datavideo

A Guide to Robotic Cameras for Production & Presentation

Datavideo offers a wide range of PTZ cameras for various applications and venue size. There are many factors to consider when choosing a PTZ camera and this guide should help clarify which camera would be best for your application.
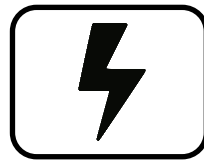
4K 50/60 UHD — In this guide we will indicate which cameras are 4K models for your reference.

Choosing A PTZ Camera For Your Application

Here are four features to consider when selecting a PTZ Camera:

AT AUTO TRACKING	⚡	🔍⊕	CONTROL
1. Auto Tracking	**2. Power & Video Signal Transmission**	**3. Optical Zoom & Distances**	**4. Camera Control**

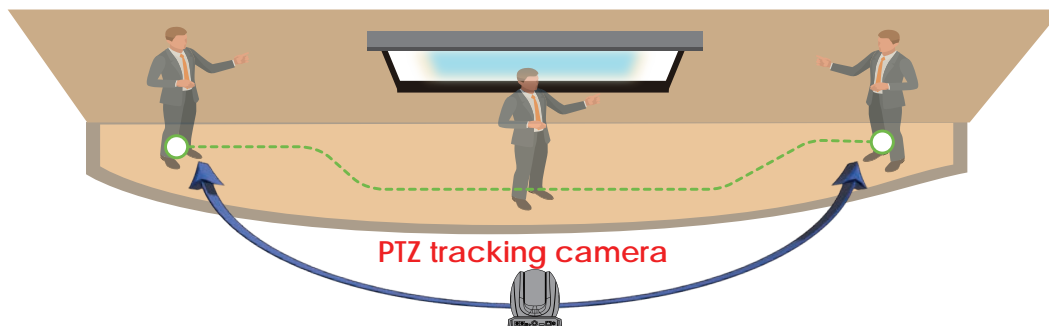## Auto Tracking AT AUTO TRACKING

A Datavideo Auto Tracking camera uses AI technology built into the camera, so no software or external device is needed to use this function.

PTZ tracking camera

Once auto-tracking is turned off, the camera will still work as a regular PTZ camera. When there is no operator available for a live video event, the presenter has the ability to turn on/off the tracking feature. Auto-tracking cameras are popular solutions for lecture capture, corporate, conferencing, or even houses of worship venues where technical operators are not available.
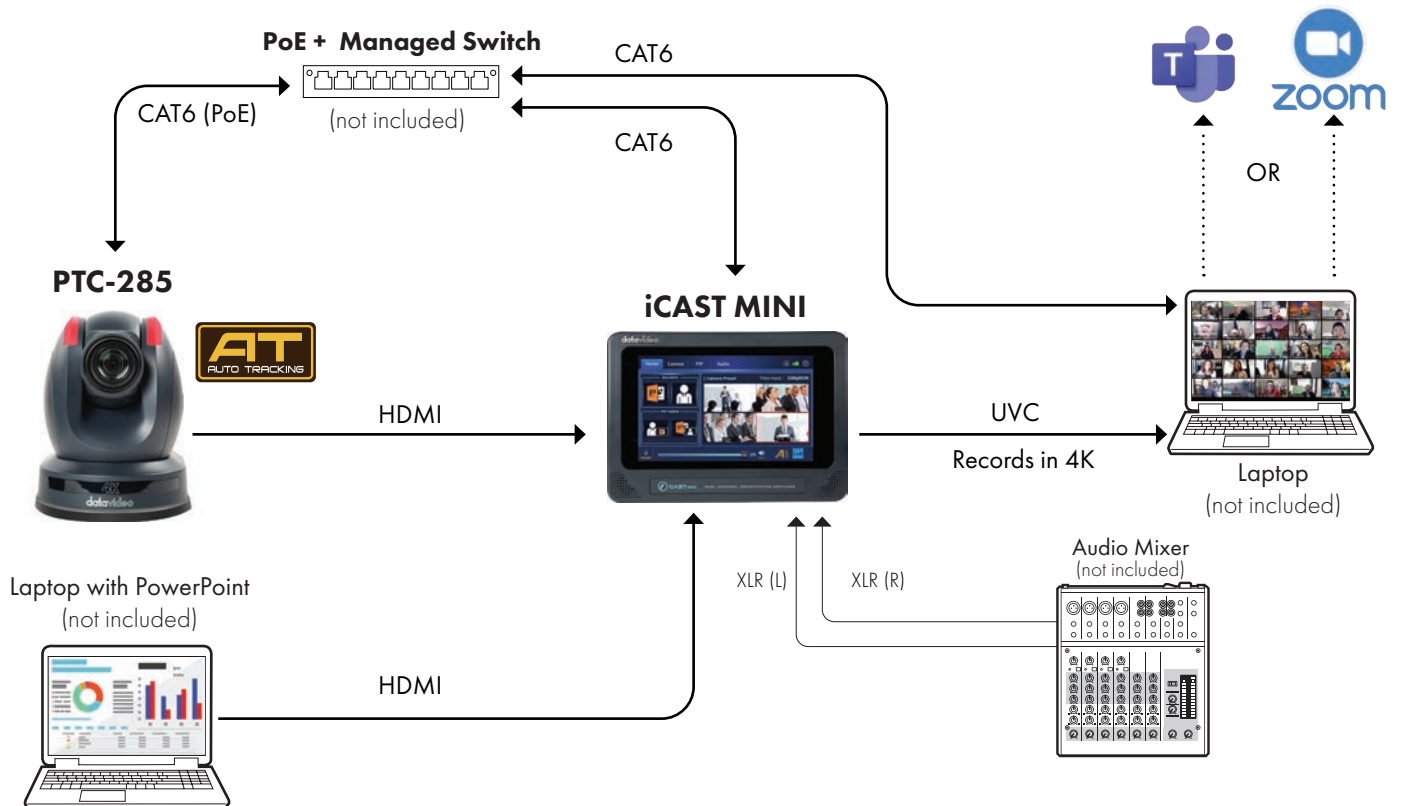
Auto Tracking

