Model Number:
PT20X-USB-GY-G2 (gray)
PT20X-USB-WH-G2 (white)
http://ptzoptics.com/usb/

PTZOPTICS
Broadcast & Conference Camera

The PTZOptics 20X-USB is a 1080p camera with 20X optical zoom for capturing HD images at long distances. With support for USB 3.0, 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 light scenarios 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".
- UVC 1.5 (USB), RS232 & RS485 (Serial), and IP (LAN/WAN) control
- H.264, H.265, & MJPEG Streaming over RJ-45 LAN port
- HDMI, USB 3.0, & IP streaming (all 3 simultaneously)
- RTMP & RTSP IP streaming
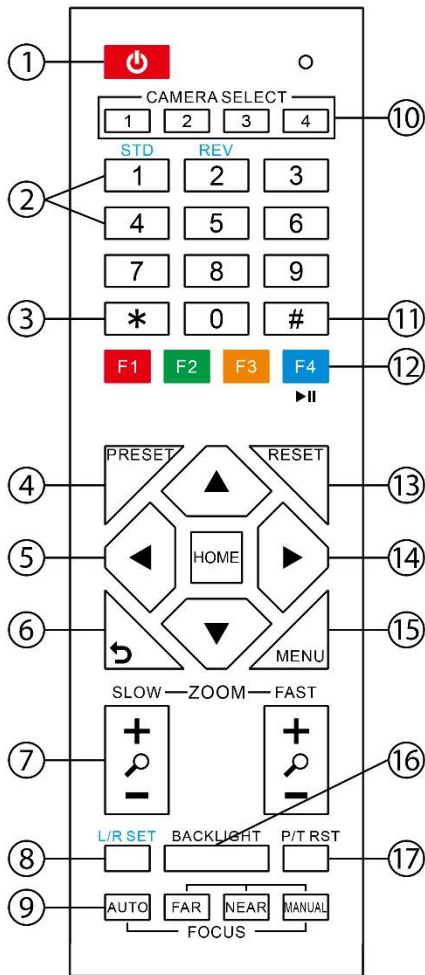- 5-year warranty
- Photobooth capable

WHAT'S IN THE BOX
20X Zoom USB 3.0 Camera
Power Adapter + Cord
USB 3.0 Cable
IR Remote Control
RS-232C Cable
Quick Start Guide
(2) AAA Batteries

Camera & Lens	
Video Sensor	1/2.7" CMOS, 2.12 Mega Pixels
Frame Rates	1080p-60/50/30/25, 1080i-60/50, 720p-60/50/30/25
Frame Rates (CVBS)	576i-30, 480i-30
Focal Length	20x, F4.42mm-88.5mm, F1.8-F2.8
Lens Zoom	20x
Field of View	60.7°
Min Lux	0.05 Lux (@F1.8, AGC ON)
Shutter Speed	1/30s - 1/10000s
SNR	≥55dB
Vertical Flip & Mirror	Supported
Horizontal Angle of View	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 Connectors	
Video Output	HDMI, USB 3.0, IP Streaming, CVBS
Network Interface	RJ45
Audio Interface	Line In, 3.5mm (USB & IP Stream Only)
Communication	RS-232, RS-485, PELCO-D/P, UVC 1.5
Baud Rate	2400/4800/9600 bits
Power Supply	JEITA type Power Adapter (DC IN 12V)
USB 3.0 Interface	USB 3.0 (Requires Quad Core Processor)
USB 2.0 Interface	Future Use

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

Physical Specifications	
Dimension (in.)	5.6W x 6.5H x 6.3D (7.5H max w/ Tilt)
Dimensions (mm)	142W x 164H x 160D (189H max w/ Tilt)
Box Dimensions	9" x 9" x 10"	229mm x 254mm x 229mm
Camera Weight	2.95 lbs. (1.34 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)
[*] + [#] + [MANUAL]: Resets IP information
[#] + [*] + [4]: Enable Dynamic IP addressing
[#] + [*] + [#] + [1]: Set IP to 192.168.100.81
[#] + [*] + [#] + [2]: Set IP to 192.168.100.82
[#] + [*] + [#] + [3]: Set IP to 192.168.100.83
[#] + [*] + [#] + [4]: Set IP to 192.168.100.84
[#] + [*] + [#] + [5]: Set IP to 192.168.100.85
[#] + [*] + [#] + [6]: Set IP to 192.168.100.86
[#] + [*] + [#] + [7]: Set IP to 192.168.100.87
[#] + [*] + [#] + [8]: Set IP to 192.168.100.88
[#] + [*] + [#] + [9]: Set IP to 192.168.100.89
[#] + [*] + [#] + [0]: Set IP to 192.168.100.80