BZB⊘GEAR®

Solutions to Amplify Your World™

BG-CJ-IPRSPRO

Professional Serial and IP Joystick Controller (IP/RS-232/422/485)

User Manual

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Statement

Please read these instructions carefully before connecting, operating, or configuring this product. Please save this manual for future reference.

Safety Precaution

- Unpack the equipment carefully and save the original box and packing material for possible future shipment.

- Follow basic safety precautions to reduce the risk of fire, electrical shock and injury to persons.

- To prevent damaging this product, avoid heavy pressure, strong vibration, or immersion during transportation, storage, and installation.

- Do not dismantle the housing or modify the module.

- Using supplies or parts not meeting the products' specifications may cause damage, deterioration or malfunction.

- Do not put any heavy items on the extension cable in case of extrusion.

- Install the device in a place with fine ventilation to avoid damage caused by overheat.

- Do not twist or pull by force ends of the optical cable. It can cause malfunction.

- The housing of this product is made of organic materials. Do not expose to any liquid, gas, or solids which may corrode the shell.

- Unplug this device during lightning storms.

- Do not use liquid or aerosol cleaners to clean this unit. Clean only with a soft dry microfiber cloth.

- Always unplug the power to the device before cleaning.

- If an object or liquid falls or spills on to the housing, unplug the module immediately.

- To prevent the risk of electric shock, do not open the case. Installation and maintenance should only be carried out by qualified technicians.

- Do not use the product beyond the specified temperature, humidity, or power supply specifications.

- This product does not contain parts that can be maintained or repaired by users. Damage caused by dismantling the product without authorization from BZBGEAR is not covered under the warranty policy.

- Installation and use of this product must strictly comply with local electrical safety standards.

- Product specifications may be subject to technical upgrades without further notice.

- Unplug the power cord when left unused for a long period of time.

- Information on disposal for scrapped devices: do not burn or mix with general household waste, please treat them as normal electrical wastes.

Introduction

The BG-CJ-IPRSPRO is a network camera controller with several control modes. It is a popular choice for recording studios, live production teams, and houses of worship thanks to its professional-grade reliability, ease of use, and compatibility with many IP-capable cameras.

Features

- Flexible: Store and recall up to 46 camera presets!
- Quick Select: Fast and easy camera selection
- High Quality Construction: Designed to handle years of use
- Control up to 7 compatible IP cameras
- Logical button layout for a quick workflow
- Adjust PTZ speed for the perfect transition
- IP VISCA, ONVIF, RS232/422/485 control modes
- Integrated OLED display
- Keypad dims without use and adjusts to ambient light

Packing List

- 1x BG-CJ-IPRSPRO Controller Joystick Gen2
- 1x Power Supply
- 1x User Manual
- 1x Quick Start Guide

