

Atik Air Guide:

Introduction:

Atik Air allows you to use your Cameras* and Filter Wheels* on your network instead of connected into your main PC. To do this, we will be using a Raspberry Pi 3. You can then use your cameras on using either the built in Wifi connection or direct Ethernet connection of the Raspberry Pi. You can then use Capture (or most other astronomy programs**) to control your cameras.

Before you get started, you will need to setup the Raspberry Pi with our software. There are two ways to do this:

- 1) The Simple Way: This is the recommended way for most users. It assumes no knowledge of the Raspberry Pi itself and will allow you to setup the Raspberry Pi with the sole purpose of using our cameras.
- 2) The Advanced Way: For people who are already familiar with their Raspberry Pi and wish to add Atik Air to it.

This guide will describe both ways in detail and will allow you to set up your Raspberry Pi for your needs. At the end of the guide there are some notes and an explanation of the auto scan feature.

To use Atik Air, you will need the following:

- Raspberry Pi 3 (With power cable)
- Micro SD card (2GB or bigger)
- SD card writer
- Ethernet cable

You will also need to download and install the latest version of the core installer (v3.2.0.5 onwards) in which this document is included. You also need to make sure you check the 'Atik Air' component during installation.

Atik Air will not work with previous versions of the installer. You can download this from our website.

<http://www.atik-cameras.com/downloads/>

Please follow all instructions on that page.

**USB1 and EFW1 filter wheel will not work.*

*** GP Acquire will not work.*

Simple Setup:

This section describes the 'Easy Setup' to set up your Raspberry Pi from scratch. For more advanced users, there is also an 'Advanced Setup' section which will show you how to install Atik Air on an existing Raspberry Pi.

There are two main steps you need to follow:

- 1) Set up the SD card
- 2) Setup the PC

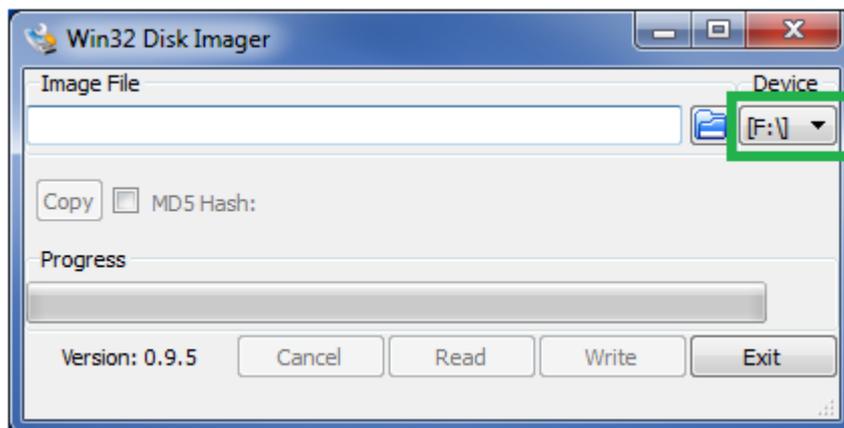
Step 1: Setup SD Card

For this step you will need your SD card and SD card writer. You will also need to download:

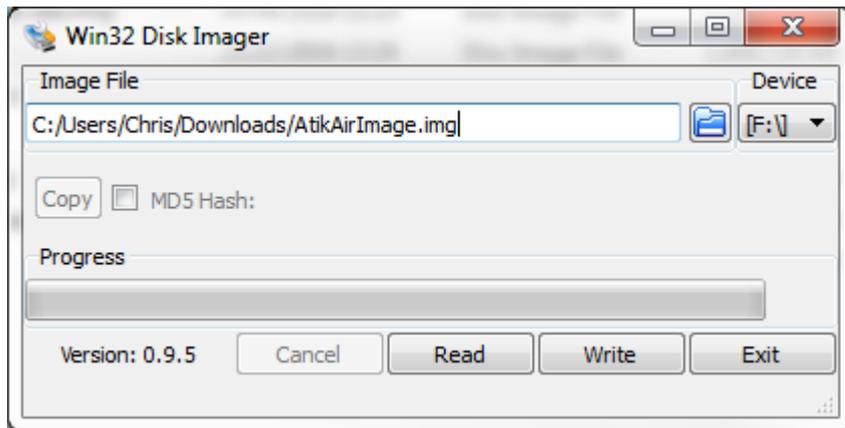
- Latest version of the 'Atik Air' Image. This is available for download on our website: www.atik-cameras.com/downloads
- SD card writer software: (Win32 Disk Imager) <https://sourceforge.net/projects/win32diskimager/files/latest/download>

