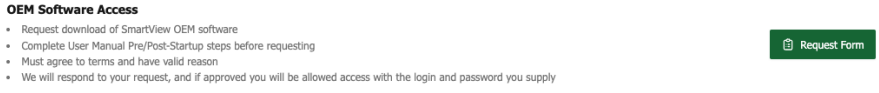
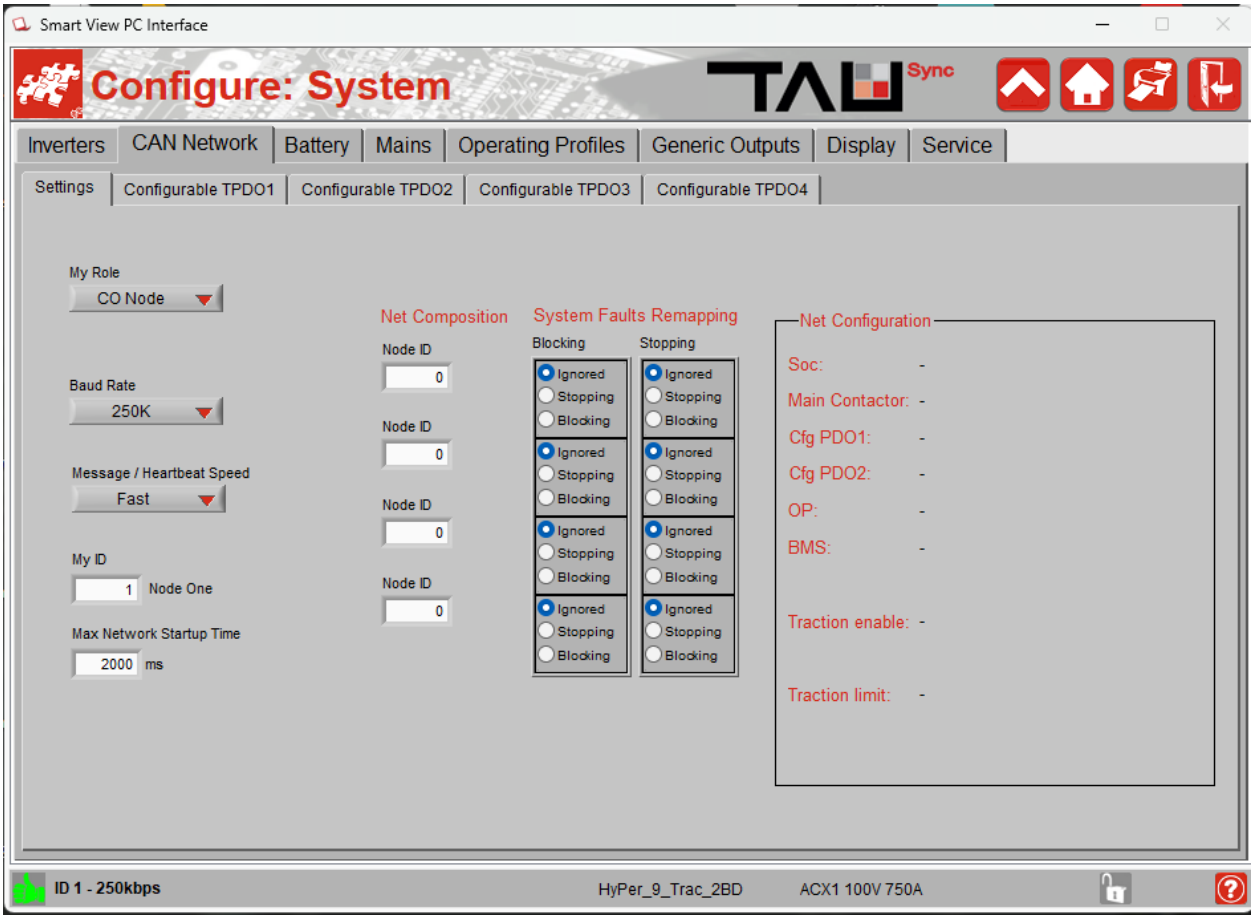
In order for the MFD-15 Display or AEM CD-5/7 to function properly, the HyPer-Drive X1 Inverter must be configured to output a number of metrics, including RPM, over the CAN bus. Follow there instructions to connect your PC to the inverter.

