

Operating Instruction Manual
YOKOGAWA netDevice and netProject (A2LP131)
FDT Container

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1 Introduction

1.1 About this Manual

The configuration software SYCON.net-A2LP/YOKO described here is a standalone program and is based on the FDT specification 1.2 (Field Device Tool Specification). However, this program is only for YOKOGAWA.

netDevice is a **FDT Container** for the configuration of field devices.

A2LP131 is the PROFINET IO Controller Communication Module for CENTUM engineering tool by YOKOGAWA.

“YOKOGAWA” means Yokogawa Electric Corporation.

1.1.1 Overview

The table below gives an overview of the descriptions provided in this manual:

Chapter	Section	Manual Page
netDevice and netProject	<i>netDevice</i>	12
	<i>netProject - Network</i>	17
Working with the Menus	<i>The Menu Bar</i>	18
	<i>Menu Device and Context Menu</i>	18
	<i>Menu Network</i>	22
Working with netDevice and netProject	<i>Getting Started - Configuration Steps</i>	24
	<i>The Device Catalog</i>	25
	<i>Installing Slave DTM or adding Device Description</i>	26
	<i>Insert Device in Project</i>	27
	<i>Cutting, copying, pasting Slave Devices</i>	28
	<i>Delete Device from Project</i>	29
	<i>Working with Buslines</i>	30
Configuration	<i>Offline Configuration</i>	34

Table 1: Overview

1.1.2 List of Revisions

Index	Date	Version	Component	Chapter	Revision
1	2018-12-17	1.2110	Yokogawa SYCON.net FDTContainer	all	Created

1.1.3 Conventions in this Manual

Notes, operation instructions and results of operation steps are marked as follows:

Notes



Important: <important note you must follow to avoid malfunction>



Note: <general note>



<note, where to find further information>

Operation Instructions

1. <instruction>

2. <instruction>

or

➤ <instruction>

Results

⇒ <result>

1.2 Documentation Overview

The following table lists the documents for SYCON.net-A2LP/YOKO for A2LP131:

Content	Document Name
General description of netFrame: Description of the output window, menus and toolbars.	SYCONnet netFrame YOKOGAWA A2LP131 OI xx EN.pdf
General description of netDevice. Graphical network view, device catalog and the project tree. Description of <ul style="list-style-type: none"> ▪ menus, ▪ context menus, ▪ insert device, cut/copy/paste device, additional functions (print), delete device, ▪ symbolic name, ▪ network menu, ▪ network toolbar. Getting started/Configuration steps. How to add a device description. Working with bus lines.	SYCONnet netFrame YOKOGAWA A2LP131 OI xx EN.pdf
Description of the configuration dialogs to configure the PROFINET IO Controller. Getting started/Configuration steps. Configuration of the controller <ul style="list-style-type: none"> ▪ Controller network settings, ▪ Device table, ▪ IP address table, ▪ Process data, ▪ Stations timing, ▪ Address table, ▪ FSU-/port-settings, ▪ Controller settings 	PROFINET IO Controller YOKOGAWA A2LP131 DTM OI xx EN.pdf
Description of the configuration dialogs to configure the PROFINET IO device. Getting started/Configuration steps. Configuration of the device <ul style="list-style-type: none"> ▪ General, ▪ Modules and parameters. 	YOKOGAWA PROFINET IO Generic Device DTM no PROFIsafe OI xx EN.pdf
Topology Editor MRP configuration	Topology Editor A2LP131 OI xx EN.pdf

Table 2: Documentation Overview

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- Medical devices used for life support and
- Vehicle control systems used in passenger transport

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2 Safety

2.1 General Note

The documentation in the form of a user manual, an operating instruction manual or other manual types, as well as the accompanying texts have been created for the use of the products by educated personnel. Technical knowledge is presumed. The user has to assure that all legal regulations are obeyed.

2.2 Intended Use

netDevice is a **FDT Container** which serves for the configuration of field devices of different manufacturers.

2.3 Personnel Qualification

Personnel responsible for the application of the network system shall be aware of the system behavior and shall be trained in using the system.

2.4 Personal Injury

To ensure your own personal safety and to avoid personal injury, before you configure your system, you necessarily must read, understand, and comply with the safety instructions and safety messages in the manufacturer manuals of your system, the Controller device is connected to.

2.4.1 Mismatching System Configuration

Mismatching system configuration loaded into the device could result in faulty data mapping in the application program and thus unexpected equipment operation may cause personal injury.

2.5 Property Damage

To avoid property damage respectively device destruction and damage to your system or to your equipment, before you configure your system, you necessarily must read, understand, and comply with the safety instructions and safety messages in the manufacturer manuals of your system, the Controller device is connected to.

2.5.1 Mismatching System Configuration

Mismatching system configuration loaded into the device could result in faulty data mapping in the application program and thus unexpected equipment operation may cause damage of equipment.

2.6 References Safety

[S1] ANSI Z535.6-2006 American National Standard for Product Safety Information in Product Manuals, Instructions, and Other Collateral Materials

[S4] 26514-2010 - IEEE Standard for Adoption of ISO/IEC 26514:2008 Systems and Software Engineering--Requirements for Designers and Developers of User Documentation

3 netDevice and netProject

3.1 netDevice

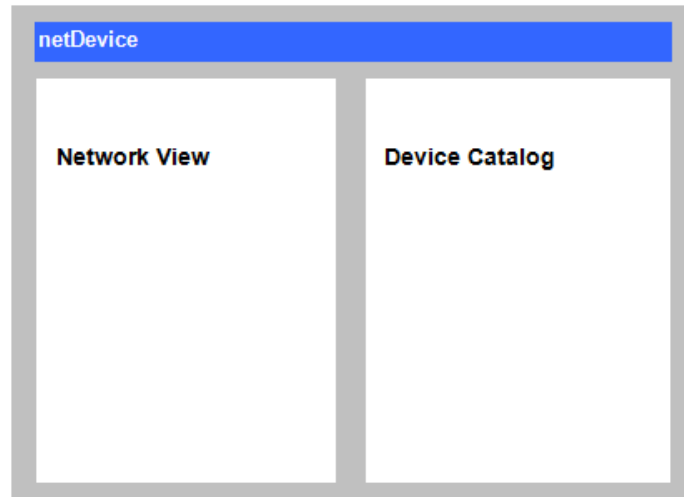


Figure 1: netDevice - Network View and Device Catalog (Principle)

The **netDevice** window is divided in two different areas:

- **Network View**

The left side of the **netDevice** window shows the current configuration as network view.

