4K 12x Tracking PTZ Camera
PTC-285/ PTC-285T/ PTC-285G

www.datavideo.com

4K 12x Tracking PTZ Camera

Brand New 4K AI Tracking PTZ Camera

The Datavideo 4K Auto Tracking PTZ Camera PTC-285 is a high-performance solution for live production environments. This camera operates at 4K 50/60p with advanced auto-tracking capabilities. It can be controlled via a traditional RS-422 serial port or through IP remote control using DVIP (Datavideo's proprietary protocol) or Sony VISCA over IP. Notably, the PTC-285 series supports dual streaming output, making it ideal for A/V market applications, and enables easy streaming to platforms like Facebook (RTMPS), YouTube, and dvCloud.
Furthermore, the PTC-285 models are compliant with the ONVIF Profile S standard, ensuring compatibility and interoperability across various network video environments.
To meet different workflow needs, Datavideo offers multiple models, including the PTC-285T 4K HDBaseT version for long-distance high- quality signal transmission and the PTC-285G with 12G-SDI output for professional-grade video production requirements. Users can flexibly choose according to their actual working environment and personal preferences to achieve the desired shooting effect. Additionally, the PTC-285 and PTC-285G cameras support NDI functionality.

PTC-285T

PTC-285/ PTC-285T/ PTC-285G

- 2160p50/59.94/60 PTZ camera
- Supports Auto tracking function
- 1/2.8" CMOS
- 12x Optical Zoom, 16x Digital Zoom
- 4K Video outputs: HDMI 2.0, 3G-SDI, H.264/H.265 Streaming
- 2160p and 1080p (3G-SDI) Simultaneous video output
- RS-422 Serial Control
- DVIP (Datavideo Proprietary Protocol) Control
- Supports Sony VISCA via browser and VISCA over IP Protocol
- External audio input: 3.5mm audio in (mic in or line in)
- User friendly web UI via browser & app (iOS and Android)
- Dual streaming: 2160p and 480p simultaneously
- The PTC-285 and PTC-285G cameras support NDI | HX3and NDI | HX2 technology.
- Compliant with the ONVIF Profile S standard.
- Support DC and POE power supply

PTC-285

PTC-285 SERIES

PTC-285

NDI.HX3 12x 4K 50/60 UHD AT AUTO TRACKING

PTC-285T

HDBaseT 12x 4K 50/60 UHD AT AUTO TRACKING

PTC-285G

NDI.HX3 12G 12x 4K 50/60 UHD AT AUTO TRACKING

Quick Access to Camera's Auto tracking

You will be allowed direct access to auto tracking via various external controllers such as the supplied RMC-1AT remote control and DVIP controllers (RMC-300A, PTC View Assist, etc.)

In addition to camera controllers, you can also easily enable auto tracking on smart switchers which include KMU-200, SHOWCAST 100, etc as well as complete solution systems like ZR-1 Hybrid Video Production Solution.

SHOWCAST 100

RMC-300A   PTC View Assist   TPC-700P   RMC-1AT

## Custom AI Object Tracking

If you are filming multiple people, you can designate a person for Auto tracking. Once linked to the camera, only the designated person will be tracked, avoiding interferences such as the desks, people coming back and forth, large objects, etc.
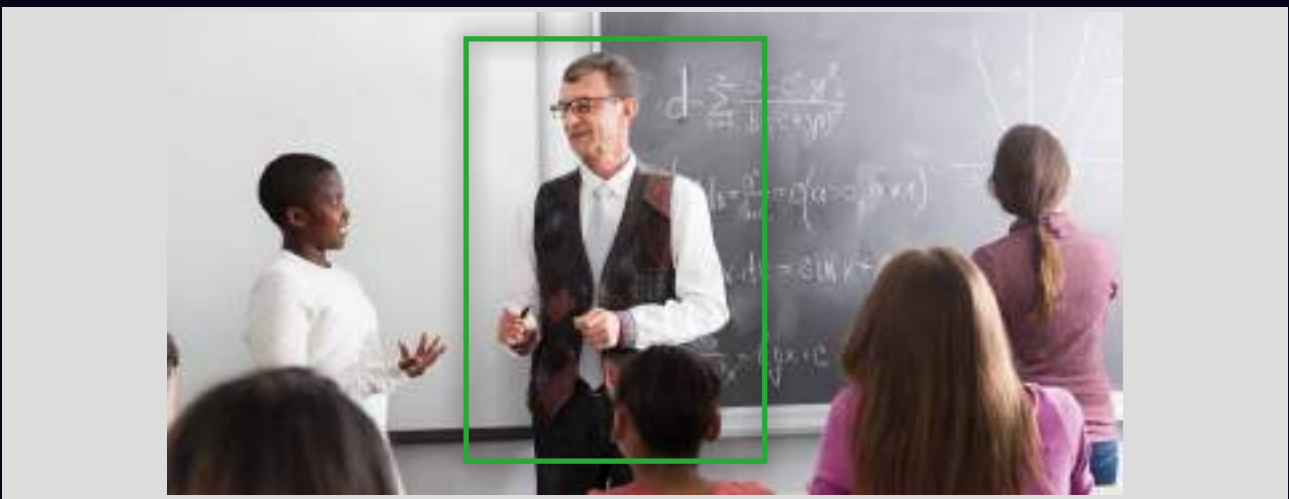
Talent Position: Center / Left Side / Right Side

