

# CC200 to E3 via Modbus

## Configure the CC200 Modbus Settings with the Full Touch Display

### For Modbus Devices Connecting to an E3, Set the Following Parameters:

- Modbus Address (**Adr**) - set this to an address that is unique from any other Modbus device located on the same RS-485 connection.
- Modbus Baud rate (**bAU**) - default is 19.2k. The Baud Rate must match on both the E3 Com Port and CC200.
- IP address octet 1 (**iP1**) - default is **10**. Change to **192** if your network setup requires this.
- Rack id (**rid**) - default is **A**. Change the Rack ID per the Site Install documents.
- Circuit lineup id (**Lid**) - default is **99**. Change the Lineup ID per the Site Install documents
- Case id (**Cid**) - default is **A**. Change the Case ID per the Site install documents.
- Cases in lineup (**CiL**) - default is **1**. For Standalone cases use **1**. For Lineups enter the total number of cases in this particular Lineup.
- Modbus Data Bits (**dAt**) - default is **8**. Recommended to leave this at the default value.
- Modbus Parity (**PAr**) - default is **nOn**. Recommended to leave this at the default value.
- Modbus Stop Bits (**StP**) - default is **1**. Recommended to leave this at the default value.
- Save All Changes (**SAv**) - Saves all changes and writes them to the CC200. Changes to any other Modbus parameter shown above will not be saved unless this is set to **Yes**.



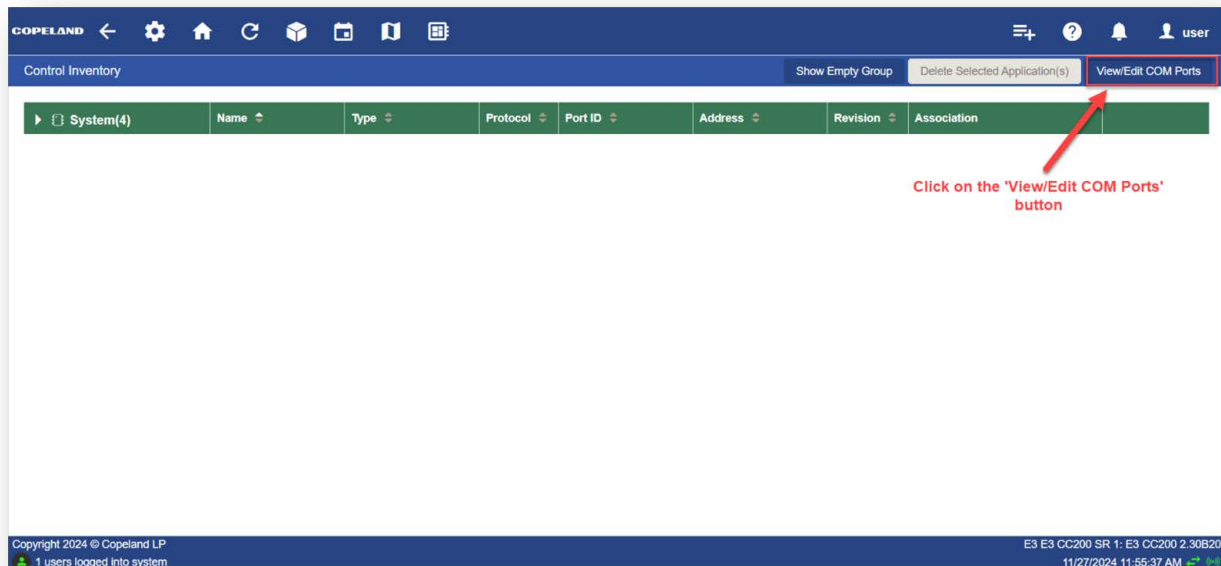
1. Unlock the Full Touch display by pressing and holding the upper right corner for 3 seconds.
  - The display will beep and **PRG** and **SET** will become visible.
2. With the display unlocked, tap and hold **PRG** again for 3 seconds to reach the first menu level.
  - **PCL** will be displayed.
3. Tap **PRG** again to enter the **CON** menu level.
  - a. From **CON**, tap **PRG** again to enter the communication protocol menu.
  - b. Verify that **nrt** is displayed.
    - If **biP** is displayed, swipe down on the display to change the parameter to **nrt**.