In the network view you can arrange the single elements (devices and bus lines).

A detailed description of the network view you find in section *netDevice - Network View* on page 13.

- **Device Catalog**

The right side of the **netDevice** window displays the installed devices as tree structure. Further information about this you find in section *netDevice - Device Catalog* on page 13.

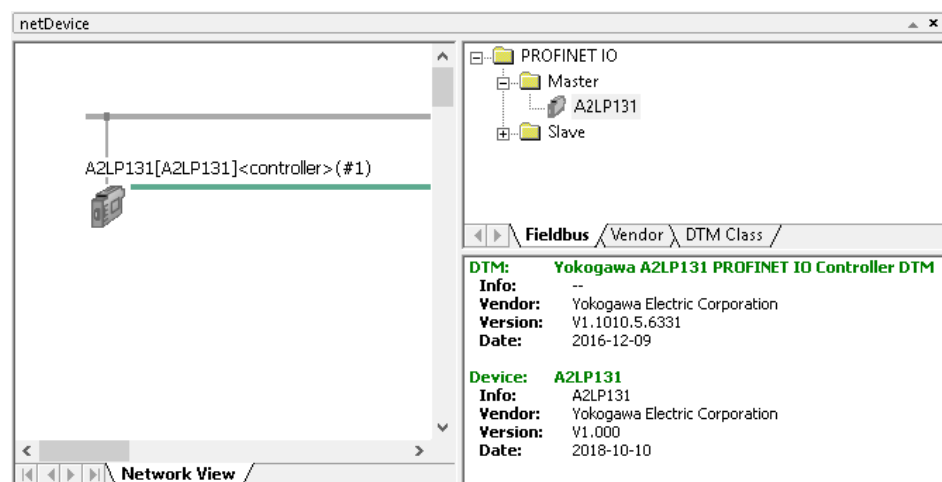


Figure 2: netDevice with A2LP131 - Network View and Device Catalog

3.1.1 netDevice - Network View

The network view displays the current project as graphical network structure. Devices can be added by drag and drop from the device catalog and they are displayed as an icon in the network view. For further information refer to section *Insert Device in Project* on page 27 or to section *Arrange Elements in the Network View* on page 32.

- **Device Symbol and Device Description**

Above or below the device icon the name of the device with the device address are displayed and for master devices a continuous number, the network ID. The position of the text depends on the direction of the connection line.

- **Context Menu**

By a right mouse click on a device icon, the context menu is opened. The context menu contains all entries of the menu **Device** from the menu bar of the frame application. The context menu contains further entries for configuration. A detailed description about the **Device** menu and the context menu you find in section *Menu Device and Context Menu* on page 18.

- **Configuration Dialog**

For most of the DTM the configuration dialog of the appropriate device opens by a double click on a device icon. Otherwise the context menu is opened. In the configuration dialog all device and bus-specific settings can be made. The possibilities of the configuration are manufacturer specific. Closer information for device configuration can be taken from the technical manual of the manufacturer.

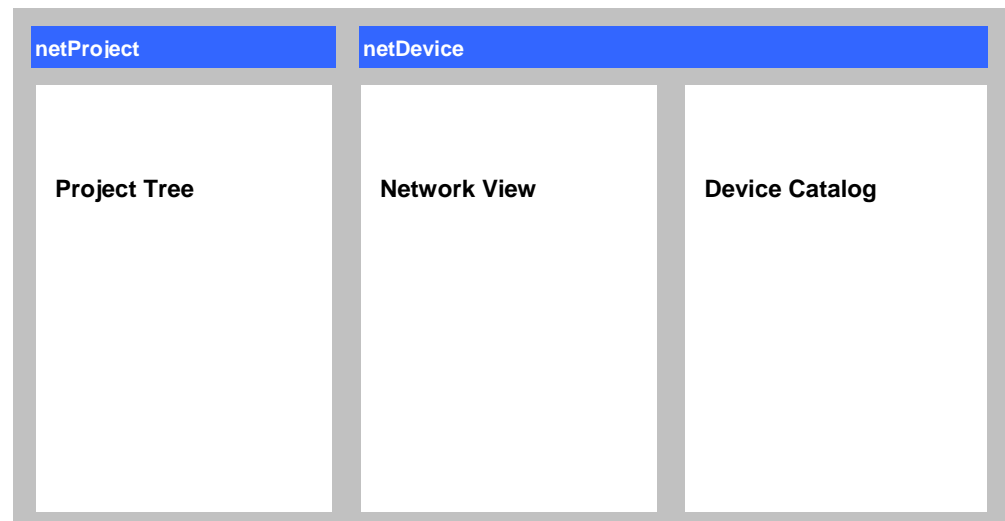


Figure 3: netDevice and netProject - Network View (Principle)

The network view in the **netDevice** window is synchronized with the **netProject** window. That means devices which you insert

- in the network view, are also displayed automatically in the **netProject** window.
- in the **netProject** window, are shown in the network view of the **netDevice** window.

