



AUGUST 2024

Balluff IO Link Master

Konfiguration an ABB Roboter

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Verwendete Versionen

RobotStudio 2024.2.1 mit IOE 1.4.1

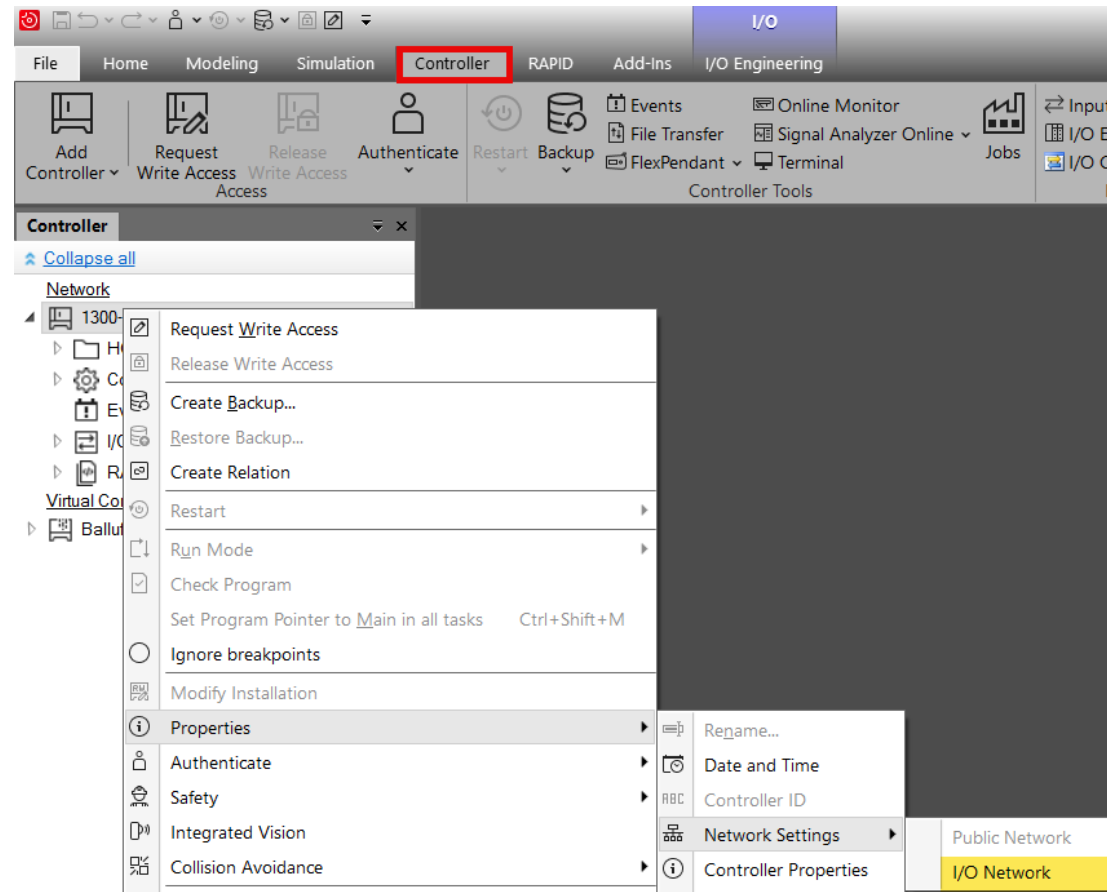
RW 7.15.01

Balluff BNI PG3 508 0C5 Z015

GSDML-V2.42-Balluff-BNI-PG3-508-0C5-Z015-20230720.xml

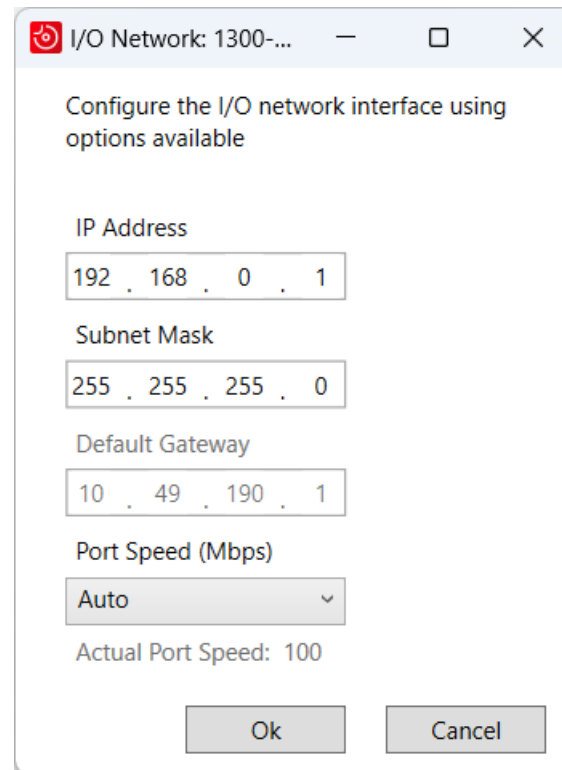
IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

IP-Adresse für I/O Netzwerk vergeben



IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

IP-Adresse für I/O Netzwerk vergeben



I/O Network: 1300-...

