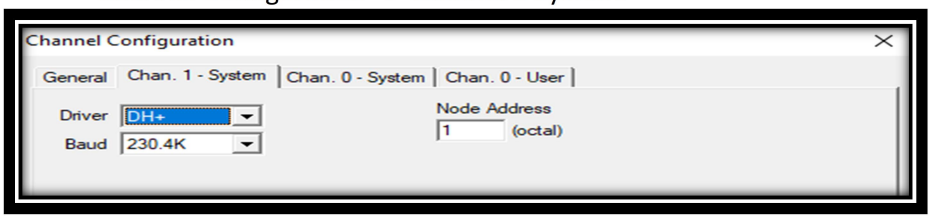
Emerson QuickPanel+ (GE QP+) HMI AB Ethernet Driver & SLC 5/04 Communication using EQ7000

This application note explains how to make the Emerson QuickPanel+ or GE QP+ HMI communicate with SLC504 using GE Proficy Allen Bradley Ethernet Driver with Equustek EQ7000.

1- Determine the DH+ node address & Baud Rate of the SLC 5/04 PLC by going to RSLogix500 → Channel Configuration → Channel 1 System.



2- Download and Install EQ32 Software:

https://www.equustek.com/downloads/

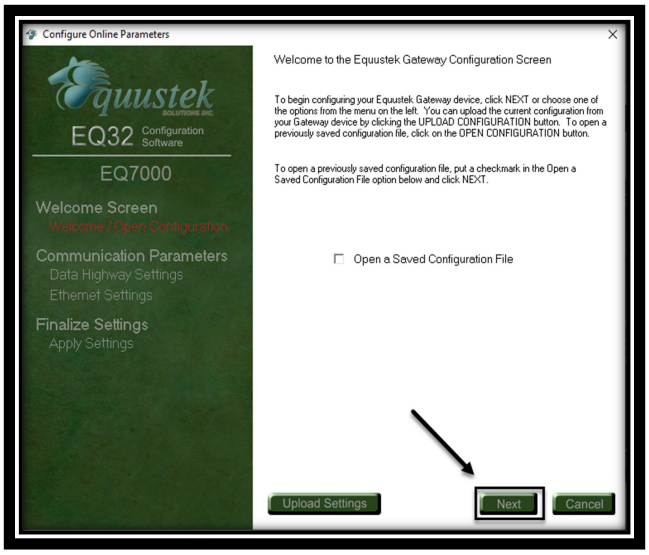
To Configure EQ32, follow the steps in sequence :

a- Connect the USB to EQ7000 and find out the Com Port number for it under Device Manager.

b- Open EQ32 Configuration Software and Select the correct COM Port:

c- Click on Configure on the left :

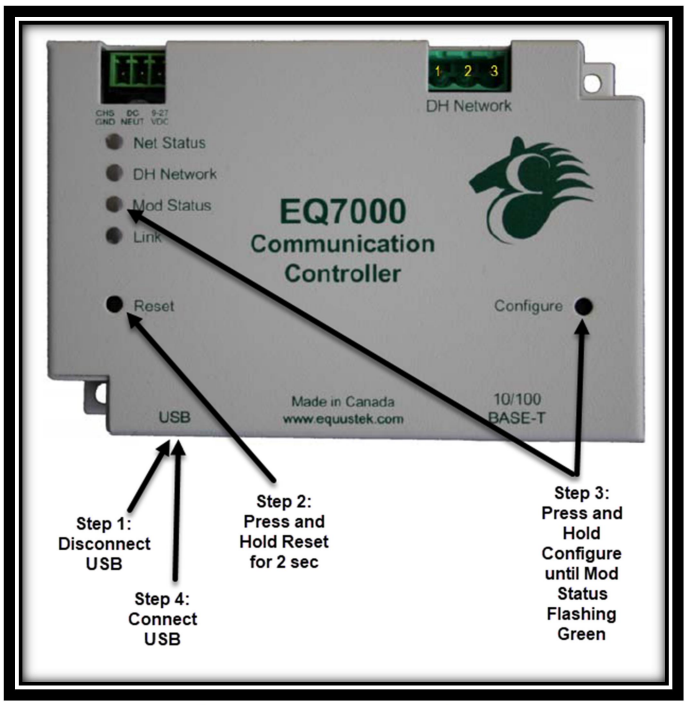
d- Click Next:



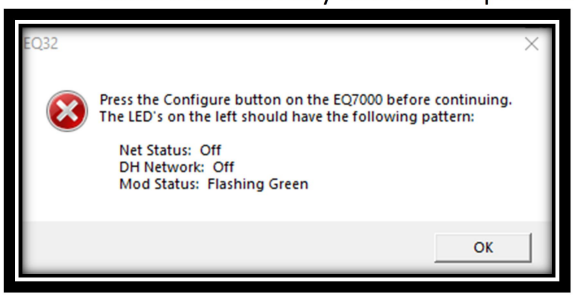
e- Enter Network Type DH+, Node Address for the EQ7000 and DH+ Network Speed then click Next. Network speed should be the same as the PLC (Step 1) but the Node Address must be different than the PLC or any other node on the DH+. In this setup, our Node Address is set to 4:

f- In the next screen enter IP Address & Subnet Mask for the EQ7000. Default Gateway can be left blank if there is not gateway. In this setup , the IP address is set to 192.168.1.105 as shown below. Click Next when done:

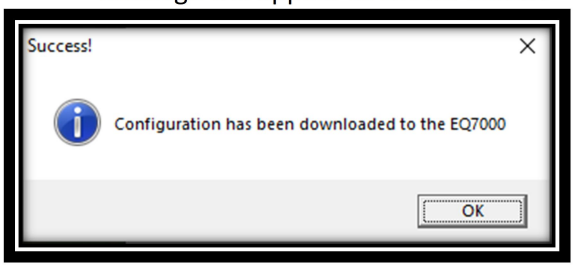
g- Before downloading the configuration, the following must be done in correct order.
Disconnect the USB Cable from EQ7000 module.
Press & Hold Reset for 2 seconds
Once the module boots up, press Configure until “Mod Status LED : Flashing Green”
Now connect the USB back to the module and click Finish to download the configuration.



h- After clicking Finish, a screen will appear to remind about pressing the configure push button. Since it was already done in the previous step, click OK.

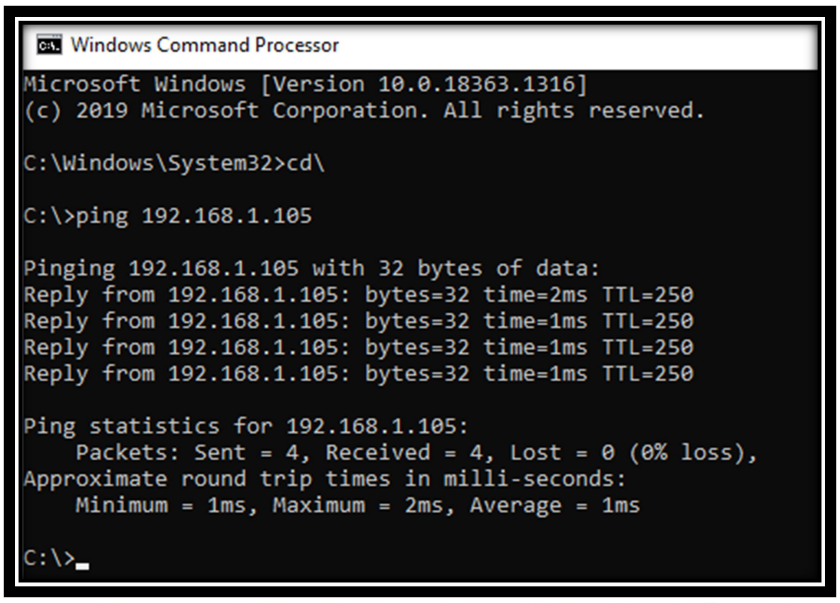


i- If step g above was followed correctly then the configuration will be downloaded and a success message will appear as shown below:

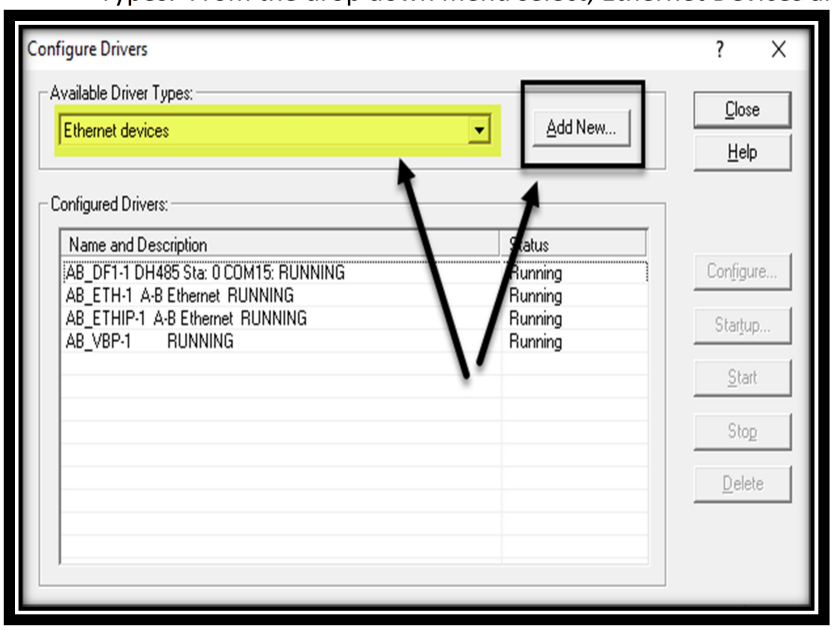


*** *If the download is not successful for any reason then go back to step g and try downloading it again.*
j- Once the download is complete, remove the USB cable then press and hold Reset for 2 seconds and then release it. The unit will reboot with the new configuration in place.

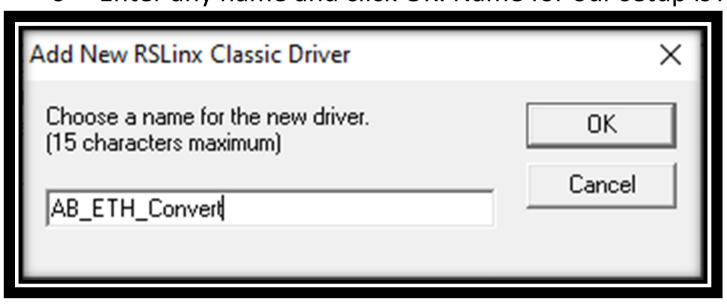
4- After the module boot sequence is complete, wait for 2 minutes and then ping the module using its new IP address to make sure the module is online, connected and the new settings are in affect.



5- Next, open RSLinx Classic and go to RSLinx Classic ➔ Configure Drivers → Available Driver Types. From the drop down menu select, Ethernet Devices and click Add New:



6- Enter any name and click OK. Name for our setup is AB_ETH_Convert

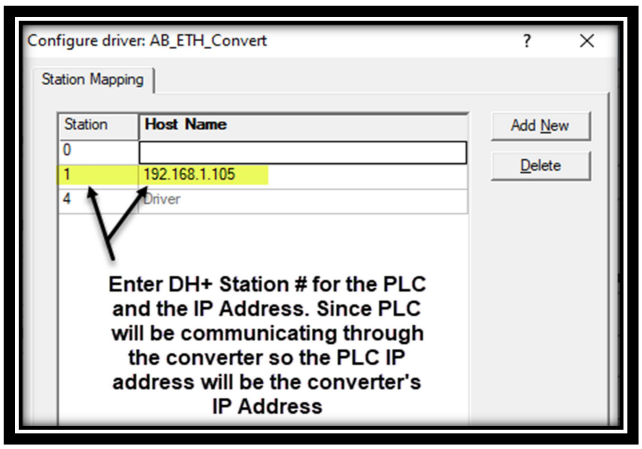


7- According to Step 1 and Step 3e above, the DH+ Node address for PLC and the converter are :