The positioning of talent depends on the videographer's creativity and intent rather than strict rules. Different positions can convey various emotions, messages, or visual effects. A centered composition provides a sense of stability and balance, suitable for scenes that require highlighting the main subject. Videographers may also place the talent on the left third or right third of the frame, leaving adequate space in the foreground to showcase the talent's sight direction or potential future possibilities.

Left Side

Center

Right Side
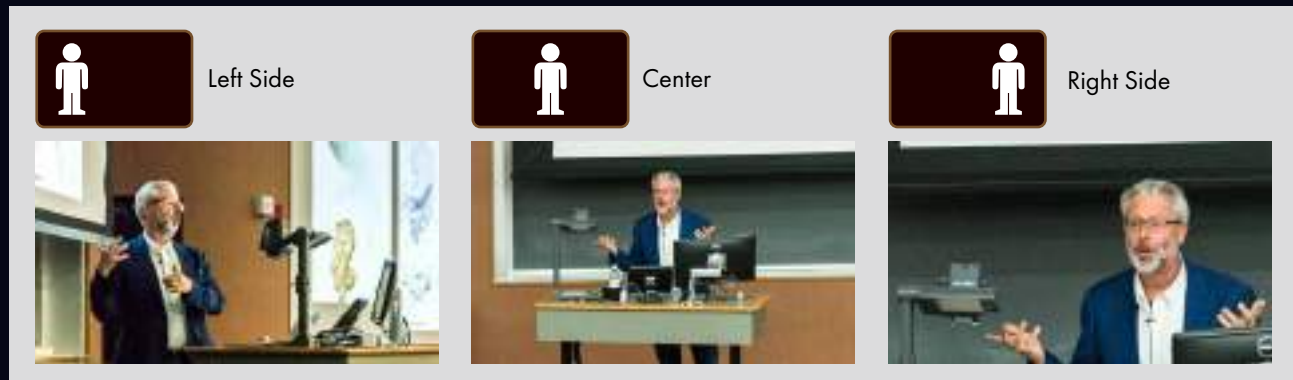
Quick Access to Framing Options

All of the PTC-285 camera series include RMC-1 controller. User can quickly select full-body , half-body and close up framing, making it easy to change the shooting scene and framing requirements.

full-body

half-body

close up framing
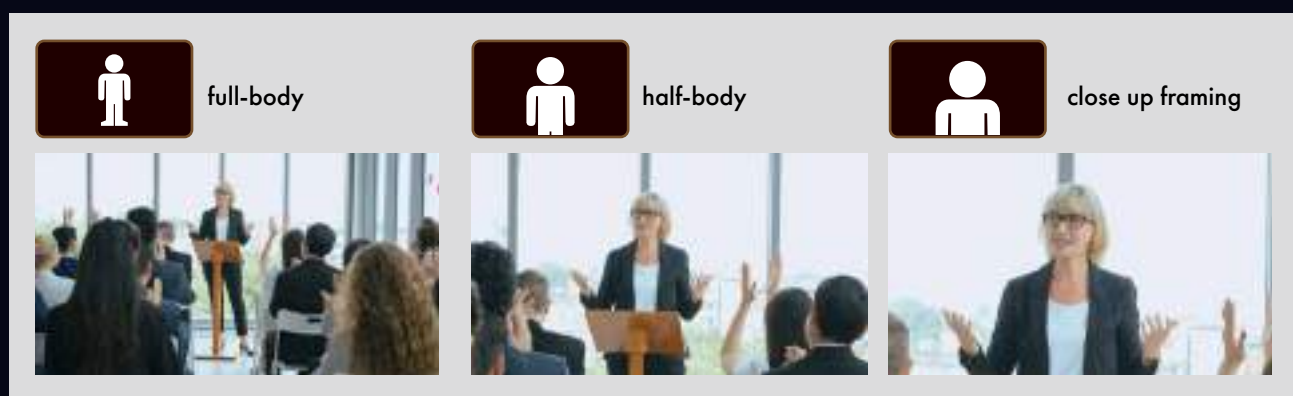
Smart PTZ Speed Adaptation

The integrated PID algorithm is able to detect the movement speed of the identified object and automatically adjust the camera's corresponding pan, tilt and zoom speeds in such a way that the lens movement will be smooth, avoiding common camera lens movement problems like jerky movements or unpredicted halts.

Auto Tracking

S-Shaped Speed Curve

Just like how the lift accelerates or decelerates, the camera lens movement will be smooth, avoiding jerky movements that are visible to naked eyes.