Configure the I/O network interface using options available

IP Address
192 . 168 . 0 . 1

Subnet Mask
255 . 255 . 255 . 0

Default Gateway
10 . 49 . 190 . 1

Port Speed (Mbps)
Auto

Actual Port Speed: 100

Ok Cancel

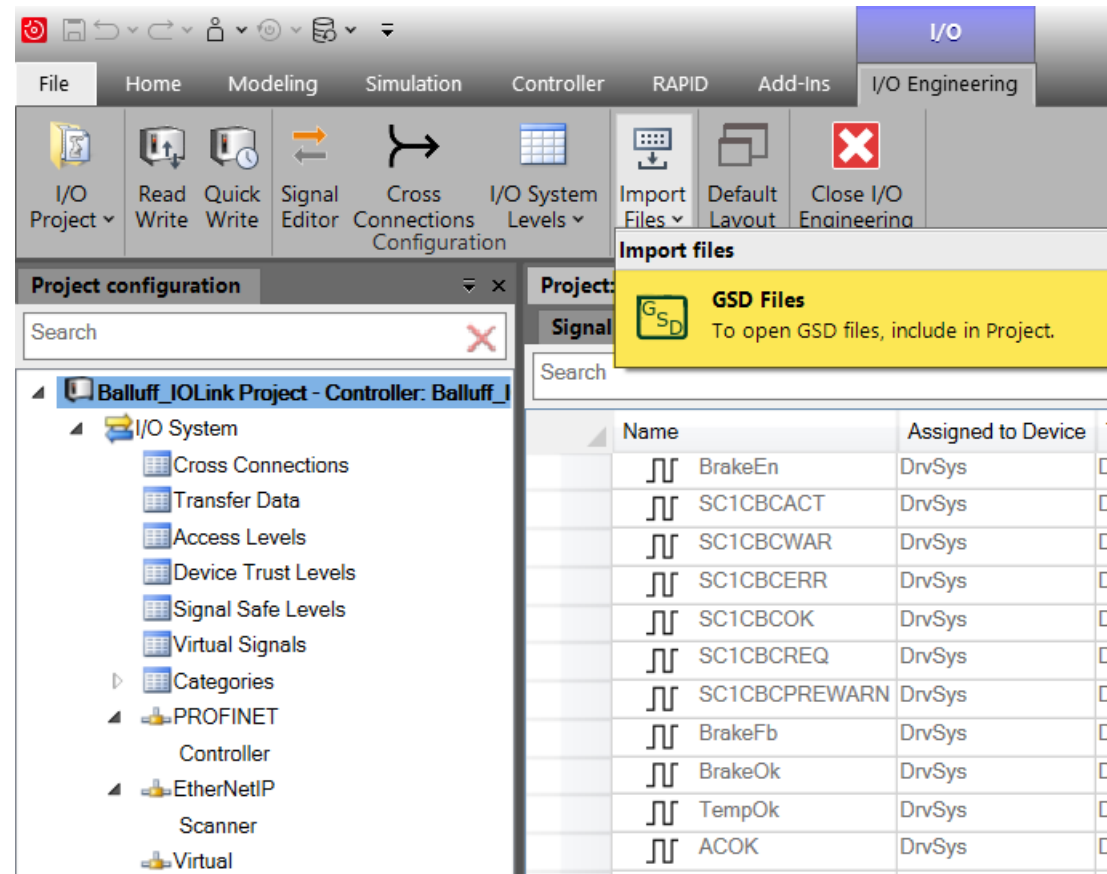
IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

