



**Model Number:**  
 PT20X-NDI-GY (gray)  
 PT20X-NDI-WH (white)  
<http://ptzoptics.com/ndi/>

## PTZOPTICS Broadcast & Conference Camera

The PTZOptics 20X-NDI is a 1080p camera with 20X optical zoom for capturing HD images at long distances. With support for NDI|HX, 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 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”.
- NDI, RS232 & RS485 (Serial), and IP (LAN/WAN) control
- H.264, H.265, & MJPEG streaming over RJ-45 LAN port
- HDMI, 3G-SDI, & NDI or IP streaming (3 simultaneously)
- PoE (Power over Ethernet) or 12VDC
- RTMP, RTSP, and NDI|HX
- 5-year warranty
- Photobooth capable

### WHAT'S IN THE BOX

- 20X Zoom NDI|HX Camera
- Power Adapter + Cord
- 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	NDI   HX, HDMI, 3G-SDI, IP, CVBS
Network Interface	RJ45
Audio Interface	Line In, 3.5mm (NDI, HDMI & IP Stream)
Communication	RS-232, RS485, PELCO-D/P, NDI
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) or PoE 802.3af

Physical Specifications	
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" x 9" x 10"   229mm x 254mm x 229mm
Camera Weight	3.00 lbs. (1.36 kg)
Boxed Weight	5.4 lbs. (2.45 kg)



**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]: Enables DHCP 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

**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)

