

**Operating Instruction Manual**  
**YOKOGAWA netDevice and netProject (ALP121)**  
**FDT Container**

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# 1 Introduction

## 1.1 About this Manual

The configuration software SYCON.net/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.

ALP121 is the PROFIBUS DP Communication Module for CENTUM VP 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>	10
	<i>netProject - Network</i>	15
Working with the Menus	<i>The Menu Bar</i>	16
	<i>Menu Device and Context Menu</i>	16
	<i>Menu Network</i>	20
Working with netDevice and netProject	<i>Getting Started - Configuration Steps</i>	22
	<i>The Device Catalog</i>	23
	<i>Installing Slave DTM or adding Device Description</i>	24
	<i>Insert Device in Project</i>	25
	<i>Cutting, copying, pasting Slave Devices</i>	26
	<i>Delete Device from Project</i>	27
	<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	2012-05-16	1.1201	AxSyconu.ocx	all	Created

### 1.1.3 Conventions in this Manual

Operation instructions, a result of an operation step or notes are marked as follows:

**Operation Instructions:**

➤ <instruction>

or

1. <instruction>

2. <instruction>

**Results:**

↻ <result>

**Notes:**



**Important:** <important note>



**Note:** <note>



<note, where to find further information>

## 1.2 Documentation Overview

The following table lists the documents for SYCON.net/YOKO for ALP 121:

Content	Document Name
General description of netFrame: Description of the output window, menus and toolbars.	SYCONnet netFrame YOKOGAWA ALP121 OI 01 EN.pdf
General description of netDevice. Graphical network view, device catalog and the project tree. Description of <ul style="list-style-type: none"> <li>▪ menus,</li> <li>▪ context menus,</li> <li>▪ insert device, cut/copy/paste device, additional functions (print), delete device,</li> <li>▪ symbolic name,</li> <li>▪ network menu,</li> <li>▪ network toolbar.</li> </ul> Getting started/Configuration steps. How to add a device description. Working with bus lines. How to import SyCon-PB/YOKO project.	SYCONnet netDevice YOKOGAWA ALP121 OI 01 EN.pdf
Description of the configuration dialogs to configure the PROFIBUS DP master. Getting started/Configuration steps. Configuration of the master <ul style="list-style-type: none"> <li>▪ bus parameters,</li> <li>▪ DPM management (DPM Settings and DPM Layout),</li> <li>▪ station table,</li> <li>▪ master settings,</li> <li>▪ time sync.</li> </ul>	PROFIBUS DP Master YOKOGAWA ALP121 DTM OI 01 EN.pdf
Description of the configuration dialogs to configure the PROFIBUS DP slave. Getting started/Configuration steps. Configuration of the slave <ul style="list-style-type: none"> <li>▪ general,</li> <li>▪ modules,</li> <li>▪ parameter,</li> <li>▪ groups,</li> <li>▪ extension,</li> <li>▪ DPV1,</li> <li>▪ DPV2,</li> <li>▪ redundancy.</li> </ul>	PROFIBUS DP Generic Slave DTM YOKOGAWA OI 01 EN.pdf

Table 2: Documentation Overview

## 1.3 Legal Notes

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## 2 netDevice and netProject

### 2.1 netDevice

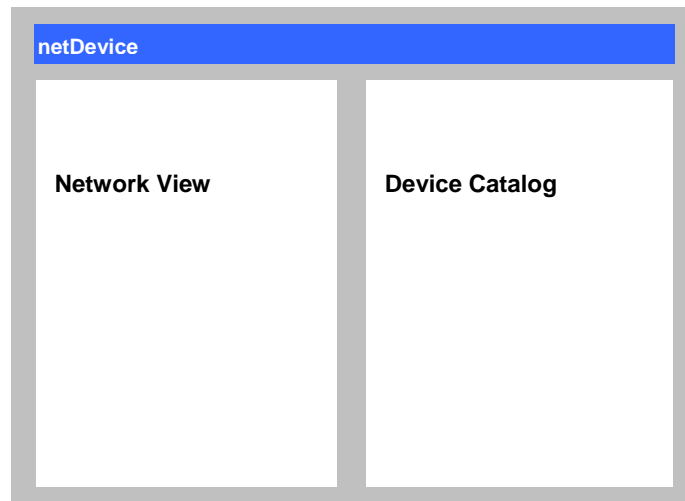


Figure 1: netDevice - Network View and Device Catalog (Principle)

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

- **Graphical Network View**

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

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

A detailed description of the network view you find in section *netDevice - Graphical Network View* on page 11.