ProfiNet Netzwerk konfigurieren



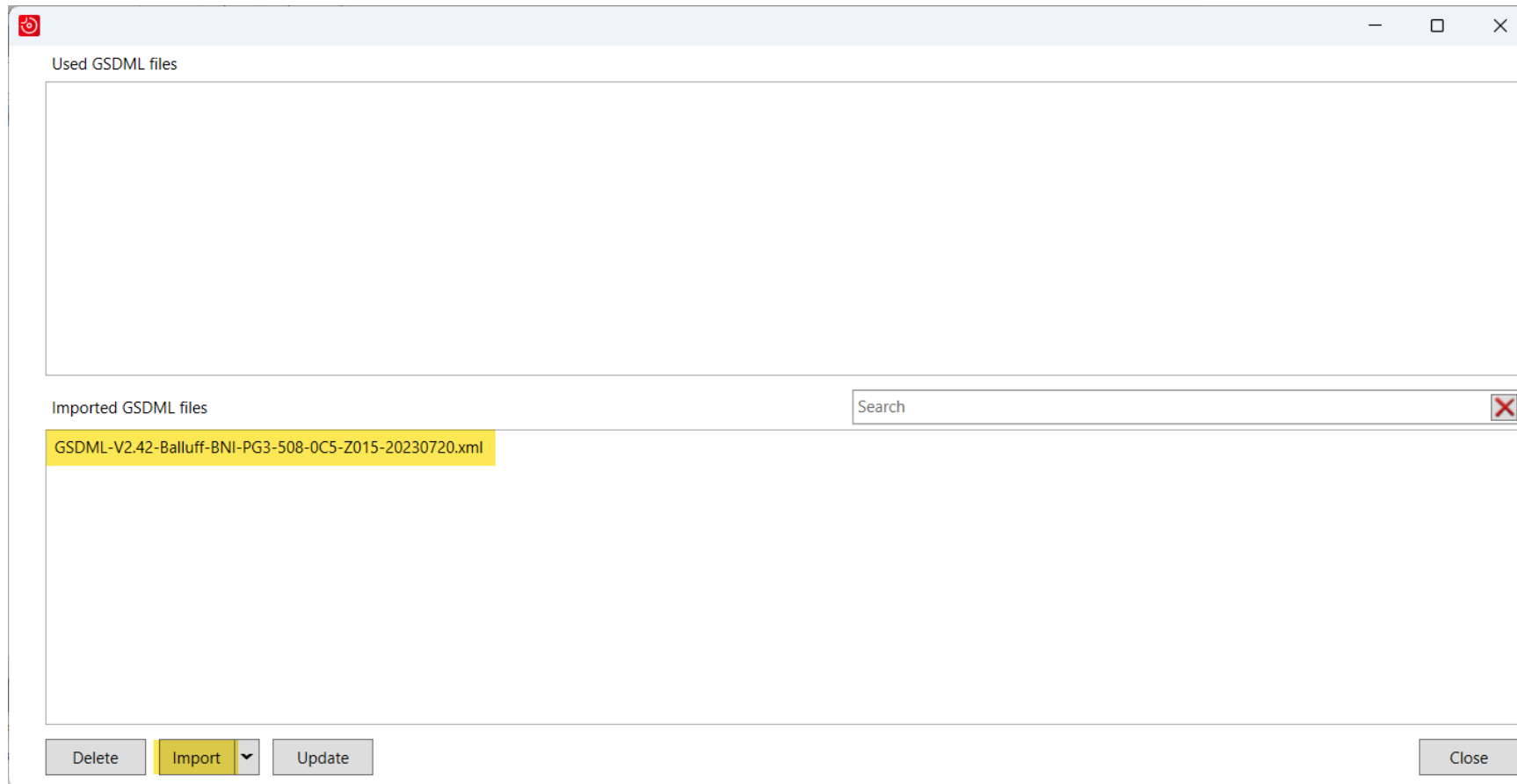
IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

GSDML importieren



IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

GSDML importieren



IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Device Access Point zur Konfiguration hinzufügen



IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Device Access Point konfigurieren

The screenshot displays the RobotStudio IO Engineering Tool interface for configuring a Balluff IO-Link Master. The main window is titled "Balluff_IOLink (Local) - RobotStudio". The "I/O Engineering" tab is active, showing a toolbar with various functions like "I/O Project", "Read Write", "Quick Write", "Signal Editor", "Cross Connections Configuration", "I/O System Levels", "Import Files", "Default Layout Layout", and "Close I/O Engineering Close".

The "Project configuration" pane on the left shows the project structure for "Balluff_IOLink Project - Controller: Balluff_IOLink". The "I/O System" is expanded, showing "Cross Connections", "Transfer Data", "Access Levels", "Device Trust Levels", "Signal Safe Levels", "Virtual Signals", "Categories", and "PROFINET". Under "PROFINET", the "Controller" is expanded, showing "BNI_PG3_508_0C5_Z015" (highlighted with a red box), "00: BNI PG3-508-0C5-Z015", and "01: IO_Link_IO_Ports".

The "Signal Editor" pane in the center shows a table with columns: Name, Assigned to Device, Type of Signal, Device Mapping, Signal Identification Label, Category, and Access Level. The table contains one entry: "BNI_PG3_508_0C5_Z015" with a "Digital Input" type.

The "Properties" pane on the right shows the configuration for the selected device. The "Profinet Configuration" section includes:

- Station Name: iolink-master
- Reduction Ratio: 8
- Faulty Telegrams: 24

The "Network" section includes:

- IP Address: 192 . 168 . 0 . 5
- Subnet: 255 . 255 . 255 . 0
- Gateway: 192 . 168 . 0 . 5

The "System" section includes:

- Name: BNI_PG3_508_0C5_Z015
- State when System Startup: Activated
- Trust Level: DefaultTrustLevel
- Simulated: No (selected)
- Identification Label:

The "Media Redundancy Protocol" section includes:

- Media Redundancy: Disabled

The "Information" section includes:

- Input Size: 1
- Output Size: 1

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration

The screenshot displays the RobotStudio IO Engineering Tool interface. The main window is titled "Balluff_IOLink (Local) - RobotStudio". The "I/O Engineering" tab is active, showing a toolbar with icons for I/O Project, Read Write, Quick Write, Signal Editor, Cross Connections Configuration, I/O System Levels, Import Files, Default Layout Layout, and Close I/O Engineering Close.

The "Project configuration" pane on the left shows a tree view of the project structure. The "Controller" folder is expanded, showing the "BNI_PG3_508_0C5_Z015" controller. Under this controller, the "01: IO Link IO Ports" folder is expanded, and the "01: BALLUFF 8 Port IO-Link Master" module is selected and highlighted with a red box.

