

# EtherCAT to MODBUS RTU Gateway

In order to communicate with internal memory of NLi integrated motor, an SDO mapping is available on the Bus Converter. This communication type is available when the Bus Converter Mode is set to 1 ⇒ EtherCAT to MODBUS RTU.

| Address           | Name                          | Description                                                                                                                                                                                                                                                                                            |
|-------------------|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0x800D Subindex 1 | SLAVE_MODBUS_STATUS_WORD      | Current MODBUS RTU status word related to the current slave ID<br>Possible Value:<br>0 → Init State<br>1 → Ready<br>3 → Automatic Homing<br>5 → Run<br>6 → I2T Fault<br>13 → SIN/COS Encoder fault<br>14 → Overtemperature fault<br>15 → Power stage overcurrent fault<br>16 → DC Link overrange fault |
| 0x800D Subindex 2 | SLAVE_MODBUS_CONTROL_WORD     | Current MODBUS RTU control word related to the current slave ID<br>Possible value:<br>0 → No Command<br>1 → Start Homing<br>3 → Enable drive<br>6 → Disable drive<br>10 → Start motion<br>11 → Stop motion<br>12 → Drive reset                                                                         |
| 0x800D Subindex 3 | SLAVE_MODBUS_ADDRESS          | Current MODBUS RTU Address used for read or write                                                                                                                                                                                                                                                      |
| 0x800D Subindex 4 | SLAVE_MODBUS_DATA             | Current MODBUS RTU Data read or to write                                                                                                                                                                                                                                                               |
| 0x800D Subindex 5 | SLAVE_MODBUS_FUNC_CODE        | MODBUS RTU Function code (3 ⇒ Read, 6⇒ Write)                                                                                                                                                                                                                                                          |
| 0x800D Subindex 6 | SLAVE_MODBUS_CURRENT_POSITION | Current axis position using MODBUS RTU                                                                                                                                                                                                                                                                 |

CODESYS example project using FCT640 PLC : [:gtw\\_ethercat:gtw\\_eth\\_slave\\_modbus.zip](https://github.com/NiLAB/gtw_ethercat:gtw_eth_slave_modbus.zip)

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