

# CANOpen Master

straton user guide – Rev. 8

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**straton**



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## Content

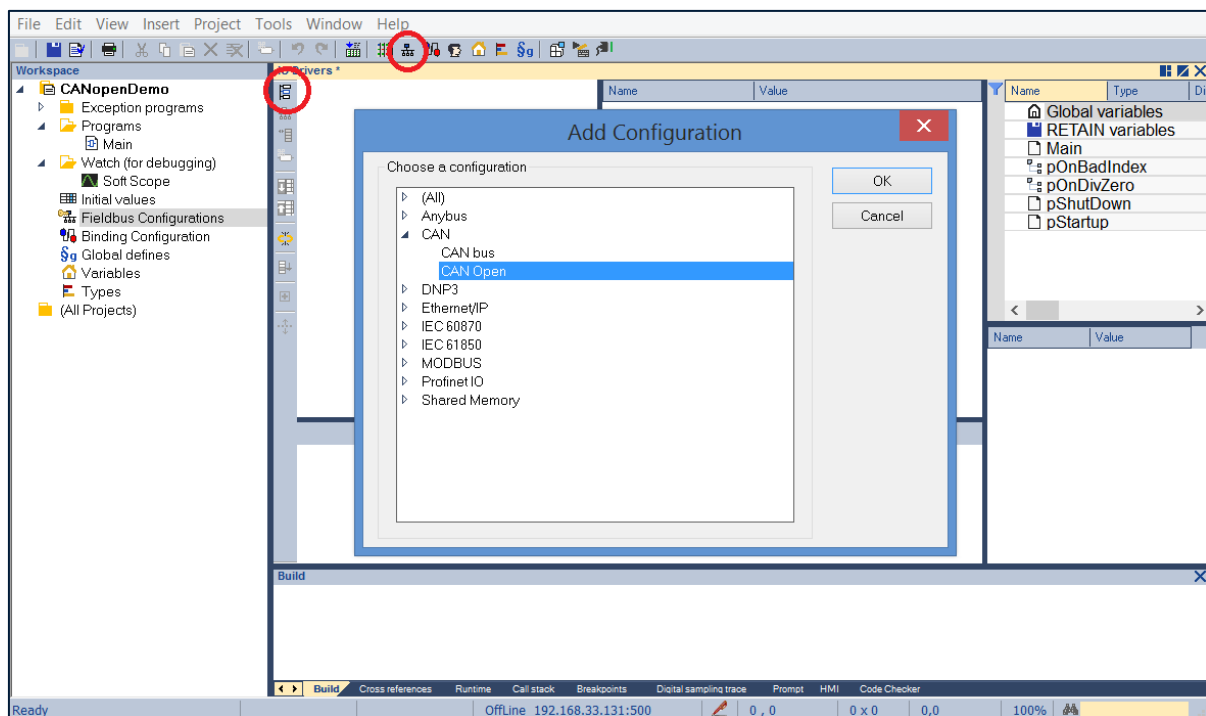
1. INSTALL EDITOR AND RUNTIME.....	4
2. DRIVER CONFIGURATION .....	4
3. DOWNLOAD THE APPLICATION .....	7
4. ERROR CODES OF RETURN CHECK.....	7
5. FREQUENTLY ASKED QUESTIONS.....	8

## 1. Install Editor and Runtime

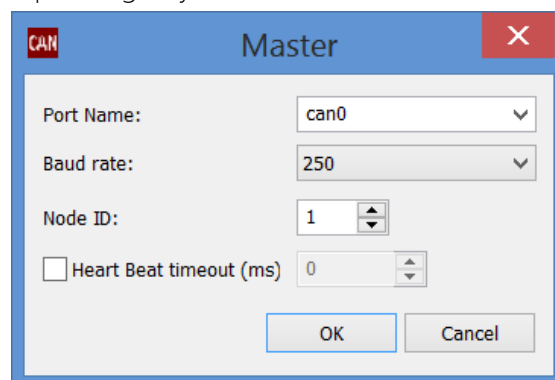
Download and install from <https://straton-plc.com/telechargements/>

