

Model Numbers:

- **PT-PRODUCER-12X**
- **PT-PRODUCER-20X**

Accessories:

- **PT-PRODUCER-ADD12X**
- **PT-PRODUCER-ADD20X**

<http://ptzoptics.com/producer/>

PTZ Producer Kits

The all new PTZ Producer Kits from PTZOptics are complete, turn-key, live streaming systems built around the groundbreaking Intel NUC Skull Canyon Micro-PC. These systems, available with 12X and 20X optical zoom 3G-SDI cameras, finally make television quality video production affordable. With hundreds of potential video angles made possible with PTZ cameras and the included 3D PTZ Joystick, this system will make any venue your next live streaming destination.

KEY FEATURES

1. Systems built around the Intel NUC “Next Unit of Computing” Skull Canyon high performance PC
2. Open Platform Windows 10 PC includes 6th generation i7 Processor, 32 GB of Ram, 256 GB SSD and 802.11ac WiFi
3. Works with all the latest live streaming and video production software applications
4. 2nd Generation PTZOptics 3G-SDI Cameras provide hundreds of possible streaming angles
5. 2nd Generation RS-232 Joystick provides seamless camera control switching and preset selections
6. Kits include frame grabber, 100’ of HD-SDI Cabling and 100’ of RS232 Serial Control cabling for each camera



WHAT'S IN THE BOX

Main Kits

- Intel NUC Skull Canyon PC
- PTZOptics Gen-2 12X or 20X Camera
- HuddleCamHD RS232 Joystick
- Magewell 3G-SDI/USB 3.0 Frame Grabber
- Shure Motiv MVi Mic Interface
- 100' 3G-SDI Cabling
- 100' RS-232 Cabling
- 2M HDMI High speed with Ethernet
- 8in mini display port to HDMI
- Logitech USB Wired keyboard & mouse
- 7 port USB3 HUB

Accessory Kits

- 2nd PTZOptics Gen-2 12X or 20X
- 2nd Magewell 3G-SDI/USB Frame Grabber
- 2nd 100' 3G-SDI Cabling
- 2nd 100' RS-232 Cabling (Daisy Chain)



Application Diagram

configuration | video streaming/recording



The Ideal Live Streaming System

- Stream RTSP or RTMP video and audio to your favorite CDN (Content Delivery Network)
- Stream locally on your network
- Dual Streaming for both high and low resolution settings
- Benefit from easy to use far end camera control
- Support for (2) 1080p unicast users *more at lower resolutions
- Ready for unicast streaming (best for low bandwidth internal usage)
- Open Source IP Control Software
- Android Camera Control App
- 16 Professional Virtual Sets included for TriCaster, vMix & WireCast
- Each digital video output can still be used for video monitoring or conferencing
- Make dynamic recordings with LMS systems and record “just the talking heads” via HDMI
- Take remote camera control from the far end as PTZOptics offers over 4 different ways for camera control (IP/Network, IR Remote, RS-232, and UVC)
- Every camera has HDMI video output (Perfect for in-room confidence monitors)

PTZOptics cameras can easily integrate with Learn Management Systems (LMS) such as Blackboard, Moodle or Kaltura.

Publish your live video streams with RTSP or RTMP using a CDN or a enterprise streaming server.





Model Number:

PT12X-SDI-GY-G2 (gray)

PT12X-SDI-WH-G2 (white)

<http://ptzoptics.com/12x-sdi/>

PTZ OPTICS Broadcast & Conference Camera

The PTZ Optics 12X-SDI is a 1080p camera with 12X optical zoom for capturing both wide angles and long shots. With support for 3G-SDI, HDMI, and IP Streaming (H.264, H.265 & MJPEG), this camera is ideal for broadcasting high definition video signals for broadcast, recording or video conferencing applications.