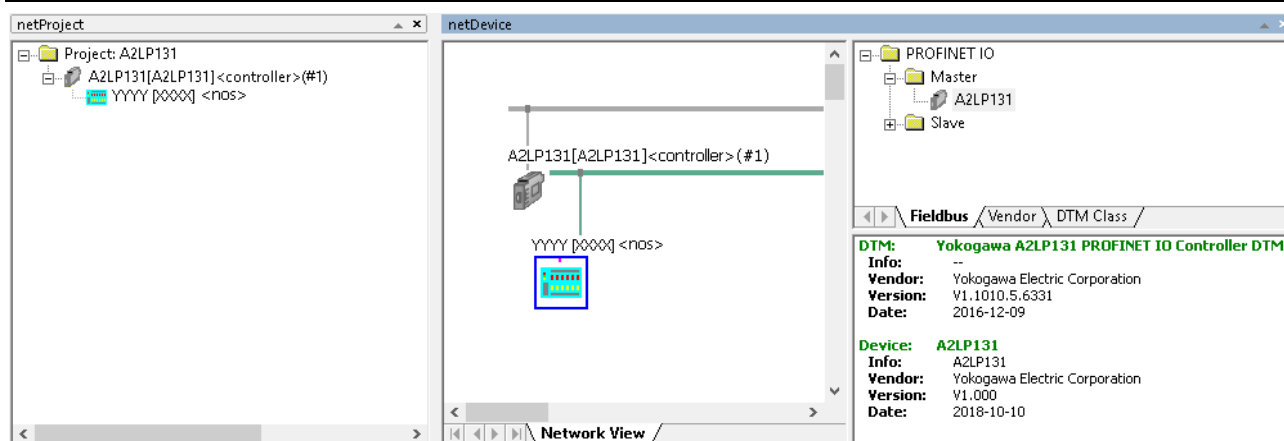


Figure 4: netDevice and netProject with A2LP131 - Network View

3.1.1.1 Notation of the Device Description

The device description is composed as follows:

YYYYYY [XXXX] <1> (#1)	
YYYYYY	Symbolic Name
[XXXX]	Device Description
<nos>	Name of Station
(#1)	Network ID

Figure 5: Notation of the Device Description

Term	Description
Symbolic Name	In the Symbolic Name dialog optionally a symbolic name can be entered. This name is displayed in netDevice and netProject as the first part of the device description. For further information refer to section <i>Change Symbolic Name</i> on page 21.
Device Description	The Device Description indicates the name of the device and can not be edited.
Name of Station	The Name of Station is the device address on the bus and can be changed in the Master DTM configuration dialog.
Network ID	The Network ID is the network address of the Master and it is provided automatically when inserting the device. The network ID is static and cannot be changed. For Slaves no network ID appears.

Table 3: Notation of the Device Description

3.1.2 netDevice - Device Catalog

The device catalog displays a list of devices of all DTM installed on this PC. If the device catalog is loaded, it is shown as tree structure in the **netDevice** window.

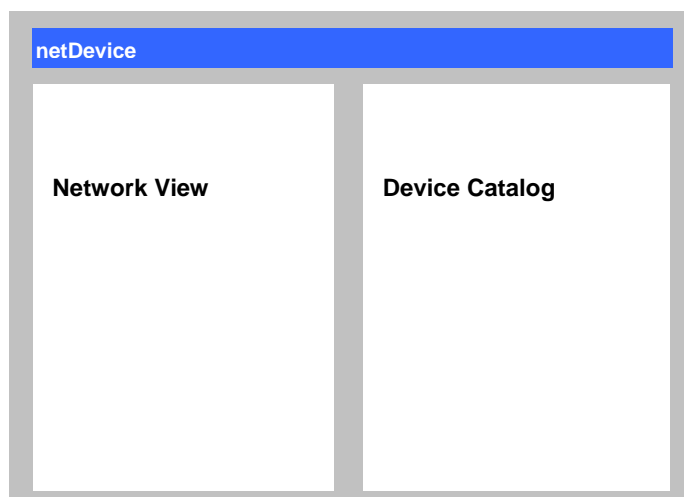


Figure 6: netDevice - Device Catalog (Principle)

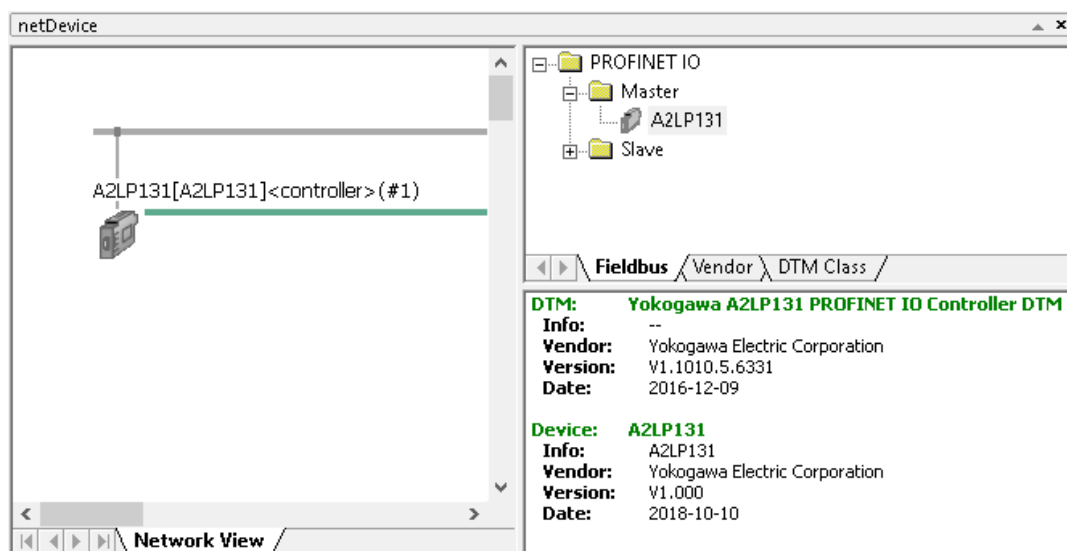


Figure 7: netDevice with A2LP131 - Network View and Device Catalog

Selecting a register card, the devices are arranged by different criteria, e. g. by **Vendor**, **Fieldbus** or **DTM Class**.

