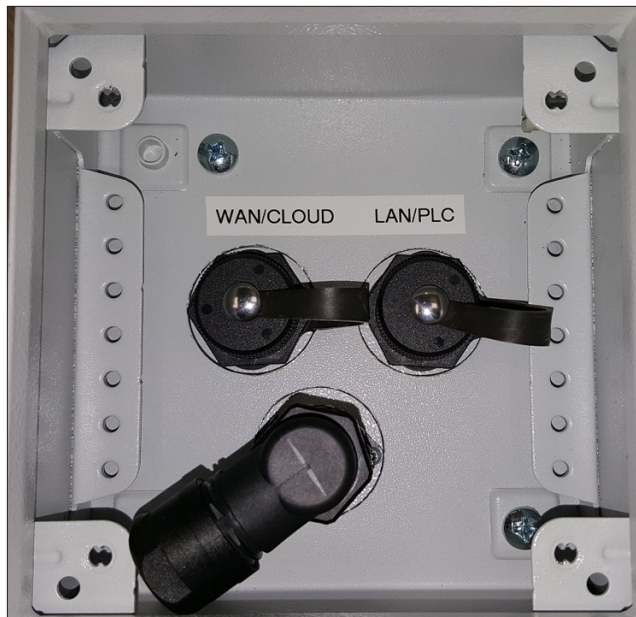


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1. CONNECTING THE EDGE DEVICE TO YOUR COMPUTER

Prior to beginning this process, please connect an Ethernet cable from the Ethernet port of your PC to the LAN/PLC port (pictured below) on the Edge Device.

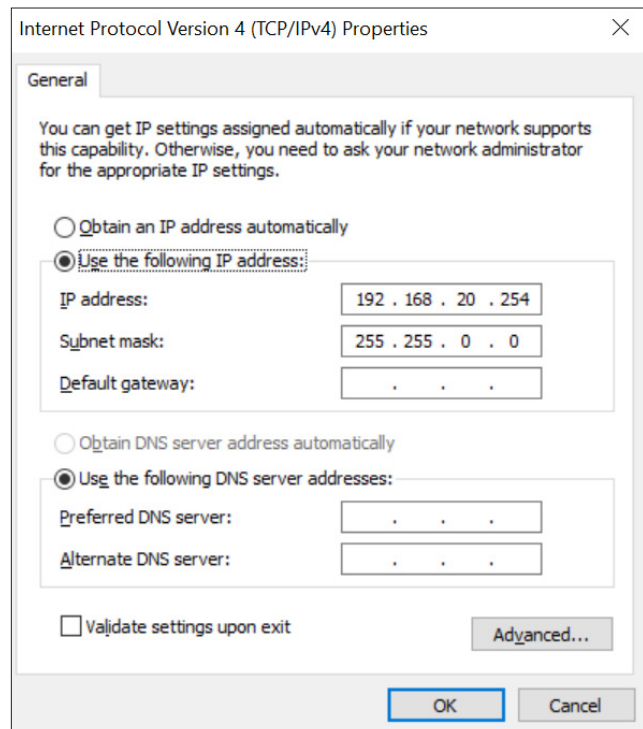
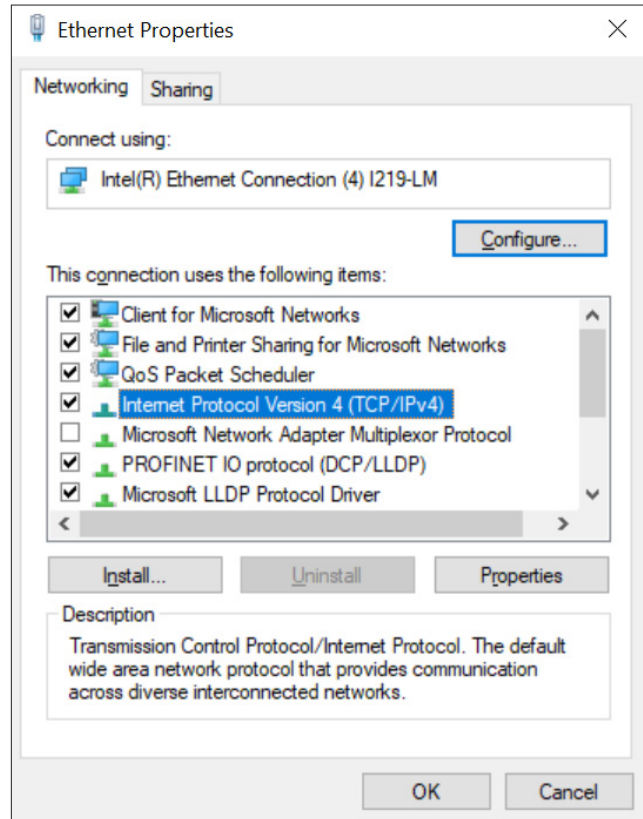


