Application manual
PROFINET Anybus Device

Application manual

PROFINET Anybus Device

RobotWare 6.04

Document ID: 3HAC050968-001

Revision: C

Table of contents

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Overview of this manual

About this manual

This manual describes the PROFINET Anybus Device option and contains instructions for the PROFINET Anybus Device configuration.

Usage

This manual should be used during installation and configuration of the PROFINET Anybus Device option.

Who should read this manual?

This manual is intended for:

- Personnel that are responsible for installations and configurations of industrial network hardware/software.
- Personnel that make the configurations of the I/O system.
- System integrators.

Prerequisites

The reader should have the required knowledge of

- The PROFINET system.
- I/O system configuration.
- IRC5 controller.
- RobotStudio.

References

ABB documents

Reference	Document ID
Technical reference manual - System parameters	*3HAC050948-001*
Product manual - IRC5	*3HAC047136-001*
Operating manual - IRC5 with FlexPendant	*3HAC050941-001*
Operating manual - RobotStudio	*3HAC032104-001*

Other references

Reference	Description
International standard IEC 61158 Type 3 International standard IEC 61784	The PROFINET industrial network standard is described in the international standards.
PROFINET Cabling and Interconnection Technology	Installation Guideline for PROFINET (Version 2.00, September 1998)
Commissioning PC Stations - Manual and Quick Start	Release 12/2006 C79000-G8976-C156-08
ET200S Distributed I/O System	Manual from Siemens
www.profinet.com	The web site of PROFINET International
Step7 hardware configuration	Manual from Siemens

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Overview of this manual

Continued

Revisions

Revision	Description
-	First edition. Released with RobotWare 6.0.
A	Released with RobotWare 6.01. • Minor corrections. • System parameter *Connection* removed from *Industrial Network*.
B	Released with RobotWare 6.02. • Updated the path to the template files, see *Template I/O configuration file on page 23*.
C	Released with RobotWare 6.04. Minor corrections.

Product documentation, IRC5

Categories for user documentation from ABB Robotics

The user documentation from ABB Robotics is divided into a number of categories. This listing is based on the type of information in the documents, regardless of whether the products are standard or optional.

All documents listed can be ordered from ABB on a DVD. The documents listed are valid for IRC5 robot systems.

Product manuals

Manipulators, controllers, DressPack/SpotPack, and most other hardware is delivered with a **Product manual** that generally contains:

- Safety information.
- Installation and commissioning (descriptions of mechanical installation or electrical connections).
- Maintenance (descriptions of all required preventive maintenance procedures including intervals and expected life time of parts).
- Repair (descriptions of all recommended repair procedures including spare parts).
- Calibration.
- Decommissioning.
- Reference information (safety standards, unit conversions, screw joints, lists of tools).
- Spare parts list with exploded views (or references to separate spare parts lists).
- Circuit diagrams (or references to circuit diagrams).

Technical reference manuals

The technical reference manuals describe reference information for robotics products.

- *Technical reference manual - Lubrication in gearboxes*: Description of types and volumes of lubrication for the manipulator gearboxes.
- *Technical reference manual - RAPID overview*: An overview of the RAPID programming language.
- *Technical reference manual - RAPID Instructions, Functions and Data types*: Description and syntax for all RAPID instructions, functions, and data types.
- *Technical reference manual - RAPID kernel*: A formal description of the RAPID programming language.
- *Technical reference manual - System parameters*: Description of system parameters and configuration workflows.

Application manuals

Specific applications (for example software or hardware options) are described in **Application manuals**. An application manual can describe one or several applications.

An application manual generally contains information about:

- The purpose of the application (what it does and when it is useful).
- What is included (for example cables, I/O boards, RAPID instructions, system parameters, DVD with PC software).
- How to install included or required hardware.
- How to use the application.
- Examples of how to use the application.

Operating manuals

The operating manuals describe hands-on handling of the products. The manuals are aimed at those having first-hand operational contact with the product, that is production cell operators, programmers, and trouble shooters.

The group of manuals includes (among others):

- *Operating manual - Emergency safety information*
- *Operating manual - General safety information*
- *Operating manual - Getting started, IRC5 and RobotStudio*
- *Operating manual - IRC5 Integrator's guide*
- *Operating manual - IRC5 with FlexPendant*
- *Operating manual - RobotStudio*
- *Operating manual - Trouble shooting IRC5*

Safety

Safety of personnel

When working inside the robot controller it is necessary to be aware of voltage-related risks.

A danger of high voltage is associated with the following parts:

- Devices inside the controller, for example I/O devices, can be supplied with power from an external source.
- The mains supply/mains switch.
- The power unit.
- The power supply unit for the computer system (230 VAC).
- The rectifier unit (400-480 VAC and 700 VDC). Capacitors!
- The drive unit (700 VDC).
- The service outlets (115/230 VAC).
- The power supply unit for tools, or special power supply units for the machining process.
- The external voltage connected to the controller remains live even when the robot is disconnected from the mains.
- Additional connections.