Further information about working with the device catalog you find in section *The Device Catalog* on page 25.

3.1.2.1 Notations to the DTM and to the Device

In the lower part of the device catalog window appears detailed information about the selected device and DTM. This includes the *DTM Name*, the *Device Name* as well as information about the **Vendor**, the **Version** and the **Date**. This information will help you to distinguish devices, which are displayed in the device catalog repeatedly under the same name, based on their hardware revision or in reference to the date of manufacture. Under **Info** information such as *firmware version*, the *feature set* or the *device description file name* appears.

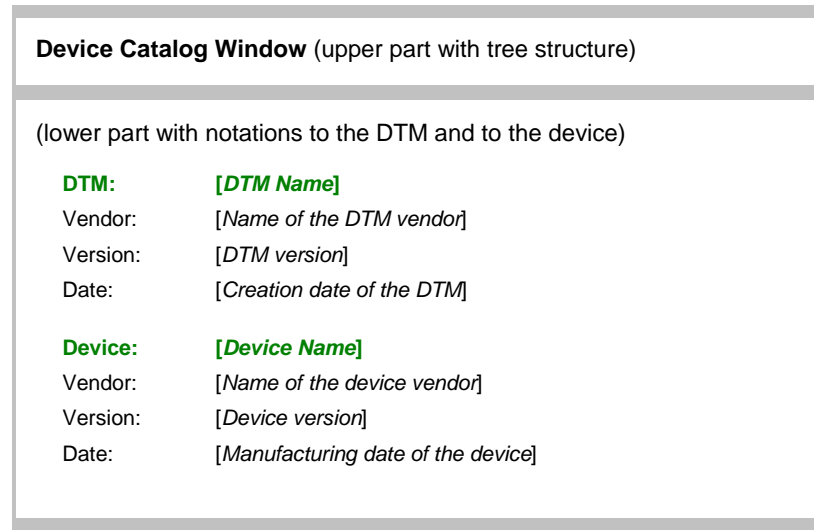


Figure 8: netDevice - Device Catalog - Notations to the DTM and to the Device (Principle)

3.2 netProject - Network

In the **netProject** the current configuration is displayed as project tree. Besides the device icon the name of the device and the device address are shown. For Master devices additionally a continuous number is displayed, the network ID.

The context menu of a device is opened by a right mouse click on the device icon. Here via **Configuration** the configuration dialog of the DTM can be accessed.

Via a double click on a device icon the configuration dialog of the DTM is opened, if supported by the DTM. In the configuration dialog then the parameter and general settings can be made.

Devices which are inserted in the network view are also displayed in the netProject and the other way, too.

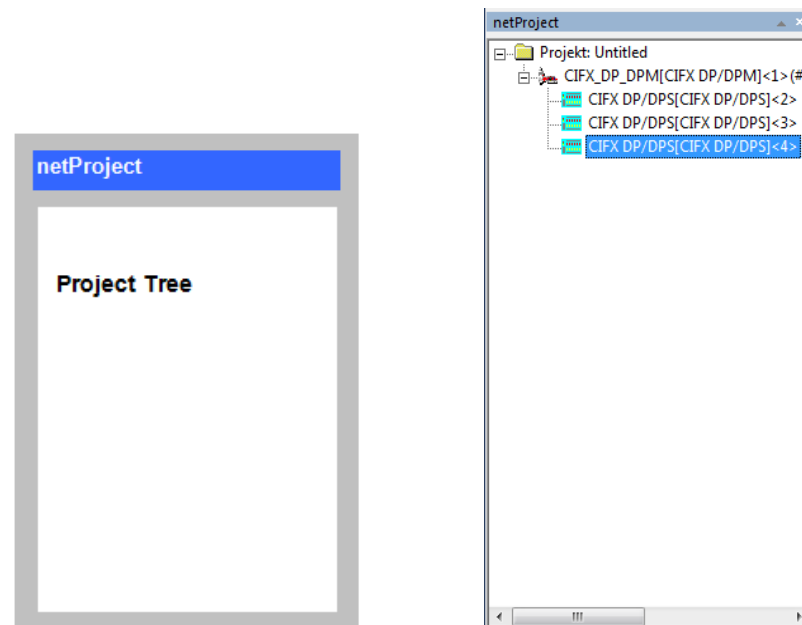


Figure 9: netProject (Principle) (left side), Example (right side)

The current selection in the **netProject** window is synchronized with the network view. More about multiselection you find in section on page 33.

4 Working with the Menus

4.1 The Menu Bar

The both menus **Device** and **Network** are displayed in the menu bar of the frame application, if one of the windows **netProject** or **netDevice** is activated. The menu **Network** is a dynamic menu.

4.2 Menu Device and Context Menu

The menu **Device** can be selected via the menu bar of the frame application.

The **context menu** can be opened via right click on the device icon in the netDevice network view.

Both menus contain several entries in common. Entries which are grayed out are disabled for the selected device. Possibly some entries are not supported by the device.