KEY FEATURES

- 72.5 degree wide-angle lens.
- High performance in low illumination situations with Wide Dynamic Range.
- Full 1920x1080p HD Resolutions up to 60 frames per second.
- 2D and 3D noise reduction with our latest “low noise CMOS sensor”.
- RS232 & RS485 (Serial) and IP (LAN/WAN) Control
- H.264, H.265 & MJPEG Streaming over RJ-45 LAN port
- HDMI, 3G-SDI, IP Streaming (All 3 Simultaneous)

WHAT'S IN THE BOX

- 12X Zoom 3G-SDI Camera
- Power Adapter + Cord
- IR Remote Control
- RS-232C Cable
- User Manual

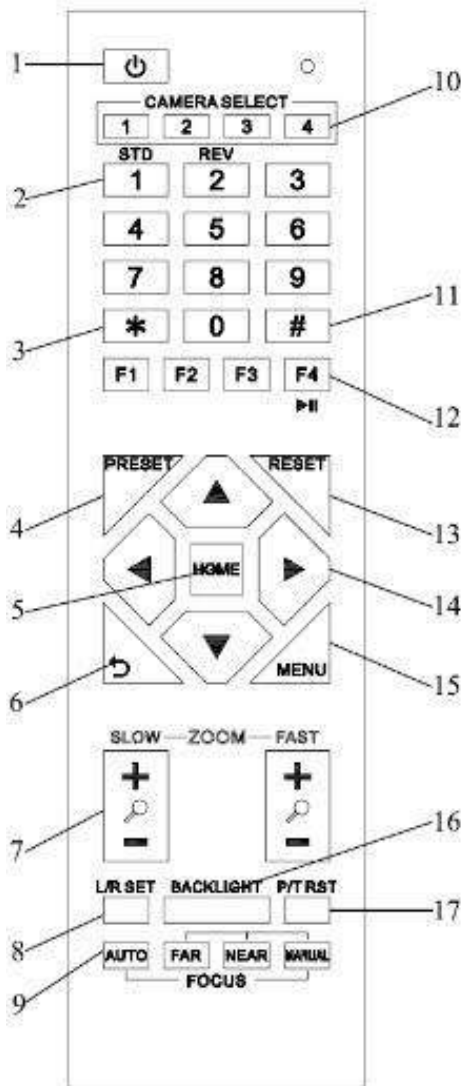
Camera & Lens	
Video Sensor	1/2.7" CMOS, 2.12 Mega Pixels
Frame Rates	1080i/60 & 50, 1080p/60 & 50, 1080p/30 & 25, 720p/60, 50, 30 & 25
Lens	12x, F3.5mm-42.3mm, F1.8-F2.8
Lens Zoom	12x
Field of View	72.5°
Min Lux	0.5 Lux at F1.8, AGC ON
Shutter Speed	1/30s - 1/10000s
SNR	≥55dB
Vertical Flip & Mirror	Supported
Horizontal Angle of	6.9° (tele) to 72.5° (wide)
Vertical Angle of View	3.9° (tele) to 44.8°(wide)
Working Environment	Indoor

Pan & Tilt Movement	
Pan Movement	±170°
Tilt Rotation	Up: 90°, Down: 30°
Presets	10 via IR (255 via Serial or IP)

Rear Board	
Video Output	HDMI, 3G-SDI, IP Streaming, CVBS
Network Interface	RJ45
Audio Interface	Line In, 3.5mm (USB & IP Stream Only)
Communication	RS-232, RS485
Baud Rate	2400/4800/9600 bits
Power Supply	JEITA type Power Adapter (DC IN 12V)
3G-SDI Interface	BNC – 75 Ohm, Female
USB 2.0 Interface	Future Use

Electrical Index	
Power Supply	12W (Max)
Input Voltage	12V DC (10.8 - 13.0V DC)

Physical	
Dimension (in.)	5.6W x 6.5H x 6.7D (7.88H max w/ Tilt)
Dimensions (mm)	142W x 164H x 169D (189H max w/ Tilt)
Box Dimensions	9"x9"x10" 229mmx254mmx229mm
Camera Weight	3.05 lbs. (1.38 kg)
Boxed Weight	5.4 lbs. (2.45 kg)



1. Standby Button

Press this button to enter standby mode. Press it again to enter normal mode. NOTE: Power consumption in standby mode is approximately half of the normal mode.

