# Device: Panasonic PTZ



## Compatibility

With our Panasonic PTZ Device Core we currently have comprehensive support for the:

- AW-UE150
- AW-HE130
- AW-HE120
- AW-UE100
- AW-UE70/AW-UN70
- AW-HE50
- AW-HE42
- AW-HE40
- AK-UB300

The complete lineup are not supported as the protocol varies for each model. We have integrated with the models we have had a high demand for and/or have had a chance to integrate with. For cameras *not* on the above list just basic pan, tilt, zoom and preset functionality are integrated as the protocol remains the same for these features across all models.



Description of the Panasonic PTZ Device Core from https://www.skaarhoj.com/support/device-cores/

## Note about AWB Exec

Notice when an auto white balance is executed the controller will momentarily loose connection to the camera, as the camera stops responding during this process.

## Note about Panasonic AW-HN130

We have not tested the AW-HN130 but many have reported that we are able to control the camera similar to the AW-HE130. However, AW-HN130 firmware v.2.38 has been known to cause the controller to freeze. We do not recommend running your camera with that firmware version at this time.

## **Device Configurations**

Device configuration options exist:

- Index 0: Connect Timeout in ms
- Index 1: Reply Timeout in ms
- Index 2: IPs for Camera Groups
- Index 3: Time between each parameter query request PER camera in ms

### **Connect + Reply Timeout**

Default Connect Timeout = 100 ms. Timeout for the camera to accept the TCP connection.

Default Reply Timeout = 200 ms. When connection have been accepted, the reply timeout is the time the controller waits for a reply.

In general increasing timeouts will decrease responsive but increase connection stability. The default values have been chosen based on tests at our facility but is not necessarily suitable for all cases.

### **Camera Groups**

Index 2 have the following structure:

D0:2="[xxx.xxx.xxx, yyy.yyy.yyy.yyy, ....],[zzz.zzz.zzz]"

This enables camera groups. Notice the outer quotes ", if there's an error in this device core option it will fallback to the regular configured IP address. The format is such that each group is an array separated by a comma ,. Inside each group it's also just simple ip addresses separated by a comma ,. There's not any limit to the IPs per group but the system won't handle anything more than 8 per group. There's no limit to the number of groups besides the maximum 13 in the frontend. See example 3 for use case.

### Parameter query requests

Default time between *each* parameter query request *per* camera = 1500 ms. To begin with a controller will query all parameters for all cameras connected to a controller. Thereafter a controller will only query parameters updates from the camera on a 1.5 s interval between query requests per camera. This parameter is set to 1.5 seconds to improve connection stability when either:

- Two (or more) SKAARHOJ controllers are connected to the same camera
- A SKAARHOJ controller and a Panasonic controller is connected to the same camera
- A SKAARHOJ controller and the web interface is used to control the same camera

This means if a parameter is changed on SKAARHOJ controller #1 it will not be instantly reflected on SKAARHOJ controller #2, or the Panasonic controller, or the web interface. It also means if a change is made on the Panasonic controller or the web interface it will not be instantly reflected on the SKAARHOJ controller. The parameter query time have been implemented to support cases where one operator is in charge of PTZ control (controller #1) while another operator is in charge shading control (controller #2).

The time can be lowered if you have less complex setups and want faster responds on the connected units. See example 4 for use case.

### Example 1:

Setting "Reply Timeout" to 250 ms could look like this device configuration code: "D0:1=250" where the general form would be "Dx:y=z" where "x" is the number of the device core as installed on the controller (starting with zero for the first device core), "y" the index number and "z" the value for that index.