Selecting via	Description
Menu Device	The menu Device in the menu bar of the frame application includes the entry Configuration .
Context menu (Right mouse click on the device icon)	Additionally to the entries in the menu Device the context menu contains the entries Cut/Copy/Paste (enabled only for Slave devices), Additional Functions , Delete and Symbolic Name . For more refer to section <i>Additional Functions</i> on page 20.

Table 4: Menu Device and Context Menu



For further information to the configuration possibilities of a certain device, open the device specific help file.

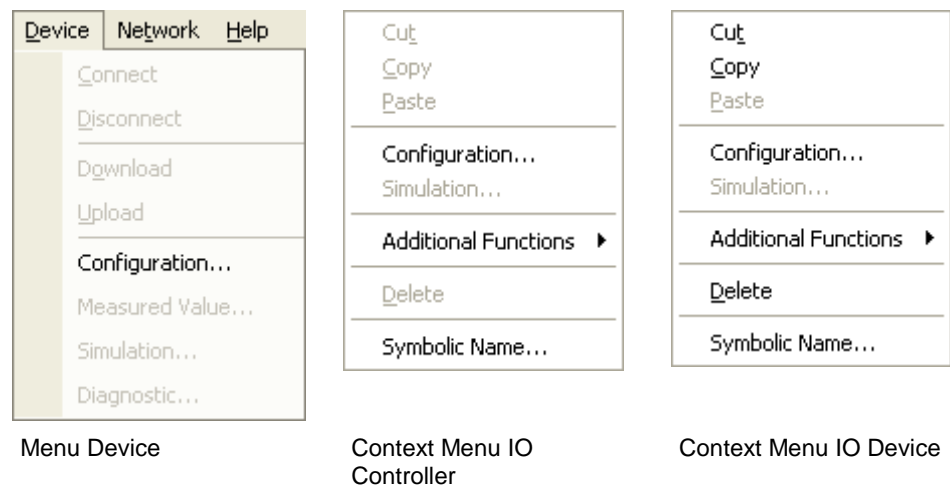


Figure 10: Menu Device (left), example Context Menu for Master or Slave (right)

In the following table you find a description of the entries of the menu **Device** and the further entries of the **context menu**.

Menu	Meaning
Cut/Copy/Paste	Via Cut/Copy/Paste in the netDevice network view you can cut or copy one or multiple Slave devices at the Master bus line and paste them to this or to another Master bus line. The Slave device configuration remains maintained and further configuration is not required. For more refer to section <i>Cutting, copying, pasting Slave Devices</i> on page 28.
Configuration	Via Configuration the device parameters of the currently in the netDevice network view selected device are displayed. The device parameters are manufacturer specific and cannot be specified here. Also the view of the menu can vary depending by the DTM. For further details about the device parameters of the used device refer to the manufacturer documentation.
Additional Functions	Additional Functions > Print > Configuration. For more refer to section <i>Additional Functions</i> on page 20.
Delete	Via Delete the selected device is removed from the project. For more refer to section <i>Delete Device from Project</i> on page 29.
Symbolic Name	Here an arbitrary name can be assigned to the device. This name is displayed in netDevice and netProject as the first part of the device description. For more details (e.g. length) refer to section <i>Change Symbolic Name</i> on page 21.

Table 5: Entries in the Menu Device or Context Menu for the Master or Slave

4.2.1 Cut/Copy/Paste

Via the context menu entries **Cut**, **Copy** or **Paste** one or more Slave devices can be cut or copied in the **netDevice** network view at a Master bus line and then can be inserted at the same Master bus line or at another one. I. e. the Slave devices can be cut or copied at a Master bus line by selecting the Slave devices and using the **Cut** or **Copy** command from the context menu. Then the Slave devices can be inserted at the Master bus line by using the **Paste** command from the context menu. The configuration for the pasted Slave devices remains maintained.

A detailed description for the context menu entries **Cut**, **Copy** or **Paste** is given in section *Cutting, copying, pasting Slave Devices* on page 28.

4.2.2 Additional Functions

Menu Entry	Meaning
Print	The submenu Print contains the printing options of the DTM.

Table 6: Additional Functions



Depending by the software variant the context menu > **Additional Functions** can contain additional or less entries as described here. Further information to this is given in the help of the corresponding DTM.

4.2.3 Delete

With the delete function a device is removed from the project. For further information see section *Delete Device from Project* on page 29.

4.2.4 Change Symbolic Name

Generally the **Device Description** as described under section *Notation of the Device Description* on page 14 is used as device name. Via **Symbolic Name** an additional name for the devices can be set.

➤ Right click on the device icon and select **Symbolic Name**.

➤ The **Change Symbolic Name** dialog is displayed.

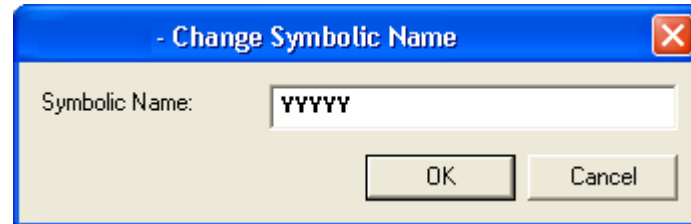


Figure 11: Change Symbolic Name

➤ Enter a symbolic name. Max. 31–63 Unicode characters (UTF-16 coding).

➤ The used name then is displayed in the windows **netDevice** and **netProject** as name of the device.

The **Device Description** is always displayed in squared brackets behind the symbolic name.

YYYYYY [XXXX] <1> (#1)	
YYYYYY	Symbolic Name
[XXXX]	Device Description
<nos>	Name of Station
(#1)	Network ID

Figure 12: Notation of the Device Description

4.3 Menu Network

The menu **Network** includes the network depending entries

- Add Busline/Delete last Busline,
- Device Catalog,
- Import Device Descriptions,
- Print Project Data.