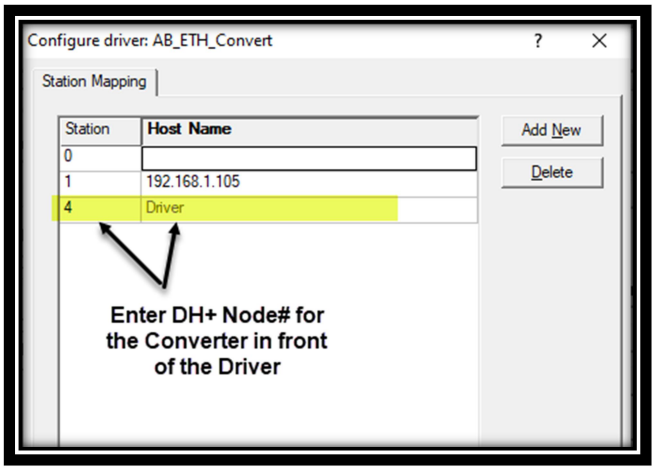
PLC Node Address (DH+) = 1

EQ7000 Node Address (DH+) = 4

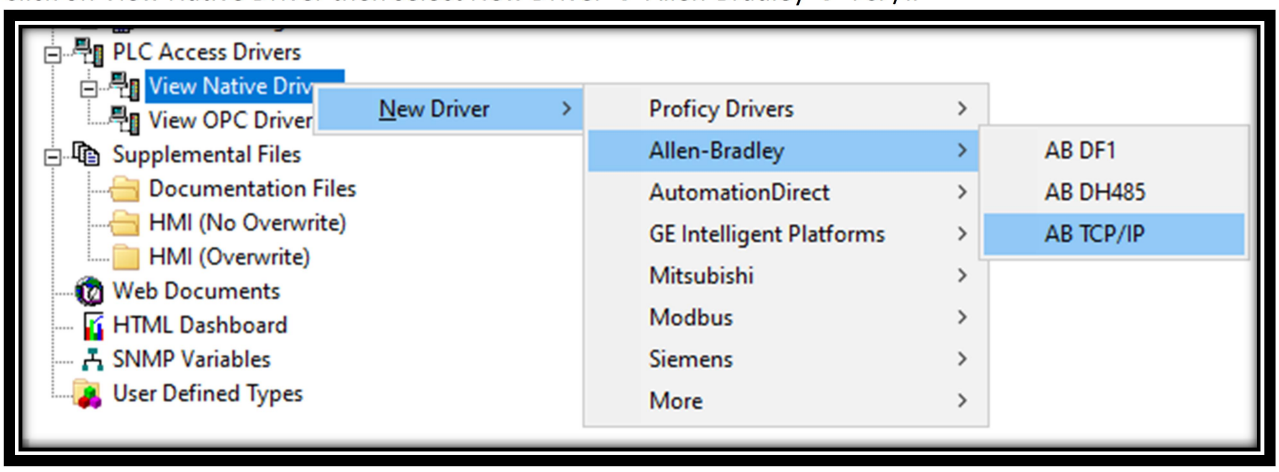
Enter DH+ Station# for the PLC and the IP address. Since PLC will be communicating through the (EQ7000) converter so the PLC IP address will be the converter's IP Address.



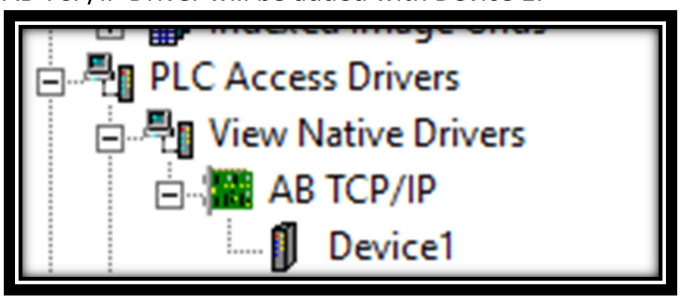
Enter Node # for the converter in front of the driver and click OK:



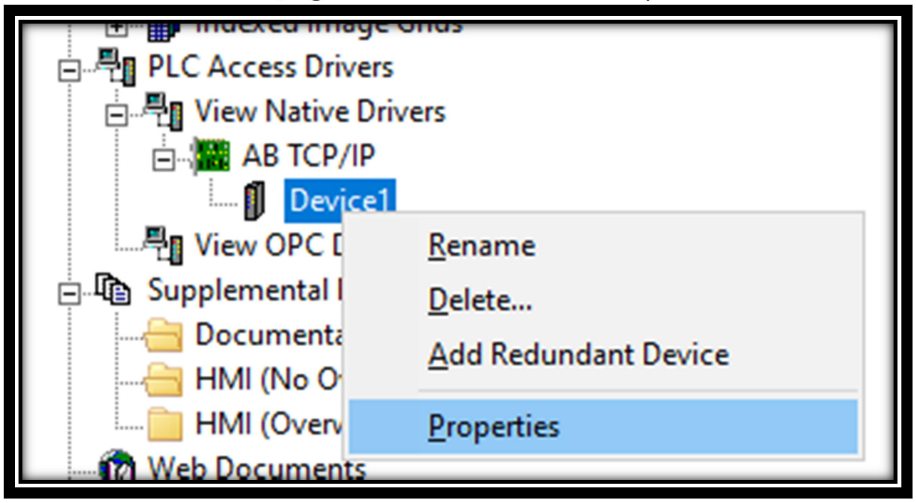
8- Now go to the GE Proficy Project and under the PLC Access Drivers → View Native Drivers, Right Click on View Native Driver then select New Driver → Allen-Bradley → TCP/IP



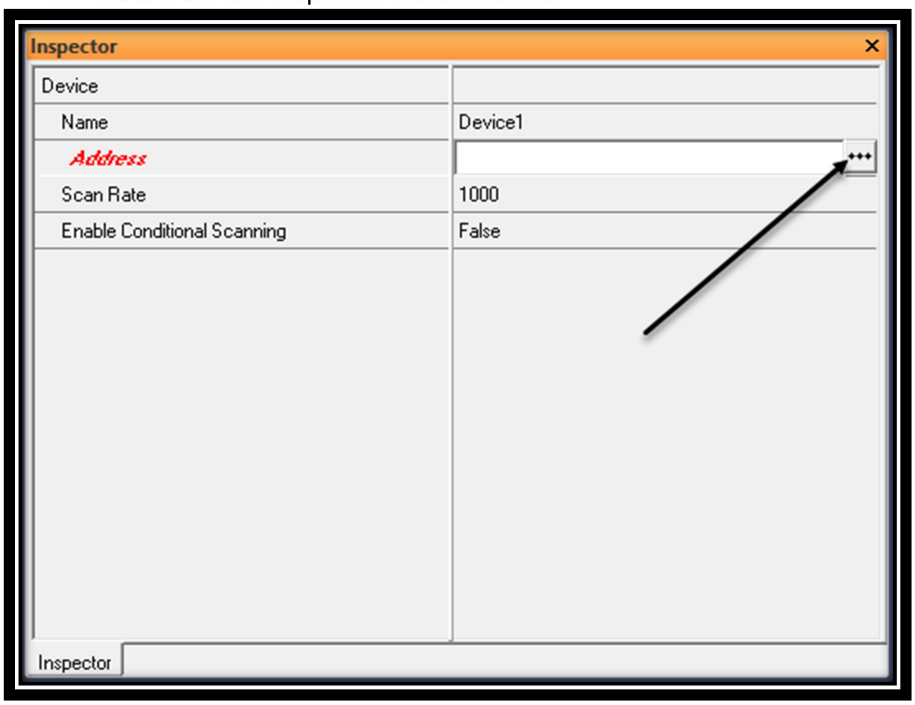
AB TCP/IP Driver will be added with Device 1.



