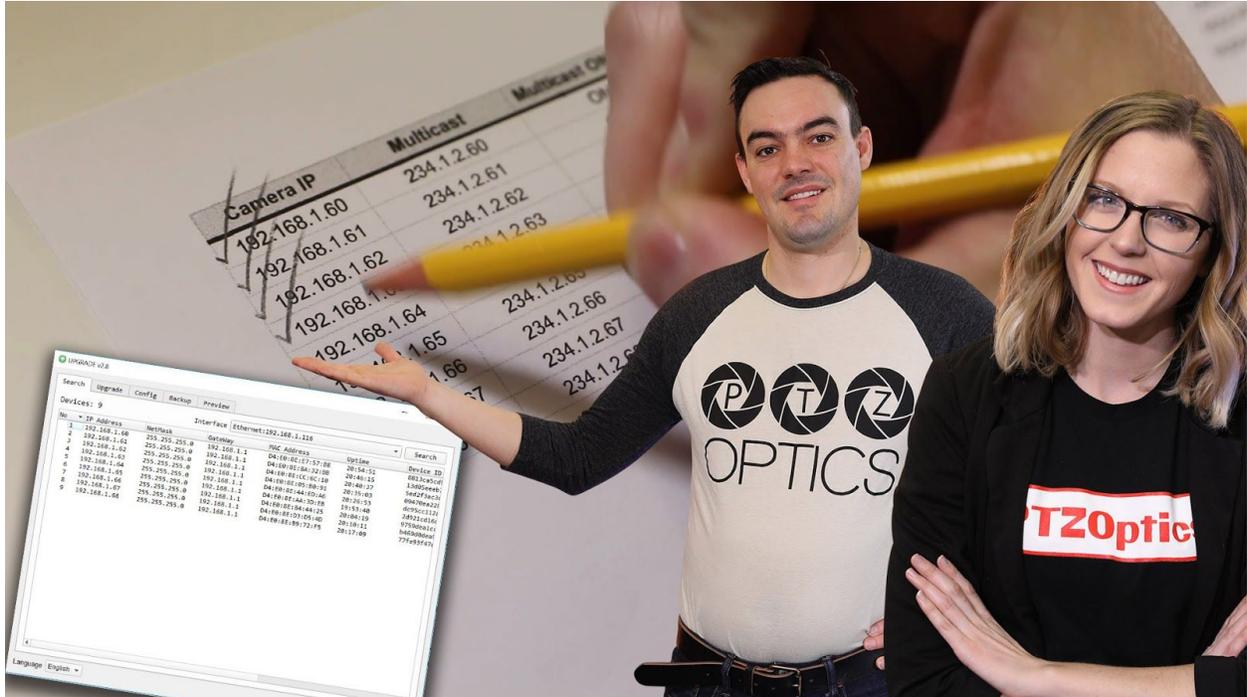
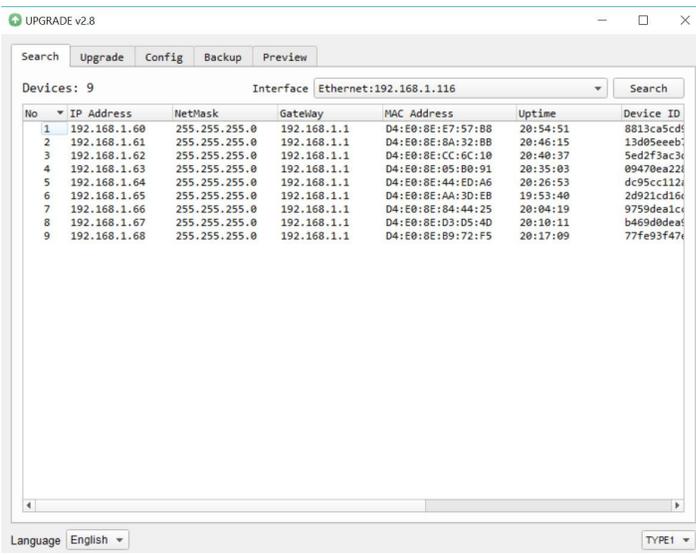