- **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 11.

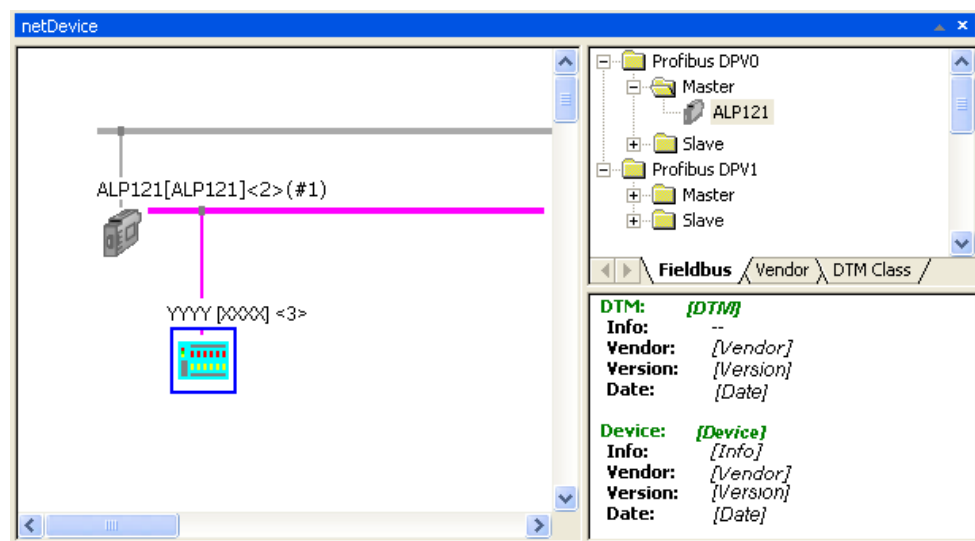


Figure 2: netDevice with ALP121 - Network View and Device Catalog

## 2.1.1 netDevice - Graphical Network View

The graphical network view displays the actual 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 25 or to section *Arrange Elements in the Graphical 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 16.

- **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.

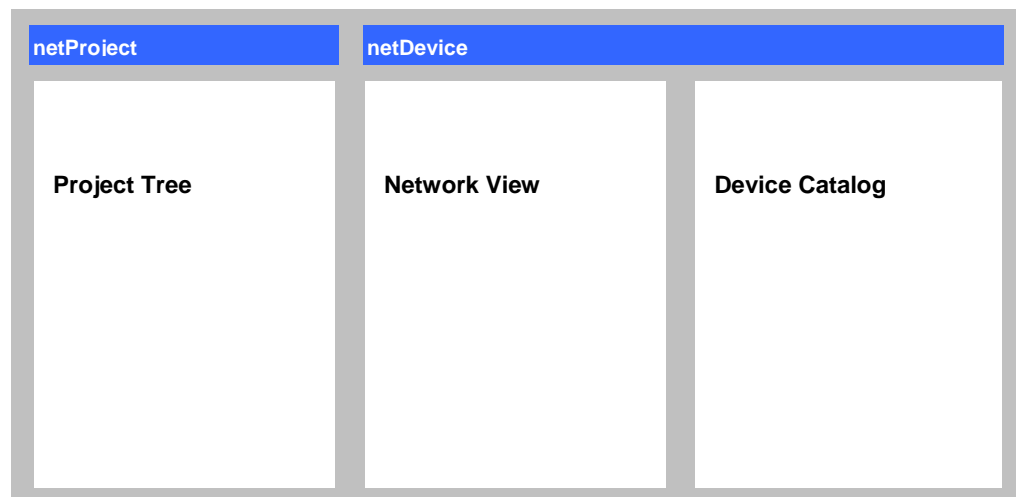


Figure 3: netDevice and netProject - Graphical Network View (Principle)