Pan   Tilt   Zoom   Speed   Auto
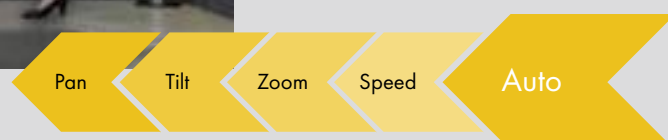
Various Control Options

Control real-time pan, tilt, and zoom camera movements using the Datavideo PTZ View Assist app, RMC-300A, and RMC-180 series, with configurable preset positions supported.

Multiple Simultaneous Video Outputs

Supports simultaneous HDMI 2.0 output up to 2160p 50/60, as well as 3G-SDI output up to 1080p 50/60.

Supports 12G-SDI Output

The PTC-285G is equipped with a 12G-SDI input/output port, designed to deliver ultra-high-definition 4K SDI video content, ensuring detailed and smooth imagery. It is seamlessly compatible with other professional broadcast-grade 12G-SDI devices, creating an integrated, high-quality video production experience.

SHOWCAST 100

PTZ View Assist

RMC-180 MARK II

RMC-300A

streaming

4K HDM

3G-SDI

12G

Multiple Network Protocols with Dual Stream Function

Supports RTSP and RTMPS protocols, making it easy to stream directly to two different CDN platforms, including Datavideo dvCloud.

One Ethernet Cable with NDI® | HX Technology

There is no need for multiple cables or complicated setup. The single-wire concept allows you to transfer video, audio, power, tally, and control using just one Ethernet cable.
Power over Ethernet (PoE) functionality enables you to transmit all data and power over a single cable.
NDI® is a registered trademark of NewTek, Inc.

NDI® Virtual Input

The PTC-285, as a video input source, can be used with various platforms: Skype, GoToMeeting, WebEx, Zoom, and more.

SRT READY

NDI.HX3

Broadcast-Quality 4K HDMI /3G-SDI PTZ Camera

Supports resolutions up to 2160p 50/60.
12x optical zoom for the PTC-285 series provides high-quality video.

Low-Noise in Low-Light CMOS Effectively ensures high SNR for video quality

Advanced 3D noise reduction technology further reduces noise while maintaining image sharpness.

RS-422, DVIP, and Ethernet Camera Control

RS-422 and Ethernet allow the use of DVIP or VISCA over IP commands to integrate with larger control systems.

RS-422
VISCA
RMC-300A
DVIP

Compliant with the ONVIF Profile S Standard

The PTC-285 series cameras are compliant with the ONVIF Profile S Standard, ensuring seamless integration and interoperability in network video systems.

Supports H.264/H.265 video compression

Supports compression of resolutions up to 3840x2160 with frame rates up to 59.94 or 60 fps, and a second channel with 720x480p compression. AAC, MP3, and PCM audio compression are also supported.

Tally Light

Green and red tally lights indicate preview and program status for broadcast applications.

ONVIF® | S

H.264
HEVC

Simply enable Auto tracking with your IR remote control

RMC-1AT PTZ Controller

AT
AUTO TRACKING

All you need is a remote control to set and control all four cameras and save the four presets.

Menu
Press the Menu button to open the camera's OSD menu which will show you all functions of the PTC-285.

Focus
Ergonomic design to ease manual focus adjustment.

Return
This returns the camera lens position to the Home position. When the OSD menu is opened, this button returns to the previous menu hierarchy level.

AF Auto Focus
Press the AF button to turn on/ off auto focus function.

AT Tracking Enable
The AT button activates the auto tracking function of the PTC-285 series with one key. User can quickly select full-body , half-body and close up framing, making it easy to change the shooting scene and framing requirements.

Power
Press to activate the camera or enter standby mode.

Camera Selection / Setting
Select to set or control up to four cameras.

Camera Presets
Each camera is allowed up to four presets which store the camera's current pan, tilt and zoom position, as well as settings such as iris, focus and movement speed. Presets allow quick access to settings required for specific camera shooting.

