90°
  - DOWN: -30°~+90°
  - LEFT: -170°~+170°
  - RIGHT: -170°~+170°
- D-ZOOM LIMIT: X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, X12
- PTZ TRIG AF: ON, OFF
- RATIO SPEED: ON, OFF
- POWER UP ACTION: PRESET 1, PRESET 2, PRESET 3, PRESET 4, PRESET 5, PRESET 6, PRESET 7, PRESET 8, PRESET 9, HOME

System Menu

- PAN/TILT SPEED: 1, 2, 3, 4, 5, 6, 7, 8
- PAN/TILT LIMIT: ON, OFF
  - UP: -30°~+90°
  - DOWN: -30°~+90°
- ADDRESS: 1, 2, 3, 4, 5, 6, 7
- PROTOCOL: VISCA, PELCO-P, PELCO-D
- BAUDRATE: 2400, 4800, 9600, 38400
- VIDEO FORMAT: 1080P60, 1080P50, 1080I60, 1080I50, 1080P30, 1080P25, 720P60, 720P50
- MOUNT MODE: STAND, CEILING
- LANGUAGE: ENGLISH, CHINESE
Status Menu

<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDRESS</td>
<td>1</td>
</tr>
<tr>
<td>PROTOCOL</td>
<td>VISCA</td>
</tr>
<tr>
<td>BAUDRATE</td>
<td>9600</td>
</tr>
<tr>
<td>MOUNT MODE</td>
<td>STAND</td>
</tr>
<tr>
<td>IMAGE VER</td>
<td>V6629</td>
</tr>
<tr>
<td>FIRMWARE VER</td>
<td>V1.0.0</td>
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</tbody>
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RS232 wiring

Blue          Ground
Green         TX
Green/White   RX
## TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th><strong>VIDEO</strong></th>
<th></th>
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<tbody>
<tr>
<td>Image Sensor</td>
<td>1/2.9” CMOS, 2.12megapixel</td>
</tr>
<tr>
<td>Video Format</td>
<td>1080P30 fps</td>
</tr>
<tr>
<td>Compression</td>
<td>H.264</td>
</tr>
<tr>
<td>Focal Lens</td>
<td>f=3mm-10mm</td>
</tr>
<tr>
<td>Iris</td>
<td>F1.4</td>
</tr>
<tr>
<td>Optical Zoom</td>
<td>3X</td>
</tr>
<tr>
<td>Field of View</td>
<td>80°~28°</td>
</tr>
<tr>
<td>Focus System</td>
<td>Sync focus</td>
</tr>
<tr>
<td>Exposure Control</td>
<td>Auto/ Manual.</td>
</tr>
<tr>
<td>Min. Illumination</td>
<td>0.5 lux (color) . 0.1Lux (B/W)</td>
</tr>
<tr>
<td>BLC</td>
<td>Support</td>
</tr>
<tr>
<td>S/N Rate</td>
<td>≥50dB</td>
</tr>
</tbody>
</table>

### PTZ

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pan Angle</td>
<td>-90°~+90°</td>
</tr>
<tr>
<td>Tilt Angle</td>
<td>-30°~+90°</td>
</tr>
<tr>
<td>Pan Speed</td>
<td>18°/S</td>
</tr>
<tr>
<td>Tilt Speed</td>
<td>18°/S</td>
</tr>
<tr>
<td>Preset Number</td>
<td>32</td>
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### Interface

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<tr>
<td>Video Output</td>
<td>USB2.0</td>
</tr>
<tr>
<td>Audio Port</td>
<td>Line IN</td>
</tr>
<tr>
<td>Control Interface</td>
<td>USB2.0, RS-232</td>
</tr>
<tr>
<td>UVC Protocol</td>
<td>UVC 1.0-UVC 1.5</td>
</tr>
<tr>
<td>UVC PTZ Control</td>
<td>Support</td>
</tr>
<tr>
<td>Infrared Remote Control</td>
<td>Support</td>
</tr>
</tbody>
</table>

### General

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Protocol</td>
<td>VISCA</td>
</tr>
<tr>
<td>Address</td>
<td>1~7</td>
</tr>
<tr>
<td>Power</td>
<td>DC5V</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>&lt; 2W</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C ~ + 40°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-20°C~+60°C</td>
</tr>
<tr>
<td>Dimensions (W×D×H)</td>
<td>163 mm×101 mm×114mm</td>
</tr>
<tr>
<td>Weight</td>
<td>0.6KG</td>
</tr>
<tr>
<td>Body Color</td>
<td>Black</td>
</tr>
</tbody>
</table>
SIZE AND DIMENSIONS

