Setting up a video network with the super affordable TP-Link Archer 1200

Goal

In this video, we are going to walk through the setup TP-Link networking equipment with the goal of properly configuring an IP based video production system for use with NewTek NDI enabled products and software. We have chosen networking hardware that is both affordable and reliable for IP video production. We will connect and configure a network router to properly support multicast video and a PoE network switch which can power up to 8 PTZOptics cameras. Let's start by opening up our TP-Link Archer C1200 v3 which we will setup with mDNS and multicast devices.

Overview

We will start by configuring a TP-Link Archer C1200 v3 with a TP-Link SG1016PE switch to properly enable discovery of NDI equipment via mDNS and for use with a multicast environment.

Tip: TP-Link offers an online configuration emulator you can use to to familiarize yourself with the settings before you receive your unit. We will provide a link to this emulator in the video description below.

Getting Started

Plug a network cable in between an available LAN port on the Archer C1200 v3 and an available network port on the network switch.

Plug the "Internet Port" of the Archer C1200 v3 into an available ethernet port on your cable modem or existing network.

Plug your PC into LAN port 2 on the Archer C1200 v3

Plug the Archer C1200 v3 and the network switch into available power outlets and turn them on.

We will now configure the Archer C1200 v3 using the routers "setup wizard".
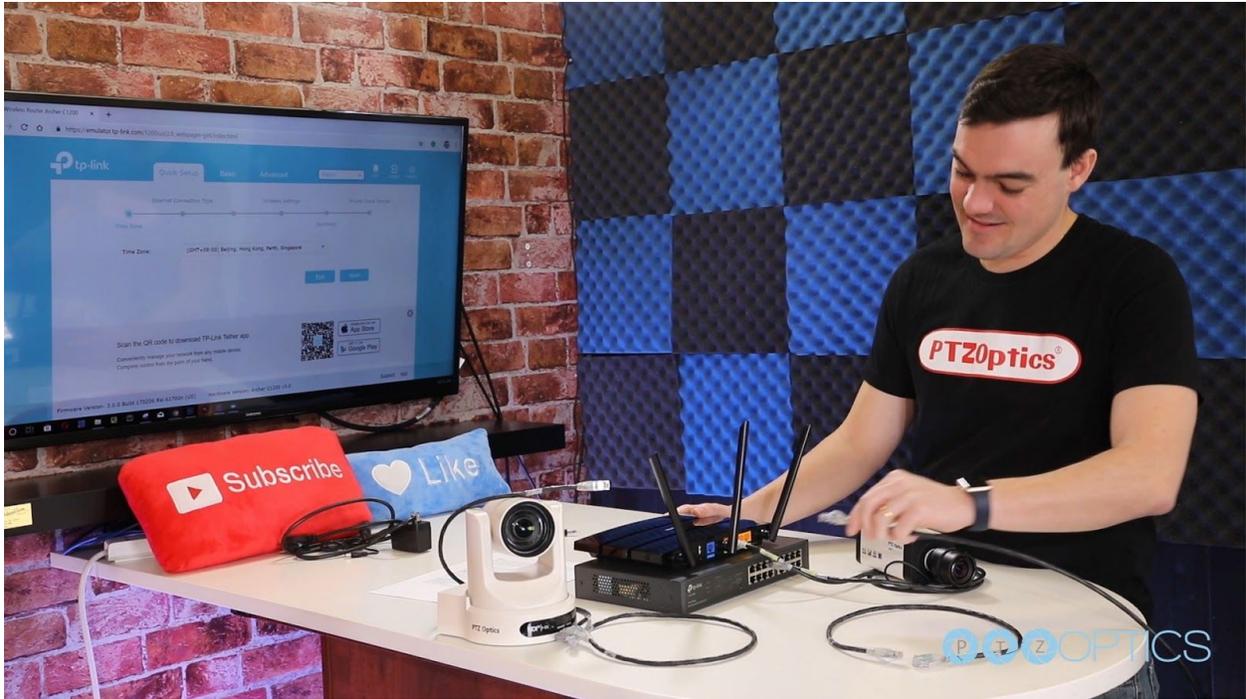
Setup Wizard

Type "tplinkwifi.net" into the search bar of your internet browser.