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

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

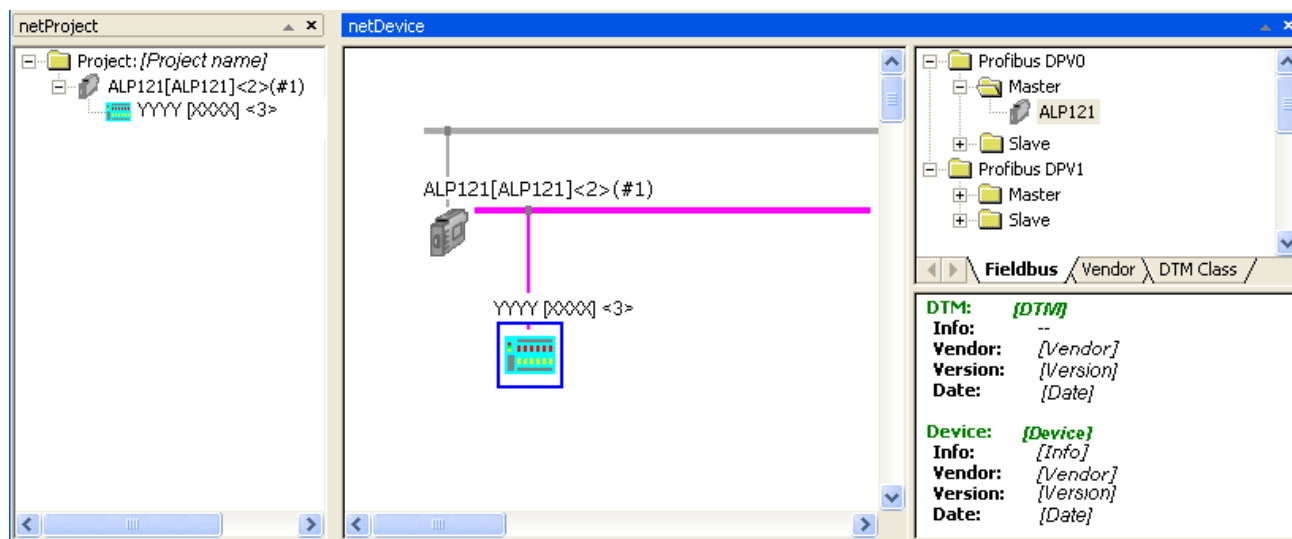


Figure 4: netDevice and netProject with ALP121 - Graphical Network View

### 2.1.1.1 Notation of the Device Description

The device description is composed as follows:

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

Figure 5: Notation of the Device Description

Term	Description
<b>Symbolic Name</b>	In the <b>Symbolic Name</b> dialog optionally a symbolic name can be entered. For further information refer to section <i>Change Symbolic Name</i> on page 19.
<b>Device Description</b>	The <b>Device Description</b> is the name of the device and is not editable.
<b>Station Address</b>	The <b>Station Address</b> is the device address on the bus and can be changed in the Master DTM configuration dialog.
<b>Network ID</b>	The <b>Network ID</b> 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

## 2.1.2 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.

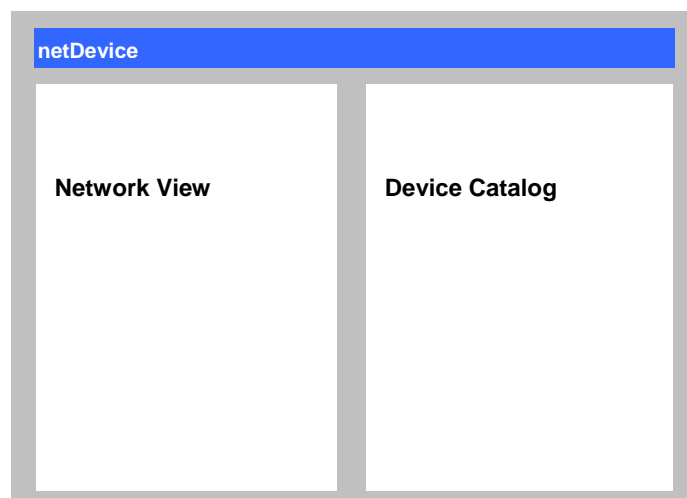


Figure 6: netDevice - Device Catalog (Principle)

