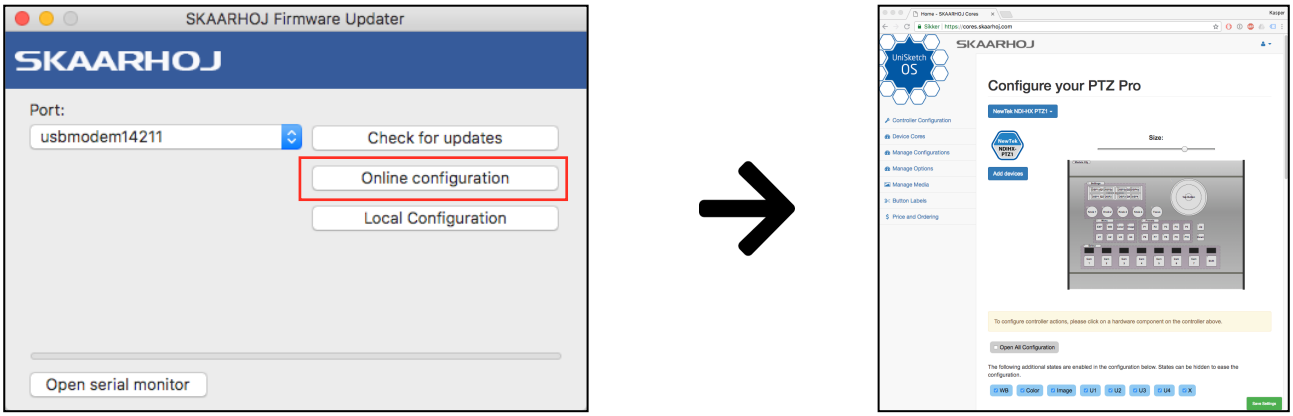
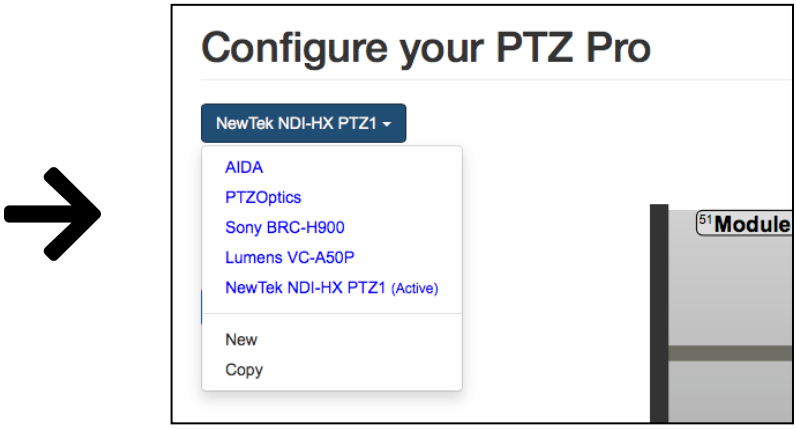
PTZ Control

Select Default Configuration

Our controllers such as the PTZ Pro and the PTZ Fly comes with a range of default configurations. In order to select the one suited for your camera brand please use the "**Online Configuration**" functionality in our Firmware Application. You must connect your device to your computer with the USB cable and have internet access as well.



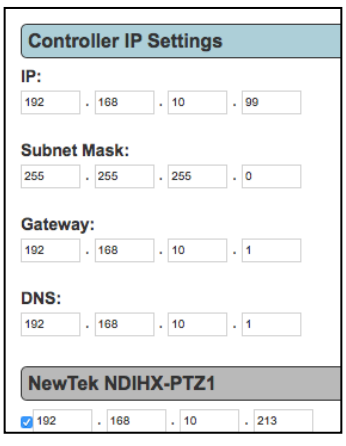


Setting IP for a Device Core / How our "Camera Selector" Works

When you have selected a default configuration you need to set IP settings as well. For PTZ Control our Device Core works by setting a "Master IP" and the IP addresses of your cameras needs to be **consecutive**. You do ***not*** need to add additional Device Cores. The controller will automatically connect to the additional cameras provided they are given consecutive IP addresses.