Tips & Tricks for Staying Organized as your IP Production Grows



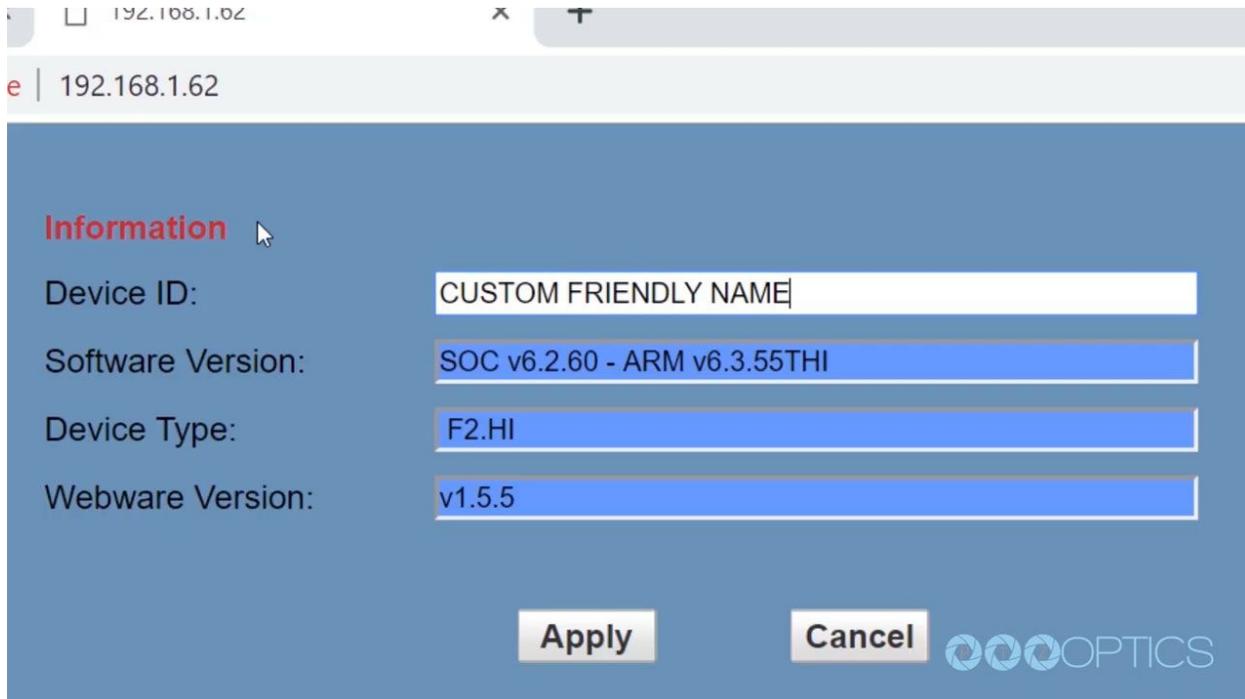
Welcome to another PTZOptics tutorial video. This video is a helpful addition to your PTZOptics camera setup videos for either SDI, USB, NDI or your ZCam. This video includes tips and tricks for staying organized as your IP production grows and it compliments our recently published IP networking implementation videos. Therefore you may find it helpful to review your specific camera, producer kit setup or networking setup videos for more detailed information before you watch this video.

If you are considering using multiple PTZOptics cameras for your video production, live streaming or communications system, it is important to understand the IP networking capabilities of your cameras. In this video, we will review the details you should consider regarding the management of PTZOptics IP addresses, multicasts addresses, and friendly names on your local area network.