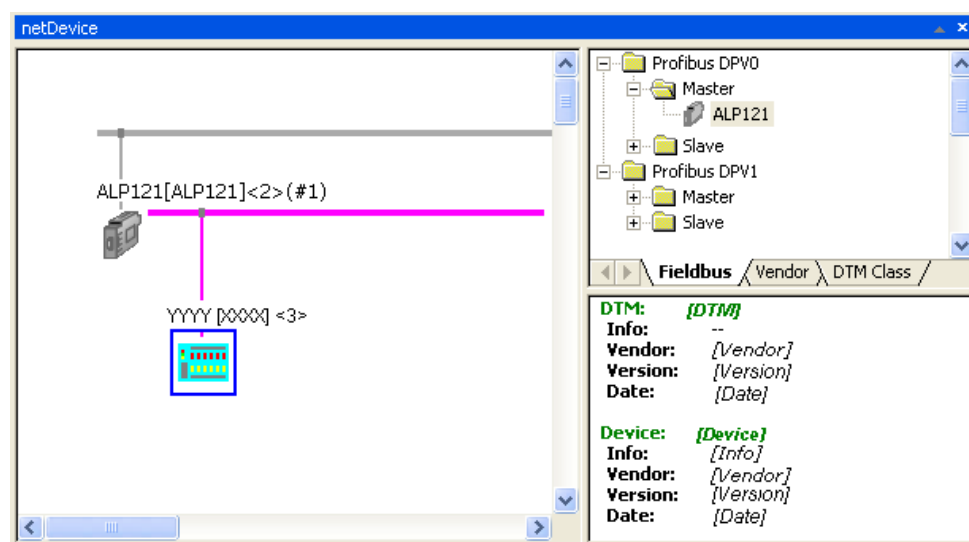


Figure 7: netDevice with ALP121 - Network View and Device Catalog

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 23.

### 2.1.2.1 Notations to the DTM and to the Device

In the lower part of the window with the device catalog for the respectively selected device and the corresponding DTM the name, the **Vendor**, the **Version** as well as the **Date** are displayed. This allows to differentiate devices, which are displayed in the device catalog repeatedly under the same name, based on their revision or the date.

The screenshot shows a window titled "Device Catalog Window (upper part with tree structure)". Below the title bar, there is a section labeled "(lower part with notations to the DTM and to the device)". This section contains two groups of labels and values. The first group is for the DTM, with a green label "DTM:" followed by a green value "[DTM Name]". Below this are three lines: "Vendor: [Name of the DTM vendor]", "Version: [DTM version]", and "Date: [Creation date of the DTM]". The second group is for the Device, with a green label "Device:" followed by a green value "[Device Name]". Below this are three lines: "Vendor: [Name of the device vendor]", "Version: [Device version]", and "Date: [Manufacturing date of the device]".

<b>Device Catalog Window</b> (upper part with tree structure)	
(lower part with notations to the DTM and to the device)	
<b>DTM:</b>	<b>[DTM Name]</b>
Vendor:	[Name of the DTM vendor]
Version:	[DTM version]
Date:	[Creation date of the DTM]
<b>Device:</b>	<b>[Device Name]</b>
Vendor:	[Name of the device vendor]
Version:	[Device version]
Date:	[Manufacturing date of the device]

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

## 2.2 netProject - Network

In the **netProject** the actual 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 graphical network view are also displayed in the netProject and the other way, too.