Zoom
Sets zoom speed and zooms in and out.
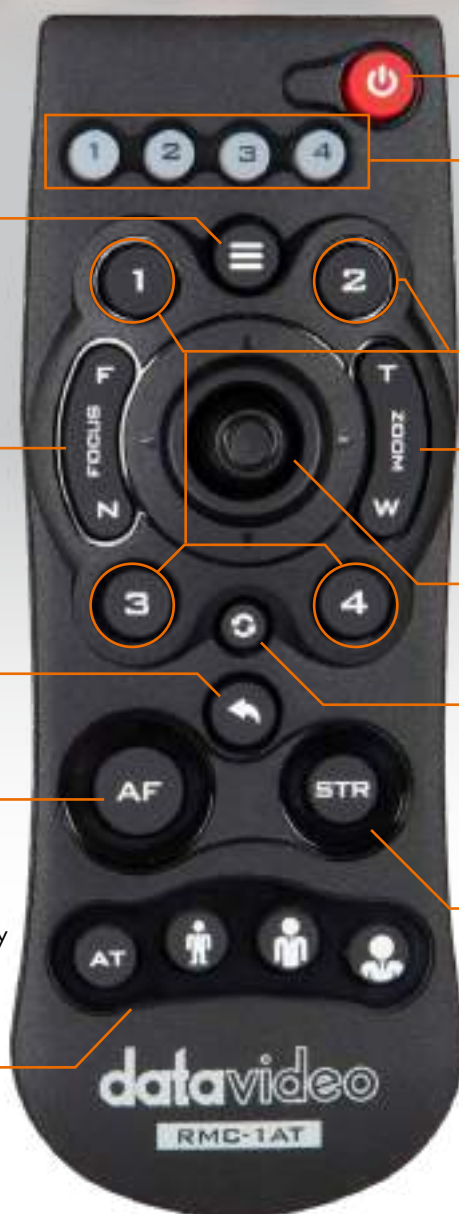
Micro Joystick
The joystick controls the pan and tilt directions or selects options or values while the OSD menu is opened.

IP Address Reset
Press and hold to restore the default IP address.

Store
Saves the current pan, tilt and zoom settings of the camera as well as settings such as iris, focus and movement speed to presets 1 to 4.

Auto Tracking

White Balance
Focus
Iris

Monitoring

PTZ View Assist
Control up to four cameras
with your Tablet

The camera control app is tailored for the Datavideo PTZ camera series. It can monitor live
streaming video from the PTC-140, PTC-145, PTC-280, PTC-285, PTC-300, and PTC-305 series.
The app can control up to four cameras simultaneously via DVIP. You can intuitively set up and recall
presets, and adjust white balance, focus, and iris. The app can decode live streaming via RTSP and
SRT, making it easy to monitor the live video stream and promptly set up parameters in a single
application.
Datavideo provides both iOS and Android versions, available for free on Google Play and the App
Store.

Mobile phone version available soon
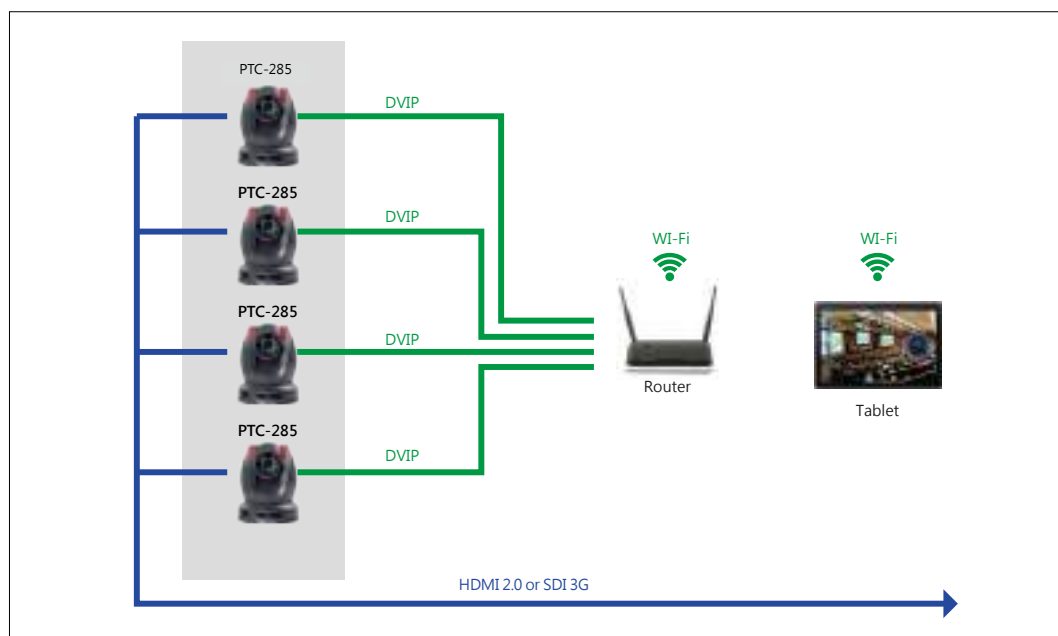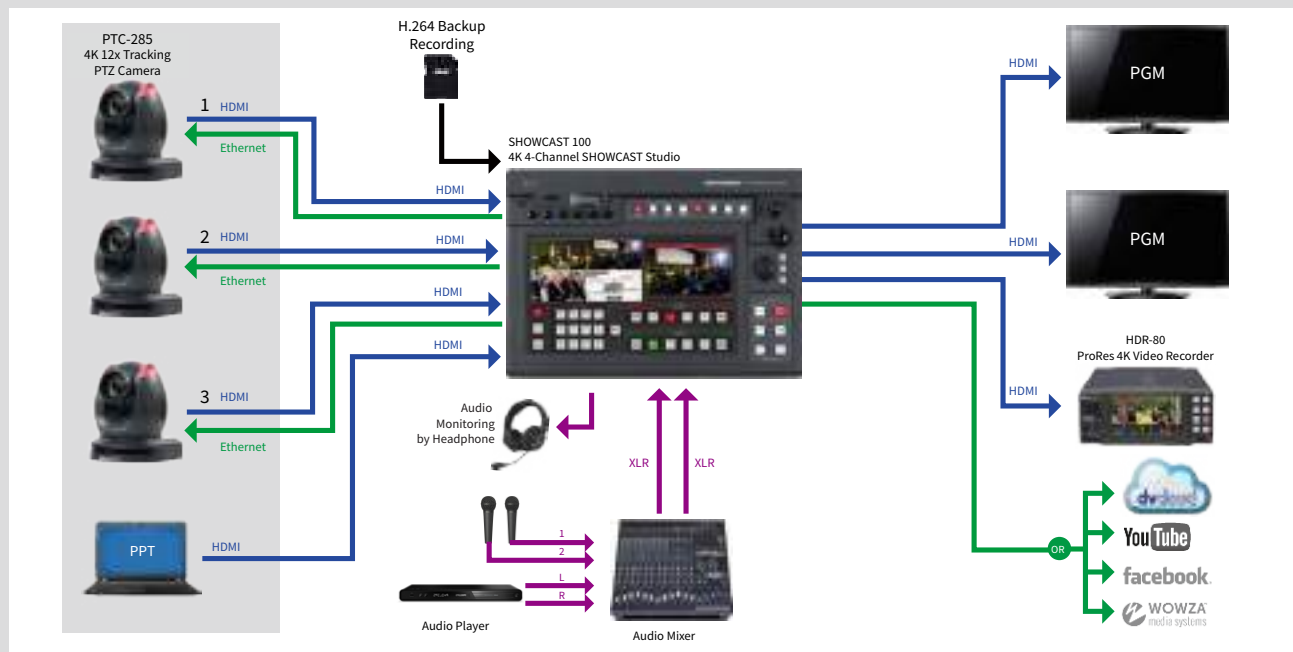
Camera
Control