Once those are downloaded and the Win32 Disk Imager is installed, follow these steps:

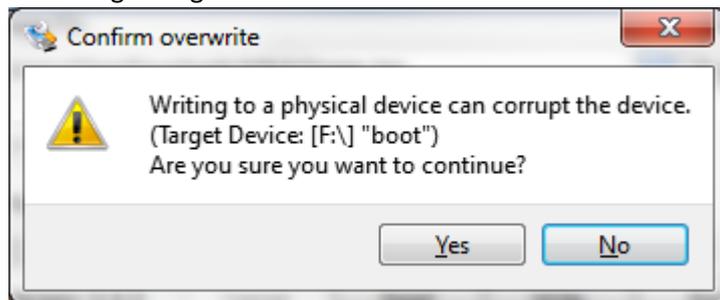
- 1) Insert the SD card into the SD card writer.
- 2) Insert the SD card writer into your PC (You may need to wait for the drivers to install). If it displays the 'Do you want to scan and fix' or the 'AutoPlay' dialog, simply press the close button.
- 3) Open Win32 Disk Imager. It should automatically set the Device to the SD cards drive. If not, you will need to select it. You should see the following program:



- 4) Click the folder button next to the 'Image File' box and find the Raspberry Pi image you downloaded:



- 5) Click 'Write'.
- 6) If it displays the following dialog box: Click 'Yes'



- 7) It may take a while for the image to finish writing. Once done, it should look like this:

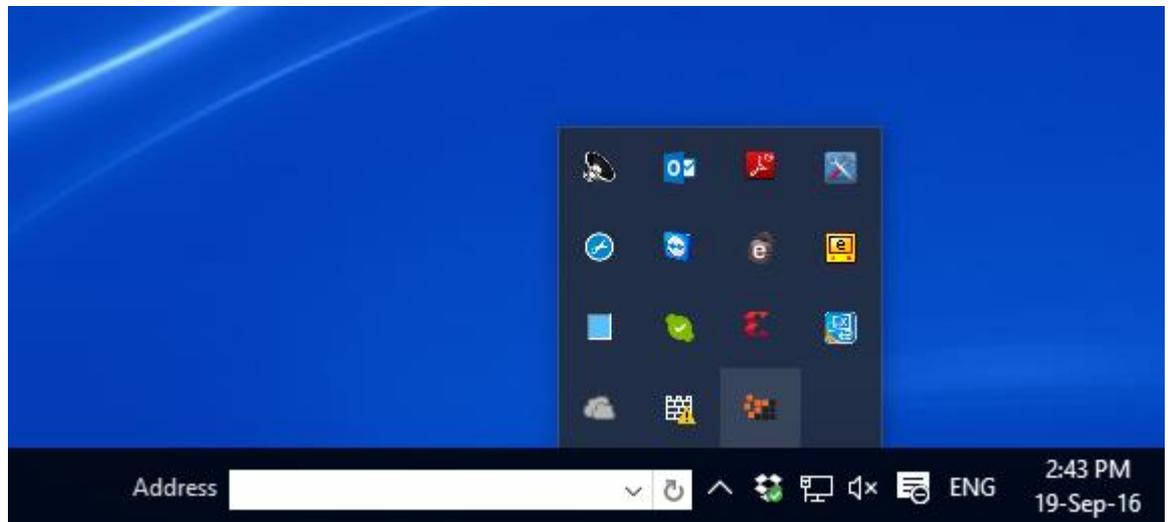


At this point, you can remove the SD card writer from your PC. Remove the SD card from the writer and insert it into your Raspberry Pi. Then, connect the Ethernet Cable to your Raspberry Pi and router. You can then put the power cable into the Raspberry Pi and it will boot up automatically. It may take as long as 1 min for the Raspberry Pi to boot up. Whilst you're waiting, you can move onto step 2.

