OB82 Diagnose Error Interrupt

Project number: 900145039

Project designation: **iJaw - Sensor-integrated clamping jaw**

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1 About this document

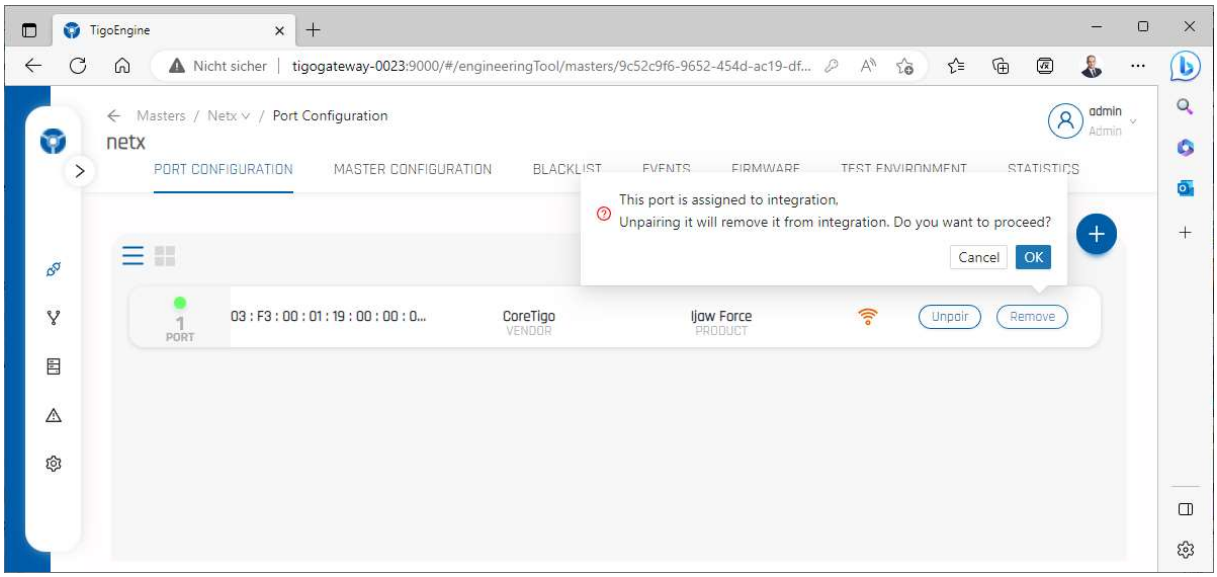
1.1 Motivation

The following description of modifying the OB82 interrupt should prevent to CPU from unintended machine stop in case of following use cases.