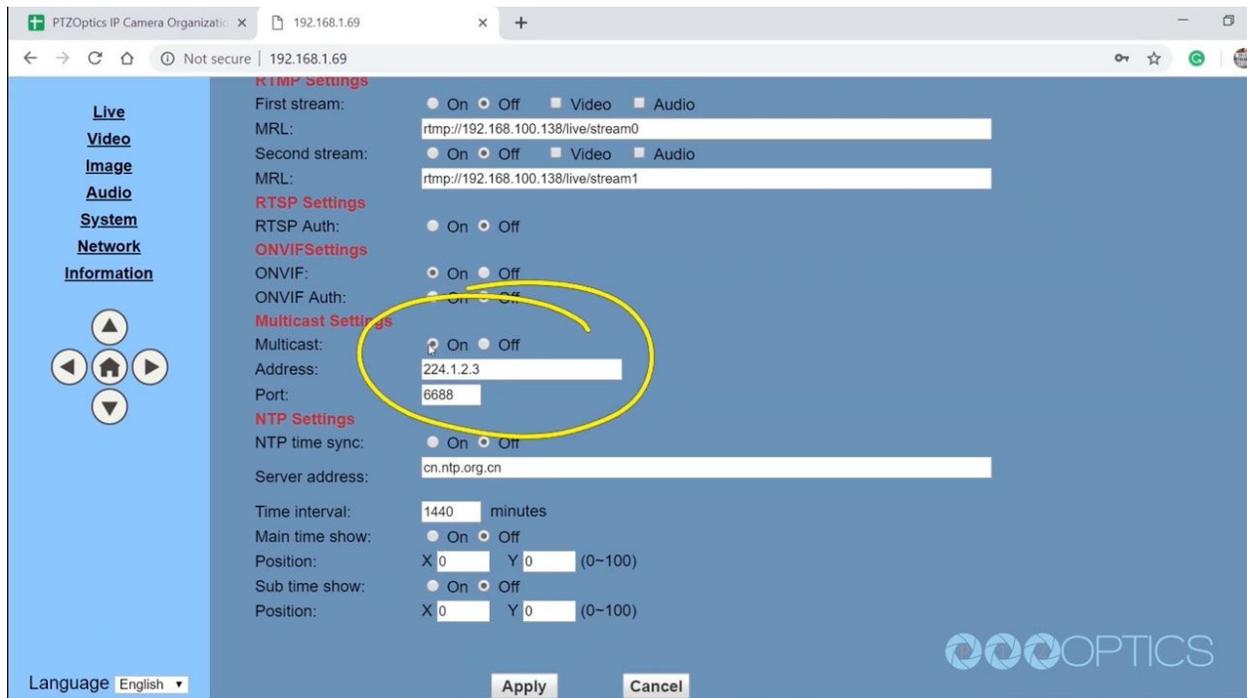
As you may know, we always suggest setting up a static IP address for your PTZOptics cameras. This can be easily done using our Mac or PC IP Address Settings Tools available for download

at PTZOptics.com/downloads. By default, PTZOptics have a static IP address of 192.168.100.88 or .99 depending on your camera model. This default IP address can be referenced on the bottom of your camera. You can access and update this default IP address using our Mac or PC IP Address Settings Tool. You can find a guide for this at help.ptzoptics.com or detailed inside your camera setup video.



You can also set up your PTZOptics camera with a DHCP IP address, this will automatically assign an IP address to your camera that is in the range of your unique local area network assuming your router is enabled with DHCP. You can quickly reveal your cameras IP address at any time using the IR remote control. Once you have set up an IP address for your camera go ahead and log into the camera using any web browser. When prompted enter the default login credentials which are admin/admin. You may want to consider updating these login credentials in the system tab of the IP interface. Recording your cameras IP address is important because you can also use this address to control the camera with third party software solutions such as OBS, Wirecast, vMix, Livestream Studio, TriCasters and the new PTZOptics Mac and PC control apps. Try the new Camera Preset Map feature in the PTZOptics control app