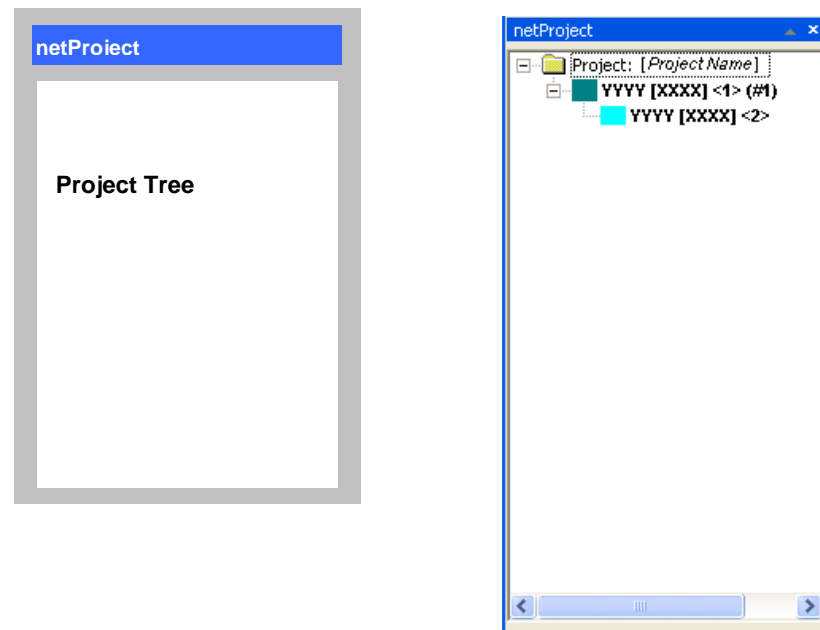


Figure 9: netProject (Principle) (left side), Example (right side)

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

## 3 Working with the Menus

### 3.1 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.

### 3.2 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 <b>Device</b>	The menu <b>Device</b> in the menu bar of the frame application includes the entries <b>Configuration</b> .
Context menu (Right mouse click on the device icon)	Additionally to the entries in the menu <b>Device</b> the context menu contains the entries <b>Cut/Copy/Paste</b> (enabled only for Slave devices), <b>Additional Functions</b> , <b>Delete</b> and <b>Symbolic Name</b> .

Table 4: Menu Device and Context Menu



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



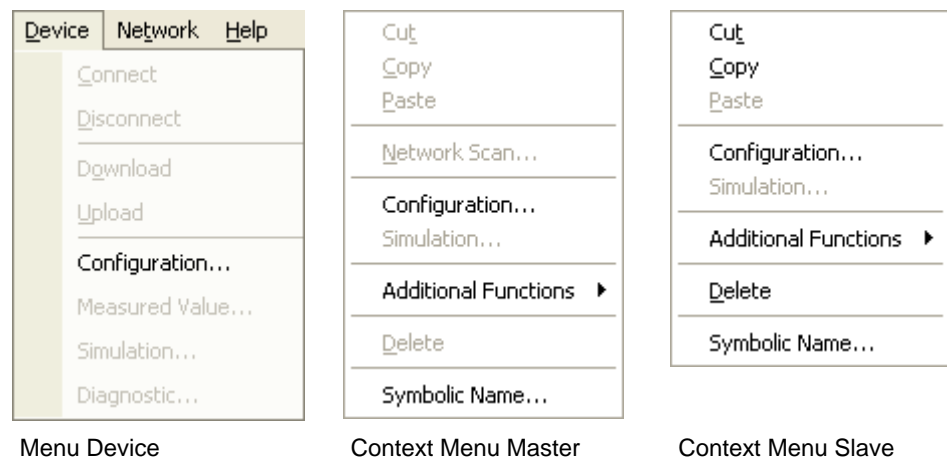


Figure 10: Menu Device (left), Example Context Menu for Master or Slave (right)

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
<b>Cut/Copy/Paste</b>	Via <b>Cut/Copy/Paste</b> in the netDevice network view one or multiple Slave devices can be cut or copied at the Master bus line and pasted at this or at an other Master bus line. The Slave device configuration remains maintained and further configuration is not required
<b>Configuration</b>	Via <b>Configuration</b> the device parameters of the actual 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.
<b>Additional Functions</b>	<b>Additional Functions &gt; Print &gt; Configuration.</b>
<b>Delete</b>	<b>Delete</b> removes the selected device.
<b>Symbolic Name</b>	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.