## 2. Driver configuration

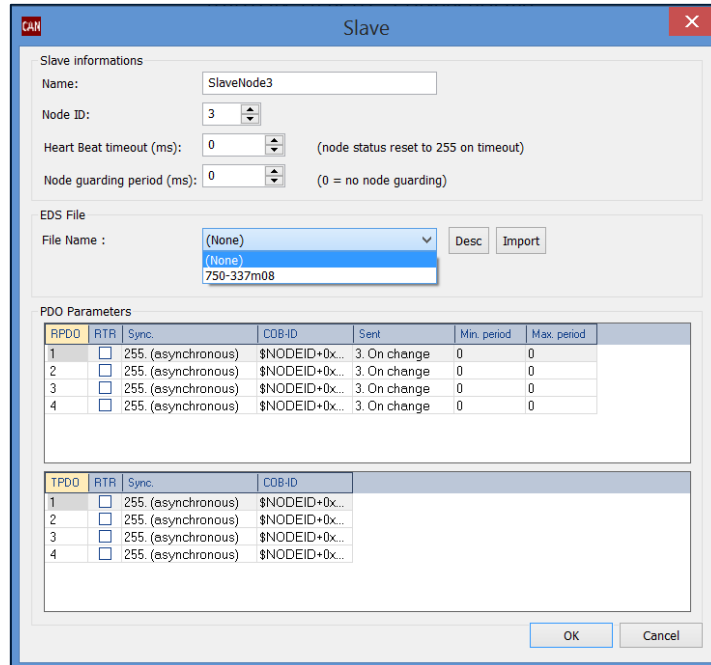
Open the IO Drivers window (  ), insert a new configuration (  ) and select the CANopen bus driver.



Insert a Master/Port (  ) corresponding to your CAN controller.



Insert a Slave/Datablock (  ) and enter the corresponding CAN information.



**Slave**

Slave informations

Name:

Node ID:

Heart Beat timeout (ms):  (node status reset to 255 on timeout)

Node guarding period (ms):  (0 = no node guarding)

EDS File

File Name :  Desc Import

PDO Parameters

RPDO	RTR	Sync.	COB-ID	Sent	Min. period	Max. period
1	<input type="checkbox"/>	255. (asynchronous)	\$NODEID+0x...	3. On change	0	0
2	<input type="checkbox"/>	255. (asynchronous)	\$NODEID+0x...	3. On change	0	0
3	<input type="checkbox"/>	255. (asynchronous)	\$NODEID+0x...	3. On change	0	0
4	<input type="checkbox"/>	255. (asynchronous)	\$NODEID+0x...	3. On change	0	0

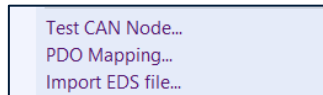
TPDO	RTR	Sync.	COB-ID
1	<input type="checkbox"/>	255. (asynchronous)	\$NODEID+0x...
2	<input type="checkbox"/>	255. (asynchronous)	\$NODEID+0x...
3	<input type="checkbox"/>	255. (asynchronous)	\$NODEID+0x...
4	<input type="checkbox"/>	255. (asynchronous)	\$NODEID+0x...

OK Cancel

Select the CANopen device in the EDS area, if your device is not listed here select "Import" and select the corresponding EDS file.

Create the PDO mapping:

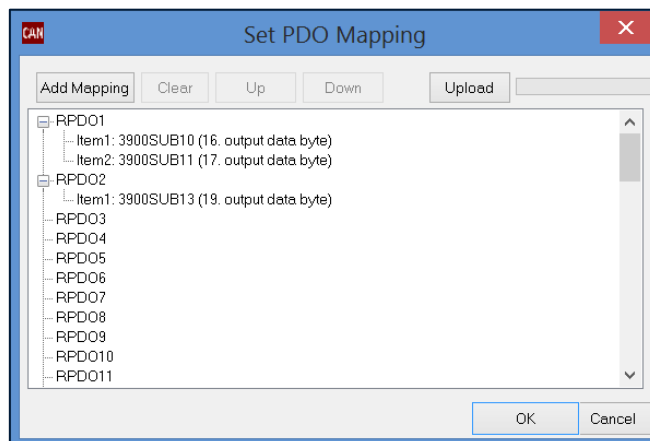
- ▶ Right click on the CANopen port to select the PDO mapping tool:



Test CAN Node...  
PDO Mapping...  
Import EDS file...

Using "Add Mapping" command you can select the CANopen object to be connected to the PDO.

IMPORTANT: if the EDS file does not exist or is empty, or if there is no object which can be mapped in the EDS file, this dialog won't appear.