Step 2: Setup the PC

Now that you have set up the SD card is setup and the Raspberry Pi is switched on, you can now setup your PC.

- 1) Open the 'Atik Air' application. To do this, click on the AtikAir icon in the tray of your taskbar:

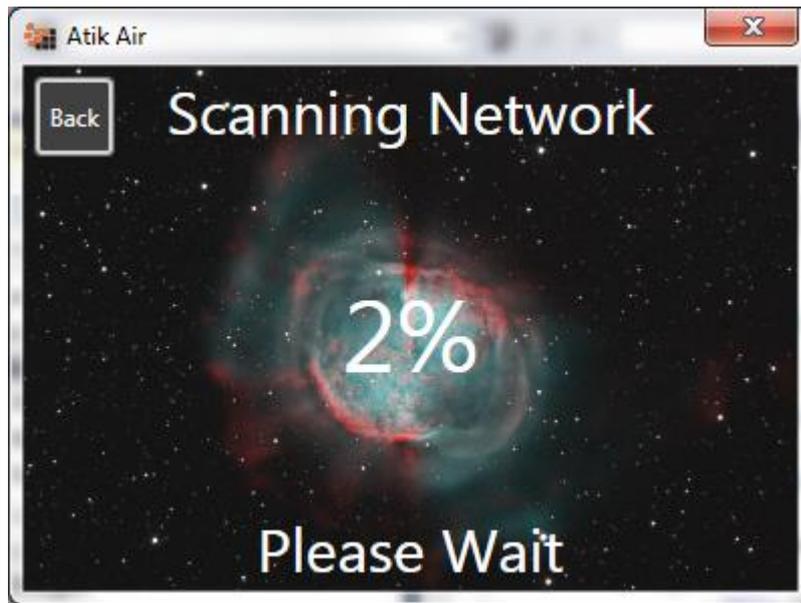


- 2) Once open, you should see the following:



You will see two options 'Local' and 'Remote'. Local will look for cameras connected to your PC. Remote will look for cameras connected to the Raspberry Pi. The first time you see this screen, Remote will say 'Not Set'. Before you can use the cameras connected to the Raspberry Pi, you will need to set it up.

- 3) Click the 'Find Pi' button. This will start looking for the raspberry pi on your network:

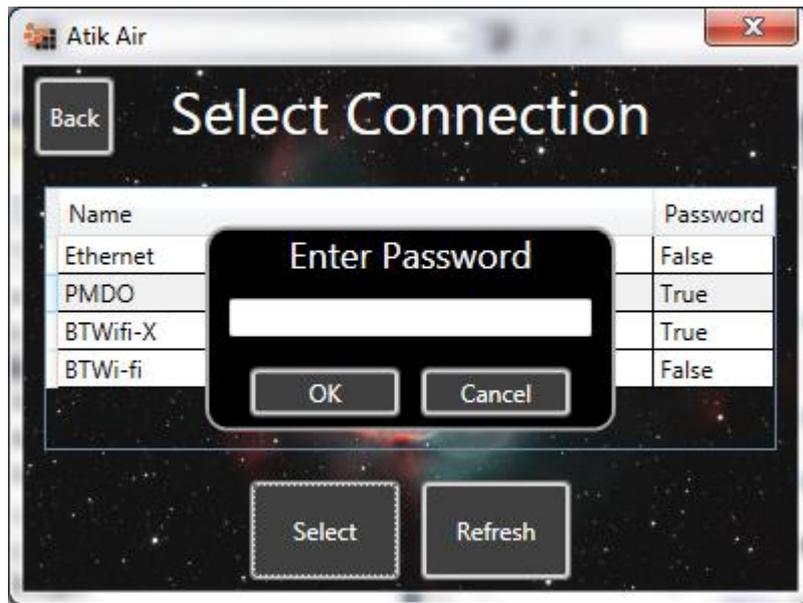


- 4) Once the Raspberry Pi is found, you will see a list of network connections that are available to the Raspberry Pi:



The top option will always be 'Ethernet' and is the direct Ethernet connection to the Raspberry Pi. The others will be any wifi sources in range of the Raspberry Pi. The right column indicates whether or not the connection needs a password.

- 5) Click the connection you want and then click 'Select'. If a password is required, a password box will be shown.

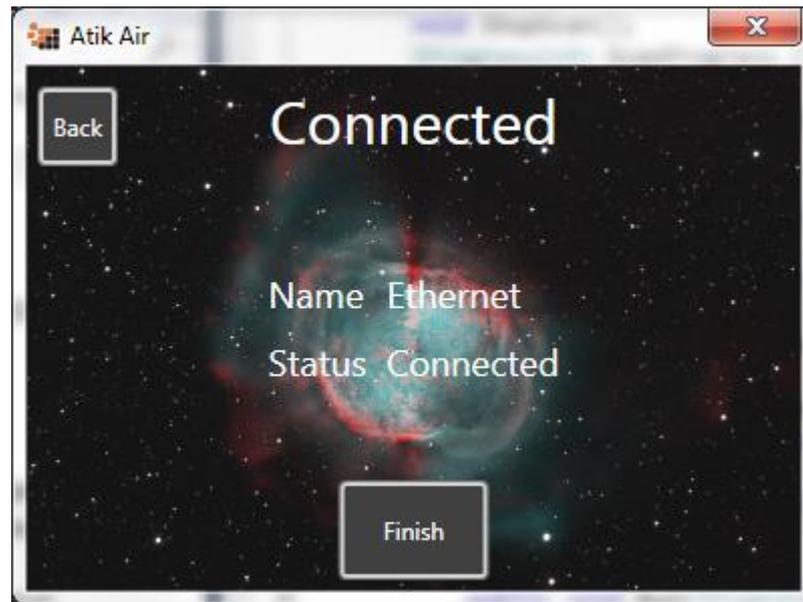


Enter the password and press 'OK' to connect to that network.

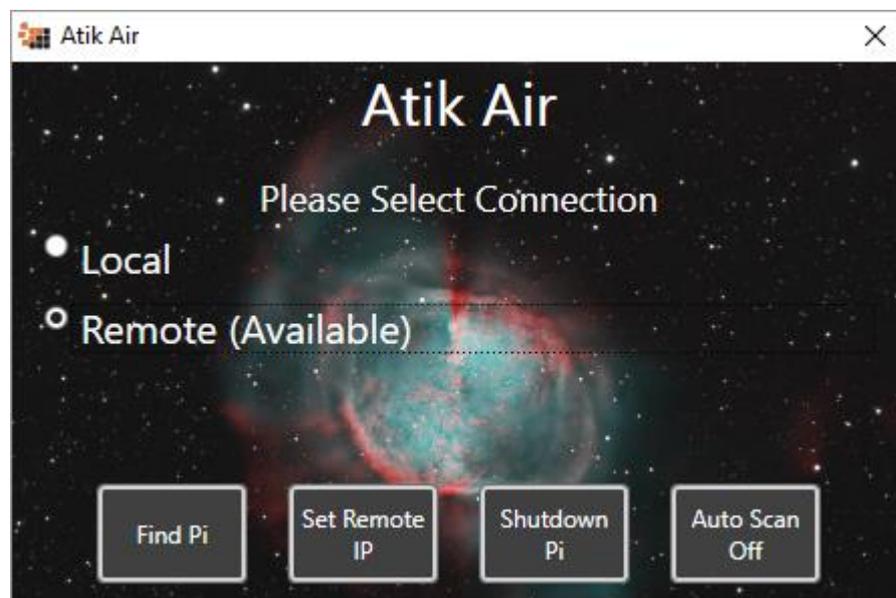
- 6) Atik Air will now set the network connection on the Raspberry Pi



7) Once connected, press 'Finish'



8) You will now see that the 'Remote' option is now 'Available' and selected:



You can now plug your Atik Camera into the Raspberry Pi and open your image capturing software.