To confirm that a device configuration is in fact detected by the controller, please check it out on the serial monitor where it will be mentioned:

Example: If the Panasonic PTZ device core is the first like below:

Device	Cores					
Below, you can see Mature, Beta, Alpha For general docum Panasonic PTZ -	low, you can see the currently enabled device support on your controller. You can add and delete device cores in accordance with your requirements up to a maximum of 14 devices. To understand the development states true. Beta, Alpha and Planned (as well as Pro and Planned actions), please check out the device core support page. r general documentation, please see the UniSketch Manual and System Actions Manual.					
Pana AW-HEx	Panasonic PTZ Controls Panasonic AW-HEs series robotic cameras over IP. Currently, comprehensive support for AW-HE120, AW-HE20, AW-HE40, AW-UE70/AW-UN70 (Beta) is available, while other models have basic PTZ and preset functionality.					
Save Settings	Add another device -					

Then setting the "Connect Timeout" would be set by this configuration under "Manage Media" on your configuration page for your controller on <u>cores.skaarhoj.com</u>

Manage Media
Here, you can add various types of media content to your configuration. Panasonic PTZ -
Device Core Options
Some device cores support additional options that can be defined through this text field. Please refer to the manual for the particular device core for details.
D0:1=250
Strings Add String
Images
Save Settings Add Image

## Example 2:

Setting "Connect Timeout" to 200 ms and "Reply Timeout" to 250 ms could look like this device configuration code

D0:0=200,1=250

lage Media	
can add various types of media content to your	r configuration.
onic PTZ -	
ce Core Options	
vice cores support additional options that can be	e defined through this text field. Please refer to the manual for the particular device core for details.
200,1=250	
as	
ring	
es	
Add Image	
	Serial Monitor
Command input. Press ent	Serial Monitor ter to send.
Command input. Press ent SKAARHOJ Controller Bootin SK_VERSION: v2.2.117 _defConfigCsc=208 SK_WODEL: SK_PT2PRO SK_SENIAL: 491455 EEPROM size: 32 kB IZC 400 kHz mode activated *** Init Module XC16 (PTZ Center values: 518,504,495 Init Display XC16: BMD Shield option de HWvar:255 MAC address: 92:Al:DA:19:7 TR address: 92:Al:DA:19:7 R. 2016 (Structure) 160 100 100 100 100 100 100 100 100 100	Serial Monitor ter to send.
Command input. Press ent SKAARHOJ Controller Bootin SK_VERSION: v2.2.117 _defConfigGsc=208 SK_WODEL: SK_FT2PRO SK_SERIAL: 491455 EEPROM size: 32 kB I2C 400 kHz mode activated *** Init Module XC16 (PT2 Center values: 518,504,495 Init Display XC16: BMD Shield option de HWvar:255 MAC address: 92:A1:DA:19:7 IP address: 92:A1:DA:19:7 IP address: 92:A1:DA:19:7 IP address: 192.168.10.99 Subnet mask: 255.255.255.0	Serial Monitor ter to send.
Command input. Press ent SKAARHOJ Controller Bootin ************************************	Serial Monitor  ter to send.  Great  Age  Pro) ***:  Commands  reset  config  config  configd  clearpresets  debug  newmac
Command input. Press ent SKAARHOJ Controller Bootin ************************************	Serial Monitor  ter to send.
Command input. Press ent SKAARHOJ Controller Bootin ************************************	Serial Monitor  ter to send.   Great  A  Pro) ***:  Commands  reset  config  config  configd  clearpresets  debug  newmac  55:33  o  b  55:26  Pr20, IP = 192.168.10.247  ok
Command input. Press ent SKAARHOJ Controller Bootin SK_VERSION: v2.2.117 _defConfigGsc=208 SK_WODEL: SK_FT2PRO SK_SERIAL: 491455 EEPROM size: 32 kB I2C 400 kHz mode activated *** Init Module XC16 (PT2 Center values: 518,504,495 Init Display XC16: BMD Shield option de HWvar:255 MAC address: 92:Al:DA:19:7 IP address: 92:Al:DA:19:7 IP address: 92:168.10.1 DNS: 192.168.10.1 Memory A-D restored Compiled: Oct 8 2018 17:3 DeviceCore #0: Panasonic P PanasonicPTZ CONNECT_TIMEO	Serial Monitor  ter to send.  General Monitor  Commands  reset  config  config  configd  clearpresets  debug  newmac  b5:26  rezo, IP = 192.168.10.247  ok