2. Position Buttons (0-9)

To set preset or call presets and for Special Shortcut Functions.

3. * (asterisk) Button

For use with multiple function buttons (see 12)

4&13. Set/Clear Preset Buttons

Set preset: Store a preset position [PRESET] + Numeric button (0-9): Setting a corresponding numeric key preset position. Clear preset: Erase a preset position [RESET] + Numeric button (0-9)
Note: [*] + [#] + [RESET]: Erase all presets.

5&14. Pan/Tilt & Home Control Buttons

Press the arrow buttons to perform panning and tilting. Press the [HOME] button to face the camera back to its Home position.

6. Return Button

Press button to return to previous menu.

7. Zoom Buttons (Slow & Fast)

Zoom+: Zoom In (Slow and fast speeds)
Zoom-: Zoom Out (Slow and fast speeds)

8. L/R Set Button

Set the left & right direction of panning control. Hold [L/R Set] + Press [1]: Normal panning direction. Hold [L/R Set] + Press [2]: Left and right panning direction will be reversed.

9. Focus Buttons

Used for focus adjustment. Press [AUTO] to adjust the focus on the center of the object automatically. To adjust the focus manually, press the [MANUAL] button, and then adjust focus with [Far] (focus on far object) and [Near] focus on near object).

10. Camera Address Select Buttons

Press the button corresponding to the camera which you want to operate with the IR remote controller.

11. # Button

For use with multiple function buttons (see 12)

12. Multiple Function Buttons

Function 1. Set camera IR address function: Press 3 keys consecutively to set the camera's IR address as follow:

- [*] + [#] + [F1]: IR Address 1
- [*] + [#] + [F2]: IR Address 2
- [*] + [#] + [F3]: IR Address 3
- [*] + [#] + [F4]: IR Address 4

Function 2. Image freezing function: Press [F4] to start the freeze function. The word "Freeze" displays on the upper left corner. After five seconds, the display disappears automatically (though the freeze feature continues). To cancel the freeze, press the [F4] key the word "Unfreeze" displays on the upper left corner. After five seconds, the display disappears automatically.

15. Menu Button

OSD Menu Settings: Press this button to enter or exit the OSD (on screen display) menu.

16. Backlight Button

Backlight (aka BLC) button: Press this button to enable backlight compensation. Press it again to disable backlight compensation. NOTE: Effective only in auto exposure mode. NOTE: If there is a light behind the subject, the subject will appear dark (i.e. silhouetted). In this case, press the backlight button to turn BLC On . To cancel this function, press the backlight button to turn BLC Off.

17. P/T RST Button

Press the button to self-calibrate the pan and tilt positions and limits.

Special Shortcut Functions

- [*] + [#] + [1]: Display OSD menu in English
- [*] + [#] + [3]: Display OSD menu in Chinese
- [*] + [#] + [4]: Show IP address
- [*] + [#] + [6]: Quickly restore default settings
- [*] + [#] + [8]: Show the camera FW version
- [*] + [#] + [9]: Quickly set mounting mode (vertical flip / normal)



Model Number:

PT20X-SDI-GY-G2 (gray)

PT20X-SDI-WH-G2 (white)

<http://ptzoptics.com/20x-sdi/>

PTZ OPTICS Broadcast & Conference Camera

The PTZ Optics 20X-SDI is a 1080p camera with 20X optical zoom for capturing HD images at long distances. With support for 3G-SDI, HDMI, and IP Streaming (H.264, H.265 & MJPEG), this camera is ideal for broadcasting high definition video signals for broadcast, recording or video conferencing applications.