1. Couple the Null Modem Serial Cable to the Serial-USB adapter. Both cables should be provided with the X1 controller.
2. Connect USB end to PC loaded with SME Smartview (Smarview Sys software).
3. Connect female serial end to X1 controller's male serial K3 port.
4. After ensuring that your car is in neutral, switch on the X1 controller via key switch.
5. Open SmartView DLR Sys software.
6. Select Connection type: Normal or Wired. Then select the Serial Port your device driver was installed on.

You can download the latest TAU SmartView DLR Sys software directly from NetGain Motors here: http://www.go-ev.com/downloads/



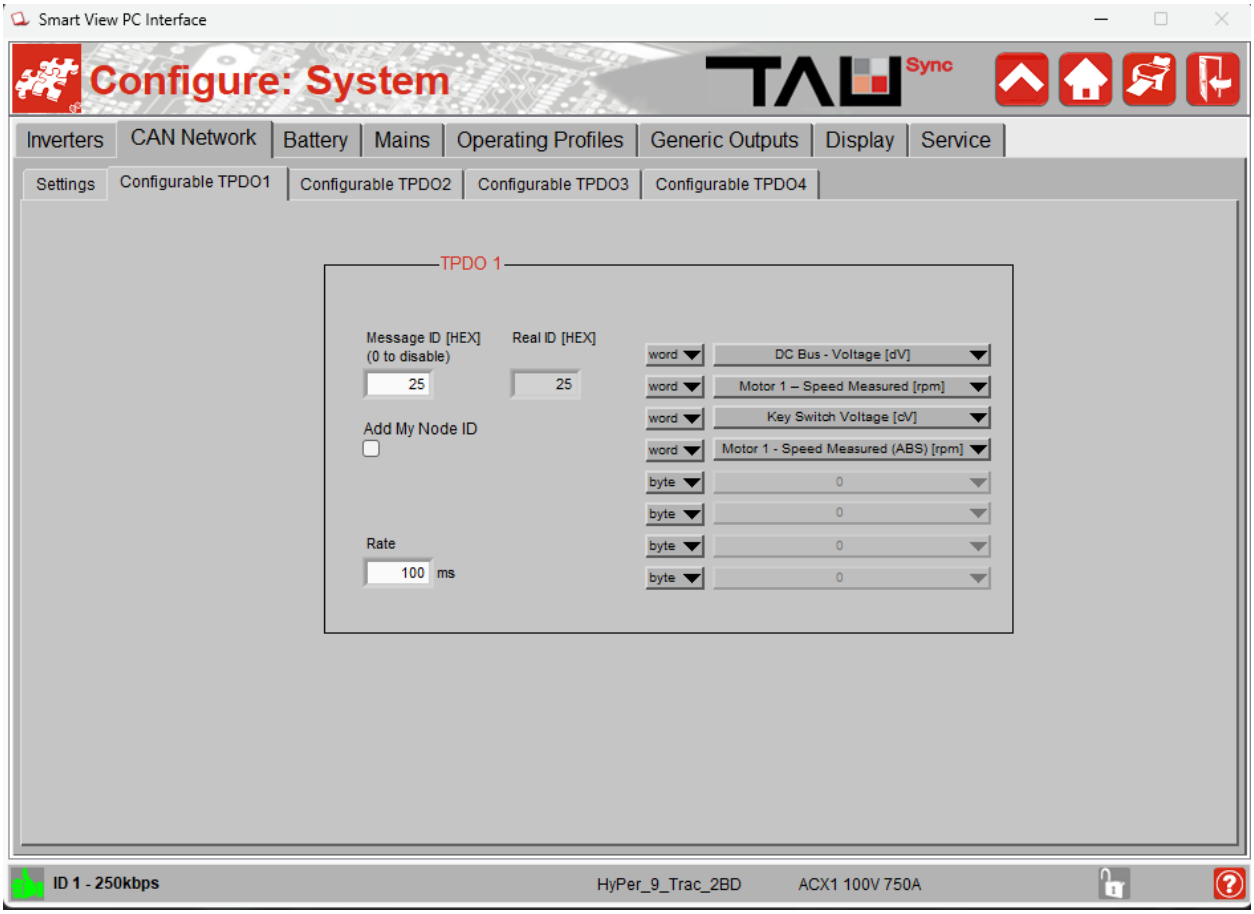
Once the SmartView software has detected the controller, you should see four options at the home page: **Monitor**, **Diagnose**, **Configure**, **and Manage**. Click **Configure**, then **System**, and select the **CAN Network** tab.