Camera

Protocal

Position

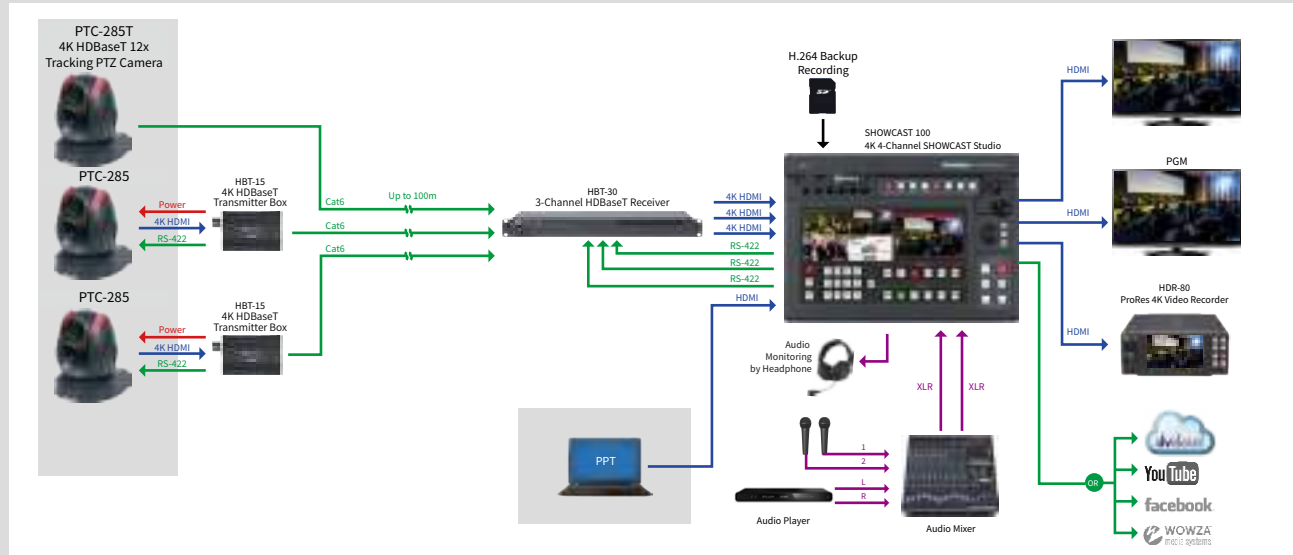## Camera control via web UI APP contrcol