In this case just one NewTek Device Core is set to 192.168.10.213 which means the controller will connect to:

Cam 1 on 192.168.10.21**3**
Cam 2 on 192.168.10.21**4**
Cam 3 on 192.168.10.21**5**
And so forth



Avoid setting IP addresses so the PTZ range will interfere with either the controller it self or other clients connected. This could be if IP of the controller is set to 192.168.10.215 when a PTZ IP range starts from 192.168.10.213.

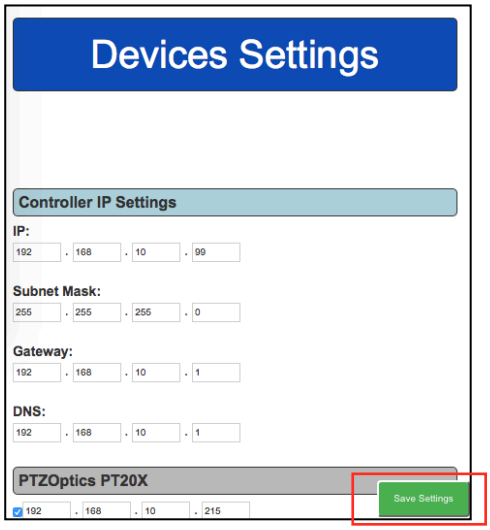
Camera Selector on Camera - NewTek

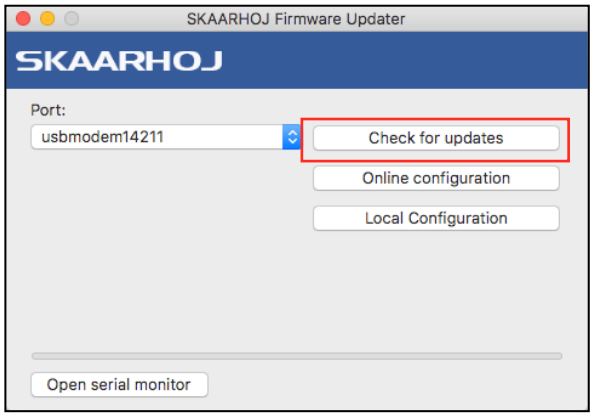
Make sure the camera address selector is set to 0 on all cameras connected to our controller

Save Settings and Update Firmware

Have you made any changes to IP settings or functionality you need to press "**Save Settings**" on the configuration page *and* press "**Check for updates**" in the Firmware Application.

This will generate a new Firmware on our server and download it to the unit.





Connected Cameras on PTZ Pro

When a PTZ Pro connects to cameras the buttons on the camera selector row will light up.

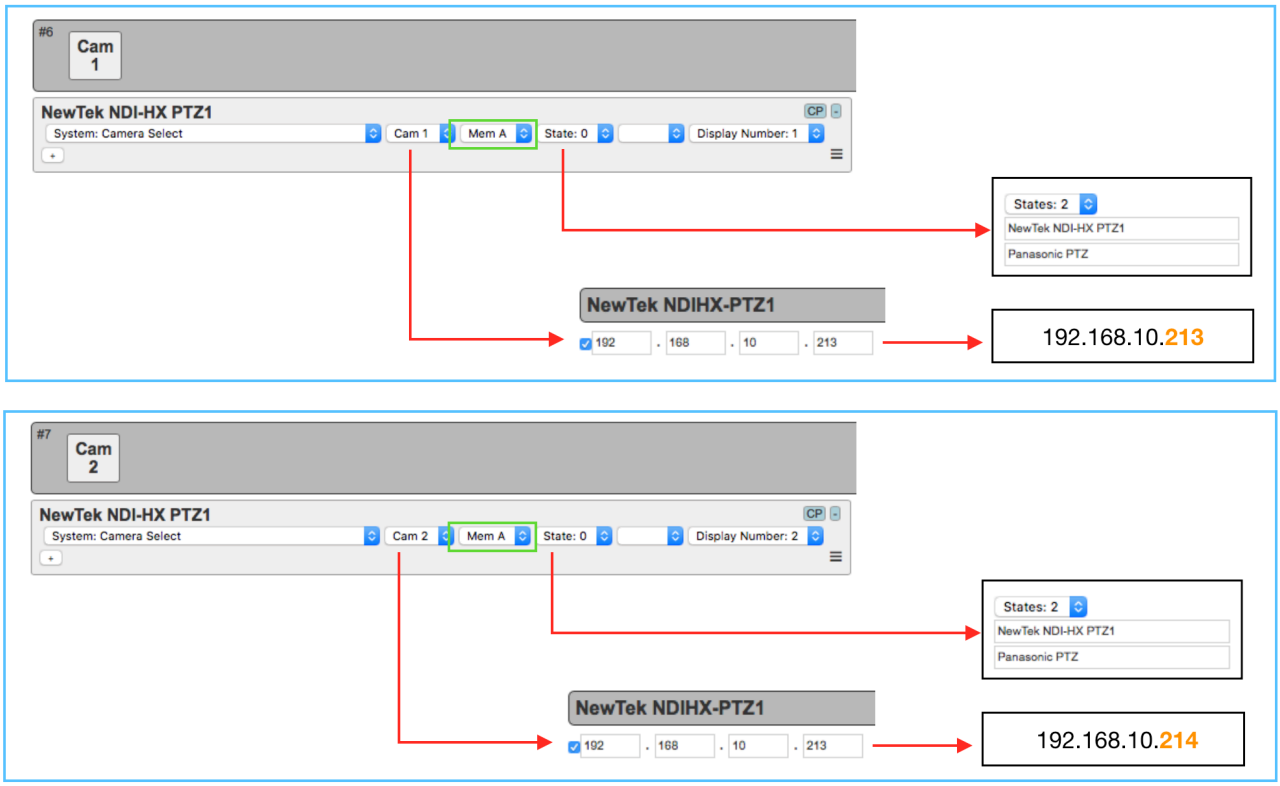
In this case Camera 1 and Camera 3 are connected.