Technical Specifications

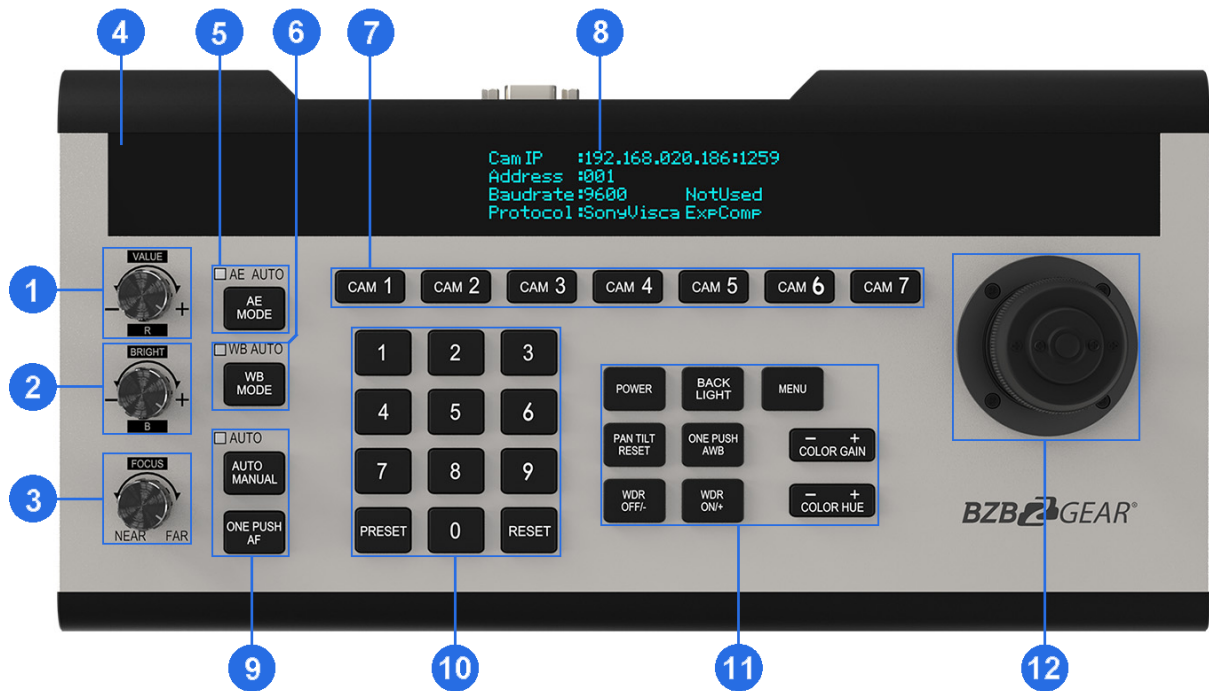| Technical	
Communication	RS485, RS42, RS23, IP (VISCA OVER IP) & Micro USB (Upgrade)
Baud Rate	2400, 4800, 9600, 19200, 38400 bps
Display	OLED Display Screen
CAM Short key Channel	7
Rotation Button	3
Joystick	1
IP Address	Default IP: 192.168.1.162
UDP Port	08090
Cam ID	1~7, Others (Max 255)
Control Protocol	VISCA, SONY VISCA, PELCO P/D, UDP, IP (VISCA OVER IP)
Power adapter	Input: AC100V ~ 240V Output: DC 12V/2A
Voltage	DC 12V
Power consumption	24W
Working Temperature	0°C ~ 40°C (32°F ~ 104°F)
Dimensions (LxWxH)	13.8 x 6.8 x 3.9 in [350 x 173 x 99 mm]
Weight	5.5 lbs
Using Environment	Indoor

Operation Controls and Functions

Side Panel

1. **Micro USB**: Connect Micro USB cable to a PC to upgrade the firmware of your controller.

2. **RS-422**: Use the RS-422 port to control your cameras over long distances up to 328ft.

3. **RS-232**: Use the RS-232 to 8-pin Mini-DIN cable to connect the 1st camera and Mini-DIN visca cables for cascadable connections.

4. **LAN**: Connect to a network switch via category cable for TCP/IP control.

5. **Power**: Connect supplied 12V power adapter.

Keys Function Description

1. **VALUE/R - Knob**

   Adjust the camera's Exposure parameters or Red Gain Value. Clockwise to increase, counterclockwise to decrease.

2. **BRIGHT/B - Knob**

   Adjust the camera's Exposure parameters or Blue Gain Value. Clockwise to increase, counterclockwise to decrease.

3. **FOCUS - Knob**

   Adjust the camera's focal length. Clockwise to focus far, counterclockwise to focus near.

   Note: When using this function, the keyboard's Focus Mode will change to MANUAL.

4. **Light Sensor**

   Detects the current environmental brightness. When the keyboard backlight setting is set to AUTO, the backlight will adjust according to the environment's light level.

5. **AE Mode Key**

Modify Auto Exposure mode. Pressing the button will switch between modes. Use the VALUE/R-Knob and BRIGHT/B-Knob to change value settings. When the AE AUTO light indicator is on, the VALUE- and BRIGHT-Knobs will only operate in this mode.