The camera control app can control Datavideo PTZ cameras. Once installed on a tablet, the app makes it easy
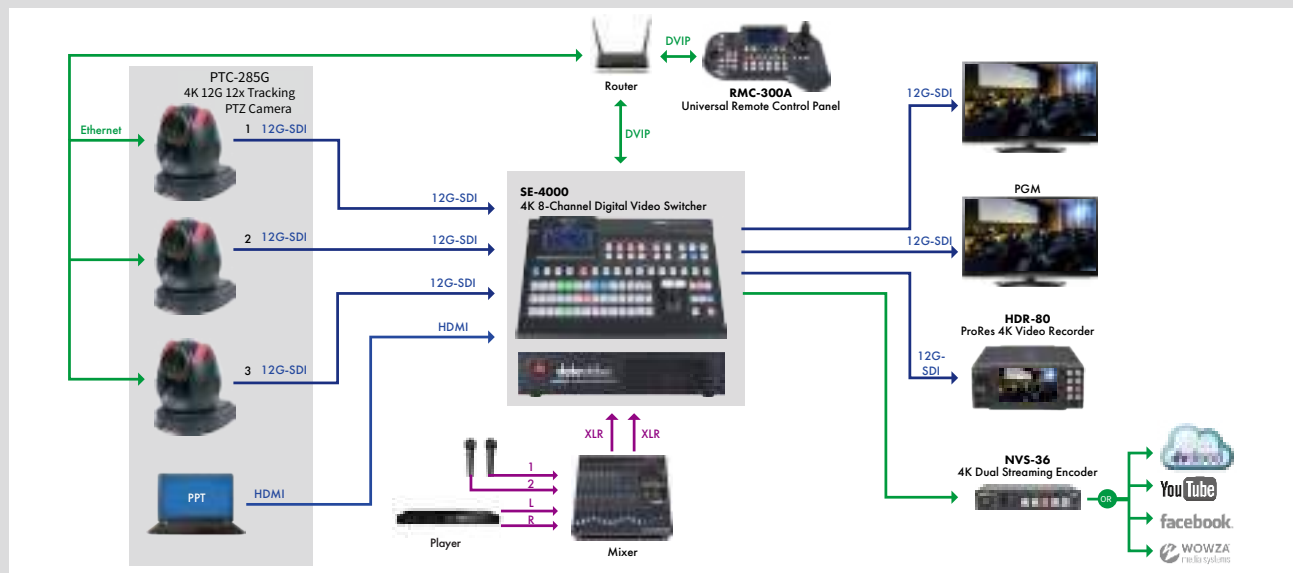to control cameras on the same network.

PTC-285

PTC-285
4K 12x Tracking
PTZ Camera

1 HDMI
Ethernet
HDMI

2 HDMI
HDMI
Ethernet
HDMI

3 HDMI
HDMI
Ethernet

PPT
HDMI

H.264 Backup
Recording

SHOWCAST 100
4K 4-Channel SHOWCAST Studio

HDMI

PGM

HDMI

PGM

Audio
Monitoring
by Headphone

HDR-80
ProRes 4K Video Recorder

HDMI

XLR   XLR

1
2

L
R

Audio Player

Audio Mixer

OR

You Tube
facebook
WOWZA
media systems

PTC-285T

PTC-285T
4K HDBaseT 12x
Tracking PTZ Camera

PTC-285

HBT-15
4K HDBaseT
Transmitter Box

Power
4K HDMI
RS-422

Cat6
Cat6
Cat6

Up to 100m

HBT-30
3-Channel HDBaseT Receiver

PTC-285

HBT-15
4K HDBaseT
Transmitter Box

Power
4K HDMI
RS-422

H.264 Backup
Recording

SHOWCAST 100
4K 4-Channel SHOWCAST Studio

HDMI

4K HDMI
4K HDMI
4K HDMI

RS-422
RS-422
RS-422

HDMI

Audio
Monitoring
by Headphone

PGM

HDMI

HDR-80
ProRes 4K Video Recorder

HDMI

PPT

XLR   XLR

1
2

L
R

Audio Player

Audio Mixer

OR

You Tube
facebook
WOWZA
media systems

PTC-285G

PTC-285G
4K 12G 12x Tracking
PTZ Camera

Ethernet

1 12G-SDI

2 12G-SDI

3 12G-SDI

PPT
HDMI

Router

DVIP

RMC-300A
Universal Remote Control Panel

DVIP

SE-4000
4K 8-Channel Digital Video Switcher

12G-SDI
12G-SDI

12G-SDI

12G-SDI

HDMI

12G-SDI

PGM

12G-SDI

HDR-80
ProRes 4K Video Recorder

12G-
SDI

NVS-36
4K Dual Streaming Encoder

XLR   XLR

1
2

L
R

Player

Mixer

OR

You Tube
facebook
WOWZA
media systems

Optional accessories

The WM-1 can be positioned upside-down or right-side-up to suit various applications. The three-piece design is sturdy and easy to install on any wall.