The "Signal Editor" pane in the center shows a table with columns: Name, Assigned to Device, Type of Signal, Device Mapping, Signal Identification Label, and Category. The table contains one row with the following data:

Name	Assigned to Device	Type of Signal	Device Mapping	Signal Identification Label	Category
+ Enter Signal Name Here to Add New Signal	BNI_PG3_508_0C5_Z015	Digital Input			No category

The "Properties" pane on the right shows the properties of the selected module. The "System" section shows the Name as "BALLUFF 8 Port IO-Link Master". The "Information" section shows the Input Size as 1, Output Size as 1, Description as "BALLUFF IO-Link master, 8 ports, max. 32 bytes input d", and Submodule ID as "0xFFFF0000".

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration

IO-Link Master Modul ist vorkonfiguriert

Modul verfügt über E/A Daten:

- 1 Byte Eingangsdaten
- 1 Byte Ausgangsdaten

E/A Daten werden für die Zustände des Pin 2 der Ports 0-7 verwendet

Abhängig, ob Pin 2 am jeweiligen Port als Ein- oder Ausgang konfiguriert wird

- Pin 2 als Eingang → Mapping: 0 (Pin 2, Port 0) – 7 (Pin 2, Port 7)
- Pin 2 als Ausgang → Mapping: 0 (Pin 2, Port 0) – 7 (Pin 2, Port 7)

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration

The screenshot displays the RobotStudio IO Engineering Tool interface. The top menu bar includes File, Home, Modeling, Simulation, Controller, RAPID, Add-Ins, and I/O Engineering. The I/O Engineering tab is active, showing a toolbar with icons for I/O Project, Read Write, Quick Write, Signal Editor, Cross Connections, I/O System Levels, Import Files, Default Layout, and Close I/O Engineering. The main workspace is divided into two panes. The left pane, titled 'Project configuration', shows a tree view of the project structure. The right pane, titled 'Signal Editor', displays a table of configured signals.

Project configuration

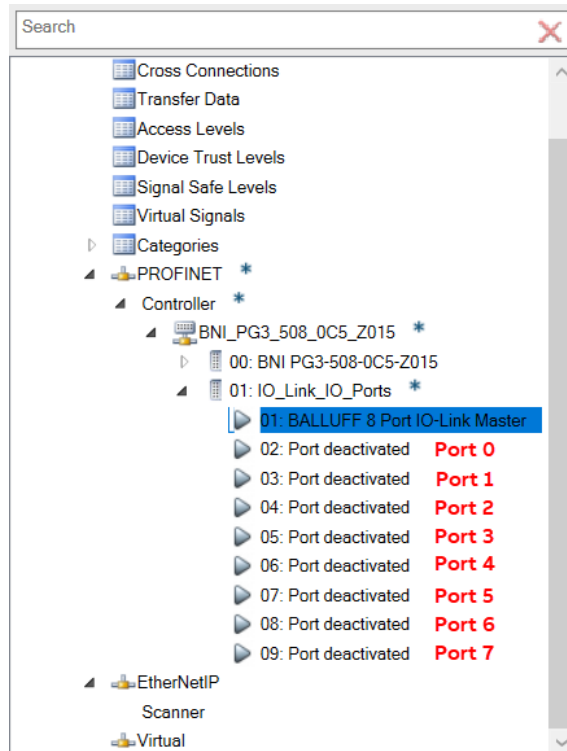
- I/O System
 - Cross Connections
 - Transfer Data
 - Access Levels
 - Device Trust Levels
 - Signal Safe Levels
 - Virtual Signals
 - Categories
- PROFINET
 - Controller
 - BNI_PG3_508_0C5_Z015
 - 00: BNI PG3-508-0C5-Z015
 - 01: IO_Link_IO_Ports
 - 01: BALLUFF 8 Port IO-Link Master**
 - 02: Digital Input
 - 03: Digital Output
 - 04: IOL_I/O_04/04_Byte
 - 05: Port deactivated
 - 06: Port deactivated
 - 07: Port deactivated

