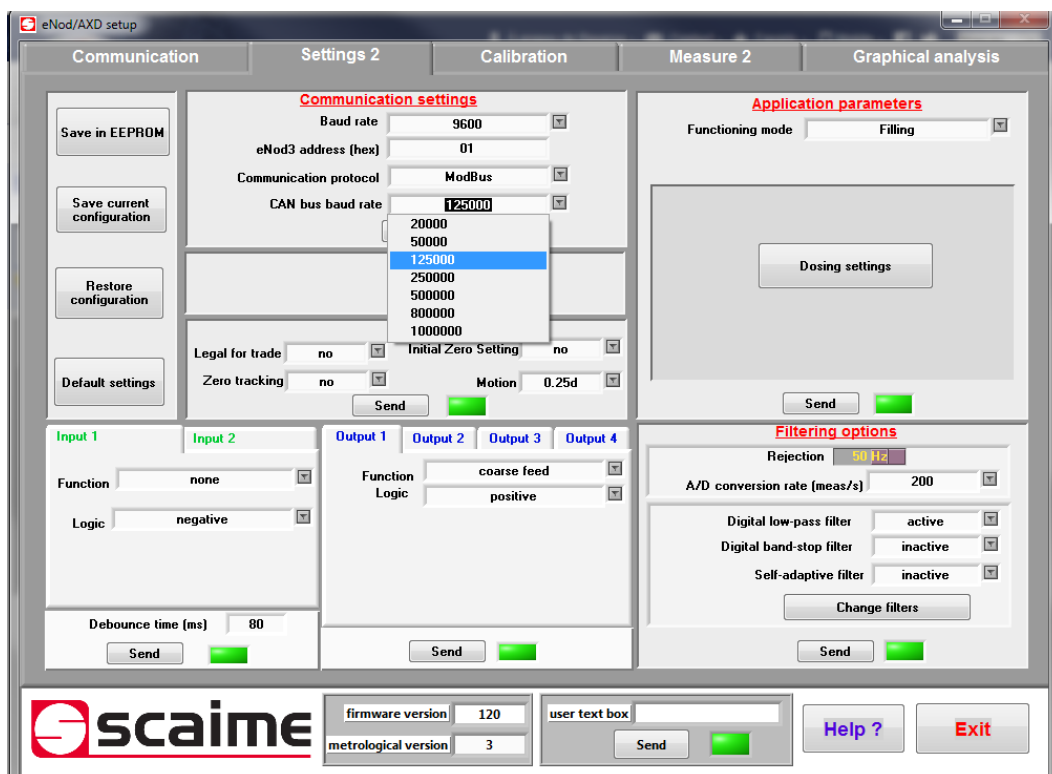


With eNod3 controller

Connect the eNod 3 to the computer with serial RS232 or RS485. If your computer is not equipped with serial port, you can use a RS232 – USB adapter or a RS485 – USB adapter. SCAIME could provide you these adapters.

Launch the eNodview software. Connect the eNod, and then in the « Parameters » tab, in the frame « Communication », fill the eNod address on your CANopen network and your bus baud rate.



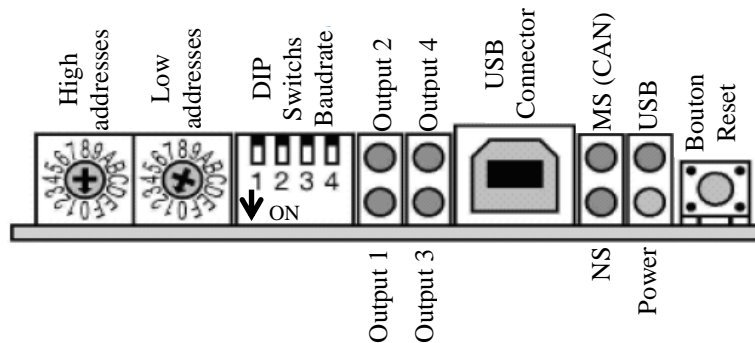
The eNod address is used both for serial communications and CANopen network.

Once these parameters have been modified, click on « Send » under the scrolling menu « Can baudrate ». Then click on « Save in EEPROM ».

The software will disconnect you. Reconnect the eNod to verify that parameters have been taken in account.

With eNod4 controller

If you are using an eNod4 controller, the node address and its baud rate on the network are accessible directly through the front face of the module.