    - Push and hold **PRG** for 3 seconds to save the edit.
4. Tap the back arrow in the upper left corner of the display.
  - **PCL** is now displayed.
5. Horizontally swipe from right to left and locate nod.
  - Tap **PRG** to enter the Modbus setup menu.
  - **Adr** is displayed for Modbus Address.
    - Tap **PRG** to enter Edit mode.
    - Swipe up/down to select a unique Modbus Address.
    - Once selected, push and hold **PRG** for 3 seconds to save.
    - Once saved, the value will flash, the display will beep and return to the **Adr** parameter label.
  - Horizontally swipe from right to left to reach **bAU** parameter for Modbus Baud Rate.
    - Tap **PRG** to enter edit mode.
    - Swipe up/down to select the Modbus Baud Rate.
    - Once selected, push and hold **PRG** for 3 seconds to save the edit.
    - Once saved the value will flash, display will beep and return to the **bAU** parameter label.
  - Horizontally swipe from right to left to reach **iP1** parameter for selecting the first IP octet.
    - Tap **PRG** to enter edit mode.
    - Swipe up/down to select the first IP octet.
    - Once selected, push and hold **PRG** for 3 seconds to save the edit.
    - Once saved the value will flash, display will beep and return to the **iP1** parameter label.
  - From **iP1** horizontal swipe right to left to reach **rid** for Rack ID.
    - Tap **PRG** to enter edit mode.
    - Swipe up/down to select the rack ID.
    - Once selected, push and hold **PRG** for 3 seconds to save the edit.
    - Once saved the value will flash, display will beep and return to the **rid** parameter label.
  - From **rid** horizontal swipe right to left to reach **Lid** for circuit lineup ID.
    - Tap **PRG** to enter edit mode.
    - Swipe up/down to select the circuit number.
    - Once selected push and hold **PRG** for 3 seconds to save the edit.
    - Once saved the value will flash, display will beep and return to the **Lid** parameter label.