Table 5: Menu Device

### 3.2.1 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 26.

### 3.2.2 Additional Functions

Menu Entry	Meaning
<b>Print</b>	The submenu <b>Print</b> 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.

### 3.2.3 Delete

With the delete function a device is removed from the project. For further information see section *Delete Device from Project* on page 27.

### 3.2.4 Change Symbolic Name

Generally the **Device Description** as described under section *Notation of the Device Description* on page 12 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.

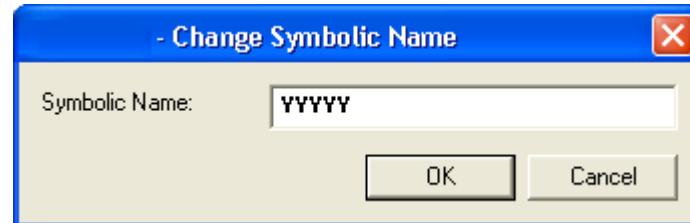


Figure 11: Change Symbolic Name

➤ Enter a symbolic name. Max. 32 letters (UNICODE).

⇒ 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
<1>	Station Address
(#1)	Network ID

Figure 12: Notation of the Device Description

### 3.3 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.

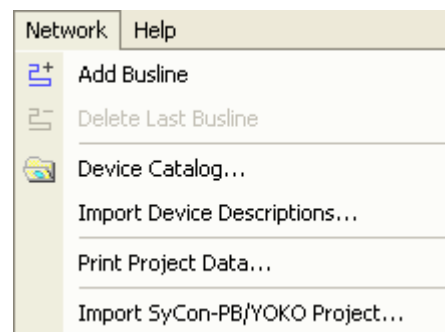


Figure 13: Menu Network

Menu	Meaning
<b>Add Busline</b>	Adds a busline to the selected bus in the netDevice window. A Master or a Master line must be selected.
<b>Delete last Busline</b>	Deletes the last added busline. A Master or a Master line must be selected.
<b>Device Catalog</b>	Selecting the <b>Device Catalog</b> 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 23.
<b>Import Device Descriptions ...</b>	Via the <b>Import Device Descriptions ...</b> 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 24.
<b>Print Project Data</b>	With the function <b>Print Project Data</b> the actual project data like project name, the fieldbus command structure and the device parameters are printed out.
<b>Import SyCon-PB/YOKO Project</b>	Via the function <b>Import SyCon-PB/YOKO Project</b> a project which was created with V2.959 can be imported. For more information refer to section <i>Importing SyCon-PB/YOKO Project</i> on page 28.

Table 7: Menu Network

### 3.3.1 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.

## 4 Working with netDevice and netProject

### 4.1 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 ALP121 master device is already present in the project.	-	-
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. - <b>Network &gt; Import Device Descriptions.</b>	<i>Installing Slave DTM or adding Device Description</i>	24
3	Load device catalog	- select <b>Network &gt; Device Catalog</b> , - select button <b>Reload Catalog</b> . The Device Catalog is loaded automatically when the configuration software is opened the first time.	<i>The Device Catalog</i>	23
4	Modify project  or import existing project	Insert slave info configuration (step 5) or configure slave device (step 7) or configure master device (step 8).  To import a SyCon-PB/YOKO project: - select <b>Network &gt; Import SyCon-PB/YOKO Project</b> , - import the SyCon-PB/YOKO project (V2.959).	<i>Importing SyCon-PB/YOKO Project</i>	-  28
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 <b>to the Master bus line</b> in the network view.	<i>Insert Device in Project</i>	25
6	Enlarge Project Configuration	If necessary enlarge project configuration: - Therefore select Slave device(s) for enlargement. - Select context menu <b>Cut</b> and/or <b>Copy</b> . - Add Slave device(s) via context menu <b>Paste</b> . - Adapt Slave device address in the Master DTM configuration dialog.	<i>Multiselection, Cutting, copying, pasting Slave Devices</i>	26  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 <b>OK</b> .	<i>See Operating Instruction Manual, Generic Slave DTM for YOKOGAWA PROFIBUS DP Slave Devices, Configuration of PROFIBUS DP Slave Devices or the corresponding DTM documentation.</i>	-
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 <b>OK</b> .	<i>See Operating Instruction Manual, DTM for YOKOGAWA PROFIBUS DP Master Device ALP121, Configuration of YOKOGAWA Master Device</i>	-
9	Arrange Project	The project can be arranged in the graphical network view by use of the mouse.	<i>Arrange Elements in the Graphical Network View</i>	32
10	Save project	- select <b>File &gt; Save</b>	-	-

Table 8: Getting Started - Configuration Steps

## 4.2 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.

### 4.2.1 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 23.

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 13.

