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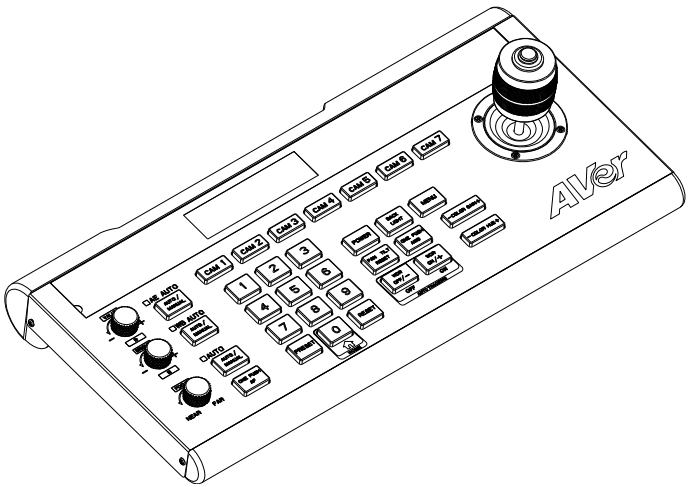

CL01 PTZ Camera Controller

— User Manual —

Warning

- To reduce risk of fire or electric shock, do not expose this appliance to rain or moisture. Warranty will be void if any unauthorized modifications are done to the product.
- Do not drop the device it to physical shock.
- Use correct power supply voltage to avoid damaging camera.
- Do not place the device where the cord can be stepped on as this may result in fraying or damage to the lead or the plug.
- Hold the both side of the device with both hands to move the device. Do not grab one side of device to move the device.

Federal Communication Commission Interference 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

VCCI-B
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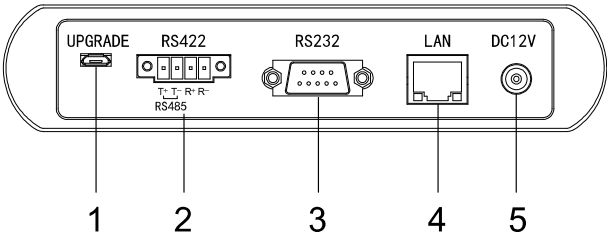
Overview