Dipswitch				Baud rate RS485 et USB	Bit rate CAN
1	2	3	4		
ON	ON	ON	X	9600	50 kbit/s
OFF	ON	ON	X	19200	50 kbit/s
ON	OFF	ON	X	38400	50 kbit/s
OFF	OFF	ON	X	57600	125 kbit/s
ON	ON	OFF	X	115200	250 kbit/s
OFF	ON	OFF	X	9600	500 kbit/s
ON	OFF	OFF	X	9600	1 Mbit/s
OFF	OFF	OFF	X	9600	125 kbit/s

Adding the eNod's EDS file in the device catalog manager

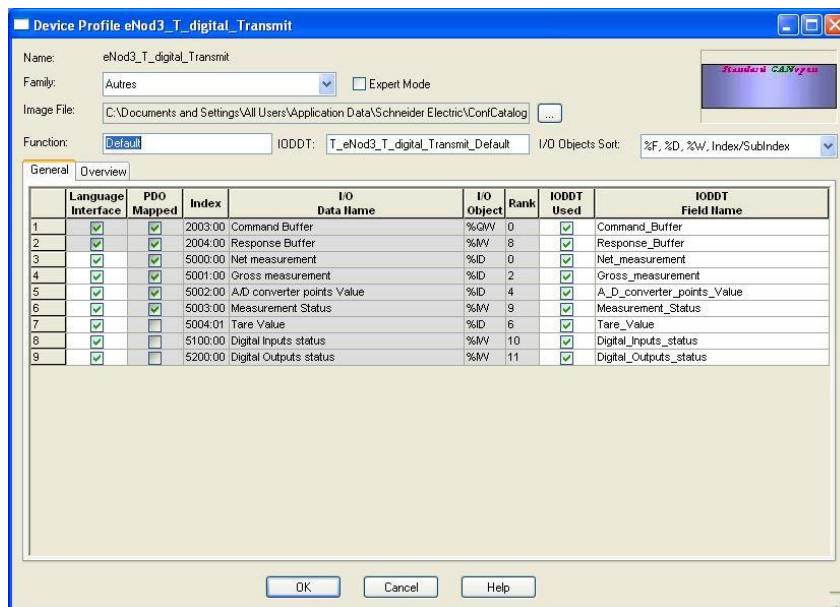
Launch the hardware catalog manager in the following path:



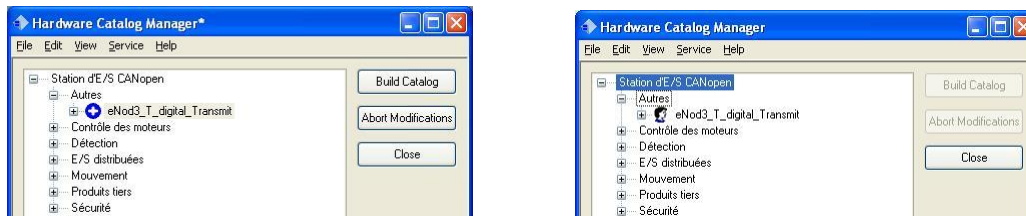
Click on « Edit » then « Add Device »



Select the corresponding EDS file. A summary of the EDS is displayed. It could be necessary to replace the IODDT identifier by a shorter name.



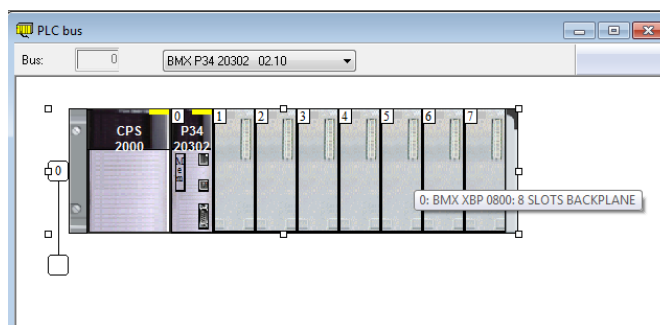
Click on OK, the eNod controller is added in the catalog. It is displayed under a « + » shape. Click on « Build Catalog » to definitively add it in the manager.



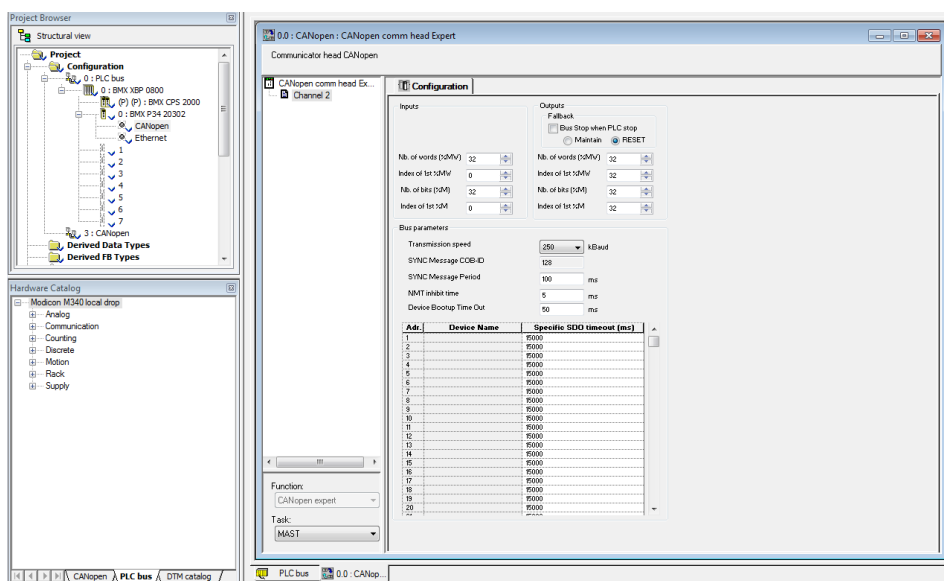
Close the device catalog.