You will now begin the initial step-by-step process of setting up your Archer C1200 v3 for use with mDNS and multicast devices.

Time Zone (Step 1)

Select your time zone from the drop-down menu and click "Next"

Internet Connection (Step 2)

For most users choosing Dynamic IP and clicking the "Next" button will provide success in the end…
An easy way to test and see if a Dynamic IP connection is likely to work for you is to temporarily plug an available PC directly into your modem. If you are able to access the internet when directly connected to the modem, then the Dynamic IP connection should work. Otherwise, you will likely need to use the Static IP option, which will require you to contact your network administrator or possibly your ISP.

MAC Cloning (Step 3)

The next screen allows you to clone the MAC address of your computer.
Unless your ISP instructs your to do this for internet connections, choose
"Do not clone my MAC address" and click the "Next" button.

Wireless Networks (Step 4)

In this step you can create a wireless network.

Note: We do not recommend running multicast sources through WiFi.

Only enable the WiFi feature if you need to share your internet connection with other devices and do not plan on using it for content delivery.

Summary and Commit (Step 5)

The final "setup wizard" page summarizes the settings you entered from above.

Check the settings as shown and click the "Next" button when you are satisfied with the choices displayed.

Click the "Save" button which will present a progress bar as the router begins to commit your settings and then finally restarts.

Note: It is recommended to enable cloud and local access to the device.
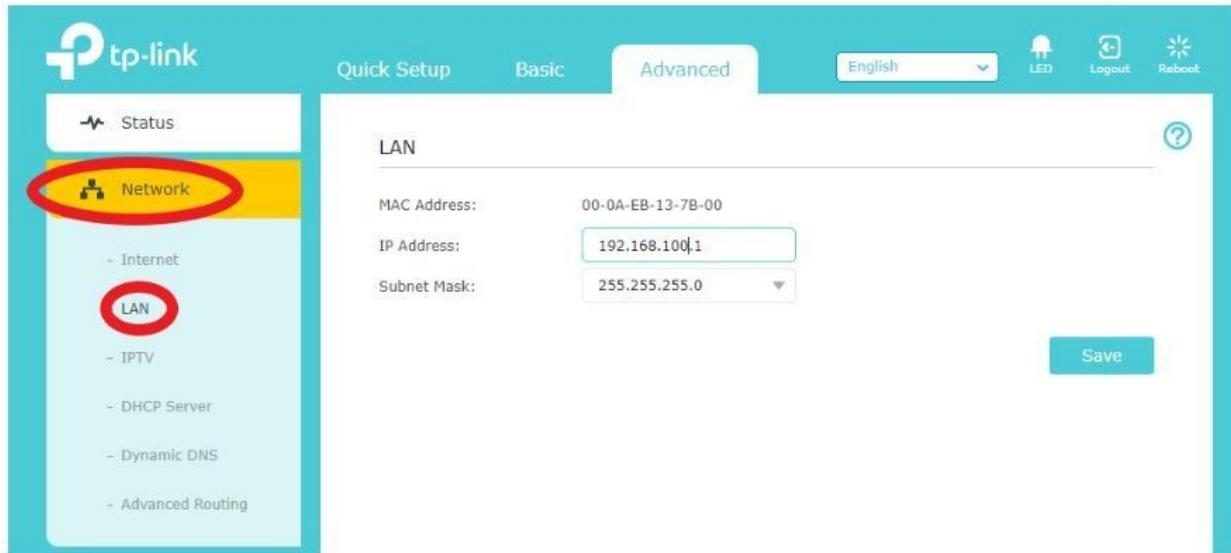
Advanced Settings

Once the device has fully rebooted log in to the WebUI of the Archer C1200v3 and click on the following options to continue with the setup process.