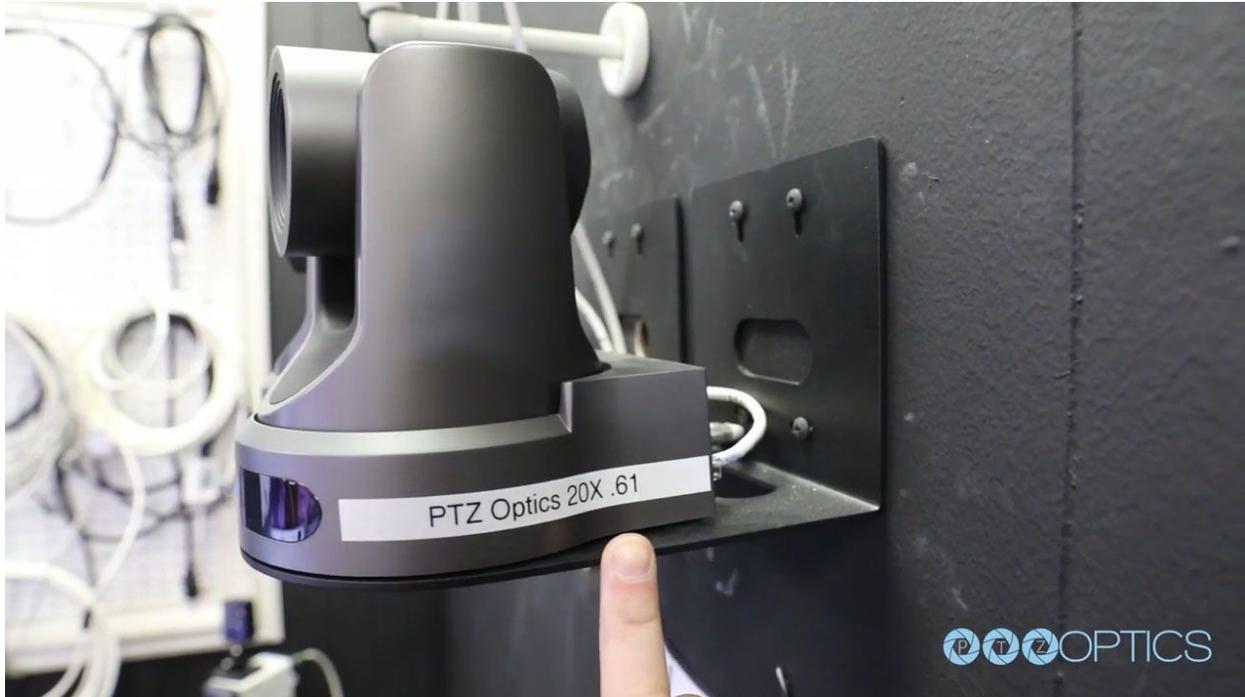
with a panoramic image of your production space.



Once you have set up your camera's IP address, you should consider setting up a multicast address for the camera as well. By default, PTZOptics cameras have multicast disabled. This is done because not all networking hardware can support multicast video traffic. The multicast feature is essentially the ability to send a single stream of multimedia (audio & video) to multiple destinations on your network without clogging up your network. That means that a single stream of bandwidth, let's say 12 Mbps, can be sent to a total of 100 devices with only 12 Mbps of bandwidth used on your switch. This is very different from Unicast which is how most networks are set up by default. Unicast video traffic will stack up bandwidth on your network for each user accessing a unique video stream. PTZOptics cameras are capable of delivering 2 Unicast video streams over your network simultaneously. With multicast enabled, you can deliver video to more users more efficiently.



Note: Make sure that your network is setup to handle multicast traffic before enabling this feature. To use multicast each PTZOptics camera should have a unique multicast address. You can assign a multicast address in the “network” area of your cameras IP interface. Once you have determined a unique multicast address for the camera you can turn multicast on. You can turn multicast on by clicking the on radios button and clicking the apply button. Finally, reboot your camera.