Therefore, it is important that all safety regulations are followed when doing mechanical and electrical installation work.

Safety regulations

Before beginning mechanical and/or electrical installations, ensure you are familiar with the safety regulations described in *Operating manual - General safety information*[1].

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[1] This manual contains all safety instructions from the product manuals for the manipulators and the controllers.

Network security

Network security

This product is designed to be connected to and to communicate information and data via a network interface, It is your sole responsibility to provide and continuously ensure a secure connection between the product and to your network or any other network (as the case may be). You shall establish and maintain any appropriate measures (such as but not limited to the installation of firewalls, application of authentication measures, encryption of data, installation of anti-virus programs, etc) to protect the product, the network, its system and the interface against any kind of security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information. ABB Ltd and its entities are not liable for damages and/or losses related to such security breaches, any unauthorized access, interference, intrusion, leakage and/or theft of data or information.

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Terminology

Terms

Term	Explanation
ABCC-PRT	This is the order number of the anybus device on the network. See *Configuring an external controller using Siemens Step7 PC tool on page 29*. Customers can contact the ABB Robotics sales for the internal order number if required.
Controller	The *PROFINET master* is referred to as *PROFINET controller*.
Device	In this manual the term *device* is used to describe a physical unit.
External device or controller	The term *external* is used to describe a controller or device on the PROFINET network connected to the IRC5 controller.
GSDML file	A GSDML file contains information about a PROFINET device. (Generic Station Description Markup Language)
Internal Anybus Device	A built-in device in the robot controller
Internal device	The term *internal* is used to describe when the IRC5 controller acts as a slave on the PROFINET network.
LAN	Port/connector for Local Area Network.
Master	See term *Controller*
PROFINET configuration file	XML file created using an external PROFINET configuration tool
Reduction ratio	Poll rate
Slave	See term *Device*
WAN	Port/connector for Wide Area Network.

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1 Introduction

1.1 What is PROFINET?

General

PROFINET is an open standard for Industrial Ethernet. PROFINET satisfies requirements for automation technology. PROFINET solutions can be implemented for factory and process automation, for safety applications, and for the entire range of drive technology right up to clock-synchronized motion control.

Standardization

The use of open standards, simple operation, and the integration of existing system segments have driven the definition of PROFINET from the beginning. PROFINET is standardized in IEC 61158 and IEC 61784. The continual further development of PROFINET offers users a long term perspective for the implementation of their automation tasks.

Communication profiles

PROFINET has a modular design and different PROFINET communication profiles are all combinations of modular elements from the groups transmission technology, communication protocol, and application profiles.

Here are some examples of PROFINET communication profiles:

- PROFINET-IO - Distributed I/O (Remote I/O). Here, the familiar I/O view of PROFIBUS is retained, in which the user data from the field devices are periodically transmitted into the process model of the control system.

- PROFINET-CBA - Based on the object-oriented modelling of technological modules. Based on the object model, machines and installations are structured in PROFINET in the form of technological modules.

- PROFIsafe - Defines how safety-oriented devices (emergency shutoff switches, light grids, overfill protection systems, etc.) can communicate safety control information over a network securely enough that they can be used in safety-oriented automation tasks up to EN954's KAT4, AK6, or SIL3 (Safety Integrity Level).

- PROFIdrive - The PROFIdrive profile covers application scenarios from simple frequency converters to highly dynamic servo drivers.

- PROFIenergy - A profile of the PROFINET communications protocol that allows the power consumption of automation equipment in manufacturing (such as robot assembly cells, laser cutters and sub-systems such as paint lines) to be managed over a PROFINET network. It offers an open and standardized means of controlling energy usage during planned and unplanned breaks in production. See also *Application manual - PROFIenergy Device*.

1.2 The PROFINET anybus device for IRC5

General

The PROFINET anybus device for IRC5 is inserted into an expansion board on top of the main computer unit in the robot controller.

The PROFINET anybus device, DSQC 688, requires the main computer DSQC1000.