Signal Editor

Name	Assigned to Device	Type of Signal	Device Mapping	Signal Identification Label	Category	Access Level
do_Port0_Pin2	BNI_PG3_508_0C5_Z015	Digital Output	0	Wenn als Ausgang konfiguriert	No category	Default
do_Port1_Pin2	BNI_PG3_508_0C5_Z015	Digital Output	1	Wenn als Ausgang konfiguriert	No category	Default
do_Port2_Pin2	BNI_PG3_508_0C5_Z015	Digital Output	2	Wenn als Ausgang konfiguriert	No category	Default
do_Port3_Pin2	BNI_PG3_508_0C5_Z015	Digital Output	3	Wenn als Ausgang konfiguriert	No category	Default
do_Port4_Pin2	BNI_PG3_508_0C5_Z015	Digital Output	4	Wenn als Ausgang konfiguriert	No category	Default
do_Port5_Pin2	BNI_PG3_508_0C5_Z015	Digital Output	5	Wenn als Ausgang konfiguriert	No category	Default
do_Port6_Pin2	BNI_PG3_508_0C5_Z015	Digital Output	6	Wenn als Ausgang konfiguriert	No category	Default
do_Port7_Pin2	BNI_PG3_508_0C5_Z015	Digital Output	7	Wenn als Ausgang konfiguriert	No category	Default
di_Port0_Pin2	BNI_PG3_508_0C5_Z015	Digital Input	0	Wenn als Eingang konfiguriert	No category	Default
di_Port1_Pin2	BNI_PG3_508_0C5_Z015	Digital Input	1	Wenn als Eingang konfiguriert	No category	Default
di_Port2_Pin2	BNI_PG3_508_0C5_Z015	Digital Input	2	Wenn als Eingang konfiguriert	No category	Default
di_Port3_Pin2	BNI_PG3_508_0C5_Z015	Digital Input	3	Wenn als Eingang konfiguriert	No category	Default
di_Port4_Pin2	BNI_PG3_508_0C5_Z015	Digital Input	4	Wenn als Eingang konfiguriert	No category	Default
di_Port5_Pin2	BNI_PG3_508_0C5_Z015	Digital Input	5	Wenn als Eingang konfiguriert	No category	Default
di_Port6_Pin2	BNI_PG3_508_0C5_Z015	Digital Input	6	Wenn als Eingang konfiguriert	No category	Default
di_Port7_Pin2	BNI_PG3_508_0C5_Z015	Digital Input	7	Wenn als Eingang konfiguriert	No category	Default
+ Enter Signal Name Here to Add /	BNI_PG3_508_0C5_Z015	Digital Input			No category	Default

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

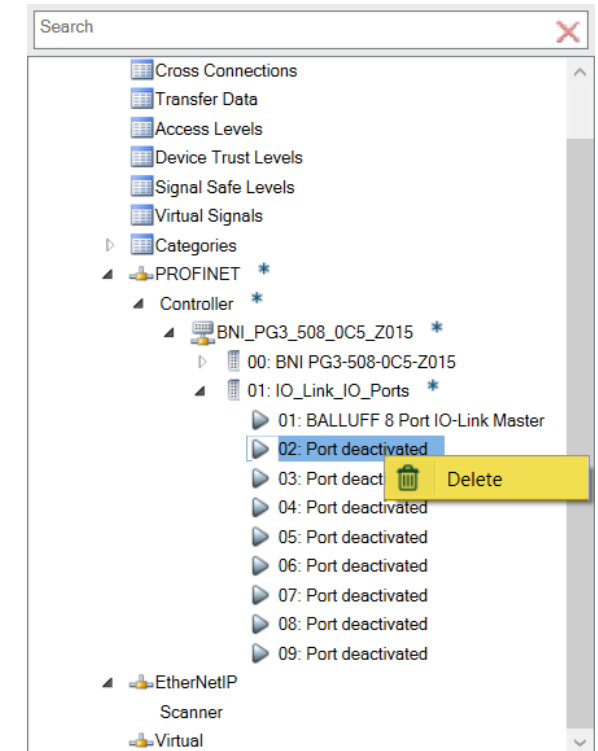
Modulkonfiguration



Steckplätze 2 – 9 sind für die Konfiguration der Ports vorgesehen

Standardmäßig sind alle 8 Ports deaktiviert

Zum Konfigurieren eines Ports muss das Modul „Port deactivated“ aus dem entsprechenden Steckplatz gelöscht werden



IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration – Digitaler Eingang

The screenshot displays the RobotStudio IO Engineering Tool interface for the 'Balluff_IOLink (Local) - RobotStudio' project. The 'Project configuration' pane on the left shows the hierarchy: I/O System > Cross Connections > Transfer Data > Access Levels > Device Trust Levels > Signal Safe Levels > Virtual Signals > Categories > PROFINET > Controller > BNI_PG3_508_0C5_Z015 > 01: IO_Link_IO_Ports. A red arrow points from the '01: IO_Link_IO_Ports' folder to the 'Signal Editor' table. The 'Signal Editor' table has columns: Name, Assigned to Device, Type of Signal, Device Mapping, Signal Identification Label, and Category. A new signal is being added with the name 'Enter Signal Name Here to Add New Signal' and assigned to the device 'BNI_PG3_508_0C5_Z015'. The 'Device Catalogue' panel on the right lists various digital input and output modules. The 'Digital Input' module is highlighted in yellow.