HX3

Part #	PTC-145(W)	PTC-285(W)	PTC-305(W)	PTC-305NDI
Optical Zoom	20x	12x	20x	20x
Dual Streaming	RTMP, SRT, HLS	RTMP, SRT, HLS	RTMP, SRT, HLS	RTMP, SRT, HLS
Video Resolution	up to 4K60p	up to 4K60p	up to 4K60p	up to 4K60p
HDBaseT Compatible TX/RX	ALL	ALL	ALL	ALL
PoE	PoE+	PoE+	PoE+	PoE+

Auto Tracking PTZ Camera Example Workflow

PoE + Managed Switch
(not included)

CAT6

CAT6

CAT6 (PoE)

OR

PTC-285

iCAST MINI

HDMI

UVC

Records in 4K

Laptop
(not included)

Laptop with PowerPoint
(not included)

HDMI

XLR (L)   XLR (R)

Audio Mixer
(not included)

NDI ⚡ | SDI / HDMI ⚡

	PTC-285NDI	PTC-280NDI(W)	PTC-140NDI(W)	PTC-280(W)	PTC-140(W)	PTC-150(W)
	HX	HX	HX			
Zoom	12x	12x	20x	12x	20x	30x
Streaming	RTMP, SRT, HLS	RTMP, SRT, HLS	RTMP, SRT, HLS	RTMP, SRT, HLS	RTMP, SRT, HLS	N/A
Resolution	up to 4K60p	up to 4K60p	up to 1080p60	up to 4K60p	up to 1080p	up to 1080p 59.94
	ALL	ALL	ALL	ALL	ALL	ALL EXCEPT HBT-5 & HBT-6
Power	PoE+	PoE+	PoE+	PoE+	Requires AD-PoE-140	N/A

NDI Camera Example Workflow

PoE + Managed Switch

PTC-140NDI — CAT6 (PoE)
PTC-285NDI — CAT6 (PoE)

CAT6 → iCAST 10NDI
CAT6 (PoE) → TPC-700P

iCAST 10NDI
TPC-700P

RMC-2 — USB

SMART BOARD

HDMI → HDMI Splitter (Optional)