Exposure Mode	VALUE-Knobs Function	BRIGHT-Knobs Function
AUTO	None	Gain Compensation
MANUAL	Shutter	IRIS
Shutter Priority	Shutter	Gain Compensation
Iris Priority	IRIS	Gain Compensation
Brightness Priority	None	Brightness

6. **WB Mode Key**

Modify White balance mode. Pressing the button will change between auto and manual modes. Use the VALUE/R-Knob and BRIGHT/B-Knob to change value settings. When the WB AUTO light indicator is on, the R- and B-Knobs will only operate in this mode.

WB Mode	R-Knob Function	B-Knob Function
Auto	None	None
Manual	Red Gain	Blue Gain

7. **Channel short Keys Area**

[**CAM1**] ~ [**CAM7**] is the shortcut key to switch the channel of the camera. When you press the camera selection, the indicator light turns green. Now all the keyboard display information is from that camera. All of the camera channels can work with different communication protocols and COMM parameters.

8. **Display Screen**

Displays current real-time Keyboard status information (including IP Address, Port Number, COMM ID, Communication Protocol, Baud Rate, etc.) and Keyboard Menu. The display screen brightness can be set in the Keyboard Menu.

9. **FOCUS Function Area**

[**AUTO MANUAL**] Adjust camera's Focus Mode.
When AUTO indication light is ON, then the current mode is AUTO MODE
[**ONE PUSH AF**] Triggers one-time Auto FOCUS. Each time it is pressed, the camera focuses once. The camera will enter AUTO FOCUS mode.

10. PRESETS Function Area

[**PRESET**] Keys are used to Save and Call Presets.

Save Presets : Press the [**PRESET**] Button, the light of [**PRESET**] keys start blinking. Next press the number of Preset position you want saved (e.g., [**PRESET**] + [**1**] + [**2**] + [**0**] to save Preset **120**).

Call Presets: Preset Number Keys + [**PRESET**] (e.g., Press [**1**] + [**2**] + [**0**], then press [**PRESET**] , to call Preset **120**).

Clear Presets: Press [**RESET**] button; the light of [**RESET**] keys will blink. Next press the number of the saved preset position you want to clear (e.g., Press [**RESET**] + [**1**] + [**2**] + [**0**] to clear Preset **120**).

11. Camera function Area

[**POWER**] key is to check the power status of all camera channels. Press the keys and the indication light of [**CAM1**] ~ [**CAM7**] turns on.

Green means the camera is powered on. White means the camera is in standby mode. No light means the camera is not connected.

Pressing [**POWER**] + [**CAM1**] - [**CAM7**] will turn on/off the corresponding camera.

[**BACKLIGHT**] Turn ON/OFF Back light

[**MENU**] Open or close keyboard menu; long press [**MENU**] enter to Keyboard menu setting:

- [**PAN TILT RESET**] Reset the Pan/Tilt Position of camera
- [**ONE PUSH AWB**] Trigger one-time white balance.

Each time you press, the camera will calibrate White balance one time.

The camera will enter to Single time White balance Mode.

[**WDR OFF/-**] Turn OFF WDR Function or Reduced Dynamic Grade (Only available for Multigrade WDR Camera)

[**WDR ON/+**] Turn on WDR Function or Increased Dynamic Grade (Only available forMultigrade WDR Camera)