Note: The menu entries **Add Busline** and **Remove last Busline** are independent from the connected hardware; it affects only the graphical view of the network created in the netDevice window. It does not affect the real hardware configuration.

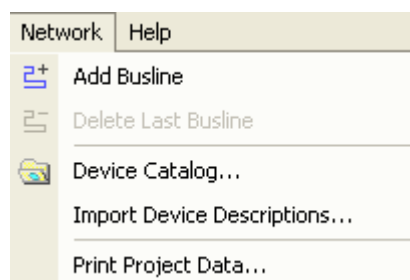


Figure 13: Menu Network

Menu	Meaning
Add Busline	Adds a busline to the selected bus in the netDevice window. A Master or a Master line must be selected.
Delete last Busline	Deletes the last added busline. A Master or a Master line must be selected.
Device Catalog	Selecting the Device Catalog function, the dialog of the device catalog opens. The device catalog can be loaded or if necessary reloaded. For more information about the device catalog refer to section <i>The Device Catalog</i> on page 25.
Import Device Descriptions ...	Via the Import Device Descriptions ... dialog a device can be added using a device description file. For more information refer to section <i>Installing Slave DTM or adding Device Description</i> on page 26.
Print Project Data	With the function Print Project Data the current project data like project name, the fieldbus command structure and the device parameters are printed out.

Table 7: Menu Network

4.3.1 netDevice Network Toolbar

The network toolbar is faded in and faded out via **View > Device**.

This toolbar contains the entries (from the left to the right):

- **Network > Add busline,**
- **Network > Delete Last busline** and
- **Network > Device Catalog**



Figure 14: netDevice Toolbar Network



Note: The **Network** toolbar is enabled, if the focus is put on the **netDevice** or **netProject** window.

5 Working with netDevice and netProject

5.1 Getting Started - Configuration Steps

The following table describes the steps to configure a Master device as it is typical for many cases. It is presupposed that the hardware installation was done.

The configuration for Master devices of different manufacturers may differ for some of the configuration steps of this example.

#	Step	Short Description	For detailed information see section	Page
1	Start Program	Open the configuration software from the YOKOGAWA engineering tool, where you can select to create a new or to open an existing project. The A2LP131 master device is already present in the project.	<i>(See Operating Instruction Manual of the Frame Application)</i>	-
2	Add Slave in the Device Catalog	Add a missing slave in the Device Catalog by importing the device description file to the Device Catalog. - Network > Import Device Descriptions.	<i>Installing Slave DTM or adding Device Description</i>	26
3	Load device catalog	- select Network > Device Catalog , - select button Reload Catalog . The Device Catalog is loaded automatically when the configuration software is opened the first time.	<i>The Device Catalog</i>	25
4	Modify project	Insert slave info configuration (step 5) or configure slave device (step 7) or configure master device (step 8).	-	
5	Insert slave into configuration	Insert Slave into configuration: - in the Device Catalog click to the Slave and insert the device via drag and drop to the Master bus line in the network view.	<i>Insert Device in Project</i>	27
6	Enlarge Project Configuration	If necessary enlarge project configuration: - Therefore select Slave devices for enlargement. - Select context menu Cut and/or Copy . - Add Slave devices via context menu Paste . - Adapt Slave device address in the Master DTM configuration dialog.	<i>Multiselection, Cutting, copying, pasting Slave Devices</i>	28 33
7	Configure Slave device	Configure the Slave device. - Double click to the device icon of the Slave. - The Slave DTM configuration dialog is displayed. In the Slave DTM configuration dialog: - Configure the Slave device. - Close the Slave DTM configuration dialog via OK .	-	-
8	Configure Master device	Configure the Master device. - Double click to the device icon of the Master. - The Master DTM configuration dialog is displayed. In the Master DTM configuration dialog: - Configure the Master device. - Close the Master DTM configuration dialog via OK .	<i>See Operating Instruction Manual, DTM for YOKOGAWA PROFINET IO Controller A2LP131, Configuration of YOKOGAWA Controller</i>	-
9	Arrange Project	The project can be arranged in the network view by use of the mouse.	<i>Arrange Elements in the Network View</i>	32
10	Save project	- Select File > Save .	-	-

Table 8: Getting Started - Configuration Steps

5.2 The Device Catalog

The device catalog lists all devices, for which a DTM is installed on the used PC. A DTM represents one or more devices.

Before the devices can be used in the configuration, the DTM installed on this PC needs to be loaded in the device catalog. This is done automatically during the first start of the configuration software.

5.2.1 Load Device Catalog

Via the menu **Network > Device Catalog** the device catalog is opened and information like name of the device and manufacturer for the individual DTM is displayed.

If a new DTM is installed, the device catalog has to be reloaded, to use the new devices for the configuration. Further information about reloading the device catalog you find in section *Reload Device Catalog* on page 25.

If the **Device Catalog** is loaded, the installed devices are displayed in the device catalog depiction of the **netDevice** window.

The devices can be inserted in the project via drag and drop from the device catalog depiction in the **netDevice** window.

A detailed description about the device catalog depiction in the netDevice window you find in section *netDevice - Device Catalog* on page 15.

5.2.1.1 Reload Device Catalog

If new DTM are installed on the PC or device descriptions are imported, the device catalog must be reloaded to use the new devices in the configuration.

Via the menu **Network > Device Catalog** the device catalog opens and selecting the **Reload** button, it is searched for installed DTM on the PC.



Note: In order to reload the device catalog the, the current user must have **administrative rights**. Otherwise the **Reload** button is grayed out and the device catalog cannot be loaded.

The DTM are started and some information like device name, bus system, manufacturer and device type are read in when loading the device catalog. With this information the configuration software creates the device catalog.

