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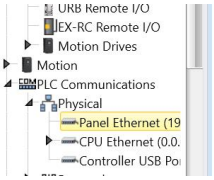
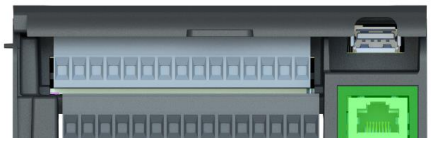
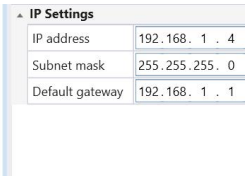
i4 Automation Ltd
Innovative Solutions for Industry

Linking PLC with Virtual HMI

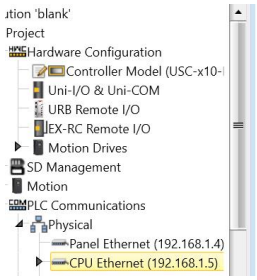
1) **Configure PLC Panel IP Address** – Remember this address (i.e., 192.168.1.4) as this will be used to connect from the HMI panel to the PLC panel.)

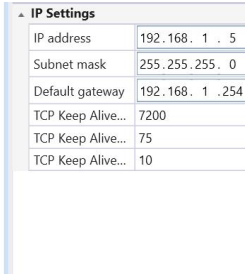




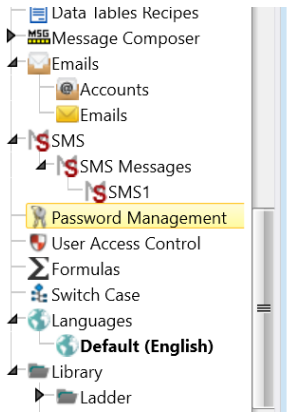


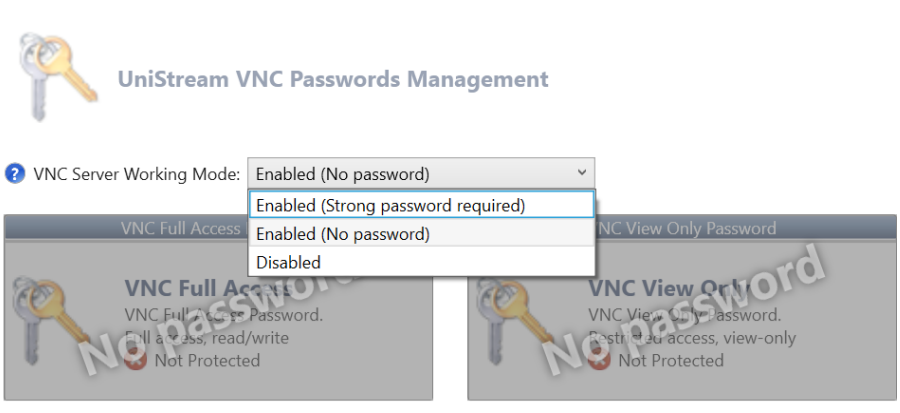
2) **Configure PLC CPU IP Address** – This needs to be on the same subnet as the PLC panel IP address (i.e., 192.168.1.5)





3) **Enable VNC in Password Management/VNC Server Management** - Either with strong password or no password





4) **Download this configuration to the PLC via Ethernet or USB -** If you do not have USB connection or do not know the IP address of your PLC then please use a **USB action file**.

5) **Connect PLC and HMI via ethernet cable either directly or over a network.** Power up both units and please be aware that the PLC will take longer to boot than HMI (Wait for green run light on PLC before connection can be made.)

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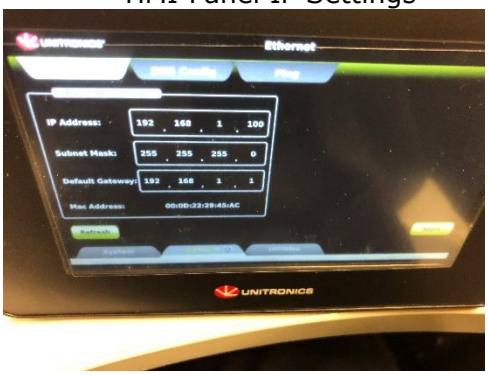
6) **Configure HMI panel IP Address** – *Please note that both the HMI has a **Panel** IP address and the PLC has a different **Panel** IP address.* The HMI subnet must match the subnet of the PLC in Network (i.e. If PLC panel IP = 192.168.1.XXX then HMI panel IP must = 192.168.1.XXX but not be identical to any other IP on the same network)

With a subnet mask of 255.255.255.0 the first 3 digits of your PLC panel and HMI IP addresses must match. So, in our example –

PLC Panel IP Settings

HMI Panel IP Settings



IP Address: 192.168.1.4
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.254

IP Address: 192.168.1.5
Subnet Mask: 255.255.255.0
Default Gateway: 192.168.1.254

These settings will allow for a direct connection between the PLC & HMI but if any of the first 3 numbers of either IP address were to be changed then you would be unable to connect. (i.e. 192.168.1.4 is incompatible with 192.168.0.5)

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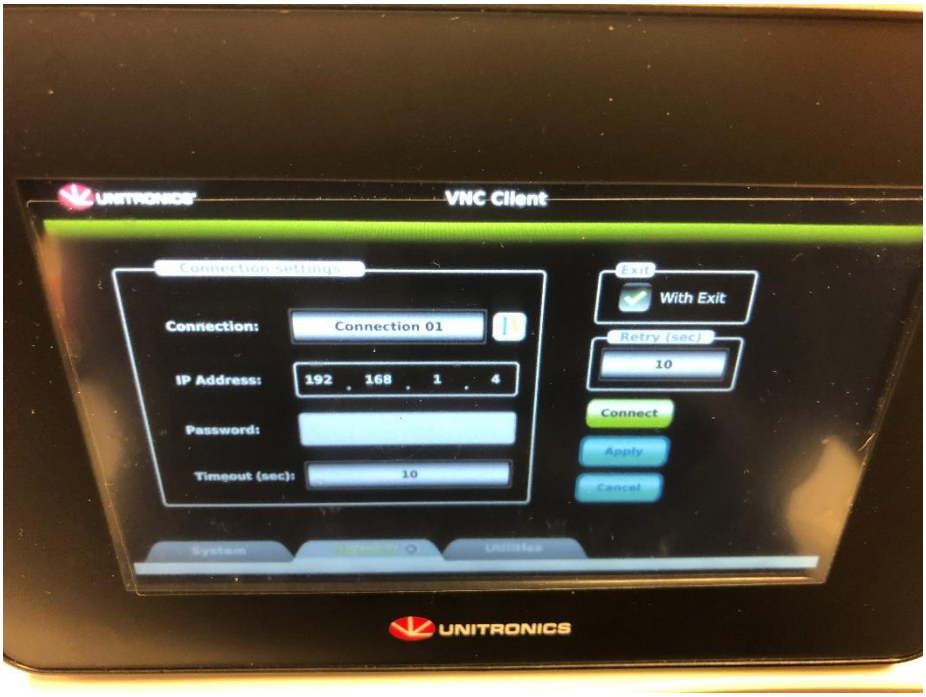
7) **In VNC Client on HMI enter the PLC Panel IP Address** (i.e. 192.168.1.4)



8) **Press connect** - your HMI will now display the screens from your PLC. To disconnect go into UniApps on the PLC select Network>VNC Server>Disconnect.
9) Please ensure you have the **VNC Server screen resolution** set correctly for your HMI module

Tom Johnson
December 2022