Options

With option *PROFINET Anybus Device*, the IRC5 controller can act as a slave on the PROFINET network.
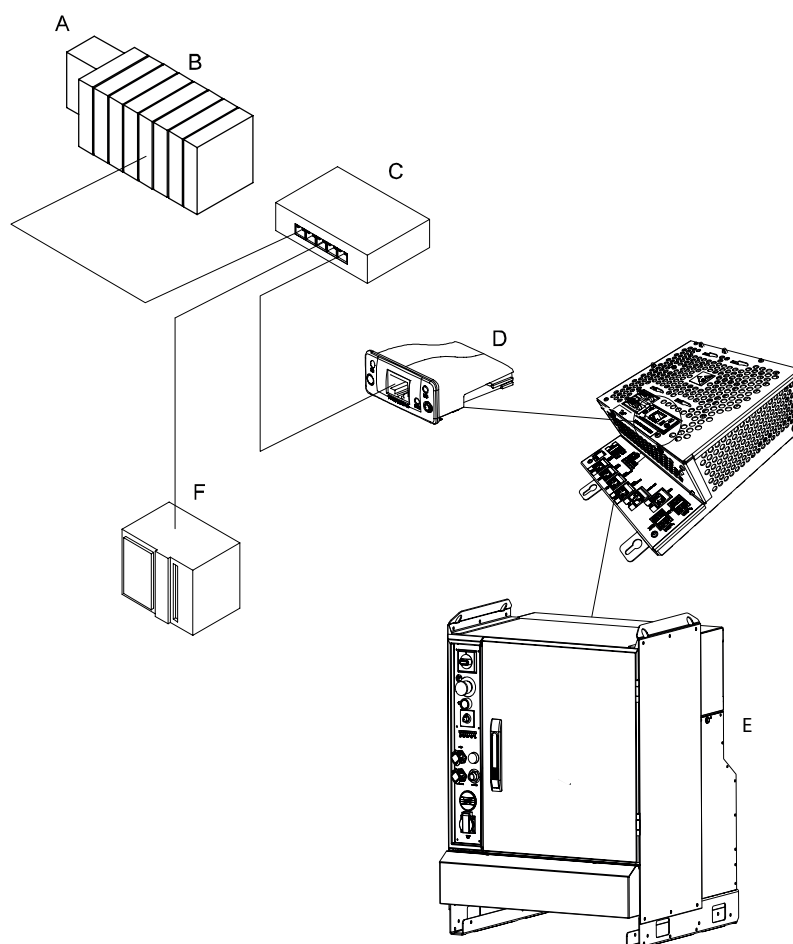
> **ℹ Note**
>
> If PROFINET master functionality is required, then the option *PROFINET Controller/Device* must be used.
>
> For more information, see *Application manual - PROFINET Controller/Device*.

Illustration, example

The following figure illustrates an overview of the hardware.

xx1300000755

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A	Modular PROFINET device
B	Modules for the modular station
C	Ethernet switch
D	PROFINET anybus device, DSQC 688
E	IRC5 controller
F	PLC

Specification overview

Item	Specification
Industrial network	PROFINET
Specification revision	*PROFINET version 2.0*
Data rate	100 Mbit
Connection size	Maximum 128 input bytes and 128 output bytes.
Vendor ID	0x10C
Device ID	0x07

Configuration program

An external PROFINET configuration tool such as *Step 7* from Siemens, together with RobotStudio, is needed for the configuration of DSQC 688. The external PROFINET configuration tool should be used according to the manual for the program.

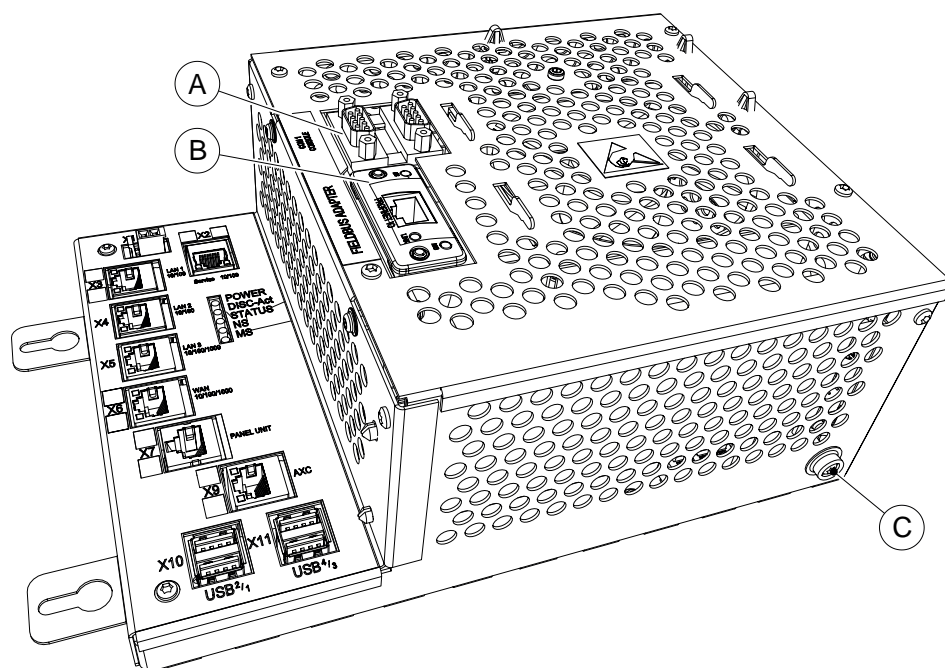This page is intentionally left blank

2 Hardware overview

2.1 Main computer DSQC1000

Connections

The I/O network is connected to the PROFINET anybus device, DSQC 688, on the main computer.