KEY FEATURES

- 60.7 degree wide-angle lens.
- High performance in low illumination situations with Wide Dynamic Range.
- Full 1920x1080p HD Resolutions up to 60 frames per second.
- 2D and 3D noise reduction with our latest “low noise CMOS sensor”.
- RS232 & RS485 (Serial) and IP (LAN/WAN) Control
- H.264, H.265 & MJPEG Streaming over RJ-45 LAN port
- HDMI, 3G-SDI, IP Streaming (All 3 Simultaneous)

WHAT'S IN THE BOX

20X Zoom 3G-SDI Camera
Power Adapter + Cord
IR Remote Control
RS-232C Cable
User Manual

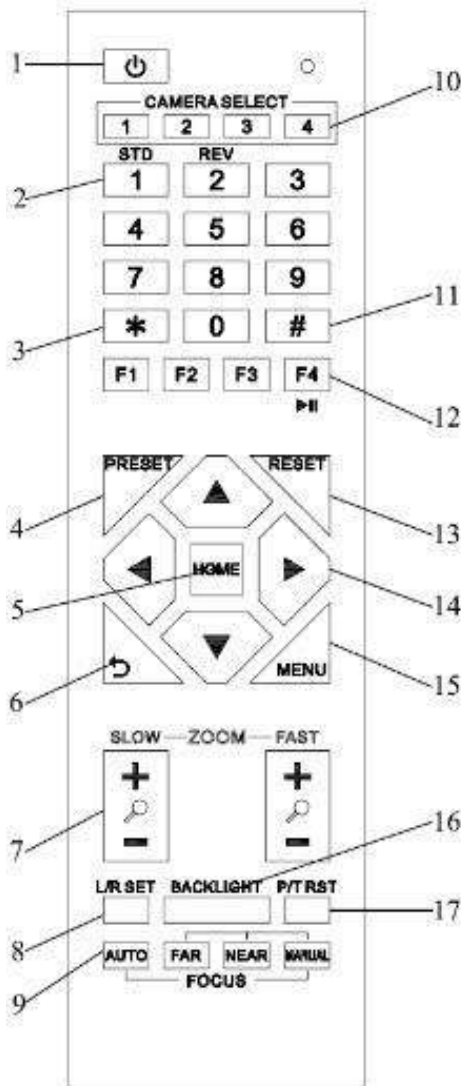
Camera & Lens	
Video Sensor	1/2.7" CMOS, 2.12 Mega Pixels
Frame Rates	1080i/60 & 50, 1080p/60 & 50, 1080p/30 & 25, 720p/60, 50, 30 & 25
Lens	20x, F4.42mm-88.5mm, F1.8-F2.8
Lens Zoom	20x
Field of View	60.7°
Min Lux	0.5 Lux at F1.8, AGC ON
Shutter Speed	1/30s - 1/10000s
SNR	≥55dB
Vertical Flip & Mirror	Supported
Horizontal Angle of	3.36° (tele) to 60.7° (wide)
Vertical Angle of View	1.89° (tele) to 34.1°(wide)
Working Environment	Indoor

Pan & Tilt Movement	
Pan Movement	±170°
Tilt Rotation	Up: 90°, Down: 30°
Presets	10 via IR (255 via Serial or IP)

Rear Board	
Video Output	HDMI, 3G-SDI, IP Streaming, CVBS
Network Interface	RJ45
Audio Interface	Line In, 3.5mm (USB & IP Stream Only)
Communication	RS-232, RS485
Baud Rate	2400/4800/9600 bits
Power Supply	JEITA type Power Adapter (DC IN 12V)
3G-SDI Interface	BNC – 75 Ohm, Female
USB 2.0 Interface	Future Use

Electrical Index	
Power Supply	12W (Max)
Input Voltage	12V DC (10.8 - 13.0V DC)

Physical	
Dimension (in.)	5.6W x 6.5H x 6.7D (7.8H max w/ Tilt)
Dimensions (mm)	142W x 164H x 169D (198H max w/ Tilt)
Box Dimensions	9"x9"x10" 229mmx254mmx229mm
Camera Weight	3.10 lbs. (1.41 kg)
Boxed Weight	5.4 lbs. (2.45 kg)



1. Standby Button

Press this button to enter standby mode. Press it again to enter normal mode. NOTE: Power consumption in standby mode is approximately half of the normal mode.

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To set preset or call presets and for Special Shortcut Functions.