Teacher
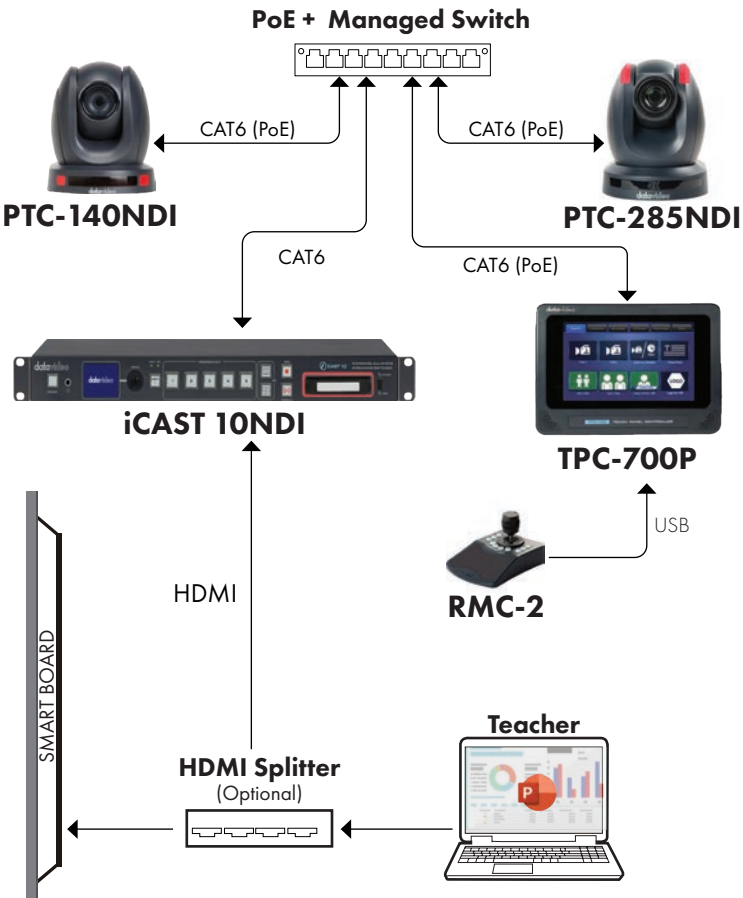
SDI/HDMI Camera Example Workflow
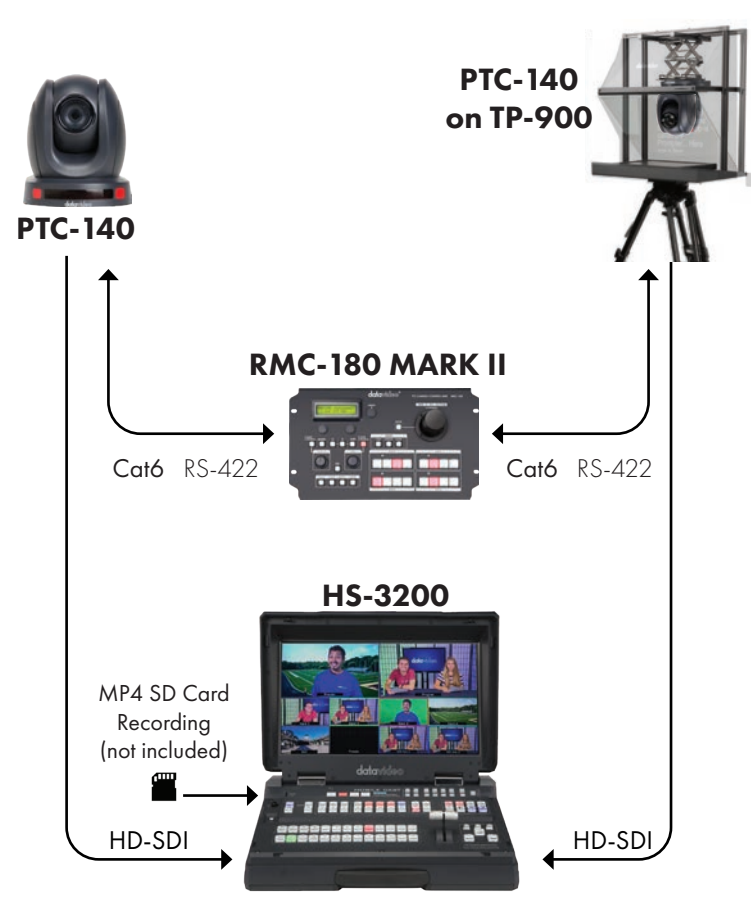
PTC-140

PTC-140 on TP-900

RMC-180 MARK II

Cat6   RS-422   ←   →   Cat6   RS-422

HS-3200

MP4 SD Card Recording (not included)

