Quickstart Guide EtherCAT

This document will help you setup your sensor in less than a minute.

Electrical Connections

Please follow these steps to connect your Bota Systems EtherCAT sensor:

1. Correctly align, plug and tighten the M8 connector of the included sensor cable into the sensor.
2. Plug the RJ45 end of the sensor cable into the POE side of the POE adapter.
3. Plug the EtherCAT master device cable into the LAN connector of the POE board.
4. Plug the AC/DC adapter into the DC plug of the POE board.

The green LED on the sensor indicates the EtherCAT state. The red LED indicates the EtherCAT error according to the EtherCAT standards.

Mechanical Connections

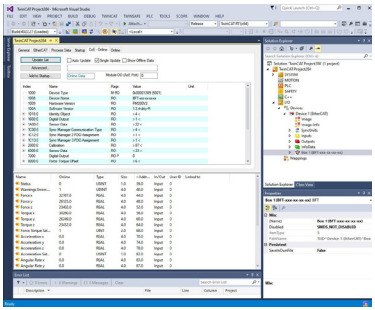
Please comply with the following requirements to ensure your sensor's measurement quality:

- Avoid mounting with non-rigid parts like 3D printed adapters.
- Clean the mounting surfaces from any dirt and debris.
- Do not under- or over-tighten the fasteners (see our **user manual**).
- Fix the sensor cable safe and steady on your system such that it does not apply any force to the sensor.

Software

Bota Systems provides a variety of options to communicate with a sensor in the form of libraries, applications or code snippets. They can be found at **gitlab.com/botasys**.

TwinCAT



TwinCAT XAE software offers a fast way to connect and log data from Bota Systems EtherCAT sensors. It enables the user to read data and configure parameters of the sensor. To achieve that, follow these steps:

1. Create a new XAE project.
2. Insert a new IO item EtherCAT master.
3. Scan for slaves to discover the sensor.

Robot Operating System (ROS)

Bota Systems offers an extensive collection of ROS packages. These packages cover the following topics:

- Sensor driver
- Sensor description (URDF/Xacro)
- Gravity and inertia compensation

Additional drivers

Additionally, Bota Systems offers drivers and scripts to configure and run the ethercat sensors for following languages and engineering software:

- C++
- Python
- MATLAB® and Simulink®

For more information, please refer to the **user manual**.