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Zoom+: Zoom In (Slow and fast speeds) Zoom-: Zoom Out (Slow and fast speeds)

8. L/R Set Button

Set the left & right direction of panning control. Hold [L/R Set] + Press [1]: Normal panning direction. Hold [L/R Set] + Press [2]: Left and right panning direction will be reversed.

9. Focus Buttons

Used for focus adjustment. Press [AUTO] to adjust the focus on the center of the object automatically. To adjust the focus manually, press the [MANUAL] button, and then adjust focus with [Far] (focus on far object) and [Near] focus on near object).

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Backlight (aka BLC) button: Press this button to enable backlight compensation. Press it again to disable backlight compensation. NOTE: Effective only in auto exposure mode. NOTE: If there is a light behind the subject, the subject will appear dark (i.e. silhouetted). In this case, press the backlight button to turn BLC On . To cancel this function, press the backlight button to turn BLC Off.

17. P/T RST Button

Press the button to self-calibrate the pan and tilt positions and limits.

Special Shortcut Functions

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- [*] + [#] + [6]: Quickly restore default settings
- [*] + [#] + [8]: Show the camera FW version
- [*] + [#] + [9]: Quickly set mounting mode (vertical flip / normal)



Scull Canyon NUC

Model Number: NUC-i7-G2
<http://ptzoptics.com/producer/>

From editing images to rendering 4K video, the 6th generation Intel® Core™ i7 processor with Intel® Iris™ Pro Graphics gives you maximum performance for anything you create. Thunderbolt™ 3 technology connects you up to 3 4K displays and allows you to ramp your graphics performance with external graphics cards, or transfer your data to and from an external drive at an incredible 40 Gbps. That's 2X the video bandwidth (3) and exactly what you need for working with large media files featuring high-resolution, vibrant visuals.

KEY FEATURES

1. 6th generation Intel Core i7-6770HQ processor (2.6 GHz up to 3.5 GHz Turbo, Quad Core 6MB cache, 45W TDP)
2. Dual-channel DDR4 SODIMMs, 32GB maximum
3. Intel Iris Pro graphics 580
4. One Thunderbolt 3 port, One Display Port via USB-C
5. Four total USB 3.0 ports with one SDXC slot
6. Two M.2 slots with flexible support for a 42 or 80 mm SATA or PCIe SSD
7. Intel Dual Band Wireless-AC 8260 and Bluetooth* 4.2
8. Consumer Infrared sensor on the front panel
9. Support for user-replaceable 3rd party lids

WHAT'S IN THE BOX

Preconfigured Skull Canyon NUC
 With:

- 32GB of RAM
- 256GB SSD
- Windows 10 Pro
- Power Supply
- PC Mount
- 2nd/Alternate cover (no skull)

Performance Parameters

6th generation Intel Core i7-6770HQ processor (2.6 GHz up to 3.5 GHz Turbo, Quad Core 6MB cache, 45W TDP)

Dual-channel DDR4 SO-DIMM sockets (up to 32 GB, 2133+ MHz)

Intel Iris Pro graphics 580

One Thunderbolt 3 port , One Display Port via USB-C

Four total USB 3.0 ports with one SDXC slot

Two M.2 slots w/ flexible support for a 42/80 mm SATA or PCIe SSD

Integrated Dual Band Wireless-AC 8260 and Bluetooth 4.2 adapter

Consumer Infrared sensor on the front panel

One full-size HDMI 2.0 display port

Warranty

3 Year Mfg. Warranty

Dimensions + Weight

Dimensions (in.): 8.5 x 4.6 x 1

Dimensions (mm.): 216 x 116 x 23

Keyboard Height: 0.76 (19.4mm)

Power Supply

19V 120W

Compatibility

Operating systems: Windows 10, 8.1 ,7 and Linux

Select USB HID compliant Smart TVs and gaming consoles



MAGEWELL™

Model Number: Magewell
<http://ptzoptics.com/producer/>

USB Capture SDI

Record or stream a 3G-SDI signal via USB 3.0 with the Magewell 'USB Capture SDI' Dongle. With its 3G-SDI input, this capture device will accept resolutions of up to 1920 x 1200 at 60p. If you need to stream or record at a certain resolution, the XI100 will internally up or down-convert the input signal to the set resolution. It can also perform frame-rate conversion and de-interlacing in real-time with its own hardware, taking the processing load off your computer's CPU.