2. SET COMMUNICATION SETTINGS OF YOUR PC AND EDGE DEVICE

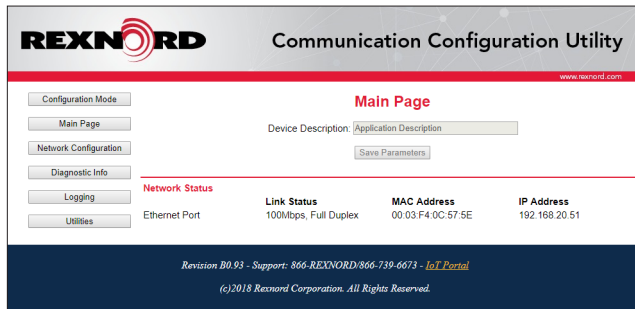
A. SET THE IP ADDRESS IN YOUR PC IN ORDER TO ASSIGN A NEW IP ADDRESS TO THE EDGE DEVICE. EXAMPLE BELOW IS WINDOWS.

1. Open the Control Panel from your desktop.)
2. Select "Network and Internet"
3. Select "Network and Sharing Center"
4. Select "Change Adapter Settings"
5. Select Ethernet Adaptor.
6. Select "Internet Protocol Version 4"
7. Select "Use the Following IP Address"
8. Use this IP Address: 192.168.20.254
9. Use this Subnet Mask: 255.255.0.0
10. Select "Ok"

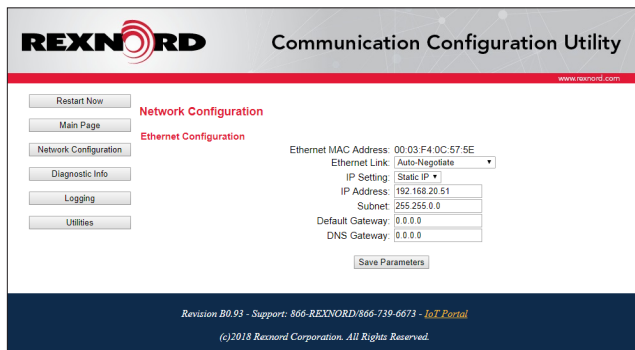
B. SET THE IP ADDRESS OF YOUR EDGE DEVICE SO THAT IT WILL BE VISIBLE TO THE PLC



1. Open a web browser and navigate to the address of the device
2. Default IP address is 192.168.20.51 (Device pictured was changed to 192.168.1.8)
3. Select “Configuration Mode”
4. Select “Network Configuration”



5. Select “IP Address” to change the IP address (Select an IP address suitable for your facility)
6. Select “Subnet” to change the Subnet Mask



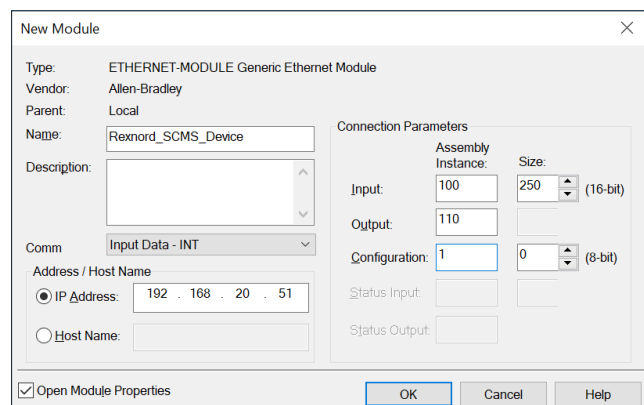
(Select a Subnet Mask suitable for your facility)