VP-929
HDMI 4K Repeater

WM-1
Wall Mount

WM-1W
Wall Mount (White)

What's in the box accessories

RMC-1
IR remote control

Ceiling mount bracket

DC 12V Adaptor

Dimension

PTC-285 and PTC-285G

219mm

173 mm

189.08mm

PTC-285T

228.5mm

184.43 mm

194.13mm
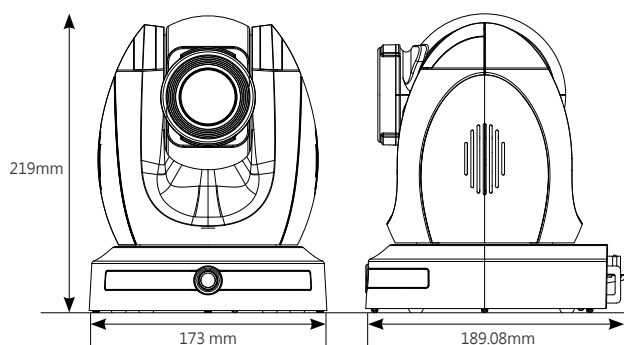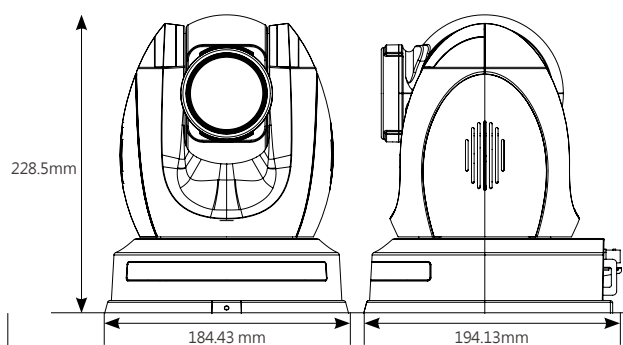
Specification