KEY FEATURES

1. No drivers needed for Windows, Mac, or Linux
2. Automatically determines input video format and converts it to the specified output size and frame rate
3. Automatically converts input audio formats to 48KHz PCM stereo Audio 64MB of DDR2 onboard memory to control frame buffer and avoid interruption or dropped frames when USB bandwidth is occupied

WHAT'S IN THE BOX

Magewell 'USB Capture SDI' Dongle
Mini-Coax to Full-Size BNC Adapter
USB 3.0 Cable
Limited 1-Year Warranty





Broadcast Quality Made Affordable

Performance Parameters

Input Interface	1 MCX interface (can convert to BNC interface with supplied adaptor)
Host Interface	USB3.0, *300-350MB/s throughput USB2.0, *40MB/s throughput
SDI Input	1 1080p/60Hz SD/HD/3G-SDI
SDI Audio Input	1 embedded SDI audio
SDI Input Formats	SD/HD/3G-SDI, SMPTE-259 / 274 / 296 / 372 / 424 / 425 / 292
SDI Input Formats	SD/HD/3G-SDI, SMPTE-259 / 274 / 296 / 372 / 424 / 425 / 292
Resolution	640×480 / 640×360 / 720×480 / 720×576 / 768×576 / 856×480 / 960×540 / 1024×576 / 1280×720 / 1920×1080
Frame rate	25 / 29.97 / 30 / 50 / 59.94 / 60 fps
Audio and Video Capture	meets standards of UVC (USB video class) and UAC (USB audio class)
Audio and Video Capture	meets standards of UVC (USB video class) and UAC (USB audio class)
Output Color Space	YUY2, RGB24
Color Space Conversion	Hardware Color Space Conversion
Up/down Scaling	Hardware Up/down Scaling
Image Adjustment	brightness, contrast, hue, saturation
Image Adjustment	The image adjustment of brightness, contrast, hue, saturation
Working Temperature	0-50 deg C
Storage Temperature	-20-70 deg C
Storage Humidity	5%-90%

Compatibility

OS	Windows 7/8/8.1/10/2008/2008 R2/2012 (x86 & x64) Linux (Ubuntu 12.04–16.10, CentOS 7) OS X 10.9–10.11 macOS 10.12 Chrome OS
Software	Windows Media Encoder (Windows) Adobe Flash Media Live Encoder (Windows, OS X) Real Producer Plus (Windows) VLC (Windows, OS X, Linux) QuickTime Broadcaster (OS X) QuickTime Player (OS X) Wirecast (Windows, OS X) and etc.
Development Interface	DirectShow (Windows), DirectSound (Windows), V4L2 (Linux), ALSA (Linux)

Hardware

Onboard Memory	64MB DDR2, the work rate is 300 MHz, the bit width is 16 bits
Upgrade	Firmware can be upgraded
Size	92.2 x 40.2 x 12.3 (L/W/H, mm)
Power Consumption	<= 2.5W



SHURE®

Model Number: Shure MVi-LTG

<http://ptzoptics.com/producer/>

Shure MVi-LTG

MVi digital audio interface offers content creators professional-quality audio recording in the studio and on the go. Take advantage of five onboard DSP recording presets to quickly dial in the right sound for your project, or dive even deeper with the free ShurePlus™ MOTIV™ iOS app for enhanced recording, editing, and sharing. A combination microphone/instrument input and zero-latency headphone connector housed in rugged, all-metal construction delivers great-sounding recordings.