7. Select “Default Gateway” to change the Default Gateway (Select a Default Gateway suitable for your facility).
8. Once Complete, select the box labeled “Restart Now”
9. In a new browser tab or window, navigate to the IP address that you have just assigned (step 2.5) to the Edge Device. (This will require you to change your Ethernet adapter IPV4 address and subnet mask to match the new address configuration. If you assign the value 1.2.3.4 to the Edge Device, you will need to change the address of your PC to 1.2.3.254 in order to see it again. For help with this please refer to section 1 of communication settings)

3. ADAPTER CONFIGURATION SPECS

A. THE FOLLOWING LIST IS AN EXHAUSTIVE SPECIFICATION LIST FOR SETTING UP THE EIP ADAPTER IN A PLC

1. LAN connection supports up to 3 Implicit Only Connections
2. LAN connection supports up to 3 Exclusive Owner Connections
3. LAN connection supports Explicit Messaging
4. The Default IP Address is 192.168.20.51
5. When the LAN connection is interrupted and the data cannot be trusted, a value of 0x00000000 will populate into the 32-bit header. If the information can be trusted and the LAN connection is continuous, a value of 0x00000001 will populate into the 32-bit header
6. TCP Port Number is 44818
7. Delivery Option: Unicast
8. RPI: 250 msec
9. Include Status Header: Yes
10. Ethernet I/P Data Model:
 - I. All data is defined as 16-bit data
 - II. Assembly Instance: 100
 - III. Input size (bytes): 496
 - IV. First 2 Integers will display the status header

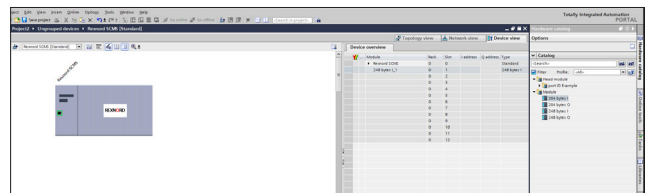


B. THE FOLLOWING LIST IS AN EXHAUSTIVE SPECIFICATION LIST FOR SETTING UP THE EIP ADAPTER IN A PLC

1. Supports Function Codes: 3, 4, 6, 16, 23
2. Support for 125 registers in a single request
3. Registers are defined as 1-based
4. Registers 1 to 700 are used to move data from the RTA product
5. The registers as defined above will be accessible with either FC3 or FC4
6. Default IP Address 192.168.20.51
7. When the LAN connection is interrupted, and the data cannot be trusted the Edge Device will reply to the Modbus TCP/IP Client with an error code of 0x0B. This error code is a special error code that can be returned, which has a meaning of "Gateway Target Device Failed to Respond"
8. TCP Port Number: 502
9. Modbus TCP/IP Data Model:
 - I. All data will be defined as 16-bit data
 - II. Registers 1 to 700 are used as Input Data

C. THE FOLLOWING LIST IS AN EXHAUSTIVE SPECIFICATION LIST FOR SETTING UP A PROFINET IO MODULE IN A SIEMENS PLC

1. Support for cyclic messaging up to 6 slots for input
2. Default IP Address 192.168.20.51
3. When the LAN connection is interrupted, and the data cannot be trusted, the Edge Device will reply to fill in the PROFINET Produce / Consume status to report whether the Edge Device is present or not
4. PROFINET Data Model
 - I. Slot 1: 248 bytes of input data.



4. DATA MODEL SPECS

A. THE FOLLOWING LIST CAN BE USED TO CHARACTERIZE THE LOCATIONS OF THE DATA MODELED TO THE PLC THROUGH THE REXNORD DEVICE.