The tree structure shows the current installed devices. Now the devices can be inserted in the project and configured there.

5.3 Installing Slave DTM or adding Device Description

In order to insert further Slave devices to the device catalog:

1. First check, if the Slave manufacturer provides a DTM.
2. Install this DTM.

Alternatively or if no DTM for the Slave is available use the device description file of the device specified by the manufacturer.

Bus System		File Type	File Extension
Fieldbus	PROFINET	GSDML	*.xml

Table 9: Device Description File Types by System

1. Select **Network > Import Device Descriptions**

➤ The file selection dialog **Import Device Description** opens.

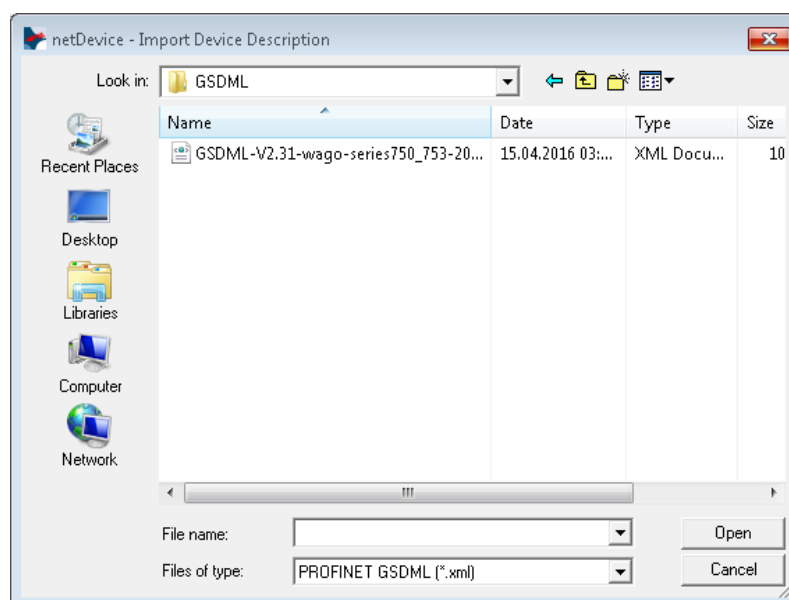


Figure 15: netDevice – Import Device Description

2. Select in the **File of type** list the bus system for which you intend to import device description files.
3. Select the path for the device description file.
4. Possibly select the path for the device icon.
5. Reload the device catalog (see section *Reload Device Catalog* on page 25).

5.4 Insert Device in Project

Devices from the device catalog are added by drag and drop in the configuration area. With this action a DTM-Instance will be created.



Note: Only devices with the same system can be connected to the same network.

In order to select the desired device in the device catalog, note the details about the DTM and the device at the bottom of the window.

- **Insert Slave**



Note: A Slave device can be connected to a bus if it supports the same bus system.

To insert a **Slave** device in a project, the device has to be selected in the depiction of the device catalog in the netDevice window. The device is inserted into the project via drag and drop to the busline of the communication channel of the Master.

If in the netDevice device catalog view devices are displayed repeatedly under the same name, this devices can be differentiated via their revision or the date (see section *Notations to the DTM and to the Device* on page 16).

Please note:

In the **netProject** window the **Slave** device must be inserted on the master icon directly.



Note: The **Master busline** or the **busline between the Master busline and the Slave device symbol** are always displayed in the same *fieldbus* or *protocol specific* color.

5.5 Cutting, copying, pasting Slave Devices

In the **netDevice** network view Slave devices in a project including all of its configuration settings can be cut or copied and then be pasted.

This way the project configuration can be enlarged by Slave devices the device configuration of which is identical or similar to that of Slave devices already existing in the project.

Via the context menu > **Cut**, **Copy** and **Paste** Slave devices in one or more networks can be cut or copied and pasted at a Master bus line. To allow pasting, the Master must support the fieldbus protocols of all Slaves. If, for example PROFINET Slaves have been copied, they can be pasted only to a Master which supports PROFINET.

By this way the configuration needs to be made only once. The newly added Slave devices do not need to be parameterized and configured once more.



Note: If Slave devices are added in a network via the context menu **Cut**, **Copy** and **Paste**, respectively the user needs to reset the device or station address for these devices in the Master configuration dialog.

5.5.1 Enlarging Project Configuration

To enlarge the project configuration via **Cut**, **Copy** or **Paste**, proceed as follows:

1. In the netDevice network view in one or more networks select the Slave devices to be added (see also section *Multiselection* on page 33).
2. Cut or copy the Slave devices via context menu **Cut** or **Copy**.
3. Via the context menu **Paste** paste these Slave devices at the Master bus line in the same or another network.
4. In the Master DTM configuration dialog adapt the device or station address of these Slave devices, device dependent also via the Master DTM context menu **Additional Functions**.

5.6 Delete Device from Project

To remove a device from the project configuration:

- First select the device by a mouse click.
- Then press the **Del** button on the keyboard.
- Or select **Delete** in the context menu of the device.
- ⇒ A security question appears, if the device really shall be deleted.



Figure 16: Security Question Delete Device



Note: If a device is deleted, all settings for this device get lost.

- Answer to the request by **Yes**.
- ⇒ The device is removed from the project configuration.

If a communication channel should be deleted that has connected Slaves, another security question appears:



Figure 17: Security Question Delete entire Network



Note: If a device is deleted, which has additional devices assigned to; the entire network is also deleted. This might include Gateways with Sub networks.

- Answer to the request by **Yes**.
- ⇒ The device is removed from the project configuration.

5.7 Working with Buslines

5.7.1 Description of the Buslines

Significance of the colors for the bus lines:

- **Root-bus line:** The **gray** bus line is the root bus line. All Masters are connected to this line.
- **Master Busline or Branch Line of the Slave device:** These bus lines are always in the respective *specific fieldbus or protocol* color.