In the **CAN Network** Setting tab, enter the following parameters:

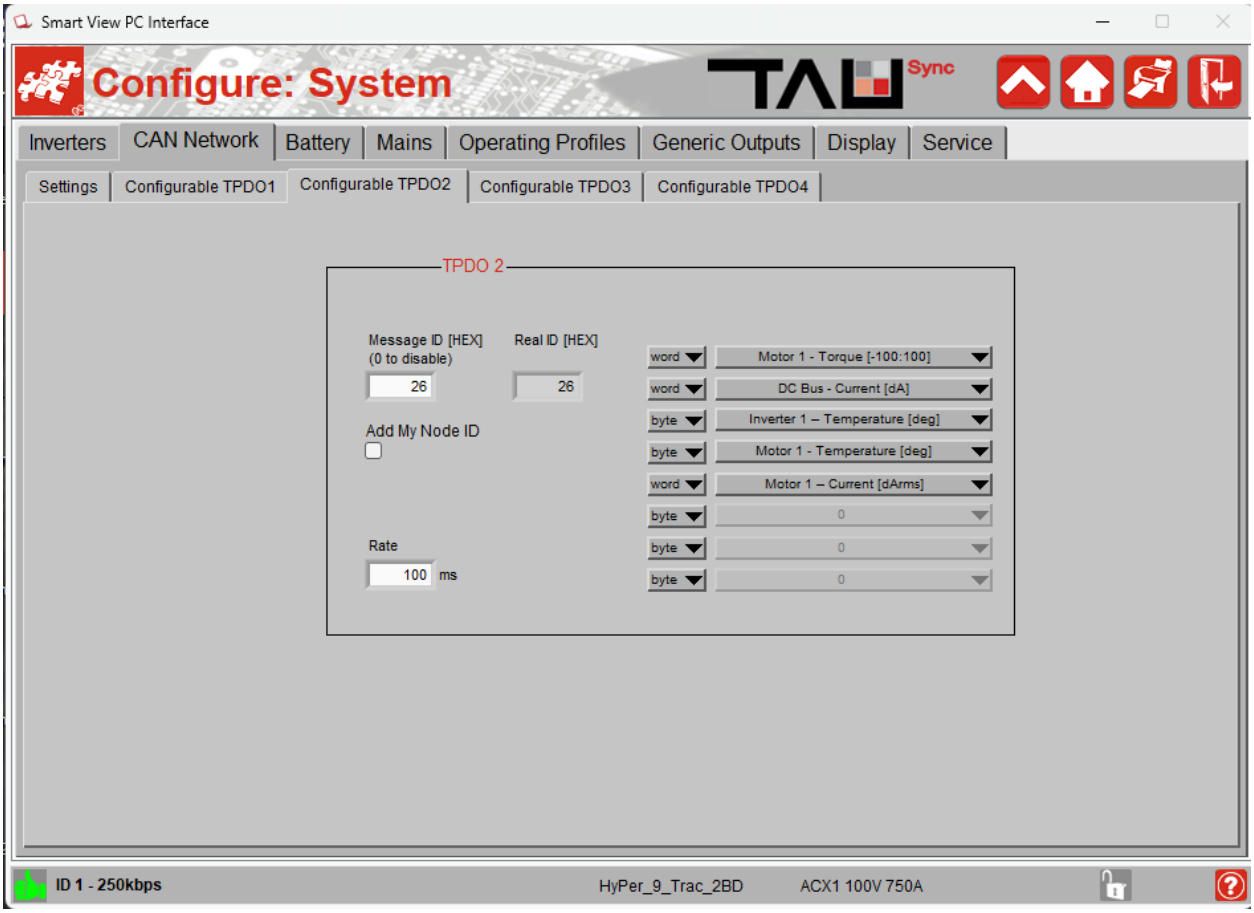
My Role: CO Node
Baud Rate: 250K or 500K depending on your CAN bus details
My ID: 1
Max Network Startup Time: 2000ms
Net Composition: All **Node ID**s should be set to 0