1. Advanced tab
2. Network

3. LAN

You should now see page as shown below

LAN Settings

If you have a desired network scheme please proceed with setting up the network per your requirements. If you do not have a specific network scheme you wish to use we recommend the following network settings.

IP Address: 192.168.100.1

Subnet Mask: 255.255.255.0

Click the "Save" button

IPTV Settings (Multicast)

Navigate to the "Network" and then "IPTV" section while still under the "Advanced" tab.
Click the box to enable "IGMP Proxy"
Under the IGMP Version drop down menu select "V3"
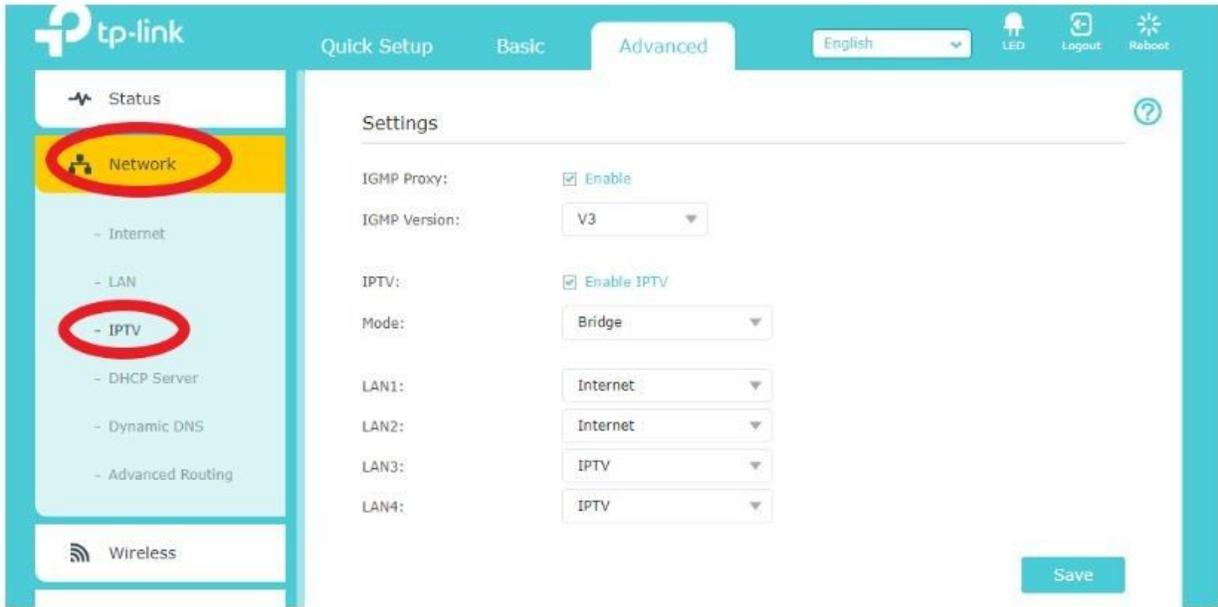Click the box to "Enable IPTV"
Set LAN 1 and LAN 2 to "Internet"
Set LAN 3 and LAN 4 to "IPTV"
With this setup all cameras and or switches with multicast serving devices should be connected to the "IPTV Lans" (LAN 3 & LAN 4)
Any device that requires a connection to the internet through the router should be plugged into the "INTERNET LANs" (LAN 1 & LAN 2)
Click the "Save" button

Congratulations!

You have now properly configured your TP-Link network for use with mDNS and multicast!

Please note we do not provide any support in relation to this document and take no responsibility for any impact or losses that may result from following this guide.

Final Notes:

If any errors are found in this documentation or updates that negate the necessity for this document come to light please feel free to let us know

tryatyourownrisk@ptzoptics.com and we will be happy to update the documentation accordingly.