[**COLOR GAIN+**] Increase the value of COLOR GAIN

[**COLOR GAIN-**] Reduce the value of COLOR GAIN

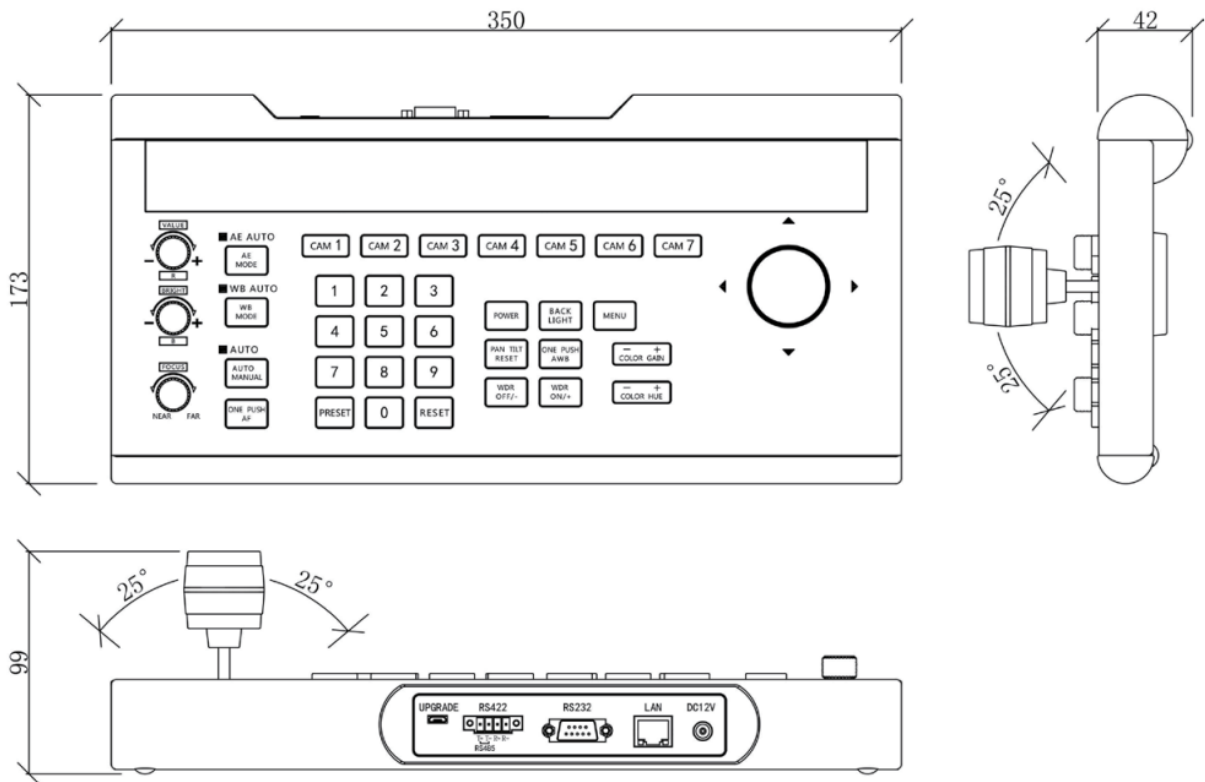[**COLOR HUE+**] Increase the value of COLOR HUE

[**COLOR HUE-**] Reduce the value of COLOR HUE

12. 3-Axis Joystick

The joystick can support up/down, left/right, and clockwise/ counterclockwise directional rotation. It can move the camera up/down, left/right and zoom in/out. Clockwise rotation is to zoom in (TELE), counterclockwise rotation is to zoom out (WIDE). When inside the Keyboard menu, the joystick can be used to modify the parameters.

Dimensions Size (Unit: mm)

Menu Introduction

Keyboard Menu Operation

- Long Press [**MENU**] for 3 secs: enter Keyboard Menu

- Swinging joystick Left & right: control the cursor up/down moving or change current menu parameter

- Joystick towards right: enter current menu; save & exit Current Menu

- Joystick towards left: exit current menu; will not save current menu

- Press [**MENU**]: exit current menu; will not save current menu

- Press Number keys [**0**] ~ [**9**]: input number value (only valid for menu items that require input number)

- Press [**PRESET**]: Backspace/Return to previous input number value (only valid for menu items that require input number)

- Press [**RESET**]: To confirm current input value; enter to next input item (only valid for menu items that require input number)

Main Menu

1. 1. Long press [MENU] for 3 secs to enter Main Menu

2. 2. Move Joystick Up-Down to control Cursor up-down

> **(System Setting)**
> **(Com Setting)**
> **(Ethernet Setting)**
> **(Password Setting)**

System Setting

Move Cursor to **[System Setting]**, then move Joystick towards right to enter.