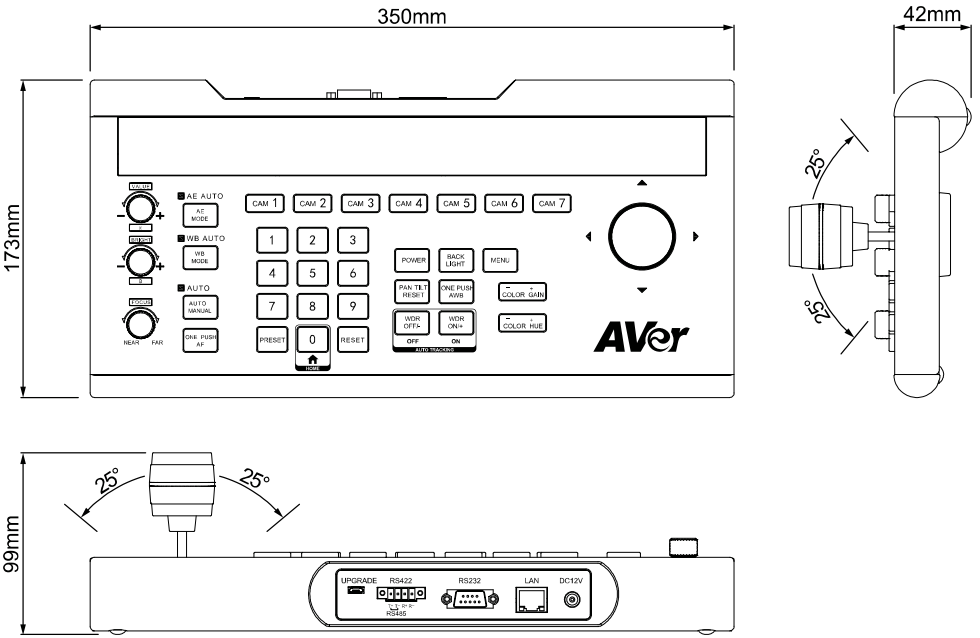
Parts Info



Back panel

1. Micro USB Port (for firmware upgrade)
2. RS-422 / RS-485 Port
3. RS-232 Port
4. LAN Port
5. DC Power Jack

Dimensions

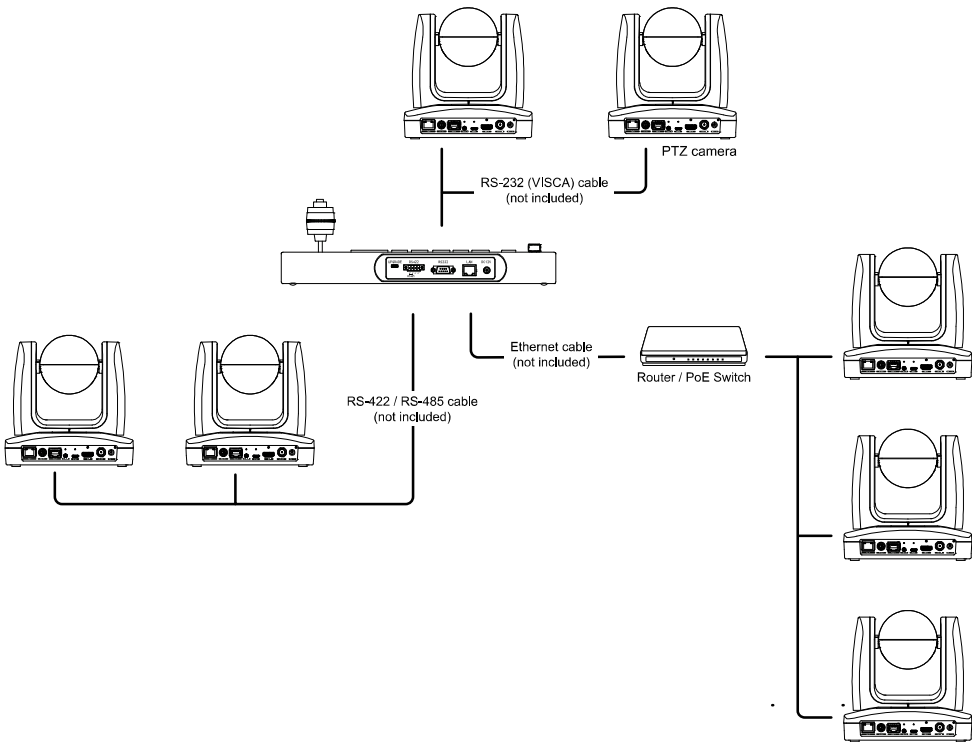


Connections

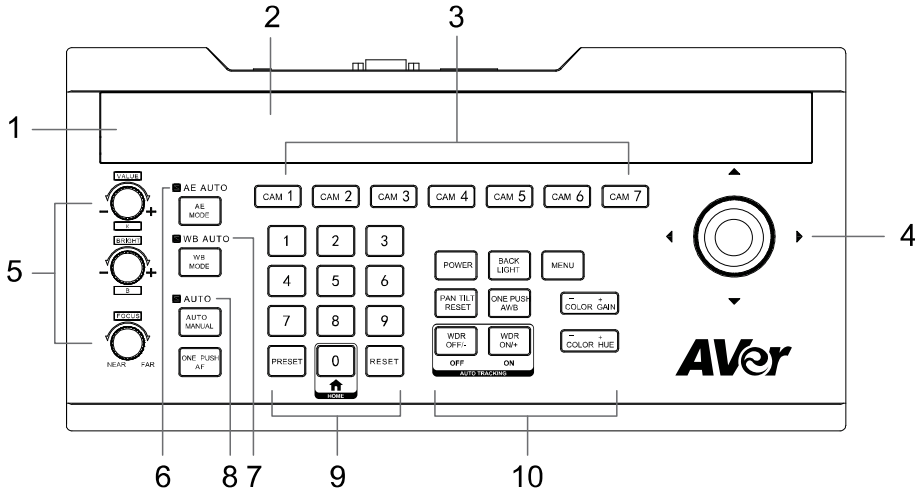
- Connect your controller to a power outlet using the included power plug for your country or region.
- Make sure your controller and PTZ cameras are connected to the same network.
- RS-422 / RS-485 port connection table:

RS-422	
Camera Controller	Camera
T+	R+
T-	R-
R+	T+
R-	T-

RS-485	
Camera Controller	Camera
T+	RS-485 A+
T-	RS-485 B-



Keyboard



Name	Function
1. Light Sensor for Backlit Keyboard	Make sure this area isn't covered when you use your controller in low light conditions. Turn backlit keyboard on or off in: **Menu** > **System Setting** > **Backlight**.
2. LED Display	Shows the relevant menu and camera information.
3. CAM1 - CAM7	Switch to a camera you want to operate. ● Make sure you have defined the camera by entering its IP address and port number in: **Menu** > **Ethernet Setting**.
4. Joystick	● Pan, tilt and zoom a camera. ● Move through the menu. ● Confirm a selection by moving right or pressing the top button.
5. Control Knobs	● **Value / R Knob:** Adjust exposure or red gain value. ● **Bright / B Knob:** Adjust exposure or blue gain value. ● **Focus Knob:** Adjust focal length. Using the focus knob will change your camera's focus mode to Manual mode.

<table>
<tr><td>6. Auto Exposure</td><td>

With each press, cycle through 5 exposure modes (Auto > Manual > Shutter Priority > Iris Priority > Brightness Priority).
The AUTO indicator will light up to confirm that your camera is in Auto mode.
Adjust Value/R knob and Bright/B knob accordingly:

<table>
<tr><th>AE Mode</th><th>Value</th><th>Bright</th></tr>
<tr><td>Auto</td><td>-</td><td>Gain compensation</td></tr>
<tr><td>Manual</td><td>Shutter</td><td>Iris</td></tr>
<tr><td>Shutter Priority</td><td>Shutter</td><td>Gain compensation</td></tr>
<tr><td>Iris Priority</td><td>Iris</td><td>Gain compensation</td></tr>
<tr><td>Brightness Priority</td><td>-</td><td>Brightness</td></tr>
</table>
</td></tr>
<tr><td>7. White Balance</td><td>

With each press, switch between Auto mode and Manual mode.
The AUTO indicator will light up to confirm that your camera is in Auto mode.
Adjust Value/R knob and Bright/B knob accordingly:

<table>
<tr><th>WB Mode</th><th>Red</th><th>Blue</th></tr>
<tr><td>Auto</td><td>-</td><td>-</td></tr>
<tr><td>Manual</td><td>Red gain</td><td>Blue gain</td></tr>
</table>
</td></tr>
<tr><td>8. Autofocus</td><td>

Auto/Manual: With each press, switch between Auto mode and Manual mode.
The AUTO indicator will light up to confirm that your camera is in Auto mode.
One Push AF: Press to autofocus once.

</td></tr>
<tr><td>9. Number Pad & Preset</td><td>

To save a preset: Press PRESET until it flashes, then a number (0-9), then PRESET again to save the preset position.
Example: Pressing PRESET + 1 + 2 + PRESET will save preset 12.
To load a preset: Press a number (0-9), then PRESET to load a preset.
Example: Pressing 1 + 2 + PRESET will load preset 12.
To delete a preset: Press RESET until it flashes, then a number (0-9), then RESET again to delete the preset position.
Example: Pressing RESET + 1 + 2 + RESET will delete preset 12.

</td></tr>
</table>

<table>
<tr>
<td>10. Camera Functions</td>
<td>

Power:

Press Power and the indicator lights of CAM1 - CAM7 will flash to confirm their status.

<table>
<tr><th>Color</th><th>Status</th></tr>
<tr><td>Green</td><td>Normal</td></tr>
<tr><td>White</td><td>Standby</td></tr>
<tr><td>No light</td><td>No camera connected or status unavailable</td></tr>
</table>

Press Power and CAM1 - CAM7 to turn the camera on or off.