HD-SDI   HD-SDI

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HDBaseT ⚡

SCAN QR CODE TO
WATCH YOUTUBE COMPARISON VIDEO ▶

	PTC-285T(W)	PTC-140T(W)	PTC-150TL(W)
Part #			
Optical Zoom	12x	20x	30x
Dual Streaming	RTMP, SRT, HLS	RTMP, SRT, HLS	N/A
Video Resolution	up to 4K60p	up to 1080p60	up to 1080p 59.94
HDBaseT Compatible TX/RX	ALL	ALL	ALL EXCEPT HBT-5 & HBT-6
PoE	PoE+	PoE+	PoE++

HDBaseT Camera Example Workflow

PTC-140TW WM-1W

HDBaseT Cat6 (PoE)

HDR-90

ISO ISO ISO
SDI SDI HDMI

HBT-50

SDI
SDI
HDMI
HDMI

SE-3200

Cat6 RS-422

RMC-300A

IMAG

AUX 1 SDI

IMAG

PGM SDI

AUX 2 SDI

IMAG

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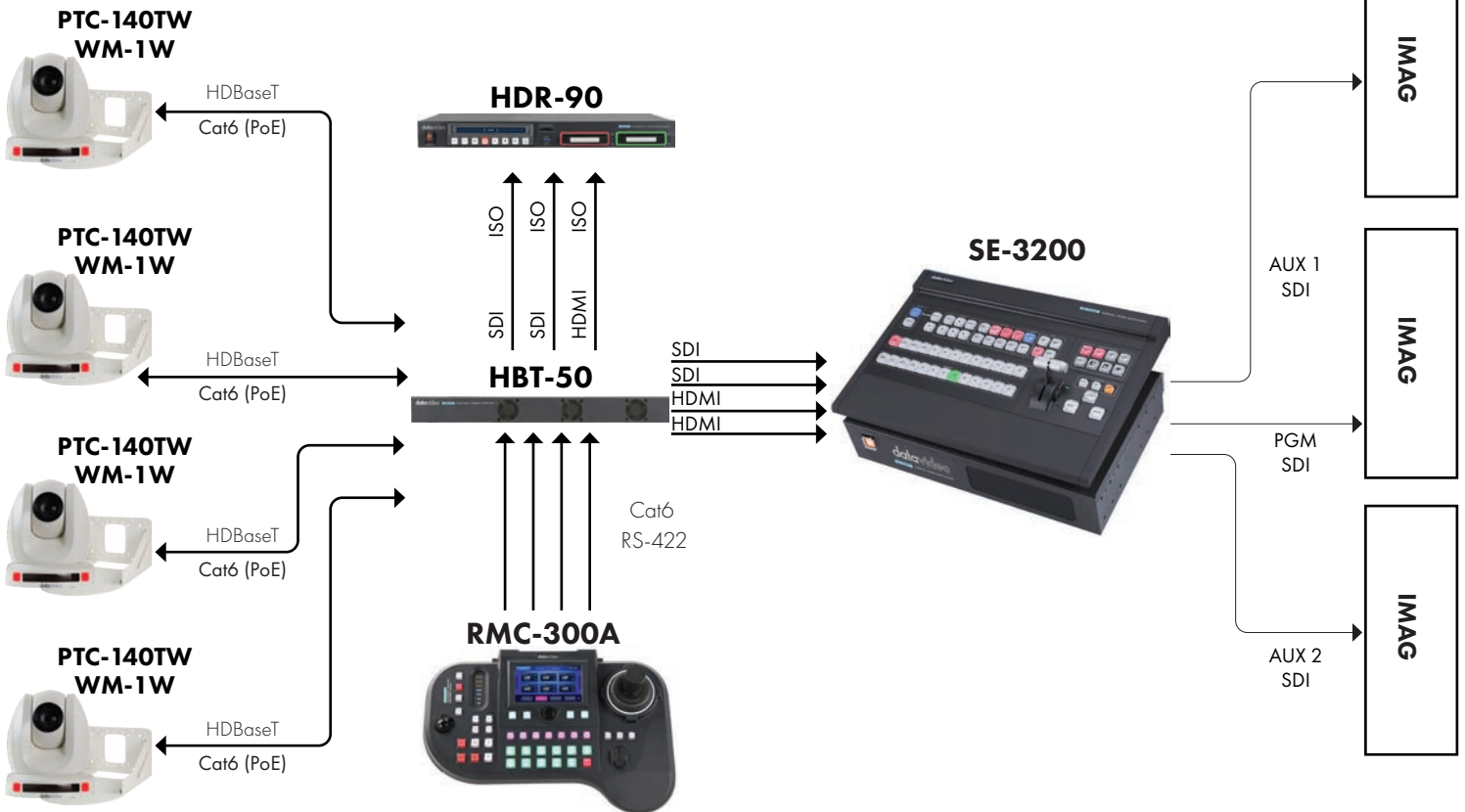
Optical Zoom Distances