KEY FEATURES

1. A flexible 24-bit/48kHz USB recording interface for your computer or mobile device
2. Onboard DSP presets for speech, singing, flat, acoustic instrument, and loud sources onboard
3. Class A microphone preamp delivers clear sound and phantom power for studio condensers
4. Integrated headphone output provides real-time, low-latency monitoring
5. Includes micro-USB to USB cable for use with Mac, Windows PC, and Android devices
6. Includes micro-USB to Lightning cable for use with iOS devices

WHAT'S IN THE BOX

- MVi digital audio interface
- micro-USB to USB cable
- micro-USB to Lightning cable

Performance Parameters

DSP Modes (Presets)	Speech / Singing / Acoustic / Loud / Flat
Transducer Type	Electret Condenser (1" / 25 mm)
Polar Pattern	Unidirectional (Cardioid)
Bit Depth / Sample Rate	Up to 24 Bit / 48 kHz
Frequency Response	20 Hz to 20,000 Hz
Adjustable Gain Range	0 to +36 dB
Sensitivity	-39 dBFS / Pa at 1 kHz
Maximum SPL	130 dB SPL
Mute	Yes

Compatibility

MFi Certified

Hardware

Power	Powered Through USB or Lightning Connector
Audio Output	3.5 mm (1/8")
Mounting Stand	Built-In
Stand Adapter	5/8", 27-Thread (Standard Microphone Stand Mount)
Housing	All-Metal
Net Weight	574.7 g (20.27 oz.)
Dimensions (H × W × D)	128 mm × 86 mm × 70 mm
Cable	Includes MicroB-to-USB Cable and MicroB-to-Lightning Cable





Model Number: HC-JOY-G2
<http://ptzoptics.com/producer/>

3D Serial Joystick Controller

Easy pan, tilt & zoom controls for any RS-232, RS-422, RS-485 VISCA or Pelco protocol camera! Controls pan & tilt with variable speed. Use 3-dimensional joystick with “twist” for variable control of zoom.

WHAT'S IN THE BOX

- Three-axis control keyboard
- RS232 cable
- DC12V Power Supply
- Manual

KEY FEATURES

1. Durable Metal Housing
2. VISCA, PELCO-P, PELCO-D
3. RS232, RS422, RS485
4. On Screen Display
5. Variable Speed Pan, Tilt & Zoom Control
6. Iris, Focus, Home, Backlight & Preset controls
7. 4 Camera Quick Select keys

Key Technical Specifications

Connections:	RS-232, RS-485, RS-422
Baud Rate:	1200-19200 bps
Interfaces:	DB9: RS232; 5SCT: RS485/RS422.
Maximum Cameras:	Control up to 255 Cameras
Maximum Presets:	Up to 255 Presets
Maximum Distance:	3,937' (1200m) using 24 gauge twisted pair

Operational Specifications

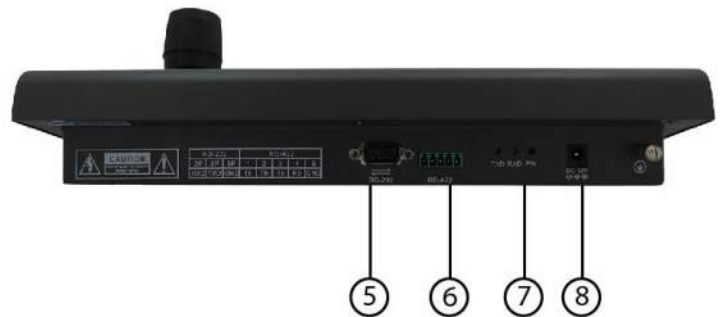
Power	6W (12VDC Voltage)
Working Temp	14°F ~ 122°F (-10° ~ +50° C).
Working Humidity:	10 ~ 90% (non-condensation)
Weight	3.4 lbs 1.6 kg
Dimensions (in.)	12.6w X 4.3h X 7.1d
Dimensions (mm.)	320w X 110h X 181d

Compatibility

Protocols: VISCA, PELCO-D, PELCO-P



- LCD Display**
1. Menu options displayed here
- Camera Control keys**
2. Quick camera select, camera select, Focus, Iris, BLC, Home, Preset set, call & clear
- Numeric Keys**
3. Setting and calling and clearing presets and changing parameters



4. Joystick
Three-Axis Joystick Controller
5. DB9 Connection
For RS-232 Camera Control
6. RS422/485 Connection
For RS422/485 camera control
7. Activity LEDs
8. Power Connection
12V Power Connection