Backlight: Turn backlight compensation (BLC) on or off.
Menu: Press and hold for 3 seconds to open the menu. Short press again to close the menu.
Pan-Tilt Reset: Reset the pan-tilt position.
One Push AWB: Adjust auto white balance once.
WDR Off / -: Turn off or decrease wide dynamic range (WDR). Or Press and hold for 3 seconds to turn off auto-tracking.
WDR On / +: Turn on or increase wide dynamic range (WDR). Or Press and hold for 3 seconds to turn on auto-tracking.
Color Gain: Increase or decrease the color gain value.
Color Hue: Increase or decrease the color hue value.

</td>
</tr>
</table>

Set up Your CL01 PTZ Camera Controller

Joystick Operation

Action	Function
Right	Enter, move to, or confirm the selection.
Left	Exit the selection or go back to the previous selection.
Up	Move through the menu or decrease a value.
Down	Move through the menu or increase a value.
Top button	Enter or confirm the selection.

Control More Than 7 Cameras

Configure the CAM7 button in the menu to control up to 255 cameras.

To configure the CAM7 button for additional cameras:

1. Press and hold the menu button for 3 seconds to open the menu.
2. Go to **3. Ethernet Setting** > **1. Channel** > select **CAM7** > disable **4. Lock**.
3. **1. Channel: CAM7** will now read **1. Channel: CAM007**.
4. Go to **1. Channel: CAM007**. Use the joystick or number pad to specify a number for your camera.

To switch to additional cameras:

1. Short press the menu button again to close the menu.
2. Press the camera number using the number pads, then press the CAM7 button to control the camera.

Menu

Press and hold the menu button for 3 seconds to open the menu. Short press again to close the menu. Move the joystick right to enter, move to or confirm the selection.

System Setting

Item	Description
1. Language: English	Change the menu language to **English**, **Traditional Chinese** or **Simplified Chinese**.
2. LED brightness: Normal	Set the LED display brightness of the controller to **Normal**, **Low** or **High**.
3. Backlight: On	Set the Backlight button to **On**, **Auto** or **Off**.
4. Joystick sensitive: 3 ↓↓↓↓ Scroll down	Adjust the joystick sensitivity. When the sensitivity is set to high, a small swinging amplitude can produce fast pan-tilt movements.
5. Auto standby: Off ↑↑↑↑ Scroll up	Set the length of time before the controller enters standby mode.
6. ItselfIP: 192.168.000.088:52381	Enter your camera's IP address and port number. ● The default is 192.168.001.088: 52381. ● Use the number pad (0-9) to enter the IP address and port number.
7. Factory default	Reset the controller to factory default settings.
8. About keyboard	Displays controller information such as firmware version and MAC address.

COM Setting

Item	Description
1. Channel: CAM1	Select a camera to set up.
2. Address: 1	● Enter the address based on your protocol. ● If the address is set to **other**, edit the address by doing the following: Close the menu, then press a number, then your camera button. *Example: Pressing **1** + **2** + **CAM1** will change the CAM1 address to 12.*

Protocol	Address value
Visca[1]	1-7
SonyVisca[2]	1-7
Pelco-P	1-7, other
Pelco-D	1-7, other

3. Baud rate: 9600	Specify the rate at which bits are transmitted.
4. Protocol: Visca	Set the protocol to **Visca**, **SonyVisca**, **Pelco-P** or **Pelco-D**.

1:

VISCA	Serial port (RS-232/422/485) : VISCA
	UDP VISCA

2:

Sony VISCA	IP: VISCA over IP

Ethernet Setting

Item	Description
1. Channel: CAM1	Select a camera to set up Ethernet.
2. Cam IP: 192.168.001.100	Enter the IP address using the number pad (0-9). ● The cursor will move to the next field automatically after 3 digits. ● Or press **RESET** to manually move to the next field. ● Press **PRESET** to clear the field.
3. Port: 52381	Enter the port number using the number pad (0-9).

Password Setting

Item	Description
1. Password enable: disable	Enable or disable password. When password is enabled, enter the password using the number pad (0-9) before opening the menu.
2. Modify password	Change your password.