- **[Language]**

Move cursor to **[Language]** Joystick toward-right to enter language setting status. Move Joystick up/down to change the parameters. To save and exit, move Joystick towards right. Optional: Chinese / English; other languages can be customized.

- **[LED Screen Brightness]**

Setting LED Screen Brightness: Low, Normal, High

- **[Button Backlight]**

Setting the brightness of button backlight: OFF, LOW, MID, HIGH, AUTO

When "AUTO"is selected, the backlight adjusts according to environmental brightness (e.g., during daytime, backlight will be off; during nighttime, backlight will turn on).

● **[Joystick Sensitivity]**

Set Joystick sensitivity: Low, Normal, High.

The joystick degree of movement to control the pan/tilt speed.

When the sensitivity is set high, the pan/tilt will move fast with only small degrees of movement from the joystick.

● **[AUTO STANDBY]**

Allows keyboard to enter standby mode after a set time of inactivity.

Auto standby options (in minutes): 1, 2, 5,10, 20, 30, 60.

● **[Keyboard IP]**

To set keyboard's IP Address and Port Number.

Default IP: 192.168.1.88; default Port: 5000

● **[About Keyboard]**

To check the keyboard information, including Keyboard Model No, Version, Serial Number.

Note: [▢▢▢▢] indicates the menu can page down, **[▢▢▢▢]** indicates the menu can page up

COM Setting

Move the cursor to **[COMM SETTING]** , Joystick toward Right to enter;

● **[CHANNEL]**

To select Channel CAM1 ~ CAM 7. Corresponding keyboard Keys **[CAM1] ~ [CAM7]**

● **[ID]**

Set communication address according to corresponding camera channel. When using VISCA, only addresses 1-7 are available. If using PELCO P/D, the address can be set to 1-7 or "Others" for addresses above 7.

Setting addresses above 7:

Select the channel key you'd like to use (e.g., CAM1). Set the ID to Others, then exit the menu. Select the corresponding numbers for the address you'd like to set (e.g., 12), then press the channel key.

Example using CAM1:

Press CAM1, then set address to Others. Exit the menu, then press **[1] + [2] + [CAM1]**. The address for CAM1 will now be "**12**."

● **[Baud Rate]**

For setting Baud Rate: 2400, 4800, 9600, 19200, 38400

- **[PROTOCOL]**

For setting PROTOCOL: VISCA, Pelco-D, Pelco-P

ETHERNET SETTING

Move Cursor to **[Network Setting]** , then Joystick towards right to enter.

- **[CHANNEL]**

To select the corresponding Channel **[CAM1] ~ [CAM7]**

- **[IP Address]**

Setting corresponding channel of Cam IP Address. It can be inputted by Digital Buttons. When the number input to 3 bits, the cursor will Auto enter the next item. When the input number is less than 3 bits. Press \ RESET J to confirm and enter next items. If you input the wrong number, press \ PRESET J to backspace.

- **[PORT]**

Setting UDP Communication PORT OF Corresponding Channel Camera.

Passwords Setting

Moving Cursor to **[Password Setting]** , then Joystick towards right to enter.