### Example 3:

Setting "Groups IPs" could look like this device configuration code

D0:2="[192.168.10.100, 192.168.10.101, 192.168.10.102, 192.168.10.103, 192.168.10.104, 192.168.10.105, 192.168.10.106, 192.168.10.107],[192.168.10.109, 192.168.10.110, 192.168.10.111, 192.168.10.112, 192.168.10.113, 192.168.10.114, 192.168.10.115, 192.168.10.116]"

#### Where

Group 1 have IPs 192.168.10.100 to 192.168.10.107 Group 2 have IPs 192.168.10.109 to 192.168.10.116

To confirm that a device configuration is in fact detected by the controller, please check it out on the serial monitor where it will be mentioned:

Serial Monitor	
Command input. Press enter to send.	
Center values: 511,488,483	Commands
Preset 1 loaded Hwar:255	
MAC address: 92:A1:DA:C6:A9:EF	reset
IP address: 192.168.10.253	
Subnet mask: 255.255.255.0	config
105: 192.168.10.1	ooning
lemory A-D restored	confied
compiled: Oct 11 2019 15:07:06 nr21 = "192 168 10 100 192 168 10 101 192 168 10 102 192 168 10 103 192 168 10 104 192 168 10 105 192 168 10 106 192 168 10 1071	connigu
[192.168.10.109, 192.168.10.110, 192.168.10.111, 192.168.10.112, 192.168.10.113, 192.168.10.114, 192.168.10.115, 192.168.10.116]"	alearpresete
DeviceCore #0: Panasonic PTZ0, IP = 192.168.10.248	clearpresets
oaded 2 IP goups with 16 IPs total	al a la vera
Group: 2: 192.168.10.109, 192.168.10.110, 192.168.10.111, 192.168.10.112, 192.168.10.113, 192.168.10.114, 192.168.10.115, 192.168.10.115, 192.168.10.116,	debug
amera groups activated	
etup() Done	newmac
system action 16	
ystem action 17	ok
Attomnting connection to 'Unknown' at 102 160 10 100	
Auto scroll	

### Example 4:

Setting "parameter query request PER camera" to 1000 ms could look like this device configuration code

D0:3=1000

To confirm that a device configuration is in fact detected by the controller, please check it out on the serial monitor where it will be mentioned:

Compiled: Oct 11 2019 15:12:43 D0[3] = 1000	clearpresets
DeviceCore #0: Panasonic PTZ0, IP = 192.168.10.248	
PanasonicPTZ QUERY_TIME = 1000ms setup() Done	debug
System action 16	newmac
System action 17	

#### An excerpt of the list of Panasonic PTZ related actions.

Notice some actions are camera dependent. Please check the camera manual/protocol if specific actions are supported for your type of camera

Panasonic PTZ: Pan Panasonic PTZ: Tilt Panasonic PTZ: Pan/Tilt Panasonic PTZ: Zoom Panasonic PTZ: Zoom (Binary) Panasonic PTZ: Auto Focus Panasonic PTZ: Focus Panasonic PTZ: Creep Focus (AK-UB300) Panasonic PTZ: Focus One Push Panasonic PTZ: Auto Iris Panasonic PTZ: Iris Panasonic PTZ: Sensor Gain Panasonic PTZ: Shutter Panasonic PTZ: Synchro-Scan Panasonic PTZ: Auto Shutter Limit Panasonic PTZ: Shutter Mode Panasonic PTZ: Shutter SW (Ak-UB300) Panasonic PTZ: Scene File Panasonic PTZ: AWB Mode Panasonic PTZ: AWB Exec Panasonic PTZ: ABB Exec Panasonic PTZ: Master Pedestal Panasonic PTZ: WB R/B Gain Panasonic PTZ: Pedestal R/G/B Panasonic PTZ: Pedestal Offset (AW-UE150) Panasonic PTZ: Detail Panasonic PTZ: Advanced Detail Panasonic PTZ: Contrast Level Panasonic PTZ: Color Temperature Panasonic PTZ: ND Filter Panasonic PTZ: Chroma Level Panasonic PTZ: Chroma Phase (AW-UE150) Panasonic PTZ: DRS Panasonic PTZ: Knee Mode Panasonic PTZ: Auto Knee Response Panasonic PTZ: Knee Point Panasonic PTZ: Knee Slope

