

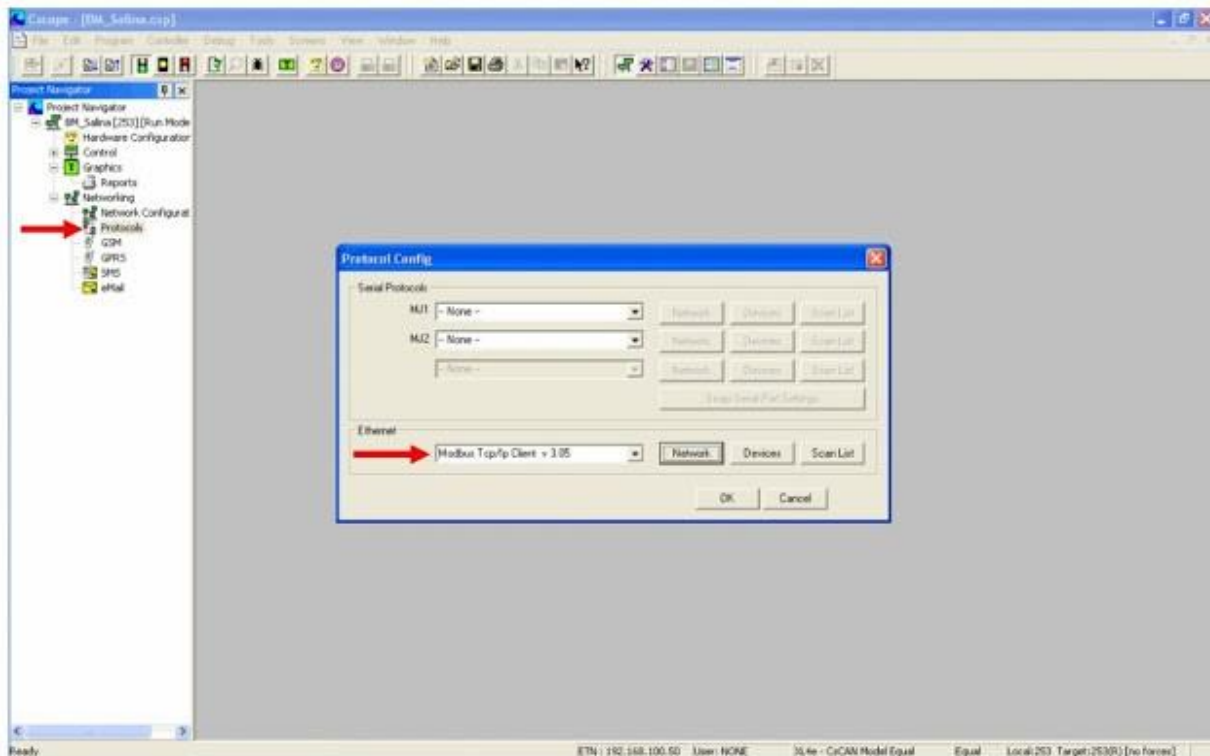
Configuring the Horner XL4 for Ethernet communications with ABB VFD's

Multiple VFD installations can be enhanced with a centrally located HMI/Controller for display, alarming, and control of the remote drives. The following outlines the configuration for Ethernet communications of the new Horner XL4 OCS All-in-One controller to ABB VFD's.



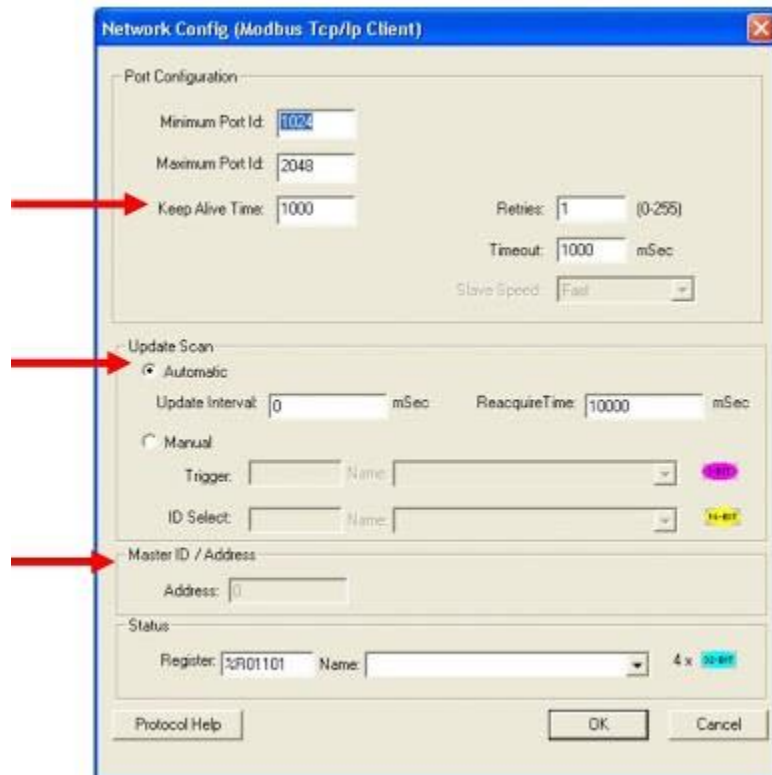
First install and configure the correct Ethernet Fieldbus Adapter Module for the ABB drive you want to communicate with. ACS350/355 drives use the FENA-01 EthernetIP\Modbus TCP module. The ACS550 and ACS800 use the RETA-01 EthernetIP\Modbus TCP module. Set the Protocol, IP address, COMM PROFILE to ABB DRIVES, and configure the specific data you want to read and write to in the drive under Drive Parameter section 51. (See note)