Front

Rear

Top

Side

Bottom

Depth to bottom surface 5-7mm, 1/4-8UNC
## TROUBLESHOOTING

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>No action or image after powered on,</td>
<td>Power supply failure</td>
<td>Check power supply</td>
</tr>
<tr>
<td></td>
<td>Power adapter damaged</td>
<td>Replace power adapter</td>
</tr>
<tr>
<td>No self-testing after powered on, or with</td>
<td>Power cable connection got loosen</td>
<td>Check &amp; reconnect</td>
</tr>
<tr>
<td></td>
<td>Mechanical failure</td>
<td>Repair</td>
</tr>
<tr>
<td>Not controllable from IR remote controller</td>
<td>Low battery of remote controller</td>
<td>Change battery for remote controller</td>
</tr>
<tr>
<td></td>
<td>Exceed remote control distance</td>
<td>Control within distance of 8M</td>
</tr>
<tr>
<td>After power on, self-test successfully, but not</td>
<td>Wrong address / protocol / baud rate</td>
<td>Check &amp; set again</td>
</tr>
<tr>
<td>controllable</td>
<td>Wrong connection or open circuit of RS-232 cable</td>
<td>Check &amp; reconnect</td>
</tr>
</tbody>
</table>
WARRANTY

PureLink Three (3) Year Limited Warranty for PureStream™ Branded Products

Dtrovision, LLC. (hereinafter “PureLink”) warrants its HDTools and PureStream™ branded products (hereinafter “Product”) purchased directly from PureLink or Dealer shall be free from defects in workmanship and materials, under normal use and service, for a period of three (3) years on parts and three (3) years on labor. Any repaired or replaced equipment related to Product shall be covered only under the remaining portion of the warranty. This warranty has no relationship to and exists independently of any warranty offered by Dealer. This warranty is a limited warranty and gives you specific legal rights. You may also have other rights, which vary from state to state.

TERMS & CONDITIONS

PureLink shall repair or replace the Product if it develops a material fault during the period of warranty, on condition that i) the Product has only been subject to normal use in a domestic or commercial environment in a manner consistent with its specification and functionality, ii) the Product has been cared for reasonably and only subjected to reasonable wear and tear, iii) the defect has not been caused by willful or negligent abuse or neglect, or any accident or improper installation procedure, iv) the serial number of the Product has not been altered or removed.

This warranty only applies to the original purchaser, and shall be the exclusive remedy to the original purchaser. PureLink shall not be liable for any damages whatsoever caused by Product or the failure of Product to perform, including incidental or consequential damages. PureLink shall not be liable for any claim made by a third party or made by the purchaser for a third party.

Except as expressly set forth in this warranty, PureLink makes no other warranties, expressed or implied, including any implied warranties of merchantability and fitness for a particular purpose. PureLink expressly disclaims all warranties not satisfied in this limited warranty. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty. This warranty statement supersedes all previous warranties.

WARRANTY RETURNS/REPAIRS/EXCHANGES

No merchandise may be returned without prior authorization from PureLink, and a Return Materials Authorization (RMA) number. Failure to comply with these conditions will result in rejection of the returned merchandise.

Any warranty service on Products must be arranged through Dealer. Authorized returns must be shipped freight prepaid and fully insured to PureLink, Ramsey, NJ USA, with the RMA number clearly marked on the outside of all shipping boxes and containers. PureLink reserves the right at its sole discretion to refuse any shipments arriving freight collect or without an RMA number. Any authorized returned merchandise must be accompanied by a note describing the reason for return, along with contact information including name, phone number, return mailing and shipping addresses, e-mail address, and RMA number.

On any products returned and accepted with an RMA number, return freight charges following repair of items under warranty shall be paid by PureLink, shipping by the standard ground carrier of its choice.

ADVANCE WARRANTY REPLACEMENTS

PureLink’s advance replacement service offers a Replacement Unit upon request - free of charge for eligible products purchased less than one (1) year of the warranty claim. Products purchased more than one (1) year prior to the warranty claim do not qualify for advance replacement services.
Advance replacement requests must be validated by a member of PureLink's Technical Support Team. Replacement units may be new or refurbished and is subject to availability. PureLink is responsible for shipping the Replacement Unit to your designated location by standard ground service. All other shipping methods will be responsibility of the Dealer.

**Original Unit Return** – the Original Unit must be returned within thirty (30) calendar days of the return authorization date. Failure to return the Original Unit within this period will be subject to a minimum 15% re-stocking fee. Dealer is solely responsible for the shipping of the Original Unit to PureLink.

**TO MAKE A WARRANTY CLAIM**
To make a warranty claim, promptly notify PureLink within the warranty periods described above by calling PureLink’s Technical Support Department at 1-201-488-3232. PureLink, in its sole discretion, will determine what action, if any, is required under this warranty.

Most problems can be corrected over the phone through close cooperation between Customer and a PureLink technician. To better enable PureLink to address a warranty claim, please have the Product’s serial and model numbers. If PureLink, in its sole discretion, determines that an on-site visit or other remedial action is necessary, PureLink may send a representative to Customer’s site.

**CUSTOMER SERVICE**
Technical support inquiries can be submitted electronically at purelinkav.com/tickets. For immediate assistance please contact PureLink’s Customer Care Team at +1 (201) 488-3232