Device	Information	Submodule ID
Digital Input	Digital Input	0x81
Digital Output	Digital Output	0x8100
IOL_I/O_01/01_Byte	IOL_I/O_01/01_Byte	0x40000101
IOL_I/O_01/01_Byte + PQI	IOL_I/O_01/01_Byte + PQI	0x102
IOL_I/O_02/02_Byte	IOL_I/O_02/02_Byte	0x40000202
IOL_I/O_02/02_Byte + PQI	IOL_I/O_02/02_Byte + PQI	0x203
IOL_I/O_02/04_Byte	IOL_I/O_02/04_Byte	0x40000402
IOL_I/O_02/04_Byte + PQI	IOL_I/O_02/04_Byte + PQI	0x403
IOL_I/O_02/08_Byte	IOL_I/O_02/08_Byte	0x40000802
IOL_I/O_02/08_Byte + PQI	IOL_I/O_02/08_Byte + PQI	0x803
IOL_I/O_04/02_Byte	IOL_I/O_04/02_Byte	0x40000204
IOL_I/O_04/02_Byte + PQI	IOL_I/O_04/02_Byte + PQI	0x205
IOL_I/O_04/04_Byte	IOL_I/O_04/04_Byte	0x40000404
IOL_I/O_04/04_Byte + PQI	IOL_I/O_04/04_Byte + PQI	0x405
IOL_I/O_04/08_Byte	IOL_I/O_04/08_Byte	0x40000804
IOL_I/O_04/08_Byte + PQI	IOL_I/O_04/08_Byte + PQI	0x805
IOL_I/O_04/32_Byte	IOL_I/O_04/32_Byte	0x40002004
IOL_I/O_04/32_Byte + PQI	IOL_I/O_04/32_Byte + PQI	0x2005
IOL_I/O_08/02_Byte	IOL_I/O_08/02_Byte	0x40000208
IOL_I/O_08/02_Byte + PQI	IOL_I/O_08/02_Byte + PQI	0x209
IOL_I/O_08/04_Byte	IOL_I/O_08/04_Byte	0x40000408
IOL_I/O_08/04_Byte + PQI	IOL_I/O_08/04_Byte + PQI	0x400

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration – Digitaler Eingang

Hinzufügen des Moduls „Digital Input“ in Steckplatz 2 konfiguriert Port 0, Pin 4 zur Verwendung als digitalen Eingang

Das Modul verfügt über 1 Byte Eingangsdaten, welche an den IO-Link Master angehängt werden

Davon wird Bit 0 verwendet für den Zustand von Pin 4

Bit 1-7 sind nicht verwendet

Über die Modulparameter, kann Pin 2 des Ports 0 konfiguriert werden:

- NC → Nicht verwendet
- DI → Digitaler Eingang
- DO → Digitaler Ausgang

Der Zustand des Pin 2 ist auf Mapping 0, siehe Folie 11

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration – Digitaler Eingang

The screenshot displays the RobotStudio IO Engineering Tool interface for a project named "Balluff_IOLink (Local)". The "I/O Engineering" tab is active, showing a toolbar with various functions like "I/O Project", "Read Write", "Signal Editor", and "Cross Connections Configuration".

The "Project configuration" pane on the left shows the project structure. Under "I/O System", "Cross Connections" is expanded, and "02: Digital Input" is selected and highlighted with a red box.

The "Signal Editor" pane in the center shows a table of signals. The first row is highlighted with a red box:

Name	Assigned to Device	Type of Signal	Device Mapping	Signal Identification Label	Category
di_Port0_Pin4	BNI_PG3_508_0C5_Z015	Digital Input	8		No category
+ Enter Signal Name	BNI_PG3_508_0C5_Z015	Digital Input			No category

The "Properties" pane on the right shows the configuration for the selected signal. The "System" section shows the name "Digital Input". The "Information" section shows the input size as 1. The "Port configuration" section shows the pin behavior as "DI / DO".

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration – Digitaler Ausgang

The screenshot displays the RobotStudio IO Engineering Tool interface for a project named "Balluff_IOLink (Local)". The "I/O Engineering" tab is active, showing a "Signal Editor" window with a table of configured signals. A red arrow points from the "01: IO_Link_IO_Ports" entry in the "Project configuration" tree to the "Signal Editor" table.

Project configuration tree:

- I/O System
 - Cross Connections
 - Transfer Data
 - Access Levels
 - Device Trust Levels
 - Signal Safe Levels
 - Virtual Signals
 - Categories
 - PROFINET
 - Controller
 - BNI_PG3_508_OC5_Z015
 - 00: BNI_PG3-508-OC5-Z015
 - 01: IO_Link_IO_Ports
 - 01: BALLUFF 8 Port IO-Link Master
 - 02: Digital Input
 - 04: Port deactivated
 - 05: Port deactivated

Signal Editor Table:

Name	Assigned to Device	Type of Signal	Device Mapping	Signal Identification Label	Category
do_Port0_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	0	Wenn als Ausgang konfiguriert	No category
do_Port1_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	1	Wenn als Ausgang konfiguriert	No category
do_Port2_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	2	Wenn als Ausgang konfiguriert	No category
do_Port3_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	3	Wenn als Ausgang konfiguriert	No category
do_Port4_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	4	Wenn als Ausgang konfiguriert	No category
do_Port5_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	5	Wenn als Ausgang konfiguriert	No category
do_Port6_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	6	Wenn als Ausgang konfiguriert	No category
do_Port7_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	7	Wenn als Ausgang konfiguriert	No category
di_Port0_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	0	Wenn als Eingang konfiguriert	No category
di_Port1_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	1	Wenn als Eingang konfiguriert	No category
di_Port2_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	2	Wenn als Eingang konfiguriert	No category
di_Port3_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	3	Wenn als Eingang konfiguriert	No category
di_Port4_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	4	Wenn als Eingang konfiguriert	No category
di_Port5_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	5	Wenn als Eingang konfiguriert	No category