- From **Lid** horizontal swipe right to left to reach **Cid** for case ID.
  - Tap **PRG** to enter edit mode.
  - Swipe **up/down** to select the case letter.
  - Once selected push and hold **PRG** for 3 seconds to save the edit.
  - Once saved the value will flash, display will beep and return to the **Cid** parameter label.
- From **Cid** horizontal swipe right to left to reach **CiL** for cases in lineup.
  - Tap **PRG** to enter edit mode.
  - Swipe up/down to select the value.
  - Once selected push and hold **PRG** for 3 seconds to save the edit.
  - Once saved the value will flash, display will beep and return to the **CiL** parameter label.
- From **CiL** swipe horizontally right to left to reach **SAv**.
  - Tap **PRG** to enter edit mode.
  - Swipe **up/down** to select **Yes**.
  - Once **Yes** is selected, push and hold **PRG** for 3 seconds to save the edit.
  - Once saved the value will flash, the display will beep and return to **SAv**.
- The CC200 will automatically reboot to initialize Modbus settings.
- Press and hold the Back Arrow (upper left-hand corner) for 3 seconds to return to the Main Display.

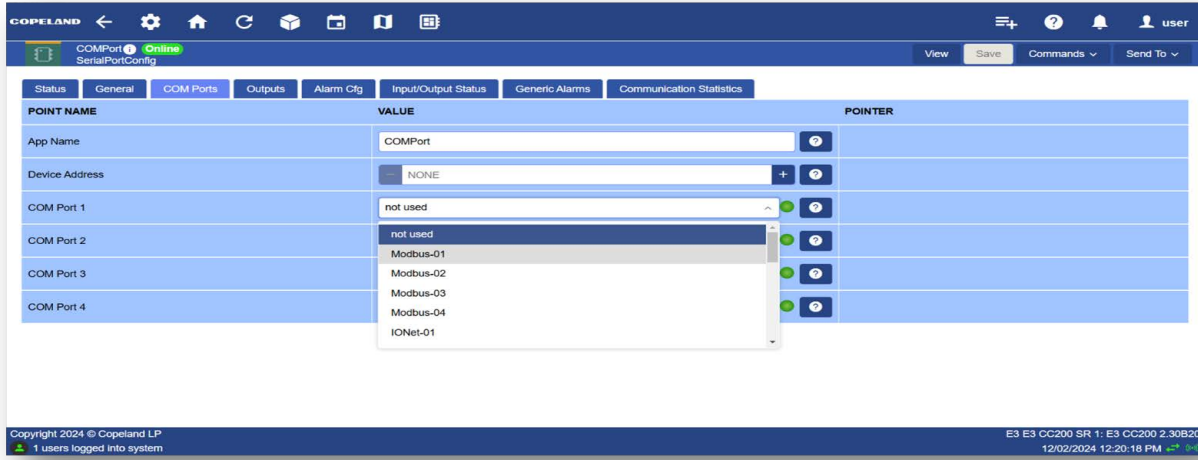
## Modbus to E3 Configuration

### Configure E3 Network Settings

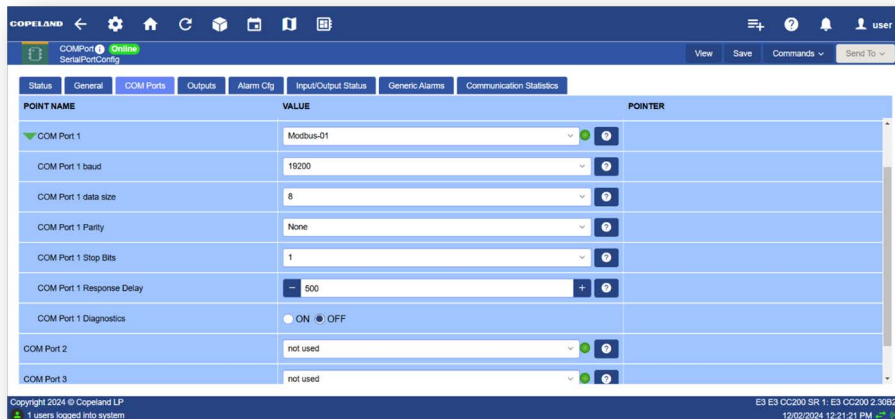
1. Log into the E3 with your credentials.
2. Click the box icon to access the **Control Inventory** screen.
3. Click the **View/Edit COM Ports** button.

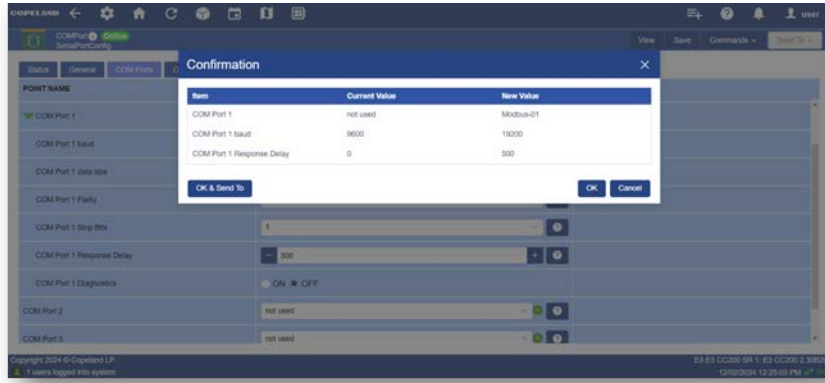


4. Select the physical E3 COM Port that the CC200 will be connected to.
  - a. COM Port 1 set as Modbus-01 at 19.2k Baud Rate is used for this example.
5. Change COM Port 1 to Modbus-01.