#### 4.2.1.1 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 actual installed devices. Now the devices can be inserted in the project and configured there.

## 4.3 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	PROFIBUS-DP	GS, GSD, GSE, GSF	*.gs, *.gsd, *.gse, *.gsf

Table 9: Device Description File Types by System

1. Select **Network > Import Device Descriptions**.
- The file selection dialog **Import Device Description** opens.

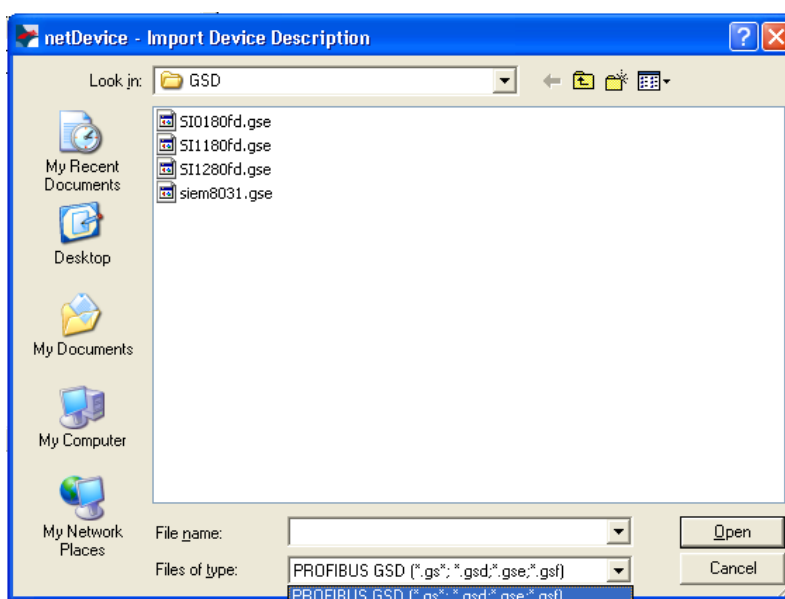


Figure 15: netDevice – Import Device Description

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 23).



## 4.4 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.

---

- **Insert Slave**



---

**Note:** A 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 14).

**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.

---

## 4.5 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 DPV0-PROFIBUS Slaves and PROFIBUS-DPV1 Slaves have been copied, they can be pasted only to a Master which supports DPV0 and DPV1.

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.

### 4.5.1 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**.

## 4.6 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.

## 4.7 Importing SyCon-PB/YOKO Project



**Note:** Via the function **Import SyCon-PB/YOKO Project** only PROFIBUS projects created with SyCon-PB/YOKO V2.959 can be imported.

### Importing Rules for the Master

Page	Parameter	Value after import
-	Master device	Master ALP 111 is replaced by ALP 121
Master Setting	Start of bus communication	Controlled by application
	Process image storage format	Big endian (MSB first)
	Module Alignment	Byte boundaries
	Process data handshake	Buffered, host controlled
	Watchdog time	Value from old project
Bus parameters	Profile	Profile <i>PROFIBUS DP</i> or <i>PROFIBUS PA</i> as set in old project. <b>Note:</b> If profile <i>PROFIBUS DP Master Redundant</i> or <i>PROFIBUS PA Master Redundant</i> is needed, the user has to set it after the import is finished.
	Baudrate	Baudrate from old project
	Bus parameters	Recalculated
	Auto Clear ON	Off (not checked)
DPM Settings	Automatically reserve memory space for each new slave	Off (not checked)
DPM Layout	Offset addresses	All addresses will be recalculated
Time Sync	Overwrite clock sync interval for all slaves with Time Sync support	Checked

Figure 18: Importing Rules Master

### Importing Rules for the Slave

The module configuration, parameter data, group and DPV1 settings are imported.