The following figure illustrates the location of the anybus device in the main computer unit.

xx1300000756

	Description	Designation	Article number
A	Anybus Device / RS232 expansion board	DSQC1003	3HAC046408-001
B	PROFINET anybus device	DSQC 688	3HAC031670-001
C	Ground connection for ESD bracelet		

Installation of the anybus device

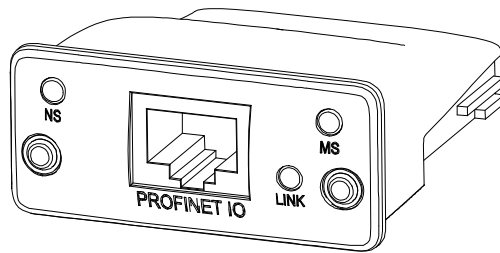For information on how to install and replace the anybus device, see *Product manual - IRC5*.

2 Hardware overview

Illustration, PROFINET anybus device DSQC 688

xx0800000136

NS	Network status LED
MS	Module status LED
LINK	Link/Activity
PROFINET IO	RJ-45 connector

LEDs

This section describes the LEDs of the PROFINET anybus device.

> **Note**
>
> A test sequence is performed on the network status LED and on the module status LED during start of the PROFINET anybus device.

Network status LED

LED status	Description	Comments
OFF	Offline	• No power • No connection with a master
Green	Online (RUN)	• Connection with master established • Master in RUN state
Green, flashing	Online (STOP)	• Connection with master established • Master in STOP state

Module status LED

LED status	Description	Comment
OFF	Not initialized	Module not configured or no power.
GREEN	Normal operation	Module is initialized.
GREEN, 1 flash	Diagnostic event(s)	Diagnostic event(s) present.
GREEN, 2 flashes	Blink	Used by external configuration tools to identify the node on the network.
RED	Exception error	Module in exception state.
RED, 1 flash	Configuration error	Expected Identification differs from real identification.
RED, 2 flashes	IP address error	IP address not set.
RED, 3 flashes	Device name error	Device (Station) name not set.
RED, 4 flashes	Internal error	Module has encountered a major internal error.

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Link/Activity LED

LED status	Description
OFF	No link, no activity
GREEN	Link established
GREEN, flickering	Activity

Ethernet interface

The Ethernet interface operates at 100 Mbit, full duplex, as required by PROFINET specification.

Cables and connectors

Cables used to connect the PROFINET network must comply with Cat 5 balanced LAN requirements or better according to *ISO/IEC 11801*. For details see *PROFINET Cabling and Interconnection Technology* available from www.profinet.com.

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3 Software overview

3.1 Information about the Anybus device

General

To use the PROFINET anybus device, the IRC5 controller must be installed with the option *840-3 PROFINET Anybus Device*.

The PROFINET anybus device can be used to:

- connect the IRC5 controller to a PLC.
- connect the IRC5 controller to another IRC5 controller which acts as a controller.

Predefined network

When the robot system is installed with the PROFINET anybus device, a predefined *Industrial Network* with the name *PROFINET_Anybus* is created at system startup.

Predefined Internal Anybus Device

When the robot system is installed with the PROFINET anybus device, a predefined *Internal Anybus Device* with the name *PN_Internal_Anybus* is created with the size of 64 input bytes and 64 output bytes.

If another input or output size is required, the predefined device *PN_Internal_Anybus* must be changed.

GSDML files

A GSDML file is available for the anybus device, matching the configuration of the predefined internal anybus device.

The GSDML file, *GSDML-V2.0-PNET-FA-20100510.xml*, for the anybus device can be obtained from the RobotStudio or the IRC5 controller.

- **In the RobotWare installation folder in RobotStudio:** *...\RobotPackages\ RobotWare_RPK_<version>\utility\service\ioconfig\PROFINET*
- **On the IRC5 Controller:** *<SystemName>\PRODUCTS\ <RobotWare_xx.xx.xxxx>\utility\service\GSDML*

> **Note**
>
> Navigate to the RobotWare installation folder from the RobotStudio **Add-Ins** tab, by right-clicking on the installed RobotWare version in the **Add-Ins** browser and selecting **Open Package Folder**.

Template I/O configuration file

A template I/O configuration file is available for the PROFINET internal anybus device, *PN_Internal_Anybus*. This file contain preconfigured names for all available inputs and outputs. This file can be loaded to the controller, using RobotStudio or the FlexPendant, to facilitate and speed up the configuration.

The I/O template configuration file, *PN_Internal_Anybus.cfg*, can be obtained from the RobotStudio or the IRC5 controller.