Configuration of Unity

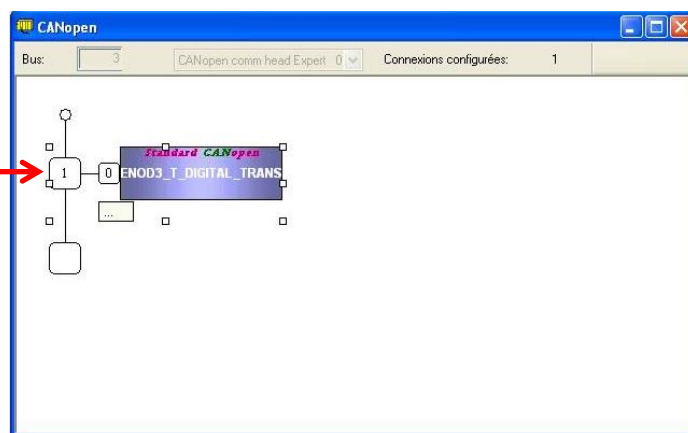
Launch Unity to configure your PLC and required devices to your project (here only a M340)



In the project browser, in the following path: « Project\ Configuration\ 0: PLC Bus\ 0: Your rack\ 0: Your CPU » double click on CANopen. In this window you can configure your CANopen bus.



In the project browser, in the following path: « Project\ Configuration » double click on: 3: CANopen. A window with your physical bus architecture is displayed. Make a right click in the white square and choose « New device ». Then select the eNod controller in « I/O CANopen Station\ Others ».

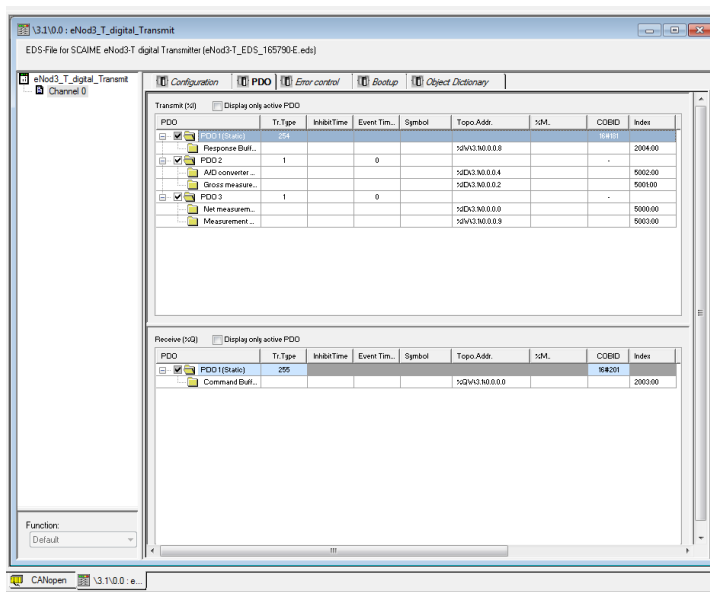


By double clicking in the white square, you can choose the node address of the eNod controller on the bus.



Be Careful, the node address set in Unity must be the same as the eNod address previously configured.

Double click on the frame eNod to display all the CANopen parameters of the eNod. You can now access to the PDO settings. You can choose the activated PDO and the variables carried by them.

