This document is designed to help configure Celestron’s SkyPortal WiFi Module to connect to a local WiFi network and connect to TheSkyX.

Needed Files


Celestron NexRemote from http://www.celestron.com/university/astronomy/nexremote

ASCOM Platform 6.3 from http://ascom-standards.org/


PART 1

This assumes you have already downloaded and installed ASCOM Platform 6.3 and the Celestron Unified ASCOM Drivers.

Install SkyQLinkPC

Extract the downloaded zip file to a location that you know. i.e. Your Desktop

Right Click on the SkyQLinkPCInstall_1_0_4.exe on the Desktop and choose Troubleshoot compatibility
This will bring up a window to detect issues

![Program Compatibility Troubleshooter]

Detecting issues

Cancel

When it is complete, it will up another window asking you how you wish to proceed. Either “Try recommended settings” or “Troubleshoot program” I recommend “Troubleshoot program” because I have seen this automatically choose setting for Windows 8, which did not seem to fix it.
When you choose “Troubleprogram”, another window will open asking “What problems do you notice?”. Choose the first option of “The Program worked in an earlier version of Windows but won’t install or run now” and click Next.
The next window that opens will allow you to choose which version of Windows it worked on. Choose Windows 7 and click Next.
The next window will prompt you to test the program. Click on “Test the program”.

Which version of Windows did this program work on before?

- Windows 8
- Windows 7
- Windows Vista (Service Pack 2)
- Windows XP (Service Pack 3)
- I don’t know
You may not notice, but at the bottom of the screen a new window opened in the background. This is the program attempting to run. You can either right click on that icon and choose “close window” or let it run. I choose “Close window” because I want the process to finish and write the options to the file. Click Next.
On the next window, click on “Yes, save these setting for this program”.

→ Yes, save these settings for this program
→ No, try again using different settings
→ No, report the problem to Microsoft and check online for a solution
The next window will tell you it is “Resolving Issues” and then pop up another window telling you that “Troubleshooting has completed”. Click “Close the troubleshooter”.

Resolving issues

Saving settings

Generating report...
Now, back on the desktop, you will see the original file, SkyQLinkPCInstall_1_0_4.exe. Double click this and run the install.
You can accept all the defaults and agree to the licensing or change as you need. Continue until the last step when it tells you to finish.

Next ensure that your Celestron SkyPortal Wifi Module has the switch positioned in the Direct Connect position (closest to the orange cap). Make sure it is plugged into an Aux port on your mount and that your mount is powered on. Once this is complete, open your Wifi settings and you should the device broadcasting and it will say something like Celestron-XX with XX being replaced with a number and letter combination. **DO NOT CLICK ON CONNECT!! BUT MAKE A NOTE OF EXACTLY WHAT IT SAYS.**

Without a lot of technical information that you may not care about, Windows 10 cannot connect to randomly detected ad-hoc networks. You **MUST** manually create the connection yourself.

In your Run window, type “wifi” and it should bring up a option for “Change Wi-Fi Settings” click on this. This will bring up a window to manage your wifi settings.
Click on the option that says “Manage known networks”. This will bring up a new window with an option to “Add a new network”. Click on that.
A window will open and ask you for your wifi credentials. Remember when I said above to not click on the wifi connection but to make note of it? This is when you need that. Enter what you saw before where it asks for the “Network name”. i.e. Celestron-XX. Leave the “Security type” Open and the two check boxes unchecked. Click “Save”. 
Now, close all wifi settings windows and return to your connections window from before but this time click connect.
After a couple of moments, this should connect. Now comes the moment of truth to know if we are getting to where we need to be.

Go to your programs menu and scroll to the “Celestron SkyQLinkPC” folder and choose “Celestron SkyQ Link Configurator” from the sub menu. The program will open and show you the following.
Notice that it shows that the SkyQ Link Current IP is 1.2.3.4. This is the default of the SkyPortal Wifi Module. If you know how to find the IP address of your PC currently while connected to the device, it should be 1.2.3.5.

Click the Check Connection button. It should now show information on the right side of the screen and the Read Settings button should now be available. If it doesn't, click the “Check Connection” button again.
Click on the “Read Setting” button. I have had looked at 2 separate devices from Celestron and they had the same default settings.

<table>
<thead>
<tr>
<th>rubygirl</th>
<th>SSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>ackme123</td>
<td>Passphrase / Key</td>
</tr>
<tr>
<td>1.2.3.4</td>
<td>SkyQLink IP</td>
</tr>
<tr>
<td>1.2.3.4</td>
<td>Gateway IP</td>
</tr>
<tr>
<td>255.255.255.0</td>
<td>Network Mask</td>
</tr>
</tbody>
</table>

You now want to change these settings to the correct settings for your network.

SSID = The name of your WiFi network
Passphrase / Key = Wifi password for your network
SkyQLink IP = Unused IP Address on your network that will be assigned permanently to your SkyPortal.
Gateway IP = Gateway address of your network
Network Mask = Network Mask of your current WiFi network.