**Set PDO Mapping**


Add Mapping Clear Up Down Upload

RPDO1  
Item1: 3900SUB10 (16. output data byte)  
Item2: 3900SUB11 (17. output data byte)

RPDO2  
Item1: 3900SUB13 (19. output data byte)

RPDO3  
RPDO4  
RPDO5  
RPDO6  
RPDO7  
RPDO8  
RPDO9  
RPDO10  
RPDO11

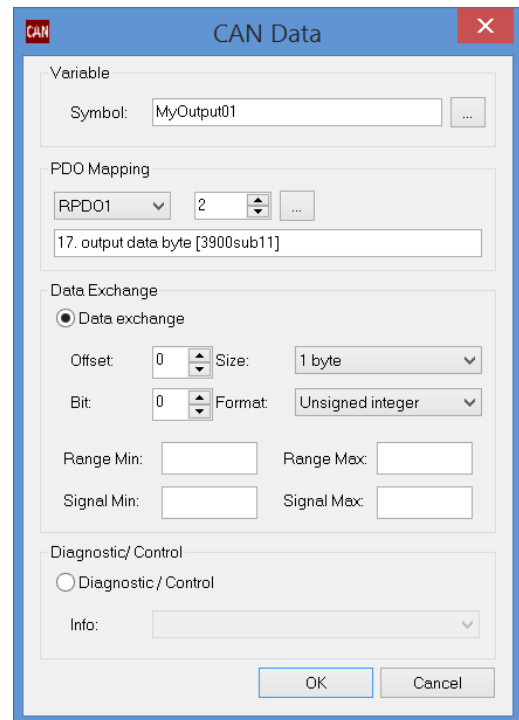
OK Cancel

Using Insert variable button () connected each object to a straton variable.

Repeat for each PDO and each object.

Additionally connect some Diagnostic/Control variable available in the straton application to make advance diagnostic or control on the CANopen Fieldbus.

Create the main program to manage the CANopen network.