- **In the RobotWare installation folder in RobotStudio**: *...\RobotPackages\ RobotWare_RPK_<version>\utility\service\ioconfig\PROFINET*
- **On the IRC5 Controller**: *<SystemName>\PRODUCTS\ <RobotWare_xx.xx.xxxx>\utility\service\ioconfig\PROFINET*

> **Note**
>
> Navigate to the RobotWare installation folder from the RobotStudio **Add-Ins** tab, by right-clicking on the installed RobotWare version in the **Add-Ins** browser and selecting **Open Package Folder**.

Communication status

To have control of the communication status, that is, to know if the controller (for example, a PLC) to device communication is working or not, the following scheme could be used.

The controller can set one signal during start-up or within the controller loop, this signal (on the internal device) could then be attached to a system input in the robot controller as a communication supervision signal. If the communication between the controller and the device is interrupted, all the inputs of the internal device will go to fail safe state (that is, be set to zero only) after the specified watchdog time. This means that the user defined communication supervision signal will also go to zero. The watchdog time is configured in the external PROFINET configuration tool.

Limitations

The predefined PROFINET internal anybus device, *PN_Internal_Anybus* has the following limitations:

- 8 digital input bytes and 8 digital output bytes but can be increased to the maximum value, which is 64 digital input bytes and 64 digital output bytes.
- Both the input and output map starts at bit 0 and ends at bit 63.

> **Note**
>
> If the PROFINET anybus device loses connection with the master, the configured input signals are cleared (reset to zero). The output signals are kept and are possible to change.
>
> When the connection is re-established, the controller updates the input signals.

4 Configuring the anybus device

4.1 Recommended working procedure

General

This section describes the recommended working procedure when installing and configuring the PROFINET anybus device. The working procedure helps to understand the dependencies between the different steps.

When the IRC5 controller with the PROFINET anybus device is connected to an external master, the IRC5 controller acts as an ordinary slave device on the PROFINET network.

Basic steps

Use this procedure to install and configure the PROFINET anybus device.

	Action	See
1	Create and configure the anybus device in the IRC5 controller using RobotStudio or the FlexPendant.	*Configuring the anybus device on page 26*
2	Configure the external master using the vendor specific configuration tool.	*Configuring the external controller on page 28*

Examples

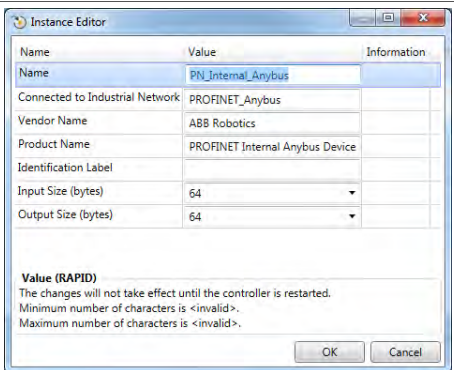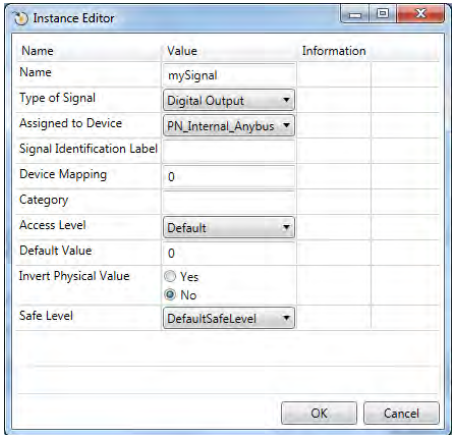| See |
|---|
| *Configuring an external controller using Siemens Step7 PC tool on page 29* |

4.2 Configuring the anybus device

General

The anybus device is pre-installed at the system startup. However, the address, the input and output size of the device can be changed.

The size of the anybus device determines how many I/O signals that can be attached.

Anybus device configuration

Use this procedure to install and configure the PROFINET anybus device in the IRC5 controller, using RobotStudio.

	Action	Note
1	Start RobotStudio and connect to the IRC5 controller. Request write access.	
2	Open the **Configuration Editor** and select **I/O System**.	For more information about the parameters, see *System parameters on page 35*.
3	In the **Type** list, click **PROFINET Internal Anybus Device**, right-click in the workspace and edit the I/O device, *PN_Internal_Anybus*. Edit the parameter values, if applicable.	 en1400002101
4	If the size needs to be changed: Change the default values for *Input Size* and *Output Size* to the desired size. Click **OK**.	This step is optional, for more information see *Information about the Anybus device on page 23*.
5	In the **Type** list click **Signal**. Add I/O signals for the new device.	 en1400002102

Continues on next page

	Action	Note
6	Restart the controller. Now the IRC5 controller is ready to be contacted from a PROFINET controller.	

Viewing the MAC address

After the configuration, it is possible to view the MAC address of the PROFINET anybus device on FlexPendant in one of the following ways:

Using the Industrial Network view.