Most PTZ production cameras have three different optical zoom distances which include 12x, 20x and 30x. Optical zoom is preferred over digital because it uses the lens to magnify the subject you're shooting whereas, digital zoom crops the image instead of using a lens to magnify the subject. Here are the Datavideo cameras options:

12x

PTC-280
12x optical zoom
(30-40ft distance)

PTC-285
12x optical zoom
(30-40ft distance)

20x

PTC-140
20x optical zoom
(50-75ft distance)

PTC-305
20x optical zoom
(50-75ft distance)

30x

PTC-150
30x optical zoom
(75-120ft distance)

Control Protocols: IP or Serial   CONTROL

Serial

RMC-180 MARK II
• Controls up to 4 PTC cameras
• Up to 8 presets for 2 cameras

IP

PTZ View Assist
• Free app for Android or IO's
• Control up to 4 cameras

Serial or IP Control

RMC-300A
• Controls up to 24 cameras thru IP
• Controls up to 8 camera serial (RS-422)

IP Control

RMC-2
• Controls up to 3 cameras
• Works with TPC-700 via USB

IR

RMC-1AT
• Controls Auto Tracking PTZ Cameras

IP Control

TPC-700 & ZR-1
• Touch Panel Controller with PTZ Auto Tracking

Datavideo HDBaseT Transmitters

Model	HBT-5	HBT-15	PTC-150TL	PTC-140T	PTC-285T	PTC-305T	PTR-10T
Max Resolution	4K30p	4K60p	1080p59.94	1080p60	4K60p60	4K60p60	4K30p
Transmission Distance	60m	100m	100m	100m	100m	100m	100m
Volts	48v	56v	48v	48v	48v	48v	56v
Compatible Datavideo Receivers	HBT-6	HBT-16	ALL EXCEPT HBT-6	ALL	HBT-6 HBT-11 HBT-12 HBT-30 HS-1600T MK II	HBT-6 HBT-11 HBT-12 HBT-30 HS-1600T MK II	HBT-11 HBT-12
Control	RS-422 RS-232	DVIP RS-422 RS-232	DVIP RS-422	DVIP RS-232	DVIP RS-232	DVIP RS-232	DVIP RS-422
MSRP	$259	$649	$1,899	$1,299	$2,849	$3,199	$2,699

Datavideo HDBaseT Receivers

Model	HBT-6	HBT-11	HBT-12	HBT-16	HBT-30	HBT-50	HS-1600T MARK II
Max Resolution	4K30p	4K30p	4K30p	4K60p	4K60p	4K30p HDMI 1080p60 HD-SDI	1080p60
Volts	48v	48v	56v	56v	56v	100~240 VAC	56v
Transmission Distance	1080p 60m 4K30p 35m	1080p 100m	4K 100m	4K 100m	4K 100m	1080p 100m	1080p 100m
Compatible Datavideo Transmitters	HBT-5, PTC-140T	all except HBT-5, PTR-10T	HBT-5, PTC-140T, PTR-10T MKII, PTC-285T, PTC-305T	HBT-15	HBT-15	HBT-15, HBT-11, HBT-5, PTC-140T, PTC-150TL	PTC-140T, PTC-150TL, HBT-5, HBT-15, PTR-10T
Channels	1	1	1	1	3	4	3
SDI & HDMI Output Simultaneously	NO	NO	NO	NO	NO	YES	NO
Datavideo Camera Controllers	ALL EXCEPT PTC-150TL	ALL	ALL	ALL	ALL	ALL	BUILT IN CONTROLLER
Control	RS-422 RS-232	DVIP RS-422 RS-232	DVIP RS-422 RS-232	DVIP RS-422 RS-232	DVIP RS-422 RS-232	DVIP RS-422 RS-232	RS-422
MSRP	$319	$449	$549	$699	$2,199	$2,749	$5,599