Colors of the Bus Line		Meaning
	gray	Root Bus line
	green	fieldbus specific for PROFINET Master
	magenta	fieldbus specific for PROFIBUS Master
	dark green	fieldbus specific for CANopen Master

Table 10: Colors of the Bus Lines

5.7.2 Add / Remove Busline

In the network view in the netDevice window the project can be arranged and edited graphically. That means, buslines can be added and removed.



Note: The changes add / remove busline in the network view have no effect to the real hardware configuration.

- **Add Busline**

To add a busline:

- Select the busline.
- Select **Network > Add Busline**.

Or

- Select  in the toolbar.

Or

- Right click on the busline and select **Add Busline**.




- A busline is added on the active bus. If more than one bus is selected, the busline is added only at the first selected bus.

- **Delete Last Busline**

To remove a busline:

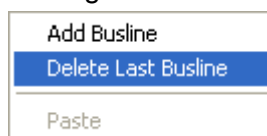
- Select a busline.
- Select **Network > Delete Last Busline**.

Or

- Select  in the toolbar.

Or

- Right click on the busline and select **Delete Last Busline**.



- The lastly added busline of this bus is removed. If more than one bus is selected, only the busline of the first bus is deleted.

5.7.3 Arrange Elements in the Network View

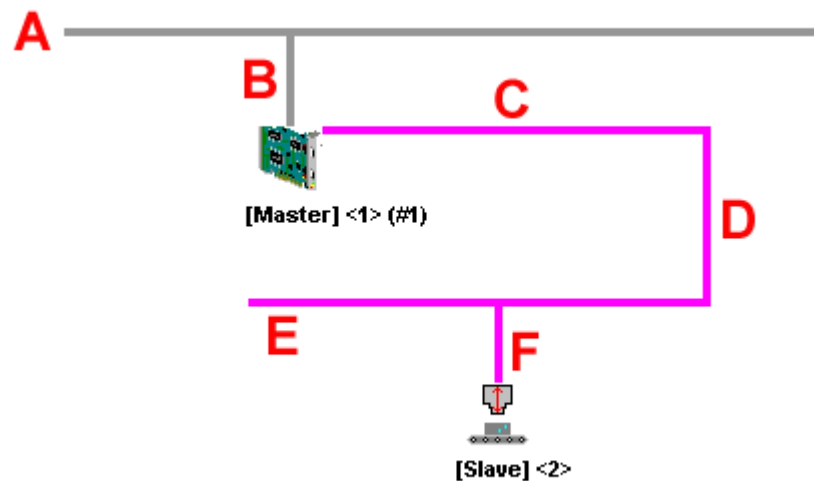


Figure 18: Buslines

Buslines and device icons can be selected and moved to arrange them in the graphical configuration.

To move a busline or an icon it is necessary to select it by clicking on it. A selected busline or device is displayed with a blue colored frame around the icon.

- **Move Device Icon**

Each device icon in the project can be moved by clicking and holding the left mouse button. The fixed buslines move with the icons and the built configuration persists.

Another possibility to move the selected device icons consists in using the cursor keys. If the SHIFT key is pressed, the icons are moved faster.

- **Move Buslines**

Busline **A** is the **Root Busline** and it can be positioned by holding the mouse button.

Busline **B** is the **Branch Line of the Master device** and can not be moved. If the Master Icon is moved, the busline moves with this icon automatically.

Busline **C** is the **basic line of the Fieldbus system** (Master bus line) inherently. It also can not be moved singly, but it is moved with the device icons automatically.

Busline **D** and **E** are **variable added buslines** (part of the Master bus line) of the Fieldbus. They can be selected and moved or resized.

Busline **F** is the **branch line of the Slave device** (bus line between the Master bus line and the Slave device icon). It is the connection line from the Slave to the bus. This line is moved automatically (like busline B) with the device icon. This line can not be moved independently.

5.7.4 Multiselection

Multiselection makes it possible to select more than one device and/or busline. This is helpful if more than one element should be arranged at the same time. Two possibilities are available for multiselection:

- **Only with the Mouse**

- Click in the configuration window.
- Hold the mouse button and draw a frame around the elements you want to select.

- **With Mouse and the SHIFT Key**

- Select the first element with a left mouse click (busline or device icon).
- Hold the SHIFT key on the keyboard and click on the next elements you want to select.



Note: Only buslines, which can be changed manually, can be selected. Descriptions of the single buslines you find in section *Arrange Elements in the Network View* on page 32.

6 Configuration

Offline Configuration

The configuration of a device is done in the DTM configuration dialog of the device.

This one can be opened via double click to the device in the netDevice network view, via the context menu **Configuration** or via **Device > Configuration**.

If a device is parameterized **offline** in the application, the configuration has to be loaded into the device via the download to transfer the parameter data into the device.

When a configuration already exists in the device, this configuration is overwritten by the download of the new parameter.

7 Appendix

7.1 User Rights

User-rights are set within the FDT-container.



Note: Administrator rights are always used.

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7.4 Glossary

Master

Master devices determine the data traffic on the bus. A master may send messages without external request, if it is in the possession of the token (bus access authorization).

Slave

Slave devices are peripheral devices, like for example I/O devices or drives. Slave devices are also called passive participants. They do not receive the bus access authorization. That means, they may only accept received messages from the Master or send a message to the Master after enquiry of the Master.

DTM

Device Type Manager.

The Device Type Manager (DTM) is a software module with graphical user interface for the configuration of device.

FDT

Field Device Tool

FDT specifies an interface, in order to be able to use DTM (Device Type Manager) in different applications of different manufacturers.

7.5 Contacts

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