	Action	Note
1	In the **ABB** menu, tap **Inputs and Outputs**.	The list of most common I/O signals is displayed.
2	Tap **View** and select **Industrial Network**.	The list of available industrial networks is displayed.
3	Tap **PROFINET_Anybus**.	
4	Tap **I/O Device Identification**.	The MAC address of PROFINET anybus device is displayed along with the other details.

Using the I/O Devices view.

	Action	Note
1	In the **ABB** menu, tap **Inputs and Outputs**.	The list of most common I/O signals is displayed.
2	Tap **View** and select **I/O Devices**.	The list of available I/O devices is displayed.
3	Tap the I/O device created to PROFINET anybus device.	
4	Tap **Actions** and select **I/O Device Identification**.	The MAC address of PROFINET anybus device is displayed along with the other details.

4.3 Configuring the external controller

General

The external controller is configured using the vendor specific configuration tool that is delivered, or bought, together with the controller.

The tool is used in order to specify all the devices in the PROFINET network. One of the devices is the anybus device of the IRC5 controller. To create such a device, the GSDML file describing the internal anybus device has to be imported into the vendor specific configuration tool, see *GSDML files on page 23*.

GSDML files must be imported for all I/O devices used in the network.

Example

For a specific example on how to configure a Siemens PLC, see *Configuring an external controller using Siemens Step7 PC tool on page 29*.

External controller configuration

This procedure describes the general steps that needs to be performed when configuring an external controller, independent of which tool is used.

	Action
1	Use the external master configuration tool to: • Specify the IP address range that the external PROFINET controller operates within. • Import the GSDML files for the internal device and all other types of I/O devices in the network. • Add the IRC5 controller device and set the same IP address as the PROFINET industrial network • Add any other I/O devices into the network structure. • Set the properties of the I/O devices to reflect the I/O device's properties on the PROFINET network.

4.4 Examples

4.4.1 Configuring an external controller using Siemens Step7 PC tool

Description

This is an example of how to configure the PROFINET anybus device using the Siemens Step7 PC tool. The procedure can be used with other tools as well. See the documentation for your PLC configuration tool.
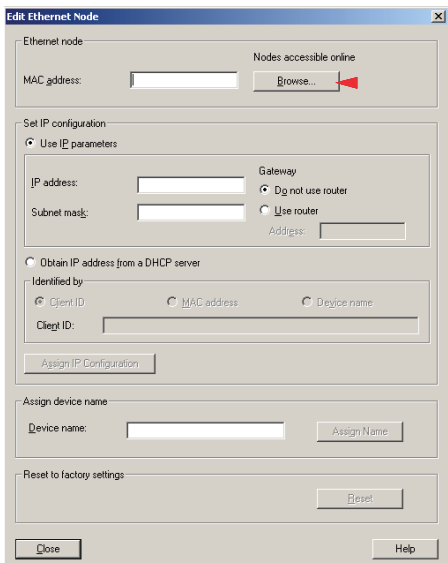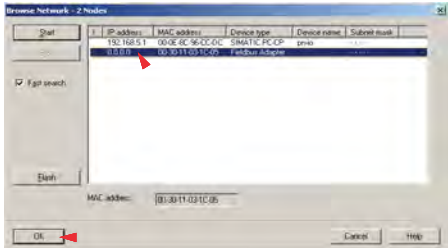
Configuring the anybus device

Use the procedure described in section *Configuring the anybus device on page 26*.

Configuring the external master

Use this procedure to configure a Siemens PLC to connect to the anybus device, using Siemens Step 7.

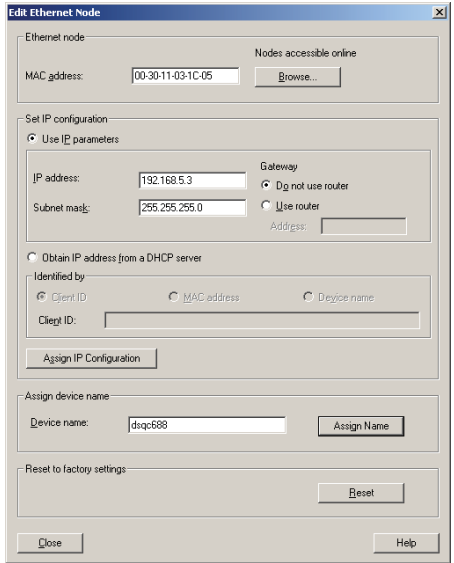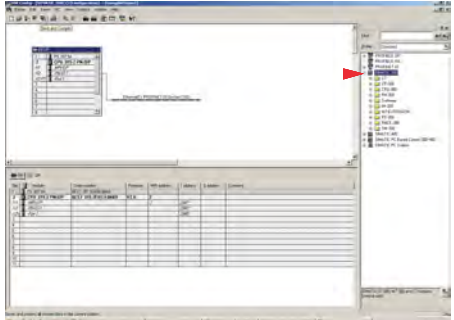The example uses a static IP address and no gateway.