- **[Password Enable]**

Setting whether to use the Passwords function: Disable / Enable.
Default password: 8888
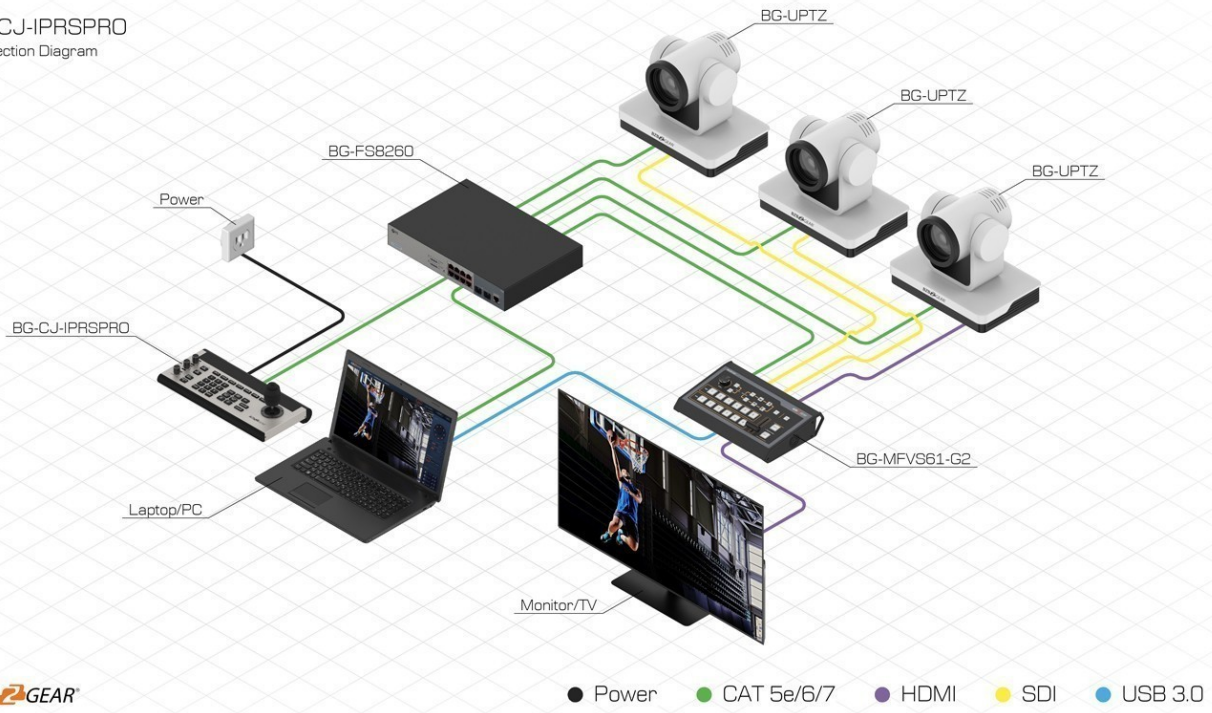
- **[Modify Password]**

Allows to change the password.
Default password: 8888

Application Example

BG-CJ-IPRSPRO
Connection Diagram

BG-UPTZ

BG-UPTZ

BG-UPTZ

BG-FS8260

Power

BG-CJ-IPRSPRO

BG-MFVS61-G2

Laptop/PC

Monitor/TV

● Power ● CAT 5e/6/7 ● HDMI ● SDI ● USB 3.0

Tech Support

Have technical questions? We may have answered them already!

Please visit BZBGEAR's support page (bzbgear.com/support) for helpful information and tips regarding our products. Here you will find our Knowledge Base (bzbgear.com/knowledge-base) with detailed tutorials, quick start guides, and step-by-step troubleshooting instructions. Or explore our YouTube channel, BZB TV (youtube.com/c/BZBTVchannel), for help setting up, configuring, and other helpful how-to videos about our gear.

Need more in-depth support? Connect with one of our technical specialists directly:

Phone	**Email**	**Live Chat**
1.888.499.9906	support@bzbgear.com	bzbgear.com

Warranty

BZBGEAR Pro AV products and cameras come with a three-year warranty. An extended two-year warranty is available for our cameras upon registration for a total of five years.

For complete warranty information, please visit bzbgear.com/warranty.

For questions, please call 1.888.499.9906 or email support@bzbgear.com.

Mission Statement

BZBGEAR is a breakthrough manufacturer of high-quality, innovative audiovisual equipment ranging from AVoIP, professional broadcasting, conferencing, home theater, to live streaming solutions. We pride ourselves on unparalleled customer support and services. Our team offers system design consultation, and highly reviewed technical support for all the products in our catalog. BZBGEAR delivers quality products designed with users in mind.

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