To find some of these settings if you are not tech savvy, you can click on your run box on a different computer that is connected to your WiFi network and type “cmd” and press the “Enter” key. This will open a Command Prompt window. In that window type “ipconfig” and press the “Enter” key. You will see a window like the following.
As you see, this shows you the Subnet Mask and the Default Gateway addresses.

To find an available network address to put in the SkyQLink IP field, you can download one of the many network scanners such as Advanced IP Scanner which you can have scan your entire network, or in this same window you can type “ping 192.168.1.xxx” replacing xxx with numbers. i.e. 192.168.1.10. This would of course assume your network is using a 192.168.1.xxx networking scheme. Adjust as you need. If an address is taken, you will see Reply from 192.168.1.xxx: bytes=32 time=1ms TTL=64. If it is available, you will see something like, Reply from 192.168.1.xxx: Destination host unreachable.

After you make the changes you need to match your network, click the “Write Settings” button. I assume, you will get an error on the right side of the window. **DON'T PANIC!** Close the program and reopen it. Make sure you are connected to the units WiFi network still. Click the “Check Connection” button and when it replies, click “Read Settings” again. This should show the settings that you had just configured.

Now we are ready for the next step. Power off your mount appropriately. Now switch the switch on your SkyPortal to the opposite position to Access Point Mode. Turn your mount back on. Once the SkyPortal has power, give it a moment to join your WiFi network. Connect your laptop back to your WiFi network. If you want to confirm that it is connected. You can open another Command Prompt window and type “ping 192.168.1.xxx, changing 192.168.1.xxx to whatever address you assigned in the above setting for SkyQLink IP. You should then get a Reply from 192.168.1.xxx response. This shows that the device is indeed online.

Next, go to your programs menu and scroll to the “Celestron SkyQLinkPC” folder and choose “SkyQLinkPC” from the sub menu. The program will open and show you the following.
Change the SkyQ Link IP to the IP address that you assigned your SkyPortal above.

Change the TCP Port to 2000. The Original SkyQ, the predecessor to SkyPortal, used port 5555.

Change the COM Port to an unused COM Port number for your system.

Press Connect. You should hear your computer ding and then the lower green light next to Port 2000 will illuminate.

**NOTE:** I use a paid program used COM2TCP that I used with SkyFi from Simulation Curriculum which has the same settings as above and works fine.

**PART 2**

Follow the exact steps above by right clicking on NexRemoteInstall_1_7_23.exe on your desktop and performing the same Troubleshoot compatibility steps as above.

After this is done, Run the NexRemoteInstall_1_7_23.exe file.
Install using all defaults and license acceptance as needed. Near the end of install, it will pop up a window that says “Installing Virtual Serial Port Drivers” with a “Close” button. Just let this sit and **DO NOT PRESS CLOSE**. I am not sure what closing it will do, but it is usually a horrible idea, to ever give a user that option. It will close on its own in a couple of minutes. If it asks you to reboot in the middle of this, just hit cancel for now until everything finishes. Press finish at the end. Reboot if you need to.

This installation should have created a shortcut on your desktop called NexRemote. Open this and you will get the following window.
Change the following settings...

PC Port- Change this to the unused port your chose in the SKyQLinkPC settings previously.

Mount Model- Change this to your mount if listed.

Note: I have a CGX-L which is not listed and I set it to NexStar 6/8SE

Firmware- Change this to the firmware version of your mount if known.

Note: I have a CGX-L which is not listed and I left this NXS 4.21

Virtual Port- This needs to be a second unused COM Port for your system. MAKE NOT OF THE PORT YOU CHOOSE. YOU WILL NEED IT IN THESKYX.
After you have these settings set, press the “OK” button in the bottom right and you will hear your PC beep again and the image change to the following and start speaking to you about alignment.

PART 3

Open TheSkyX (Other astronomy programs will now work the same way).

When TheSkyX opens, click on the “Telescope” Menu.
Next, Click on “Mount Setup” and select “Choose”
Next, choose “Ascom” & ASCOM Mount” and press “OK”

Next, from the “Mount Setup” menu, choose “Settings”

![Choose Mount Dialogue Box]

![Imaging System Setup - ImagingSystem Dialogue Box]
This will open the ASCOM Telescope Choose settings menu.

Choose Celestron Telescope Driver.

Click the Properties button.

Now, in the COM Port drop down menu, choose the COM Port you selected above in the NexRemote Virtual Port settings and press “OK”.

Back at the Telescope “Mount Setup” menu, choose “Connect”.

![ASCOM TelescopeChooser](image1)

![CelestronSetup](image2)
You should now have control over your mount via TheSkyX.

In closing I will answer a question that I know will come up...Why do you have to use NexRemote to translate a Virtual Com Port to another just to make TheSkyX work? The answer...I have absolutely no idea. I have seen PC’s not see the original Virtual COM Port in device manager at all and would only work by following all of these directions. I have seen PC’s see the original Virtual COM Port in device manager but not be able to communicate with it in TheSkyX until I translated it using NexRemote.