	Action	Note
1	Start Siemens Simatic Manager. On the **PLC** menu, click **Edit Ethernet Node**.	
2	Click **Browse**. ![i] **Note** The PROFINET Anybus Device must already be configured in the IRC5 controller.	 xx0800000187
3	Select the PROFINET Anybus Device to configure and click **OK**. ![tip] **Tip** Select a device in the list and click **Flash**. The LED on the selected device will flash repeatedly until **Stop Flash** is clicked.	 xx0800000199

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4 Configuring the anybus device
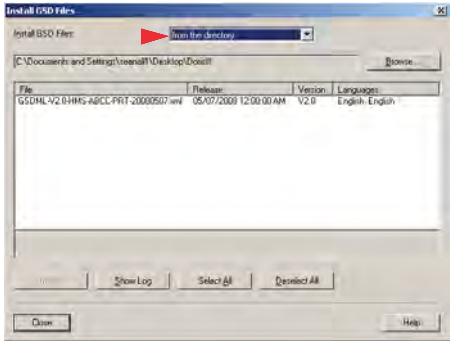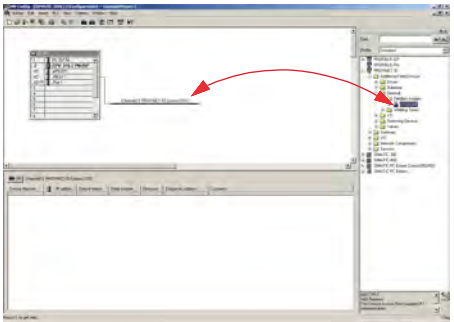
	Action	Note
4	Select **Use IP parameters** and enter the IP address and subnet mask and then click **Assign IP configuration**. Enter device name in the **Device name** text box and click **Assign name**. For more information about the other settings, see Siemens documentation. ![info] **Note** The IP address and device name must be unique on the industrial network.	 xx0800000200
5	Click **Close**.	
6	Open the project to which the PROFINET Fieldbus Adapter should be added.	
7	Open **HW Config** for the selected master.	 xx0800000188
8	On the **Option** menu, click **Install GSD File**. The GSDML file for PROFINET Anybus Device must be imported from the Robot-Ware DVD.	

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4.4.1 Configuring an external controller using Siemens Step7 PC tool
Continued

	Action	Note
9	In the **Install GSD Files** menu, select **from the directory** and click **Browse**.	 xx0800000190 ℹ️ **Note**
10	Select the GSDML file from the Robot-Ware DVD and click **Install**. Click **Yes** to confirm the warning.	
11	Click **OK** to complete the installation.	
12	Click **Close**.	
13	In the device list on the right-hand side of the HW Config, expand **PROFINET IO\Additional Field Devices\General\Fieldbus Adapter** and select **DSQC 688**.	
14	Drag the DSQC 688 device to the industrial network.	 xx0800000193

4 Configuring the anybus device

4.4.1 Configuring an external controller using Siemens Step7 PC tool
Continued

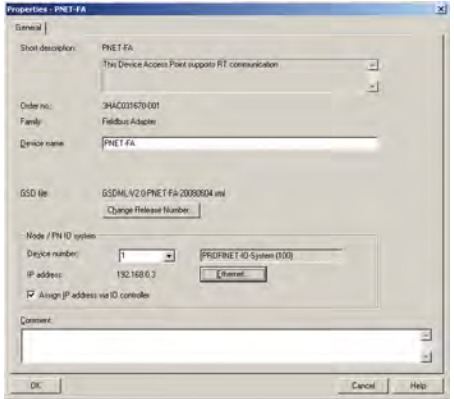|	Action	Note
15	Expand the **DI/DO** folder for the DSQC 688 device in the tree structure.	xx0800000195
16	Select the DSQC 688 icon added to the fieldbus network.	
17	Drag the correct input size to slot 1and the correct output size to slot 2. The input size shall be the same as the output size configured in the IRC5 controller. The output size shall be the same as the input size configured in the IRC5 controller. ![i] **Note** Inputs and outputs must be added to the correct slots, otherwise the communication with the device will not work properly. If another size, then 64 byte input and 64 byte output are used, the size must be changed in the UNIT TYPE in the IRC5 controller configuration.	xx0800000196
18	Right-click on the DSQC 688 icon and select **Object Properties**.	

Continues on next page

	Action	Note
19	Enter the same device name and IP address as when naming the device in step 4. Click **Ethernet** to enter the IP address and make sure that **Assign IP address via IO controller** is selected.	 xx0800000197
20	Click **OK**.	
21	On the **Station** menu, click **Save and Compile**.	
22	On the **PLC** menu, click **Download**.	

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5 System parameters

5.1 Introduction

About the system parameters

There are both PROFINET specific parameters and more general parameters. This chapter describes all PROFINET specific system parameters. The parameters are divided into the type they belong to.