Panasonic PTZ: Preset

Panasonic PTZ: Preset Speed Panasonic PTZ: Set Tally Panasonic PTZ: Audio Control Panasonic PTZ: Audio Volume Panasonic PTZ: Output Format Panasonic PTZ: Zoom Pan/Tilt Speed Adjust Panasonic PTZ: Invert PTZ Control Panasonic PTZ: Install Position Panasonic PTZ: UHD Crop - Mode (AW-UE150) Panasonic PTZ: UHD Crop - SDI Out Select Panasonic PTZ: UHD Crop - IP Out Panasonic PTZ: UHD Crop - Marker Select Panasonic PTZ: UHD Crop - Output Select Panasonic PTZ: UHD Crop - H Adjust Panasonic PTZ: UHD Crop - V Adjust Panasonic PTZ: OSD Menu Panasonic PTZ: OSD Menu Navigation Panasonic PTZ: OSD Menu Mix Panasonic PTZ: Night Mode On/Off Panasonic PTZ: Night Mode Selection Panasonic PTZ: Night Mode Level Panasonic PTZ: PTZ Cruise Control Panasonic PTZ: PTZ Trace Panasonic PTZ: Power Panasonic PTZ: Speed Limit Panasonic PTZ: Camera Select Panasonic PTZ: Camera Group Select

## Tally

In some cases it can be desirable to route tally to the PTZ cameras based on tally from a video switcher. This can to some degree be done from the hardware interface often called "Controller" on our panels. This interface is constantly evaluated. There is a limit to how many actions can be assigned onto this interface, but we are working on a way to expand this.

In the case of a PTZ Fly and ATEM Tally it would be done the following way:

- Add the ATEM Device Core and set IP Setting



- On the Controller Interface add the below actions. This instructs the system to enable tally on Cam 1-4 based on ATEM Program 1-4 . The mapping can be differently.

#15 Cor	ıtroller									Controller
Normal										CP -
BMD ATE	M: Program Src	•]	1 -	-)[H	lold Down	۱ ·	•			≡
and	System: Synthesized Trigger	•	Binary	•	Prev. ac	tion	•			≡
and	Panasonic PTZ: Set Tally	•	Cam 1 🔻 H	old	Down▼					≡
and	BMD ATEM: Program Src	•	M/E 1 ▼ 2		-	H	old	Down	-	≡
and	System: Synthesized Trigger	•	Binary	•	Prev. ac	tion	•			≡
and	Panasonic PTZ: Set Tally	•	Cam 2 🔻 H	old	Down▼					≡
and	BMD ATEM: Program Src	•	M/E 1 🔻 3		-	Η	old	Down	•	≡
and	System: Synthesized Trigger	•	Binary	•	Prev. ac	tion	•			≡
and	Panasonic PTZ: Set Tally	•	Cam 3 🔻 H	old	Down▼					≡
and	BMD ATEM: Program Src	•	M/E 1 🔻 4		-	H	old	Down	•	≡
and	System: Synthesized Trigger	•	Binary	•	Prev. ac	tion	•			≡
and	Panasonic PTZ: Set Tally	•	Cam 4 🔻 H	old	Down▼					≡
+										

## **AK-UB300** Notes

For the AK-UB300 integration the following actions have been implemented:

- Iris
- Auto iris
- AWB execute
- ABB execute
- Pedestal
- Pedestal R/B
- Shutter SW
- Shutter
- Shutter Mode
- Gain R/B
- Format
- ND Filter
- Scene

The following list has been implemented but not tested fully:

- Knee mode
- Auto Knee response
- Knee Point
- Knee slope
- Chroma level
- Contrast

The following list is NOT working:

- Zoom (Implemented, sends right commands, camera responds with OK but no change in zoom)
- Focus (Not implemented. Tested commands in browser, camera responds OK but no change in focus)
- Color temp