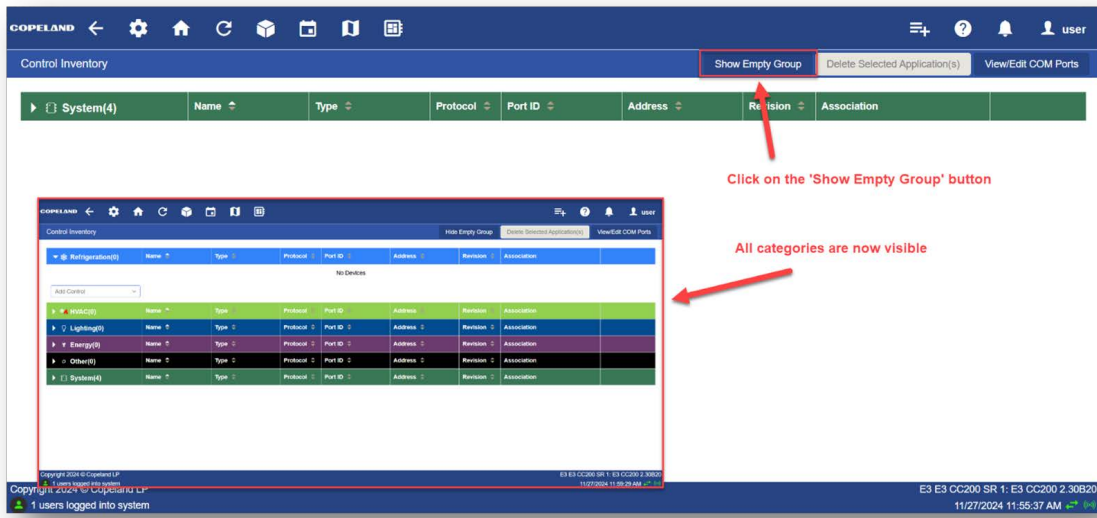


6. Click the green caret to the left of the COM Port 1 parameter name.
7. Set the following parameters to the following values and then click the **Save** button.
  - COM Port 1 baud - set to match the CC200 Modbus Baud Rate (CC200 default is 19200).
    - If you have previously changed the CC200 Modbus Baud Rate via the Full Touch display then ensure that this E3 side value matches with the CC200 side.
  - COM Port 1 Data Size - default of 8, recommended setting is 8.
  - COM Port 1 Parity - default of NONE, recommended setting is NONE.
  - COM Port 1 Stop Bits - default of 1, recommended setting is 1.
  - COM Port 1 Response Delay - default of 0, recommended setting is 500.
  - COM Port 1 Diagnostics - default of OFF, recommended setting is OFF.





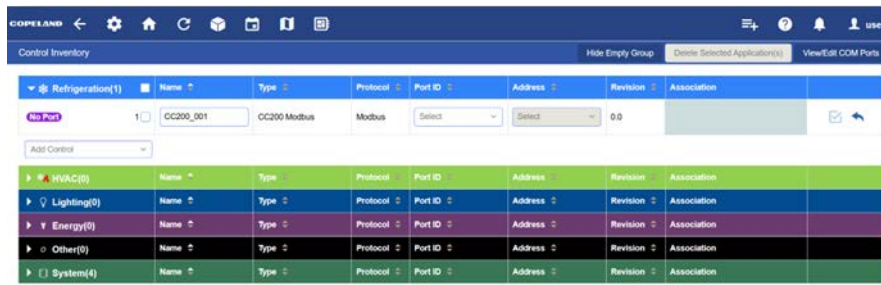
8. Click the box icon to access the **Control Inventory** screen.
  - o If the blue Refrigeration group is not displayed, click on the **Show Empty Group** button.



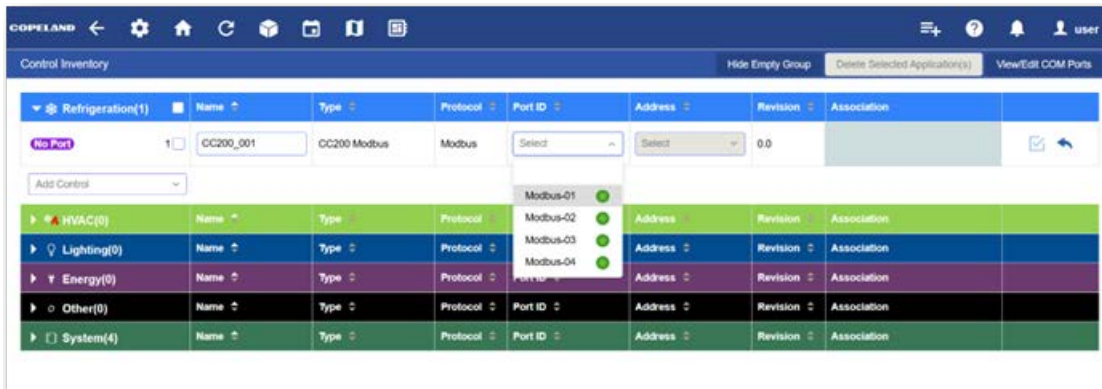
9. From the **Add Control** menu select **CC200 Modbus**.