9- Select Device 1, right click and then select Properties



10- Now from the inspector window select 



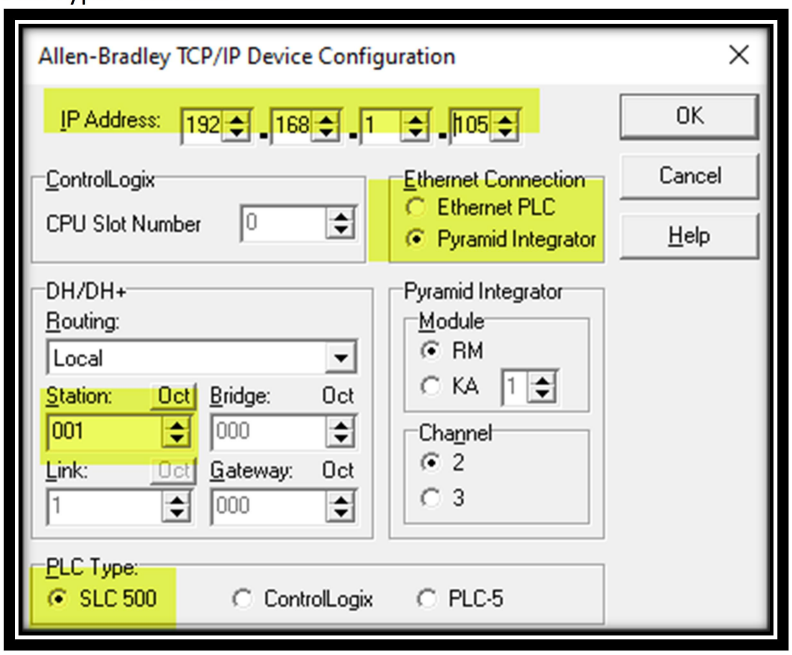
11- In the Allen Bradley TCP/IP Configuration window, enter the following then click OK

IP Address : 192.168.1.104

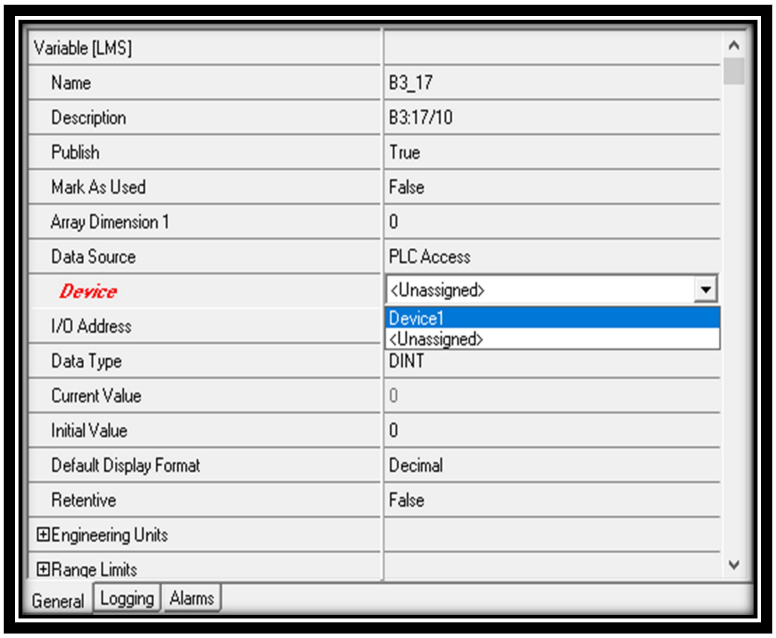
Ethernet Connection : Pyramid Integrator

Station: 1

PLC Type : SLC 500



12- Now under variables, link all variables to the newly created Device1. Here is an example of one variable :



13- Once all the variables are mapped correctly, select Download and Start so the program is compiled and downloaded to the GE QuickPanel+ (Emerson QuickPanel+) HMI.

If needed this can be done in a similar way to an Allen Bradley PLC5 as well, except you will choose PLC5 instead of SLC5/04.