1.2 Use Cases

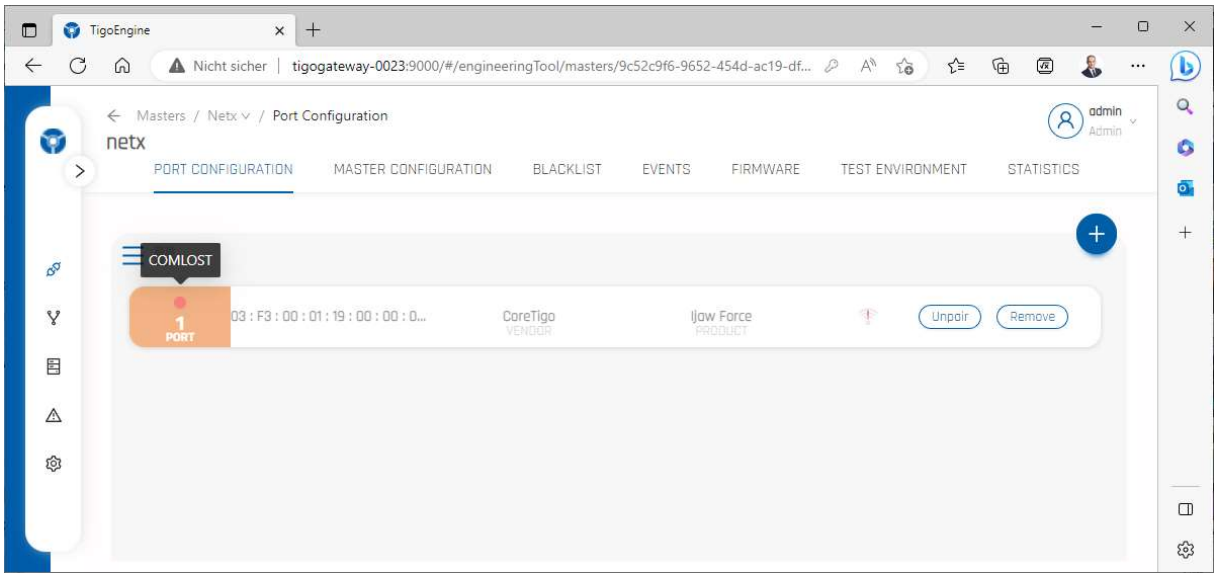
1.2.1 Unpairing of IOLW device

A unintended removal of a paired iolw device during data transmission.



1.2.2 COM lost between the IOLW Device to the IOLW Master

An extended range of the radio transmission between device and master during operation.



2 Description

2.1 Programming OB82

The below details are in accordance with the Siemens documentation – if now OB82 interrupt occurs, the customer must include it in the code (see in yellow) to prevent CPU goes to stop.

The operating system of the CPU calls OB82 when a module with diagnostics capability on which you have enabled the diagnostic interrupt detects an error and when the error is eliminated (the OB is called when the event comes and goes).

A OB82 must be created as an object in your S7 program using STEP 7. Write the program to be executed in OB82 in the generated block and download it to the CPU as part of your user program. You can, for example, use OB82 for the following purposes:

• To evaluate the start information of OB82.