NDI HX3 — **HDBaseT** — **12G**

	PTC-285	PTC-285T	PTC-285G
Product Name	4K 12x Tracking PTZ Camera	4K HDBaseT 12x Tracking PTZ Camera	4K 12G 12x Tracking PTZ Camera
Video format/Resolution	HDMI: 2160p60/59.94/50/30/29.97/25 1080p60/59.94/50/30/29.97/25 1080i60/59.94/50 720p60/59.94/50 *2160p60/59.94/50 YUV 4:2:2 SDI: 1080p 60/59.94/50/30/29.97/25 1080i 60/59.94/50 720p 60/59.94/50	HDMI/HDBaseT: 2160p60/59.94/50/30/29.97/25 1080p60/59.94/50/30/29.97/25 1080i60/59.94/50 720p60/59.94/50 *2160p60/59.94/50 YUV 4:2:2 SDI: 1080p 60/59.94/50/30/29.97/25 1080i 60/59.94/50 720p 60/59.94/50	HDMI: 2160p60/59.94/50/30/29.97/25 1080p60/59.94/50/30/29.97/25 1080i60/59.94/50 720p60/59.94/50 *2160p60/59.94/50 YUV 4:2:2 SDI: 2160p60/59.94/50/30/29.97/25 1080p 60/59.94/50/30/29.97/25 1080i 60/59.94/50 720p 60/59.94/50
Image Sensor	1/2.8" CMOS	1/2.8" CMOS	1/2.8" CMOS
Effective Pixels (approx.)	8.51 Mega Pixels	8.51 Mega Pixels	8.51 Mega Pixels
S/N Ratio	≥55dB	≥55dB	≥55dB
Min. Illumination	0.5 Lux @ (F1.8, AGC ON)	0.5 Lux @ (F1.8, AGC ON)	0.5 Lux @ (F1.8, AGC ON)
Electronic Shutter	1/30s ~ 1/10000s	1/30s ~ 1/10000s	1/30s ~ 1/10000s
Zoom Ratio	12x Optical Zoom, 16x Digital Zoom	12x Optical Zoom, 16x Digital Zoom	12x Optical Zoom, 16x Digital Zoom
Effective Zoom Ratio	12x	12x	12x
Iris Control	Auto / Manual	Auto / Manual	Auto / Manual
Digital Noise Reductions	3D	3D	3D
On-Screen Display (OSD)	English/Simplified Chinese/Traditional Chinese	English/Simplified Chinese/Traditional Chinese	English/Simplified Chinese/Traditional Chinese
White Balance	Auto, Indoor, Outdoor, OnePush, Manual, VAR	Auto, Indoor, Outdoor, OnePush, Manual, VAR	Auto, Indoor, Outdoor, OnePush, Manual, VAR
AGC / Gain Control	Yes	Yes	Yes
Mirror / Flip Image	Yes	Yes	Yes
Focus Mode	Auto/Manual	Auto/Manual	Auto/Manual
Panning / Tilting Range	Pan: 300° Tilt: +130° to -15°	Pan: 300° Tilt: +130° to -15°	Pan: 300° Tilt: +130° to -15°
Panning / Tilting Speed	Pan: 0.876°/s~43°/s Tilt: 0.693°/s ~21.32°/s	Pan: 0.876°/s~43°/s Tilt: 0.693°/s ~21.32°/s	Pan: 0.876°/s~43°/s Tilt: 0.693°/s ~21.32°/s
Preset	255 Position	255 Position	255 Position
Focal Length	12x, f = 4.4mm ~ 52.8mm, F1.8 ~ F2.6	12x, f = 4.4mm ~ 52.8mm, F1.8 ~ F2.6	12x, f = 4.4mm ~ 52.8mm, F1.8 ~ F2.6
Field of View (Horizontal, Wide)	80°	80°	80°
Image Compensation	Back light compensation	Back light compensation	Back light compensation
Video Output	HDMI 2.0 x1, 3G-SDI x1 10/100/1000M RJ45 (PoE) x1	HDMI 2.0 x1, 3G-SDI x1, HDBaseT x 1 10/100/1000M RJ45 (PoE) x1	HDMI 2.0 x1, 3G-SDI x1 10/100/1000M RJ45 (PoE) x1
Audio Input	3.5 mm x1 (mic in/line in) switch from Web UI	3.5 mm x1 (mic in/line in) switch from Web UI	3.5 mm x1 (mic in/line in) switch from Web UI
Tally LED	Yes	Yes	Yes
Control Protocol	Pelco-D, Peldo-P, VISCA, VISCA over IP, DVIP, ONVIF, NDI	Pelco-D, Peldo-P, VISCA, VISCA over IP, DVIP, ONVIF	Pelco-D, Peldo-P, VISCA, VISCA over IP, DVIP, ONVIF, NDI
Remote Control Interface	IR, Web GUI, RS-422/RS-232 DVIP, NDI	IR, Web GUI, RS-422/RS-232 DVIP, HDBaseT(RJ-45)/Serial control on Receiver Box: Transmit up to 100m	IR, Web GUI, RS-422/RS-232 DVIP, NDI
Video Compression Format	H.264/H.265/MJPEG	H.264/H.265/MJPEG	H.264/H.265/MJPEG
Audio Compression Format	AAC, G711	AAC, G711	AAC, G711
Audio Bitrate	96Kbps, 128Kbps, 256Kbps	96Kbps, 128Kbps, 256Kbps	96Kbps, 128Kbps, 256Kbps
Streaming Protocols	RTSP, RTMP(S), ONVIF, Multicast, SRT, NDI|Hx3 (1080p)	RTSP, RTMP(S), ONVIF, Multicast, SRT	RTSP, RTMP(S), ONVIF, Multicast, SRT, NDI|Hx3 (1080p)
First Stream Supported Resolution	3840x2160, 1920x1080, 1280x720 1024x576, 960x540 , 640x480, 640x360	3840x2160, 1920x1080, 1280x720 1024x576, 960x540 , 640x480, 640x360	3840x2160, 1920x1080, 1280x720 1024x576, 960x540 , 640x480, 640x360
Second Stream Supported Resolution	720x480 , 640x360, 480x270, 320x240	720x480 , 640x360, 480x270, 320x240	720x480 , 640x360, 480x270, 320x240
Video Bitrate	32Kbps ~ 50Mbps (Single Stream)	32Kbps ~ 50Mbps (Single Stream)	32Kbps ~ 50Mbps (Single Stream)
Video Bitrate Mode	VBR, CBR	VBR, CBR	VBR, CBR
Encoding Frame rate	50Hz: 1-50fps 60Hz: 1-60fps	50Hz: 1-50fps 60Hz: 1-60fps	50Hz: 1-50fps 60Hz: 1-60fps
POE	IEEE 802.3at	IEEE 802.3at	IEEE 802.3at
F/W Update	Via Web UI or USB 2.0	Via Web UI or USB 2.0	Via Web UI or USB 2.0
IR Control	Yes	Yes	Yes
Camera Control Unit	RMC-2P RMC-180 series/ RMC-300 series/ PTZ View Assist APP	HS-1650T/HS-1600T Mark II/RMC-2P/RMC-180 series/RMC-300 series/PTZ View Assist APP	RMC-2P RMC-180 series/ RMC-300 series/ PTZ View Assist APP
Tripod Mount	1/4-20 UNC	1/4-20 UNC	1/4-20 UNC
Optional Accessories	WM-1/ WM-10/ WM-11	WM-1/ WM-10/ WM-11	WM-1/ WM-10/ WM-11
Color	Dark Blue/White	Dark Blue/White	Dark Blue/White
Dimension (LxWxH)	173 (W) x 219 (H) x 189.08 (D)	185 (W) x 229 (H) x 195.08 (D)	173 (W) x 219 (H) x 189.08 (D)
Weight	2.6 kg	2.7 kg	2.6 kg
Operating Temp. Range	0~40 °C	0~40 °C	0~40 °C
Power	DC 12V 21W	DC 12V 22W	DC 12V 21W