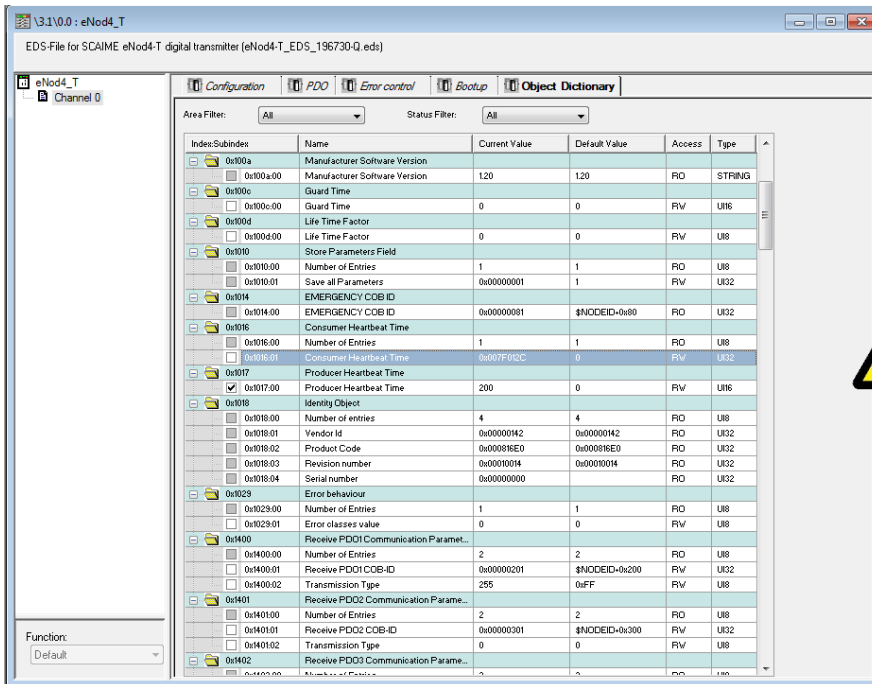


Reminder :

The transmit PDO n°1 and the receive PDO n°1 can't be changed

With eNod4, the heartbeat consumer function is available. This function (eNod watching the PLC) is not pertinent in most applications. Also the heartbeat consumer have to be inactivated: click on the “Object dictionary” tab and remove the tick on the object 0x1016 heartbeat consumer.

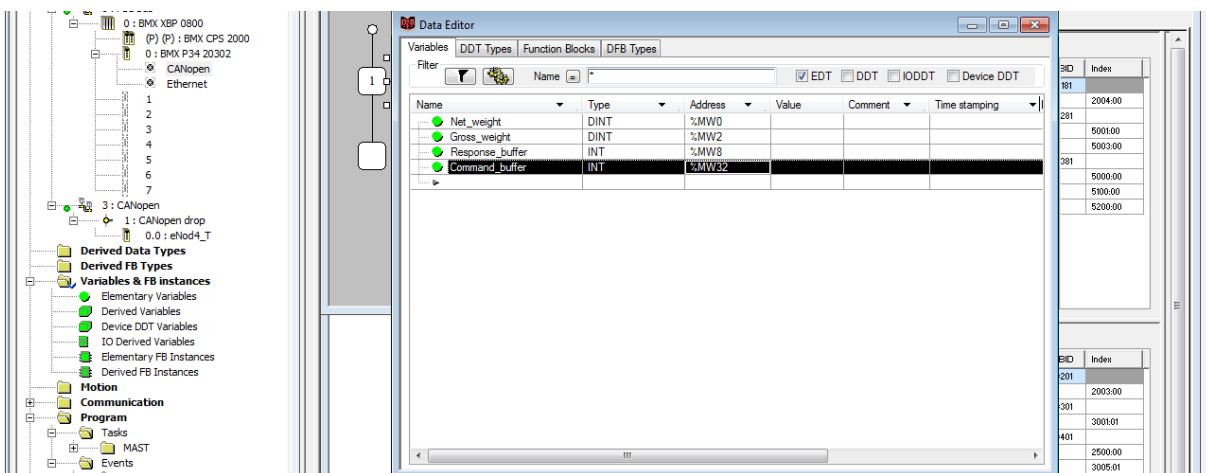
However, heartbeat consumer could be used in special applications if the Can bus is normally loaded (< 30%)



Reminder :

On an overloaded Can bus (load >30%), eNod4 can be reset by the PLC if the heartbeat consumer is activated

Generate you program to affect the PLC logical addresses with the PDO variables. In the project browser, in the subfolder « FB Variables and instances », declare the variables associated to the PDO.



In the project browser, make a right click on « animation tables » and choose « New animation table ». Import in this table the variables declared above.

Generate your project and transfer it in the PLC.

From the animation table, you can visualize data in live and set commands if you have mapped the command register (example, here a tare command)

Name	Value	Type
Gross_weight	100	DINT
Net_weight	100	DINT
Command_buffer	0	INT
Response_buffer	0	INT

Name	Value	Type
Gross_weight	100	DINT
Net_weight	0	DINT
Command_buffer	212	INT
Response_buffer	2	INT

In the project browser, double click on the eNod controller your CANopen network. Then in the corresponding window, click on the eNod controller at the root of the CANopen objects. By clicking on the CANopen tab, you can send SDO requests.