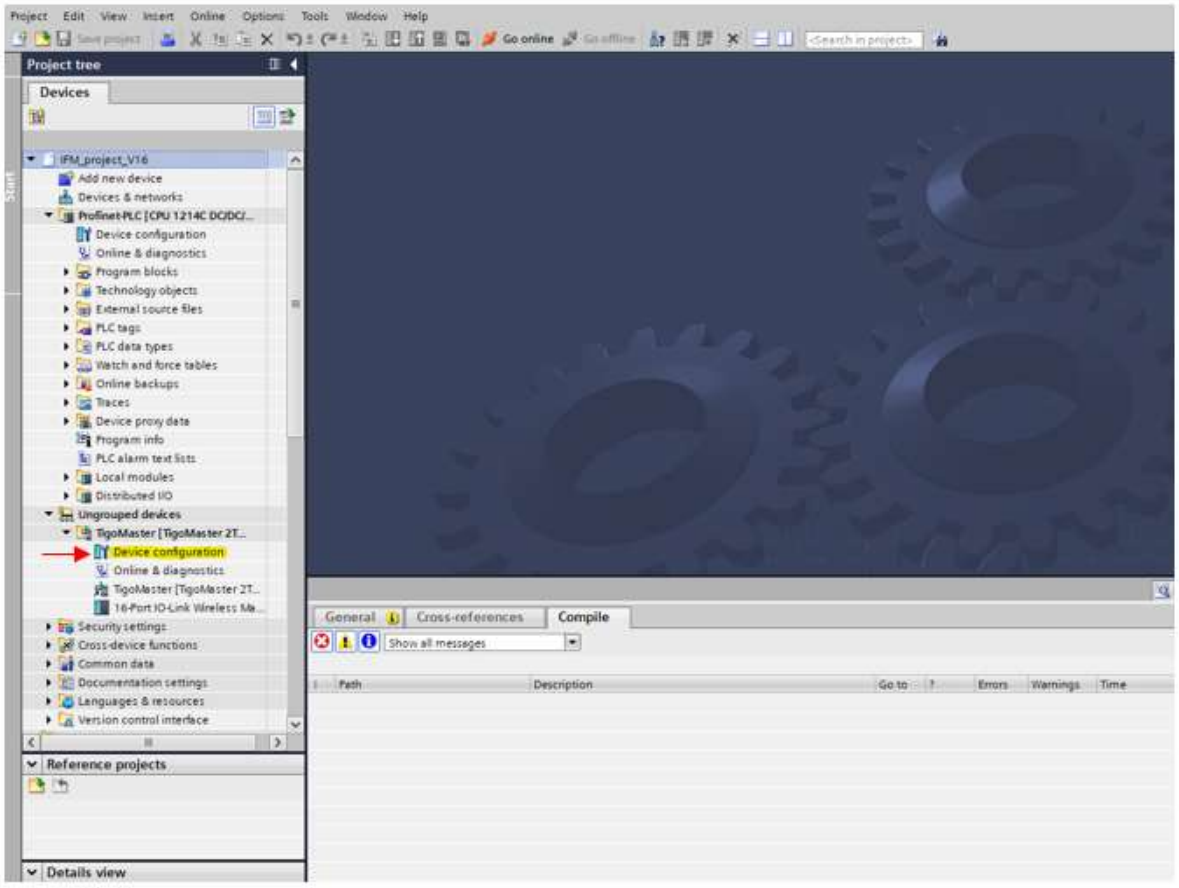
• To obtain exact diagnostic information about the error that has occurred. When a diagnostic interrupt is triggered, the module on which the problem has occurred automatically enters 4 bytes of diagnostic data and their start address in the start information of the diagnostic interrupt OB and in the diagnostic buffer. This provides you with information about when an error occurred and on which module. With a suitable program in OB82, you can evaluate further diagnostic data for the module (which channel the error occurred on, which error has occurred). Using SFC51 RDSYSST, you can read out the module diagnostic data and enter this information in the diagnostic buffer with SFC52 WRUSRMSG. You can also send a user-defined diagnostic message to a monitoring device.

If you do not program OB82, the CPU changes to STOP mode when a diagnostic interrupt is triggered. You can find detailed information on OBs, SFBs, and SFCs in the corresponding Help on Blocks.