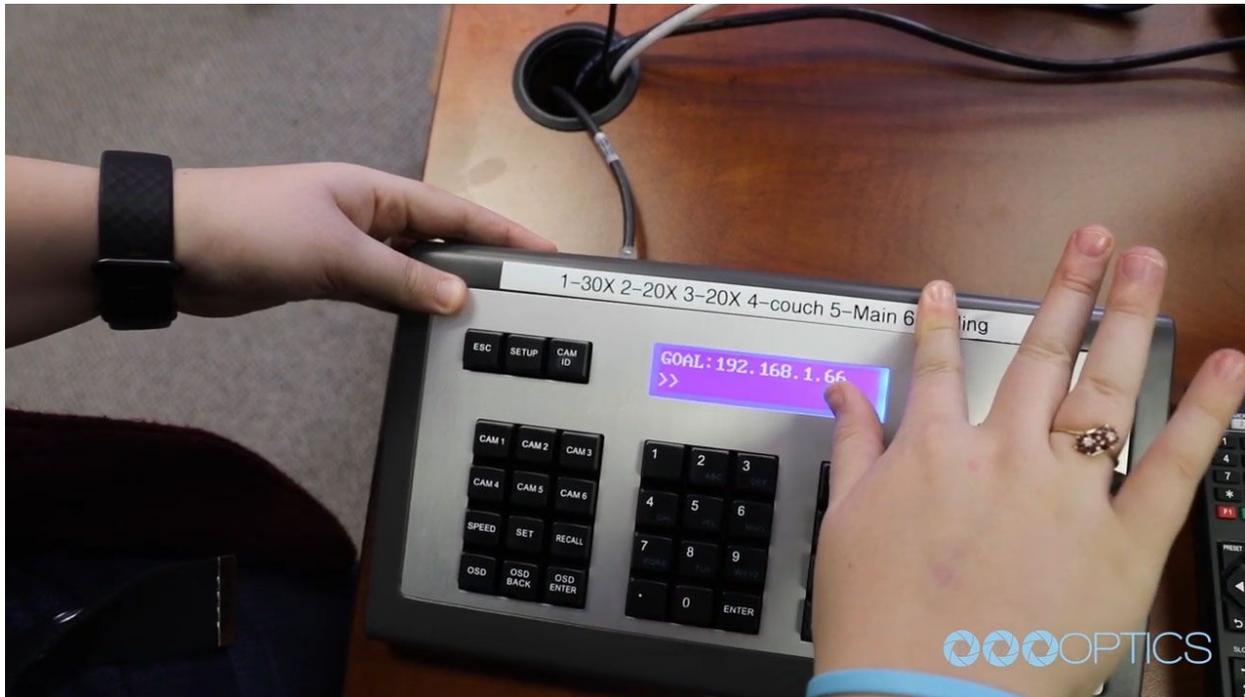


If you are organizing multiple cameras on your network we highly suggest using an excel or google sheet to keep track of all of your camera's information. For example, in our studio, we have 8 cameras. Our network reserves IP addresses above .100 for DHCP so we have IP ranges .60-.80 reserved for production equipment that is statically assigned. The first entry we have in our equipment table is the camera's IP address of 192.168.1.60. You can see that each subsequent camera has been organized with sequential IP addresses such as .61, .62 and .63. You will notice that the next entry includes information about our cameras multicast address. We have noticed that the 234.1.2.xx IP networking scheme works well for multicast video traffic on our network. So we have matched each cameras static IP address with the sequential ordering with multicast camera addresses starting with 234.1.2.60 and so forth. If you have questions about IP and multicast networking, consider reading through our knowledge base articles or posting a question in our online forums at help.ptzoptics.com. As of February 2018 you can find multiple articles outlining setups for both Ubiquiti and TP-Link networking hardware configurations.

Once we have organized our cameras IP addresses and multicast addresses, we will fill in some additional information about the camera model and the device ID. The device ID is also known as the "friendly name". This friendly name is important for use with the NewTek NDI. For example, the friendly name will pull through as the camera source's name in NDI Studio Monitor or your favorite video production software such as vMix, Wirecast, Livestream Studio or the NewTek TriCaster.

Now that our cameras are well organized, we also suggest labeling each camera with a label maker. As you can see we label each camera with their friendly name and the last portion

of their static IP address. If you have an IP joystick you can now organize your IP Joystick with a label that features each camera input as well. As you can see, we have a label that features a quick reference for our camera operator to glance at in order to quickly switch between 6 cameras. With each camera setup with sequential IP addresses, future camera software and hardware setup will be a breeze.



You have now organized your PTZOptics cameras on your network, set up unique multicast addresses, chosen friendly names for each camera, optionally updated your cameras login security credentials, and you have physically labeled each device. As your video production grows, this type of organization will prove useful. Who knows, maybe you will add another set to your video production one day. Maybe an overhead camera or a wide angle behind the scenes shot. Staying organized is always a great practice. Enjoy!

B-Roll - printed paper with highlighter. Check marks for each item...

Excel sheet with detailed telestration

IP joystick tap and operation

PTZOptics IP interface setup

Bottom of PTZOptics camera tap and zcam tap

Network Switch B-Roll - can we make it look sexy?

Multicast Diagram - After Effects?