Yokogawa PROFIBUS Generic Slave DTM includes new features which are not available in SyCon-PB/YOKO. These allows:

- Redundancy and TimeStamp configuration for slaves supporting these functionality,
- Usage of Jokerblock if required by slave (GSD).

While importing a SyCon-PB/YOKO project file (.pb) into SYCON.net/YOKO Yokogawa a PROFIBUS Generic Slave DTM will automatically parse the GSD/GSE/GSG file for Redundancy, TimeStamp and Jokerblock support. If the slave device supports these functions, the corresponding parameters are enabled for configuration. The user has to verify if these functions should be deactivated or activated for his use case for each slave.

## Preparation



**Note:** The device catalog of SYCON.net must contain all slave devices, which are used in the SyCon-PB/YOKO project. Use the **identical** device description file(s) as used in the SyCon-PB/YOKO project. Add these device description files (slave devices) to the device catalog using **Network > Import Device Descriptions**.



**Note:** The menu **Import SyCon-PB/YOKO Project** is only available if no slave is inserted in the project.

## Importing a SyCon-PB/YOKO V2.959 PROFIBUS project

1. Add all slaves to the device catalog, which are used in SyCon-PB/YOKO project. Use **Network > Import Device Descriptions** to import missing slave devices.
  2. Select **Network > Import SyCon-PB/YOKO Project**.
  3. In the dialog select the SyCon-PB/YOKO project file, which has file extension \*.pb
  4. Click **Open**.
- The SyCon-PB/YOKO project is analyzed.
  - The project gets imported if possible and is displayed in the graphical network view
- or**
- If the project import is not possible, then it is refused. See reasons below.

The project import is refused, if

- the old project contains more than one master,
- the master station address is not equal to 2,
- if a slave device has station address 0 or 1.

## 4.8 Working with Buslines

### 4.8.1 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
	magenta	fieldbus specific for PROFIBUS Master
	dark green	fieldbus specific for CANopen Master

Table 10: Colors of the Bus Lines

## 4.8.2 Add / Remove Busline

In the graphical 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 graphical 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:

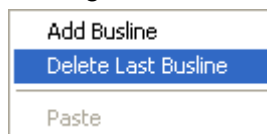
- Select a busline.
- Select **Network > Delete Last Busline**.

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.

### 4.8.3 Arrange Elements in the Graphical Network View

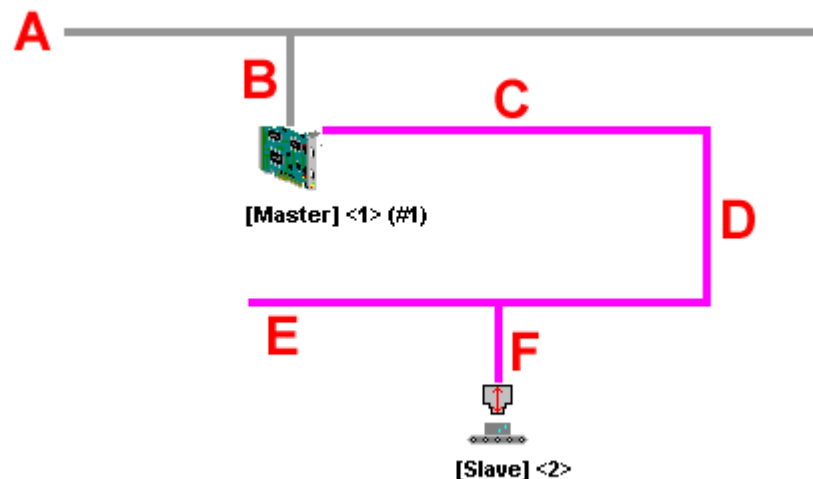


Figure 19: Buslines

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.



## 4.8.4 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 Graphical Network View* on page 32.

## 5 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.

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## 7 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.