Click the **Save** icon again in the upper-right-hand corder, and then click the blinking key icon in the lower-right-hand corner of the screen. The SmartView software will ask "Do you really want to key off?" Click **OK** to reboot the controller and apply the changes. If all was configured correctly, once the SmartView software detects the controller again, you should see a green thumbs up in the lower-left-hand corner of the screen followed by "ID 1 - 250kbps". If you see a green thumbs up, then your configuration is complete. You may check the **CAN Network** configuration once more to ensure that all of the parameters were saved correctly and exit. If you do not see a green thumbs up, then your controller is in a fault condition, and depending on the fault level, may not operate properly.



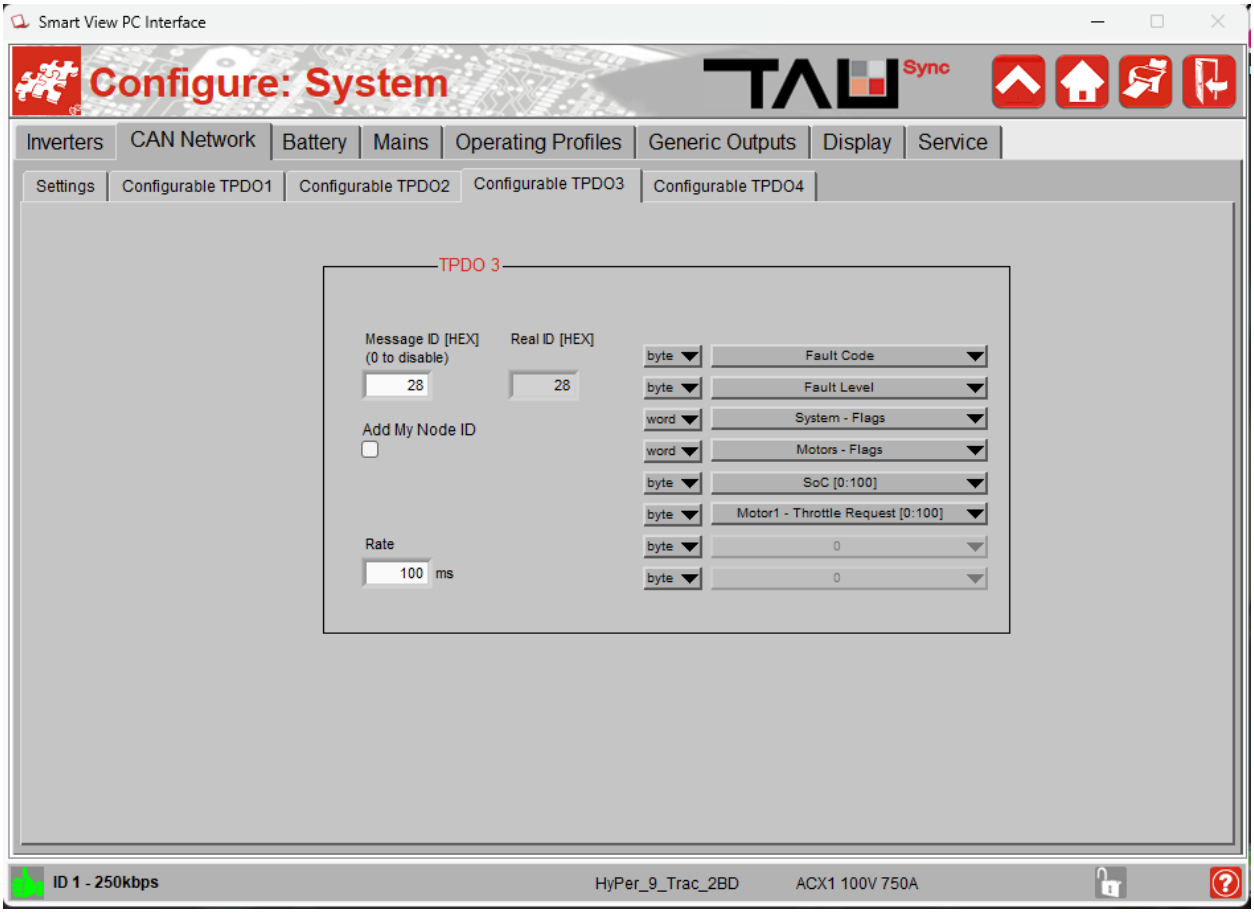
Click Configure, then System, and select the CAN Network tab.
Select the Configurable TPDO1 tab. In the Configurable TPDO1 tab, set the following parameters:
Message ID [HEX]: 25
Uncheck Add **My Node ID**. The Real ID should be 25.
Add the "1st word": DC Bus - Voltage [dV]
Add the "2nd word": Motor 1 - Speed Measured[rpm]
Add the "3rd word": Key Switch Voltage[cV] -
Add the "4th word": Motor 1 - Speed Measured (ABS) [rpm]