1. Data is to be read in entirety in signed integer form.
2. Registers are listed in order of occurrence in the data profile.
3. See table(s) on the following pages for registers

Modbus Read (MRX)

Use Structure READ

Ethernet Port CPU-ETH-Ext
 IP Address 192.168.20.51
 TCP Port Number 502
 Slave Node Number 255 (Default=255)

Serial Port CPU-232
 Slave Node Number 1 (Default=1)

Addressing and Polling Options

Automatic Polling every 250 msec poll offset 0 msec
 Skip execution if buffer is greater than 75 % full

Word Swap Slave Modbus Starting Address 1 + 000000
 Map 16 bit data to 32 bit Modbus Decimal Addressing Zero Based Modbus Addressing

Tagname Mapping

Modbus Function Code 1: Read Coils

Non-Array
 Number of Tags 15

Tag
1
2
3
4
5

Array Array Name Edge_Device_Data Starting Index 1 End Index 125
 String String Name Number of Characters 2
 Byte Swap (Even Number Only)

Show Instruction Comment

Monitor OK Cancel Help

The following registers are Boolean (Y/N) data imbedded into integers.	
Register 10.0	Amber Andon Light is illuminated
Register 10.1	Red Andon Light is illuminated
Register 10.14	Edge data subscription expired, no alerts/metrics data updates to PLC/portal
Register 11.0	Oil Quality is in a warning state
Register 11.1	Oil Quality is in a severe state
Register 11.2	Oil Temperature is in a warning state
Register 11.3	Oil Temperature is in a severe state
Register 11.4	Oil Relative Humidity is in a warning state
Register 11.5	Oil Relative Humidity is in a severe state
Register 11.6	Oil Level Severely Low
Register 12.0	Overall Vibration is in a warning state
Register 12.1	Overall Vibration is in a severe state
Register 12.2	Gear Mesh vibration is in a warning state
Register 12.3	Gear Mesh vibration is in a severe state
Register 12.4	Shaft Alignment is in a warning state
Register 12.5	Shaft Alignment in a severe state
Register 12.6	Bearing Vibration is in a warning state
Register 12.7	Bearing Vibration is in a severe state
Register 14.0	Cloud connection Lost
Register 14.1	At least one sensor is not working

The following registers are to be kept as integers.	
Register 100	Average Relative Humidity of the oil as a percent
Register 101	Oil Temperature in degrees Centigrade
Register 102	Oil Quality as a percent, 100% = new
Register 103	Estimated number of hours left before oil should be changed will read 999 when greater than one month remaining
Register 104	Current Transformer value in amperes
Register 105	RPM value of output shaft
Register 106	Ambient Temperature in degrees Centigrade
Register 107	Vibration in percent, 20% minimum = OK.

The following registers are additional registers that only apply to V-Class drives and are Boolean (Y/N) data imbedded into integers	
Register 13.0	Inboard Bearing Temperature measurement is in warning state
Register 13.1	Inboard Bearing Temperature measurement is in severe state
Register 13.2	Outboard Bearing Temperature measurement is in warning state
Register 13.3	Outboard Bearing Temperature measurement is in severe state

The following registers are to be kept as integers.	
Register 108	Inboard Bearing Temperature in degrees Centigrade
Register 109	Outboard Bearing Temperature in degrees Centigrade

Note: Register values that are "unknown" are represented by specific values. Most values are only positive values so a -1 or bit pattern 0xffff is the value that is used to represent a value that is "unknown", with the following exceptions:

- Temperature values that are unknown are represented with the value -99 degrees Fahrenheit as this is a temperature that will never happen
- Because Oil Quality Percent is set to the value of -1 to indicate its *value is being calculated*, this value must be evaluated with the current value for Oil Hours Remaining. If Oil Quality Percent is -1%:
 - If Oil Hours Remaining equals -1, then Oil Quality Percent is "unknown"
 - If Oil Hours Remaining is not equal to -1, then Oil Quality Percent is "being calculated" It may take several days for Oil Quality to establish a stable value at which time its value will change to a positive number.

Contact Information

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