Specifications

I/O Port	
RS-422/RS-485 Port	4-pin terminal
RS-232 Port	DB 9-pin male interface
LAN Port (All communication ports can work at the same time.)	RJ-45 female port
Power Plug	JEITA type-4 female
Upgrade Port	Micro USB female port
Camera Control	
Max Support	255 PTZ cameras
Control Protocol	VISCA , PELCO P/D
Display Screen	OLED screen
Camera Channel	7
Knobs	3
Joystick	1
Control Signal Format	
Baud Rate	2400bps, 4800bps, 9600bps, 19200bps, 38400bps
Data Bit	8 bits
Stop Bit	1 bit
Parity Bit	None
Ethernet Protocol	UDP/TCP/IP
Power	
Rated Voltage	DC 12V
Rated Current	0.3A max, 3.6W
Power Consumption	24W
Physical	
Working Temperature	0°C - 40°C (32°F - 104°F)
Storage Temperature	-20°C - +60°C (-4°F - 140°F)
Working temperature	Indoor
Dimension Size (L*W*H)	350mm x 173mm x 99mm
G.W (kg)	2.5kg
Packing Accessories	User manual / 4-pin terminal / power adapter / power jack transfer cable

Appendix

VISPA over IP Settings

Interface	RJ-45 10BASE-T / 100BASE-TX / 1000BASE-T
Internet protocol	IPv4
Transport protocol	UDP
IP address	Your controller's IP address
Port address	53669

Control Command

Command	**Function**	**Command Package**	**Note**
Panel System Setting	Language	81 01 01 01 2p FF	English (0), TC (1), SC(2)
	LED Brightness	81 01 01 02 2p FF	L (0) / Normal (1) / Hight (2)
	Backlight	81 01 01 03 2p FF	off (0), on (1), auto (2)
	Joystick sensitive	81 01 01 04 2p FF	1~7
Panel Channel Setting	Set Channel IP	81 01 02 02 0m 0n 0p 0q 0r 0s 0t 0u 0v 0w FF	IP = pqrstuvw, mn = Channel No.(01~FF)
	Set Channel port	81 01 02 03 0m 0n 0p 0q 0r 0s FF	Port = pqrs, mn = Channel No.(01~FF)
Panel Com Setting	Address	81 01 03 01 0m 0n 2p FF	1~7, mn = Channel No.(01~FF)
	Baud rate	81 01 03 02 0m 0n 2p FF	2400(1), 4800(2), 9600(3), 19200(4), 38400(5), mn = Channel No.(01~FF)
	Protocol	81 01 03 03 0m 0n 2p FF	Visca (1), SonyVisca (2), Pelco-P (3), Pelco-D (4), mn = Channel No.(01~FF)
Panel Control Cmd	Select Control Channel	81 01 04 01 0m 0n FF	mn = Channel No.(01~FF)

Query Command

Command	Command Package	Return Package	Note
PANEL_LanguageInq	81 09 01 01 FF	90 50 0p FF	English (0), TC (1), SC (2)
PANEL_LED Brightness_Inq	81 09 01 02 FF	90 50 0p FF	L (0) / Normal (1) / Hight (2)
PANEL_Backlight_Inq	81 09 01 03 FF	90 50 0p FF	off (0), on (1), auto (2)
PANEL_Joystick sensitive_Inq	81 09 01 04 FF	90 50 0p FF	1~7
PANEL_CurrentChannel_Inq	81 09 02 01 FF	90 50 0m 0n FF	mn=Channel No.(01~FF)
PANEL_CurrentChannel IP_Inq	81 09 02 02 FF	90 50 0p 0q 0r 0s 0t 0u 0v 0w FF	IP = pqrstuvw
PANEL_CurrentChannel port_Inq	81 09 02 03 FF	90 50 0p 0q 0r 0s FF	Port = pqrs
PANEL_Address_Inq	81 09 03 01 FF	90 50 0p FF	1~7
PANEL_Baudrate_Inq	81 09 03 02 FF	90 50 0p FF	2400(1), 4800(2), 9600(3), 19200(4), 38400(5)
PANEL_Protocol_Inq	81 09 03 03 FF	90 50 0p FF	Visca (1), SonyVisca(2), Pelco-P(3), Pelco-D(4)