Click the **Save** icon again in the upper-right-hand corder, and then click the blinking key icon in the lower-right-hand corner of the screen. The SmartView software will ask "Do you really want to key off?" Click **OK** to reboot the controller and apply the changes. If all was configured correctly, once the SmartView software detects the controller again, you should see a green thumbs up in the lower-left-hand corner of the screen followed by "ID 1 - 250kbps". If you see a green thumbs up, then your configuration is complete. You may check the **CAN Network** configuration once more to ensure that all of the parameters were saved correctly and exit. If you do not see a green thumbs up, then your controller is in a fault condition, and depending on the fault level, may not operate properly. Please follow these steps again exactly to see if you made a mistake that is causing the fault condition.



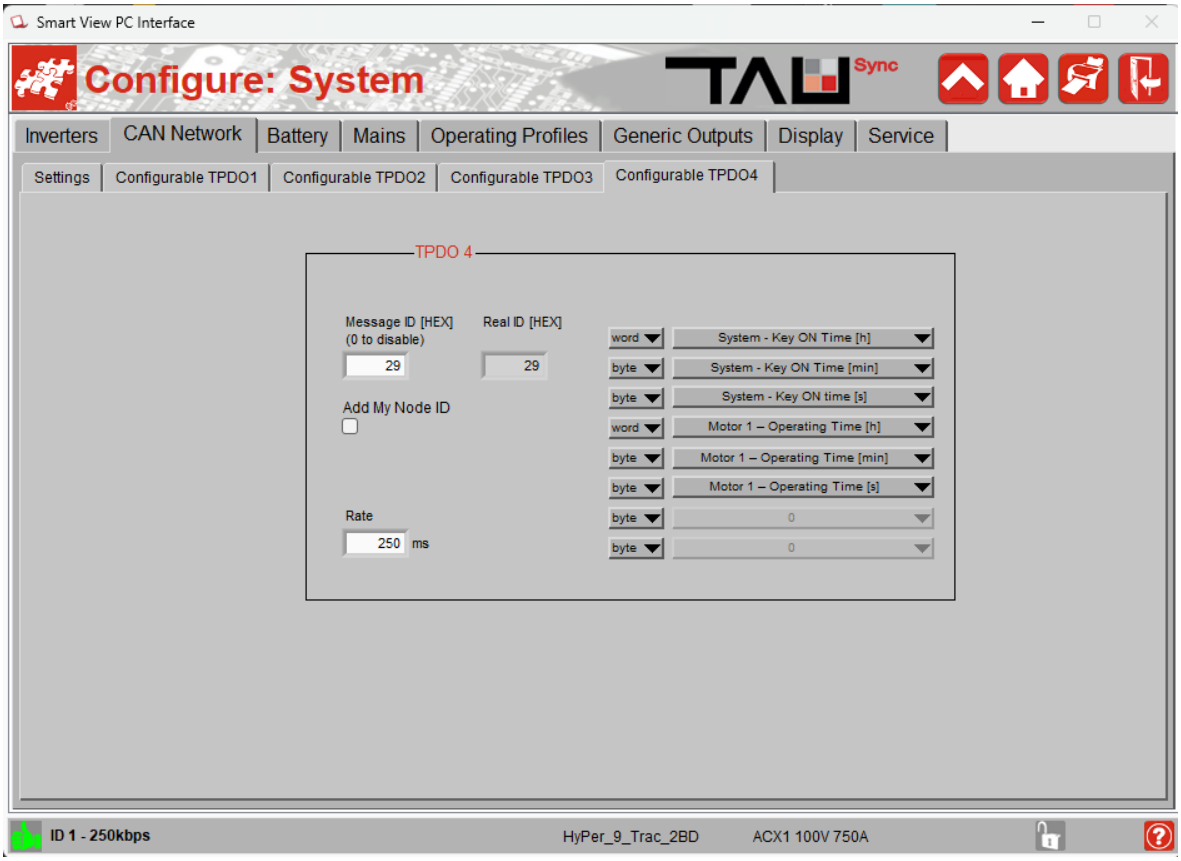
Click **Configure**, then **System**, and select the **CAN Network** tab.
Select the Configurable TPDO2 tab. In the Configurable TPDO2 tab, set the following parameters:
Message ID [HEX]: 26
Uncheck Add **My Node ID**. The Real ID should be 26.
Add the "1st word": Motor 1 - Torque [100:100]
Add the "2nd word": DC Bus - Current [dA]
Add the "3rd byte": Inverter 1 - Temperature [deg]
Add the "4th byte": Motor 1 - Temperature [deg]
Add the '5th word": Motor 1 - Current [dArms]