Advanced Setup:

This guide describes the 'Advanced Setup' and is designed for people who already have a Raspberry Pi and are familiar with how to connect to it.

There are two main sections:

- 1) Setting up the Raspberry Pi
- 2) Setup PC

Step 1: Setting up the Raspberry Pi:

This step downloading and installing the Atik Air service for the raspberry pi.

- 1) Open a terminal on your Raspberry Pi.
- 2) Run the following command to download the software:
wget downloads.atik-cameras.com/AtikAir.tar.gz
- 3) Once done, run the following command to unzip the folder:
tar -zxvf AtikAir.tar.gz
- 4) Once done, run the following command to change into the correct directory:
cd AtikAir
- 5) Then run the following command to install the software. Enter your password if necessary.
Sudo ./Installer
- 6) Lastly. If you are using an AtikGP, you will need to open the file:

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/boot/cmdline.txt
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And add this text at the start:

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usbcore.usbfs_memory_mb=20000
```

- 7) You will need to reboot you Raspberry Pi for changes to take effect.

Step 2: Setup PC

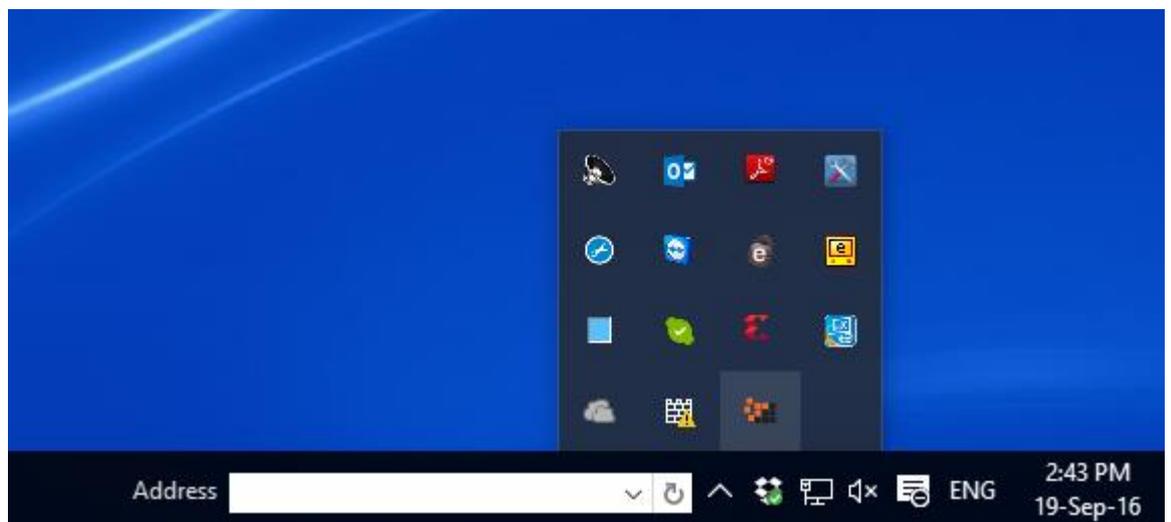
You will now need to setup your PC. If you have an Ethernet Cable, you can follow the instructions in 'Step 2' of the 'Atik Air Simple Setup Guide'. However, it's much easier to follow these steps:

- 1) Find the IP address of your Raspberry Pi. This will be 4 numbers separated by '.'s. Usually, it will take the form 192.168.1.xxx where the xxx will change depending on your network. To find out the IP address, simple run the following command on you Raspberry Pi

ifconfig

The command will list settings for 'eth0' which is your Ethernet connection and 'wlan0' which is your wifi connection. In both cases, the IP address will be listed after 'inet addr'.

- 2) Open the 'Atik Air' application. To do this, click on the AtikAir icon in the tray of your taskbar:



3) Once open, you should see the following:

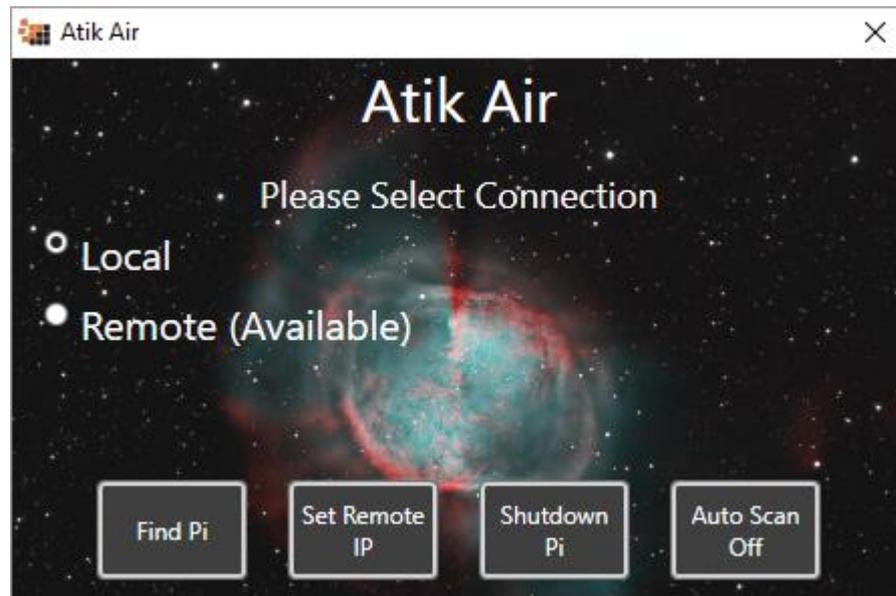