Device Catalogue Table:

Device	Information	Submodule ID
Digital Input	Digital Input	0x81
Digital Output	Digital Output	0x8100
IOL_I/O_01/01_Byte	IOL_I/O_01/01_Byte	0x40000101
IOL_I/O_01/01_Byte + PQI	IOL_I/O_01/01_Byte + PQI	0x102
IOL_I/O_02/02_Byte	IOL_I/O_02/02_Byte	0x40000202
IOL_I/O_02/02_Byte + PQI	IOL_I/O_02/02_Byte + PQI	0x203
IOL_I/O_02/04_Byte	IOL_I/O_02/04_Byte	0x40000402
IOL_I/O_02/04_Byte + PQI	IOL_I/O_02/04_Byte + PQI	0x403
IOL_I/O_02/08_Byte	IOL_I/O_02/08_Byte	0x40000802
IOL_I/O_02/08_Byte + PQI	IOL_I/O_02/08_Byte + PQI	0x803
IOL_I/O_04/02_Byte	IOL_I/O_04/02_Byte	0x40000204
IOL_I/O_04/02_Byte + PQI	IOL_I/O_04/02_Byte + PQI	0x205
IOL_I/O_04/04_Byte	IOL_I/O_04/04_Byte	0x40000404
IOL_I/O_04/04_Byte + PQI	IOL_I/O_04/04_Byte + PQI	0x405
IOL_I/O_04/08_Byte	IOL_I/O_04/08_Byte	0x40000804
IOL_I/O_04/08_Byte + PQI	IOL_I/O_04/08_Byte + PQI	0x805
IOL_I/O_04/32_Byte	IOL_I/O_04/32_Byte	0x40002004

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration – Digitaler Ausgang

Hinzufügen des Moduls „Digital Output“ in Steckplatz 3 konfiguriert Port 1, Pin 4 zur Verwendung als digitalen Ausgang

Das Modul verfügt über 1 Byte Ausgangsdaten, welche an den IO-Link Master angehängt werden

Davon wird Bit 0 verwendet für den Zustand von Pin 4

Bit 1-7 sind nicht verwendet

Über die Modulparameter, kann Pin 2 des Ports 1 konfiguriert werden:

- NC → Nicht verwendet
- DI → Digitaler Eingang
- DO → Digitaler Ausgang

Der Zustand des Pin 2 ist auf Mapping 1, siehe Folie 11

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration – Digitaler Ausgang

The screenshot displays the RobotStudio IO Engineering Tool interface for a project named "Balluff_IOLink (Local)". The "I/O Engineering" tab is active, showing a toolbar with various configuration options. The "Project configuration" pane on the left shows the project structure, with "03: Digital Output" highlighted under the "PROFINET" controller. The "Signal Editor" pane in the center shows a table of signals, with the first row highlighted:

Name	Assigned to Device	Type of Signal	Device Mapping	Signal Identification Label	Category
do_Port1_Pin4	BNI_PG3_508_0C5_Z015	Digital Output	8		No category

The "Properties" pane on the right shows the configuration for the selected signal, "do_Port1_Pin4". The "System" section shows the name "Digital Output". The "Information" section shows the input size as 0 and the output size as 1. The "Port configuration" section shows the enable port diagnosis as 1 and the enable process alarms as 0. The "Pin 4 / Pin2 behavior" section shows the output type as "DO / NC (Not connected)".

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration – IO Link Device

The screenshot displays the RobotStudio IO Engineering Tool interface for a project named "Balluff_IOLink (Local) - RobotStudio". The main window is divided into several panes:

- Project configuration:** Shows the project structure, including "I/O System", "Cross Connections", "Transfer Data", "Access Levels", "Device Trust Levels", "Signal Safe Levels", "Virtual Signals", "Categories", and "PROFINET". The "I/O System" pane is expanded, showing the "01: IO_Link_IO_Ports" device.
- Signal Editor:** A table listing the configured signals. A red arrow points to the "01: IO_Link_IO_Ports" device in the Project configuration pane, which corresponds to the first row in the Signal Editor table.
- Device Catalogue:** A table listing available devices. The "IOL_I/O_04/04_Byte" device is highlighted in green.

The Signal Editor table contains the following data:

Name	Assigned to Device	Type of Signal	Device Mapping	Signal Identification Label	Category
do_Port0_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	0	Wenn als Ausgang konfiguriert	No category
do_Port1_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	1	Wenn als Ausgang konfiguriert	No category
do_Port2_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	2	Wenn als Ausgang konfiguriert	No category
do_Port3_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	3	Wenn als Ausgang konfiguriert	No category
do_Port4_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	4	Wenn als Ausgang konfiguriert	No category
do_Port5_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	5	Wenn als Ausgang konfiguriert	No category
do_Port6_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	6	Wenn als Ausgang konfiguriert	No category
do_Port7_Pin2	BNI_PG3_508_OC5_Z015	Digital Output	7	Wenn als Ausgang konfiguriert	No category
do_Port1_Pin4	BNI_PG3_508_OC5_Z015	Digital Output	8	Wenn als Ausgang konfiguriert	No category
di_Port0_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	0	Wenn als Eingang konfiguriert	No category
di_Port1_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	1	Wenn als Eingang konfiguriert	No category
di_Port2_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	2	Wenn als Eingang konfiguriert	No category
di_Port3_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	3	Wenn als Eingang konfiguriert	No category
di_Port4_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	4	Wenn als Eingang konfiguriert	No category
di_Port5_Pin2	BNI_PG3_508_OC5_Z015	Digital Input	5	Wenn als Eingang konfiguriert	No category