Next, using CScape version 9.3, Service Pack 3 or newer, select Protocols under the Networking configuration in the Project Navigator and then choose "Modbus Tcp/Ip Client v3.05" for the Ethernet protocol.

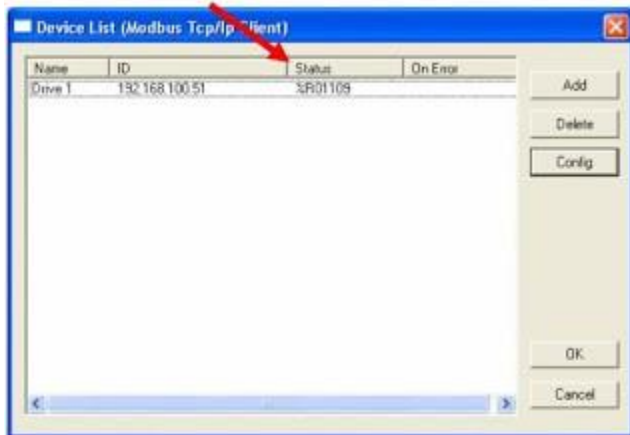


Next select the Network button on the Protocol Config screen. In the Port configuration leave everything at default except change the Timeout from 10000 mSec to 1000 mSec. In the Update Scan configuration, also change the Reacquire Time from 1000000 mSec to 10000 mSec. These two settings should be kept short until communications with the drives has been established. Once configuration and programming is completed, the Timeout and Reacquire Time can be lengthened to optimize the communications.

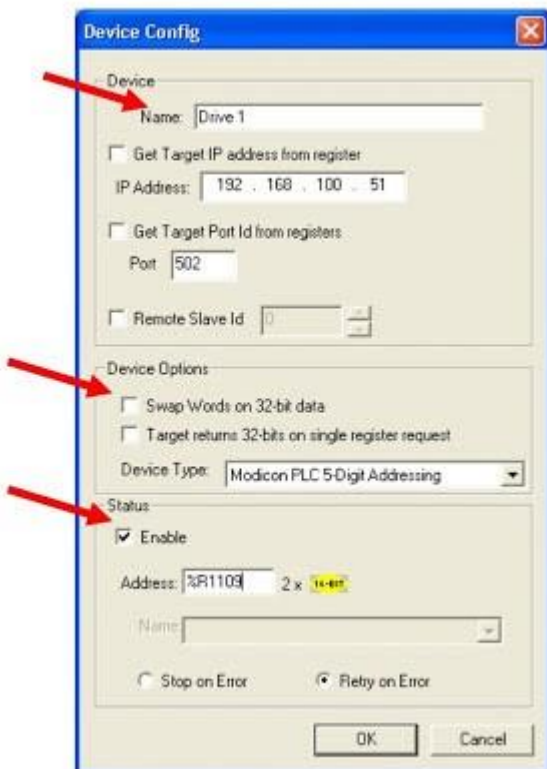
Under the Status configuration, enter a register that will contain the status of the Ethernet communications. This is usually a register location outside your normal program registers. Notice that this is 4 Double Integers (DINT), so do not use any registers above this address for at least 8 registers. Once this is completed, select OK and return to the Protocol Config screen.



Now select the Devices button. This brings up the Device List. The Device List shows the devices that can be configured to communicate with. To add a device, select the Add button.