You will see two options 'Local' and 'Remote'. Local will look for cameras connected to your PC. Remote will look for cameras connected to the Raspberry Pi. The first time you see this screen, Remote will say 'Not Set'. Before you can use the cameras connected to the Raspberry Pi, you will need to set it up.

4) Press the 'Set Remote IP' button and enter the IP address of the Raspberry Pi. The Press OK.



5) This should take you back to the first page and 'Remote' should now be 'Available'



6) Select 'Remote' to start using your Raspberry Pi

Auto Scan Feature:

If you managed to connect your Raspberry Pi to the Wifi, but after restarting it no longer connects, then the chances are the IP address in your network are not fixed. To reconnect to the Raspberry Pi, simply click the 'Find Pi' button in Atik Air. This will search your network again and should find the wifi connection without the need to enter the password in again.

If this happens every time, you can switch on the 'Auto Scan' by pressing the Auto Scan Button (Bottom Right of the Atik Air application). This will rescan your network every 2 minutes until the Raspberry Pi is found.

Note: The Auto Scan feature can be CPU intensive on less powerful machines. It is recommended that you keep this feature off unless you always expect to use your machine with Atik Air.

Notes:

- 1) If you wish to connect to a camera connected to your PC, select the local value again.
- 2) These settings are saved every time you make a change (i.e. select local or remote)
- 3) When using any program that controls our cameras (such as capture), the settings are only checked when the program is started. Therefore, changing the setting will not affect programs that are currently running.
- 4) The settings are saved, so you can close the AtikAir whenever you want. The settings will be remembered even if you restart your PC.
- 5) Once finished, you can shut the Raspberry Pi down by pressing the 'Shutdown Pi' option.
- 6) For security reasons, we have changed both the 'pi' and 'sudo' passwords to 'AtikAir'.