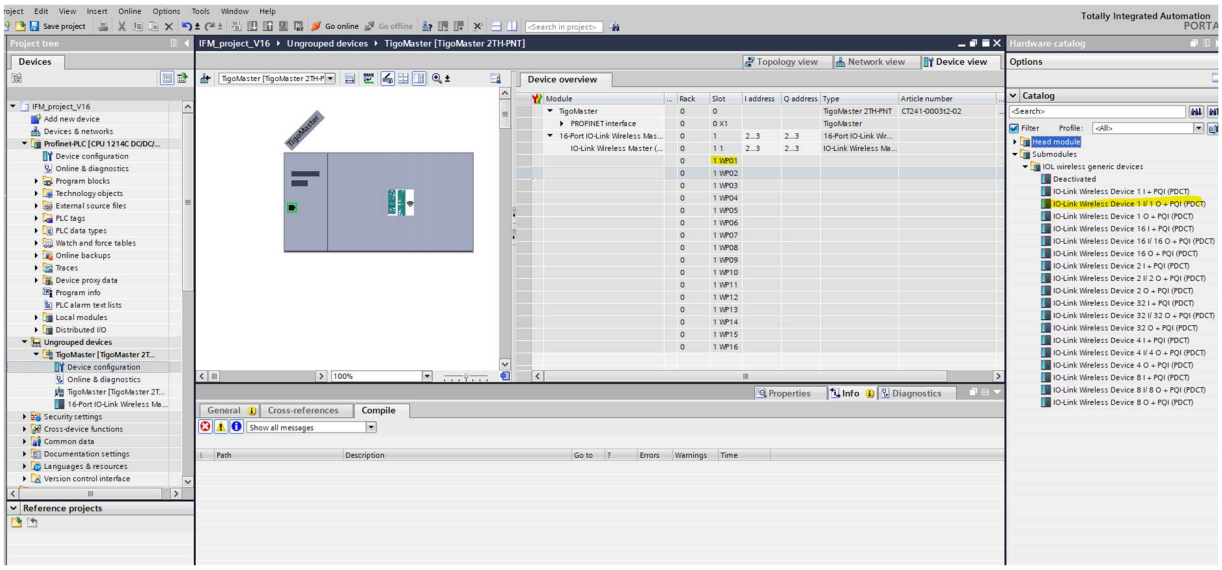
2.2 Test of error handling of the OB82

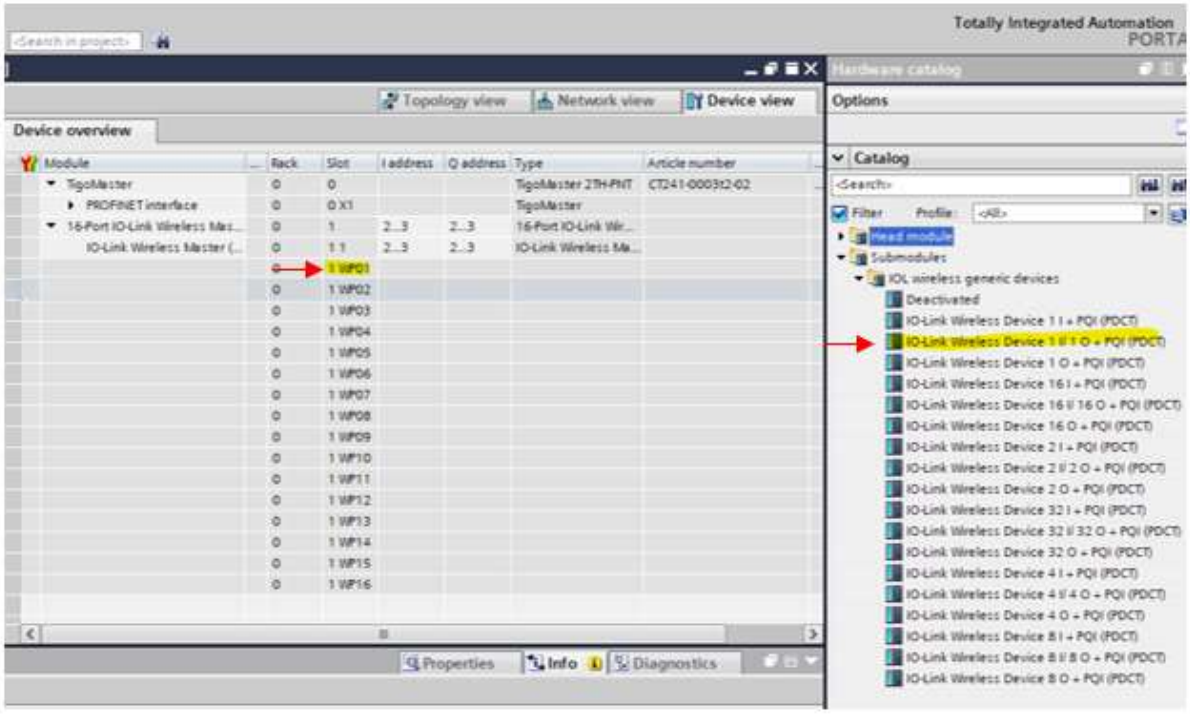
Once the IO-Link wireless master is configured in the project, we need to configure the submodules.

To configure the submodule double click on device configuration:



Then, simply drag the chosen submodule to an empty wport





After the sub-module is configured, a configuration window is located below.

The last variable called pull/plug can be set to enable or disable – **try set it to disable.**