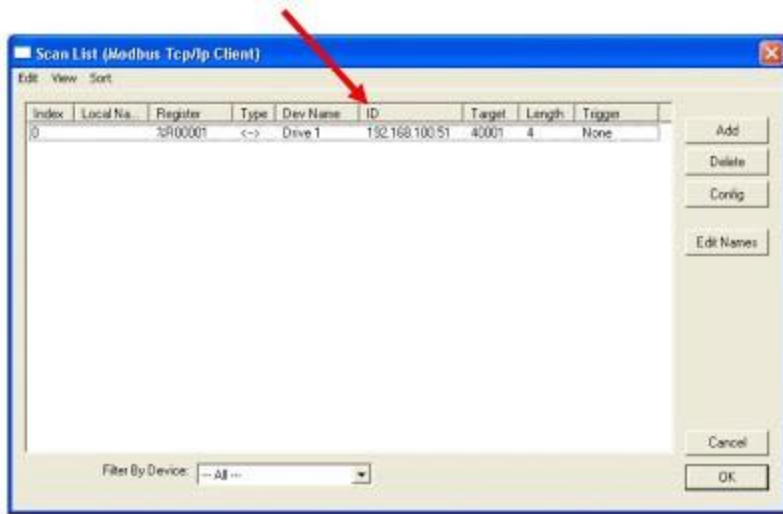


To add a device enter the Name and IP address of the first drive to communicate with. Leave the Port at 502 and enable the Status monitoring if you want to monitor the status of communications to this device. Be sure to include another unused register for the status word for communications to this drive. Take note that this is also a DINT, so two register will be used for this status word. Under Device Options select “Modbus PLC 5-Digit Addressing” as the Device Type. Select OK and make sure the device you entered is now in the list of devices.

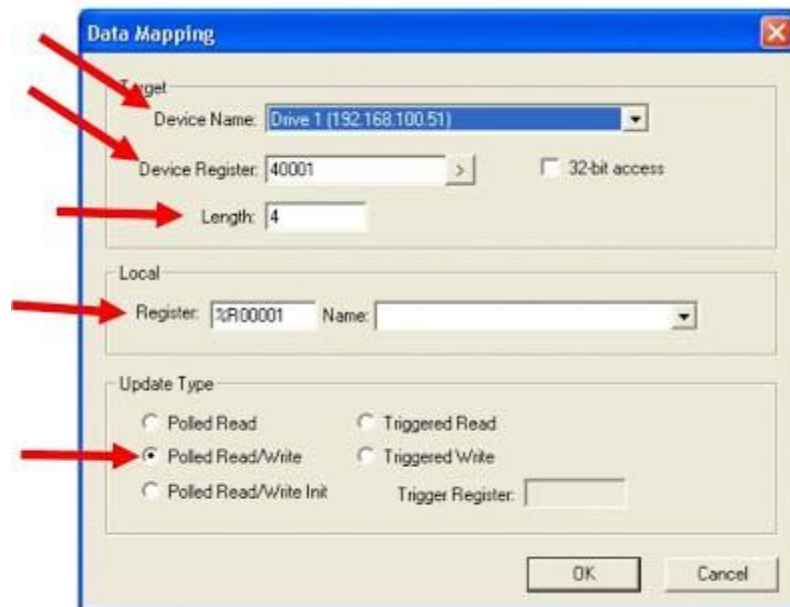


You can select Add and repeat the Device Config steps to add any additional drives you want to communicate with on the network. When done, select OK on the Device List and return to the

Protocol Config screen. Then select the Scan List button. The Scan List shows you the polling configuration of the XL4 to each device you have configured.



Select Add to configure the Data Mapping between the XL4 and drive unit. First select the drive you want to map to in the Device Name. Then in the Device Register enter the Modbus start address of 40001. Next enter the number of words you want to read from the ABB Drive based on how many words you configured to read from and write to in the ABB drive. In the Local section enter the starting register you want to write the data to in the XL4. Make sure the Update Type is set to "Polled Read/Write" for continuous polling.



Now select OK to close the Data Mapping screen. Select Add to map any additional drives you want to communicate with. When done, select OK to close the Scan List screen, and OK to close

the Protocol Config screen. This completes the configuration of communications to the ABB drives.

Once the project is downloaded to the XL4 it will continuously poll all the drives in the Scan List and place the data at the registers you designated for each drive. Display screens and logic can now be added to the Horner XL4 to display and control the remote ABB drives.

For additional information on the XL series of the Horner OCS line, contact your Logic, Inc. sales engineer. For a closer look at the new XL4, a 30 min. YouTube video can also be viewed at: <http://www.youtube.com/watch?v=BLqg0Wx9sw4>.

Note: For additional information on the ABB RETA and FENA modules you can contact our support department.