For information about other system parameters, see *Technical reference manual - System parameters*.

PROFINET system parameters

Industrial Network

These parameters belong to the type *Industrial Network* in the topic *I/O System*.

Parameter	For more information, see ...
Name	*Technical reference manual - System parameters*
Identification Label	*Technical reference manual - System parameters*
Address	*Technical reference manual - System parameters*
Subnet Mask	*Subnet Mask on page 37*
Gateway	*Gateway on page 38*
PROFINET Station Name	*PROFINET Station Name on page 39*

Internal Anybus Device

These parameters belong to the type *Internal Anybus Device* in the topic *I/O System*.

Parameter	For more information, see ...
Name	*Technical reference manual - System parameters*
Connected to Industrial Network	*Technical reference manual - System parameters*
Simulated	*Technical reference manual - System parameters*
Vendor Name	*Technical reference manual - System parameters*
Product Name	*Technical reference manual - System parameters*
Identification Label	*Technical reference manual - System parameters*
Input Size	*Input Size on page 40*
Output Size	*Output Size on page 41*

5.2 Industrial Network

5.2.1 Address

Parent

Address belongs to the type *Industrial Network*, in the topic *I/O System*.

Cfg name

Address

Description

The parameter *Address* specifies the IP address of the PROFINET anybus adapter on the network. This IP address is used by an external controller to set up a connection to the anybus adapter.

Usage

The address decides what address the master and any internal slave device should use to communicate with other devices on the industrial network.

Usage

The parameter *Address* is used to set the IP address of the IRC5 controller on the used network interface.

Allowed values

0.0.0.0 - 255.255.255.255

5.2.2 Subnet Mask

Parent

Subnet Mask belongs to the type *Industrial Network*, in the topic *I/O System*.

Cfg name

SubnetMask

Description

The parameter *Subnet Mask* is used to determine what subnet the IP address belongs to.

Usage

The parameter *Subnet Mask* is used to divide the network into logical subnets.

Prerequisites

The option *PROFINET Anybus Device* must be installed.

Default value

0.0.0.0

Allowed values

0.0.0.0 - 255.255.255.255

5.2.3 Gateway

Parent

Gateway belongs to the type *Industrial Network*, in the topic *I/O System*.

Cfg name

Gateway

Description

The parameter *Gateway* specifies the node on the network that serves as an entrance to another network.

Usage

This parameter is used to route messages to other logical networks. This functionality is currently not supported.

Prerequisites

The option *PROFINET Anybus Device* must be installed.

Default value

0.0.0.0

Allowed values

0.0.0.0 - 255.255.255.255

5.2.4 PROFINET Station Name

Parent

PROFINET Station Name belongs to the type *Industrial Network*, in the topic *I/O System*.

Cfg name

StationName

Description

PROFINET Station Name specifies the PROFINET station name on the network of the IRC5 controller.

Usage

The parameter *PROFINET Station Name* is used to identify a PROFINET device on the network. The name must be unique on the network.

The parameter *PROFINET Station Name* can also be changed with an external PROFINET configuration tool or a connecting PROFINET master.

Prerequisites

The option *PROFINET Anybus Device* must be installed.

Default value

The default value is an empty string.

Allowed values

A string with maximum 80 characters.

Allowed characters:

- 0-9 (numerical)
- A-Z (uppercase letters)
- a-z (lowercase letters)
- - (hyphen)
- . (full stop)

5.3 Internal Anybus Device

5.3.1 Input Size

Parent

    Input Size belongs to the type *Internal Anybus Device*, in the topic *I/O System*.

Cfg name

    InputSize

Description

    The parameter *Input Size* defines the data size in bytes for the input area received from the PROFINET Master.

Usage

    Input Size is a PROFINET specific parameter.

Prerequisites

    The option *PROFINET Anybus Device* must be installed.

Limitations

    A limitation is the maximum device size for the *Internal Anybus Device*

Allowed values

    Allowed values are the integers 1-128 bytes (8-1024 signal bits).

    The default value is 64 bytes (512 signal bits).

Additional information

    Any other values than 1, 2, 4, 8, 16, 32, 64, or 128 will result in digital input size rounded up to the closest of these values.

5.3.2 Output Size

Parent

Output Size belongs to the type *Internal Anybus Device*, in the topic *I/O System*.

Cfg name

OutputSize

Description

The parameter *Output Size* defines the data size in bytes for the input area sent to the PROFINET Master.

Usage

Output Size is a PROFINET specific parameter.

Prerequisites

The option *PROFINET Anybus Device* must be installed.

Limitations

A limitation is the maximum device size for the *Internal Anybus Device*

Allowed values

Allowed values are the integers 1-128 (8-1024 signal bits).

The default value is 64 (512 signal bits).

Additional information

Any other values than 1, 2, 4, 8, 16, 32, 64, or 128 will result in digital output size rounded up to the closest of these values.

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