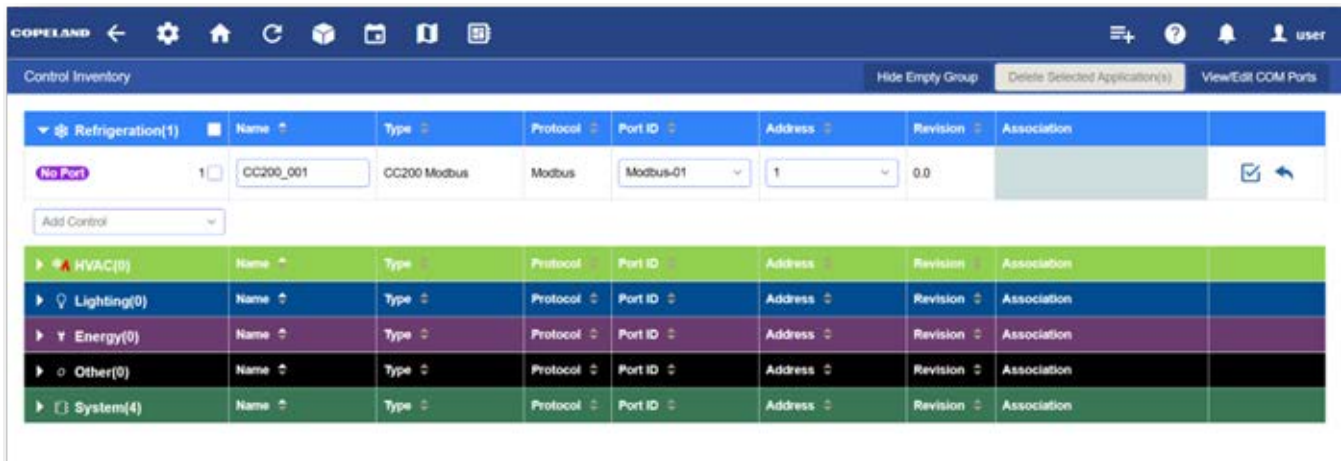
10. A new CC200 application is added.



11. From the **Port ID** menu select **Modbus-01**.



12. The E3 will automatically populate the next available free Modbus address. If this is different than the Modbus Address that the CC200 is set to, change this field to match the CC200 Modbus Address, then click the checkbox to the right of the CC200 to save the settings.



COPELAND user

Control Inventory Hide Empty Group Delete Selected Application(s) View/Edit COM Ports

▼ Refrigeration(1)		Name	Type	Protocol	Port ID	Address	Revision	Association	
Unknown	1	CC200_001	CC200 Modbus	Modbus	Modbus-01	1	0.0		
Add Control									
▶ HVAC(0)		Name	Type	Protocol	Port ID	Address	Revision	Association	
▶ Lighting(0)		Name	Type	Protocol	Port ID	Address	Revision	Association	
▶ Energy(0)		Name	Type	Protocol	Port ID	Address	Revision	Association	
▶ Other(0)		Name	Type	Protocol	Port ID	Address	Revision	Association	
▶ System(4)		Name	Type	Protocol	Port ID	Address	Revision	Association	

13. The E3 will attempt to communicate with the CC200; during this time the Online status is **Unknown**.

COPELAND user

Control Inventory Hide Empty Group Delete Selected Application(s) View/Edit COM Ports

▼ Refrigeration(1)		Name	Type	Protocol	Port ID	Address	Revision	Association	
Unknown	1	CC200_001	CC200 Modbus	Modbus	Modbus-01	1	0.0		
Add Control									
▶ HVAC(0)		Name	Type	Protocol	Port ID	Address	Revision	Association	
▶ Lighting(0)		Name	Type	Protocol	Port ID	Address	Revision	Association	
▶ Energy(0)		Name	Type	Protocol	Port ID	Address	Revision	Association	
▶ Other(0)		Name	Type	Protocol	Port ID	Address	Revision	Association	
▶ System(4)		Name	Type	Protocol	Port ID	Address	Revision	Association	

14. Once the E3 establishes communication with the CC200, the Online status changes to **Online**.

The screenshot shows the Copeland Control Inventory interface. At the top, there is a navigation bar with the Copeland logo and various icons. Below that, the 'Control Inventory' section is visible, with options to 'Hide Empty Group', 'Delete Selected Application(s)', and 'View/Edit COM Ports'. The main area contains a table of devices. The 'Refrigeration(1)' group is expanded, showing one device: 'CC200\_001' with a status of 'Online'. The table has columns for Name, Type, Protocol, Port ID, Address, Revision, and Association. Below the table, there are several other groups: HVAC(0), Lighting(0), Energy(0), Other(0), and System(4), all of which are collapsed.

Group	Name	Type	Protocol	Port ID	Address	Revision	Association
Refrigeration(1)	CC200_001	CC200 Modbus	Modbus	Modbus-01	1	0.0	
HVAC(0)							
Lighting(0)							
Energy(0)							
Other(0)							
System(4)							

15. Repeat steps 9 through 15 to add any additional CC200 devices to the E3.

Visit our website at [copeland.com/en-us/products/controls-monitoring-systems](https://copeland.com/en-us/products/controls-monitoring-systems) for the latest technical documentation and updates. For Technical Support call 833-409-7505 or email [ColdChain.TechnicalServices@Copeland.com](mailto:ColdChain.TechnicalServices@Copeland.com)