Configurations with Multiple PTZ Brand

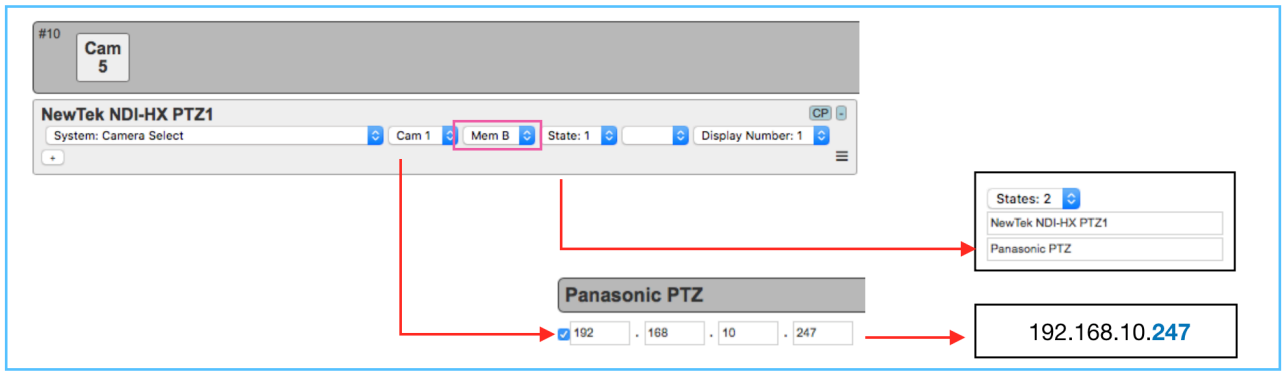
For default configurations such as "**NewTek NDI-HX PTZ1 + Panasonic PTZ**" and "**PTZOptics + Panasonic PTZ**" on the PTZ Pro the generic system action "System: Camera Select" are utilised instead of camera select on the specific Device Core level. Care must be taken in understanding how IP settings are set in UniSketch OS and how the system action works to make sure you can connect to your cameras. A example are given below for the "NewTek NDI-HX PTZ1 + Panasonic PTZ" default config:

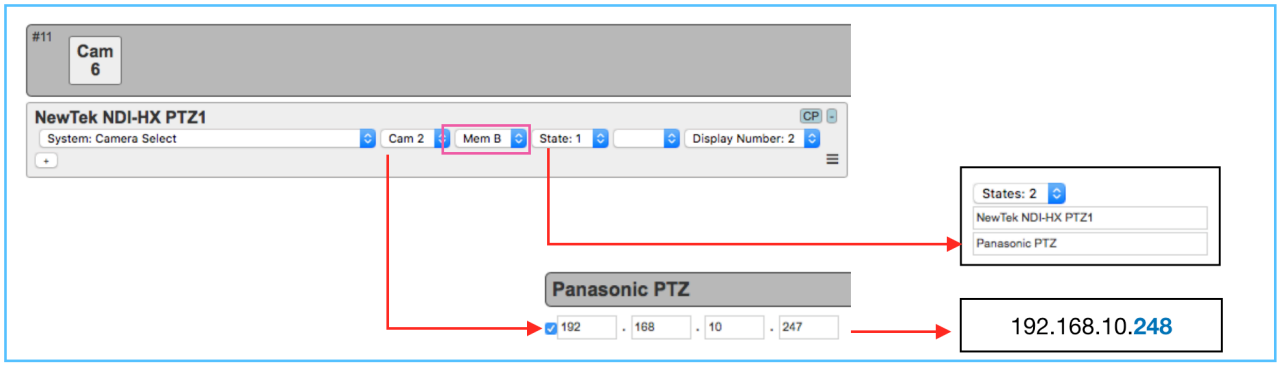
Two states are utilised - each state control the different camera brand. In this case the first state (state 0) is NewTek whereas the second state (state 1) is Panasonic. The IP scheme is the same as a controller with just one Device Core installed (as explained in the section "Setting IP for a Device Core / How our "Camera Selector" Works".

Below two examples for Cam1 and Cam2 for NewTek camera



Below two examples for Cam1 and Cam2 for Panasonic camera.





Connection Stability and NDI

Lately we have discovered connection stability issues if you use our controllers on a network with multicast data and propper network guidelines have not been followed. If appropriate network precautions have not been taken NDI data is multicast to our controller and network packages gets lost because the Ethernet interface on the controller receives megabytes of data which it has to discard to find control data. Multicast data can be generated from NDI sources such as PTZ Cameras or other NDI enabled broadcast equipment such as a Tricaster Mini. We are working intensively to understand NDI based networks and are in the process of acquiring equipment so we can replicate multiple setups and configurations with several NDI sources.

Below you will find our recommendations as this present time. Please be aware suggestions might get updated as we get to understand and test further.

If you use our controllers on a network with NDI sources it is absolutely imperative to configure your network properly to ensure a stable connection.

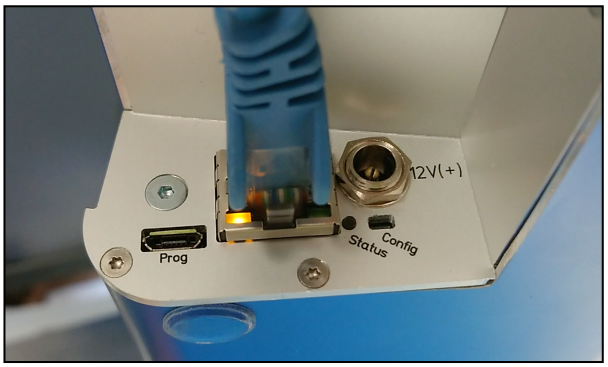
A *initial* identification to monitor if there is multicast data present on the controller is to check the Activity LED on the ethernet port of the controller (green).

- **Slow blinking:** Good. Propper network config or no multicast data present
- **Lit up all the time:** Bad. Multicast "spam" on the network

See examples via:

Bad - Green Activity - multicast spam

Good - Green Activity - only relevant control data



Network Guidelines

Besides having taken propper network switch considerations such as Gigabit Ethernet on all network switch ports we recommend the following settings on your Managed Switch when possible:

- Enable IGMP Snooping (mDNS is automatically blocked by many switches when snooping is enabled – refer to documentation from your switch vendor)
- Enable Flow Control as Asymmetrical or simply as On
- Disable Quality of Service
- Disable Jumbo Frames
- CONFIGURE IGMP Querier and Query Interval for each switch in multi-switch networks when using multicast

Additional Resources

- **NewTek:** NDI Network Guidelines
- **PTZOptics:** Setting up a Ubiquiti Network for use with PTZOptics Products
- **NewTek Network Settings**: https://support.newtek.com/hc/en-us/articles/115001705074-NETWORK-SETTINGS?mobile_site=true