The Device Catalogue table contains the following data:

Device	Information	Submodule ID
Digital Input	Digital Input	0x81
Digital Output	Digital Output	0x8100
IOL_I/O_01/01_Byte	IOL_I/O_01/01_Byte	0x40000101
IOL_I/O_01/01_Byte + PQI	IOL_I/O_01/01_Byte + PQI	0x102
IOL_I/O_02/02_Byte	IOL_I/O_02/02_Byte	0x40000202
IOL_I/O_02/02_Byte + PQI	IOL_I/O_02/02_Byte + PQI	0x203
IOL_I/O_02/04_Byte	IOL_I/O_02/04_Byte	0x40000402
IOL_I/O_02/04_Byte + PQI	IOL_I/O_02/04_Byte + PQI	0x403
IOL_I/O_02/08_Byte	IOL_I/O_02/08_Byte	0x40000802
IOL_I/O_02/08_Byte + PQI	IOL_I/O_02/08_Byte + PQI	0x803
IOL_I/O_04/02_Byte	IOL_I/O_04/02_Byte	0x40000204
IOL_I/O_04/02_Byte + PQI	IOL_I/O_04/02_Byte + PQI	0x205
IOL_I/O_04/04_Byte	IOL_I/O_04/04_Byte	0x40000404
IOL_I/O_04/04_Byte + PQI	IOL_I/O_04/04_Byte + PQI	0x405
IOL_I/O_04/08_Byte	IOL_I/O_04/08_Byte	0x40000804
IOL_I/O_04/08_Byte + PQI	IOL_I/O_04/08_Byte + PQI	0x805
IOL_I/O_04/32_Byte	IOL_I/O_04/32_Byte	0x40002004
IOL_I/O_04/32_Byte + PQI	IOL_I/O_04/32_Byte + PQI	0x2005
IOL_I/O_08/02_Byte	IOL_I/O_08/02_Byte	0x40000208

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration – IO Link Device

Hinzufügen des Moduls „IOL_I/O_04/04_Byte“ in Steckplatz 4 konfiguriert Port 3 für ein IO Link Gerät mit 4 Byte Ein- und Ausgängen
Das Modul verfügt über 4 Byte Ein- und Ausgangsdaten, welche an den IO-Link Master angehängt werden

Über die Modulparameter, kann Pin 2 des Ports 3 konfiguriert werden:

- NC → Nicht verwendet
- DI → Digitaler Eingang
- DO → Digitaler Ausgang

Pin 2 als digitaler Ausgang kann verwendet werden, um eine zusätzliche Spannungsversorgung (Aktorspannung, max. 2A) für das angeschlossene IO Link Gerät bereitzustellen und zu schalten

Pin 4 wird zur IO Link Kommunikation zwischen Master und Device benötigt

IO-Link Master Konfiguration in RobotStudio/ IO Engineering Tool

Modulkonfiguration – IO Link Device

The screenshot displays the RobotStudio IO Engineering Tool interface for configuring an IO-Link Master device. The main window is titled "Balluff_IOLink (Local) - RobotStudio". The "I/O Engineering" tab is active, showing a toolbar with icons for I/O Project, Read Write, Quick Write, Signal Editor, Cross Connections Configuration, I/O System Levels, Import Files, Default Layout, and Close I/O Engineering.

The "Project configuration" pane on the left shows the project structure. Under "I/O System", the "IO-Link IO Ports" are listed. The "04: IOL_I/O_04/04_Byte" port is highlighted with a red box.

The "Signal Editor" pane in the center shows a table of signals. The "go_Port3_IOL_Ausgangsdaten" and "gi_Port3_IOL_Eingangsdaten" signals are highlighted with a red box. The table has columns for Name, Assigned to Device, Type of Signal, Device Mapping, and Signal Identification Label.

Name	Assigned to Device	Type of Signal	Device Mapping	Signal Identification Label
go_Port3_IOL_Ausgangsdaten	BNI_PG3_508_0C5_Z015	Group Output	40-47, 32-39, 24-31, 16-23	
gi_Port3_IOL_Eingangsdaten	BNI_PG3_508_0C5_Z015	Group Input	40-47, 32-39, 24-31, 16-23	
Enter Signal Name Here to Add	BNI_PG3_508_0C5_Z015	Digital Input		

The "Properties" pane on the right shows the configuration for the selected "IOL_I/O_04/04_Byte" device. The "System" section shows the Name "IOL_I/O_04/04_Byte". The "Information" section shows the Input Size and Output Size both set to 4. The "Port configuration" section shows various settings, including "Port mode" set to "Autoconfig" and "Port Class / Pin2 behavior" set to "Class A / NC (Not connected)".

ABB