Click the **Save** icon again in the upper-right-hand corder, and then click the blinking key icon in the lower-right-hand corner of the screen. The SmartView software will ask "Do you really want to key off?" Click **OK** to reboot the controller and apply the changes. If all was configured correctly, once the SmartView software detects the controller again, you should see a green thumbs up in the lower-left-hand corner of the screen followed by "ID 1 - 250kbps". If you see a green thumbs up, then your configuration is complete. You may check the **CAN Network** configuration once more to ensure that all of the parameters were saved correctly and exit. If you do not see a green thumbs up, then your controller is in a fault condition, and depending on the fault level, may not operate properly. Please follow these steps again exactly to see if you made a mistake that is causing the fault condition.



Click **Configure**, then **System**, and select the **CAN Network** tab.
Select next of the Configurable TPDO3 tab. In the Configurable TPDO tab, set the following parameters:
Message ID [HEX]: 28
Uncheck Add **My Node ID**. The Real ID should be 28.
Add the "1st byte": Fault Code
Add the "2nd byte": Fault Level
Add the "3rd word": System - Flags
Add the "4th byte": SoC[0 - 100]
Add the '5th byte": Motor 1 - Throttle Request [0-100]

Click the **Save** icon again in the upper-right-hand corder, and then click the blinking key icon in the lower-right-hand corner of the screen. The SmartView software will ask "Do you really want to key off?" Click **OK** to reboot the controller and apply the changes. If all was configured correctly, once the SmartView software detects the controller again, you should see a green thumbs up in the lower-left-hand corner of the screen followed by "ID 1 - 250kbps". If you see a green thumbs up, then your configuration is complete. You may check the **CAN Network** configuration once more to ensure that all of the parameters were saved correctly and exit. If you do not see a green thumbs up, then your controller is in a fault condition, and depending on the fault level, may not operate properly. Please follow these steps again exactly to see if you made a mistake that is causing the fault condition.



Click **Configure**, then **System**, and select the **CAN Network** tab.
Select next of the Configurable TPDO4 tab. In the Configurable TPDO tab, set the following parameters:
Message ID [HEX]: 29
Uncheck Add **My Node ID**. The Real ID should be 29.
Add the "1st word": System - KEY ON Time (h)
Add the "2nd byte": System - KEY ON Time (min)
Add the "3rd byte": System - KEY ON Time (s)
Add the "4th word": Motor 1 - Operating Time (h)
Add the '5th byte": Motor 1 - Operating Time (min)
Add the '6th byte": Motor 1 - Operating Time (s)
Click the **Save** icon again in the upper-right-hand corder, and then click the blinking key icon in the lower-right-hand corner of the screen. The SmartView software will ask "Do you really want to key off?" Click **OK** to reboot the controller and apply the changes. If all was configured correctly, once the SmartView software detects the controller again, you should see a green thumbs up in the lower-left-hand corner of the screen followed by "ID 1 - 250kbps". If you see a green thumbs up, then your configuration is complete. You may check the **CAN Network** configuration once more to ensure that all of the parameters were saved correctly and exit. If you do not see a green thumbs up, then your controller is in a fault condition, and depending on the fault level, may not operate properly. Please follow these steps again exactly to see if you made a mistake that is causing the fault condition.