**CAN Data**

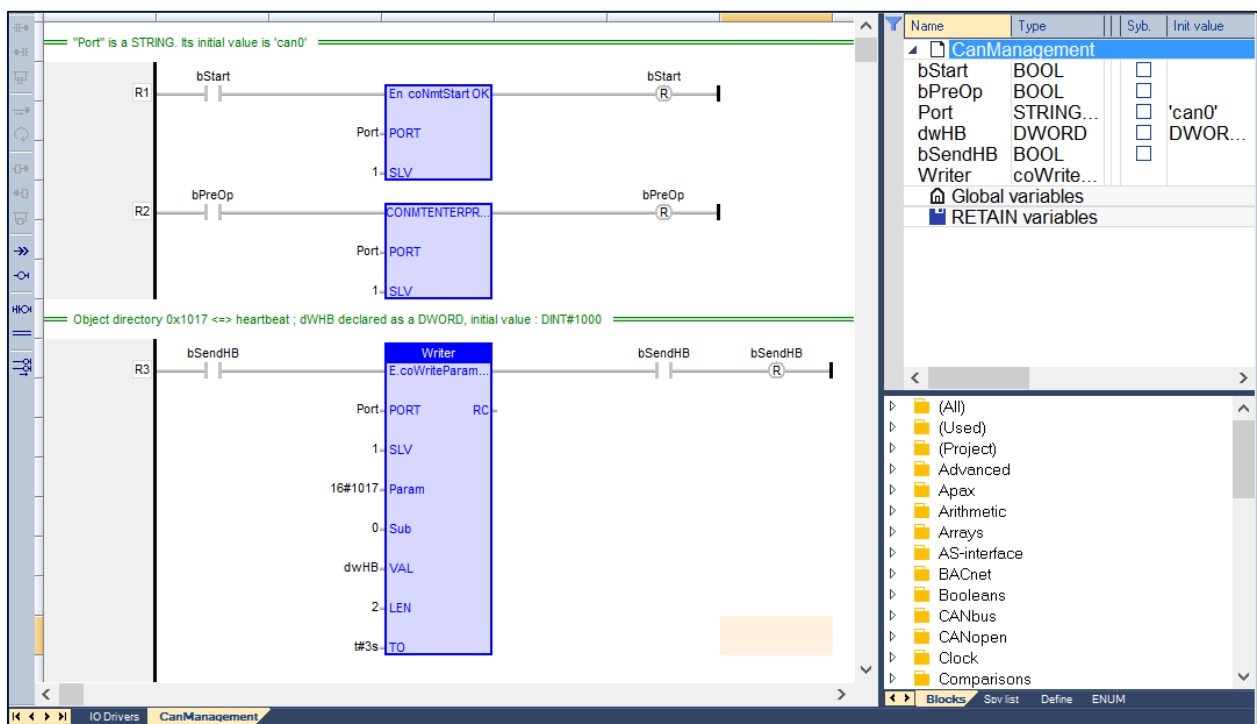
Variable  
Symbol: MyOutput01

PDO Mapping  
RPD01 2  
17. output data byte [3900sub11]

Data Exchange  
☒ Data exchange  
Offset: 0 Size: 1 byte  
Bit: 0 Format: Unsigned integer  
Range Min: Range Max:  
Signal Min: Signal Max:

Diagnostic/ Control  
☐ Diagnostic / Control  
Info:

OK Cancel



### 3. Download the application

Download the application to the runtime:

- ▶ Select the communication parameters in menu Tools/Communication Parameters
- ▶ Establish the connection through menu Project/Online

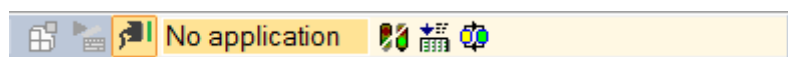
**RESULT IS:**



The download is successful and application starts correctly.



The runtime is not started or communication parameters are wrong.



The application is not yet downloaded or an error occurs during startup. More detail can be found in the output view.

### 4. Error codes of Return Check

Functions blocks coSendPdoMap and coWriteParam have a DINT output called RC. The possible values are:

Value	Meaning
0	OK
-1	Bad parameters
-2	Timeout
>0	Error code in the received CANopen message(refer to standard)

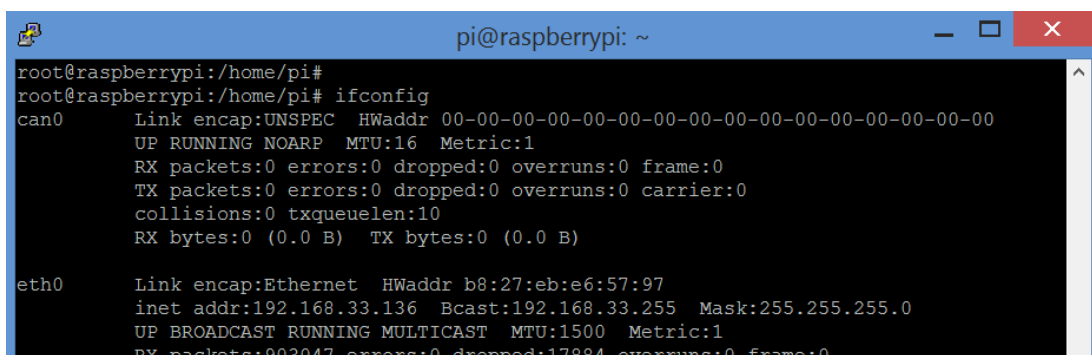
## 5. Frequently Asked Questions

### WHAT ARE THE “PORT NAMES” FOR THE CAN PORT?

The settings of the CAN port are OEM dependent, the following parameter are available for the runtime:

- ▶ Kvaser CAN : T5CANKvaser
- ▶ Grid Connect : T5CanGridConnect
- ▶ PEAK : T5CanGridConnect
- ▶ IXXAT : T5Canlxxat

If the runtime is embedded on a device, then this parameter must be the name of the CAN port, for example it can be “can0”



```
pi@raspberrypi: ~
root@raspberrypi:/home/pi#
root@raspberrypi:/home/pi# ifconfig
can0      Link encap:UNSPEC  HWaddr 00-00-00-00-00-00-00-00-00-00-00-00-00-00-00-00
          UP RUNNING NOARP  MTU:16  Metric:1
          RX packets:0 errors:0 dropped:0 overruns:0 frame:0
          TX packets:0 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:10
          RX bytes:0 (0.0 B)  TX bytes:0 (0.0 B)

eth0      Link encap:Ethernet  HWaddr b8:27:eb:e6:57:97
          inet addr:192.168.33.136  Bcast:192.168.33.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:903047 errors:0 dropped:17884 overruns:0 frame:0
```