GF_EXPRESS

User Guide

code: 80168D - 06/2012

GEFRAN

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Sommario

GF_eXpress **1**

Introduction....1
PC requirements....1
Installation....2
Installation of Catalog....2
Installation of GF_eXpress and RS-USBX driver....4
Usage of RS-USBX with Windows Xp....8
Usage of RS-USBX with Windows 7 64bit version....11
Wiring with Gefran instrumentation....14
Work session....17
Parameters file....20
Communication....20
Parameter control....22
Parameter value....22
Read and write commands....23
On-line mode....24
Read-only parameters....24
Saving parameters....24
Menu selection windows....24
Parameter selection menu....24
Wizard selection menu....25
Recipe selection....26
Alarms....26
Monitor window....27
Graphic window....27
Remote Update....28
Import Export configuration....30
Maintenance....30
GFX4....31
Converting E@syDrives saved .par file....32
Convert MDPLC par file....33

Glossario **35**

Indice **37**

GF_eXpress

Introduction

The GF_eXpress configurator lets you configure and use GEFRAN devices. To simplify configuration, the

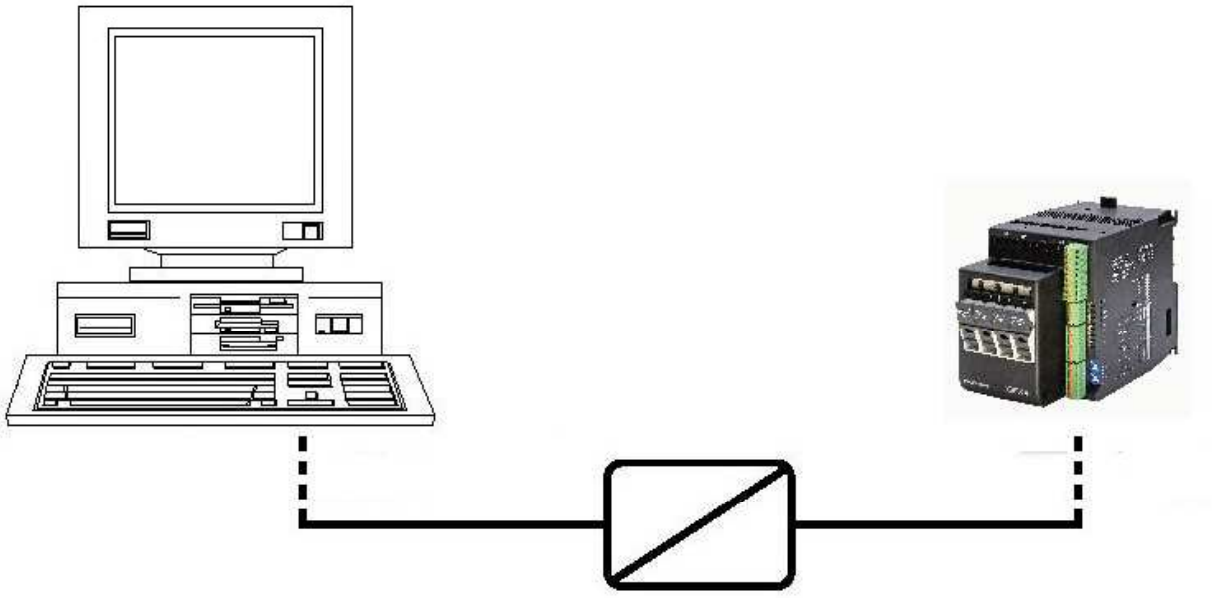
programme resembles a typical Windows™ environment, with toolbar and statusbar.

Possible operations:

- Serial communication with the device (SLINK3, CanOpen, Cencal, Modbus protocols)
- Parameter reading and writing
- Parameter saving in device flash memory
- Checking of device status

PC requirements

- Pentium (or higher) processor
- Adapter for RS232/RS485/TTL and/or CANOPEN communication
- Windows 2000 (or higher) operating system



Communication adapter

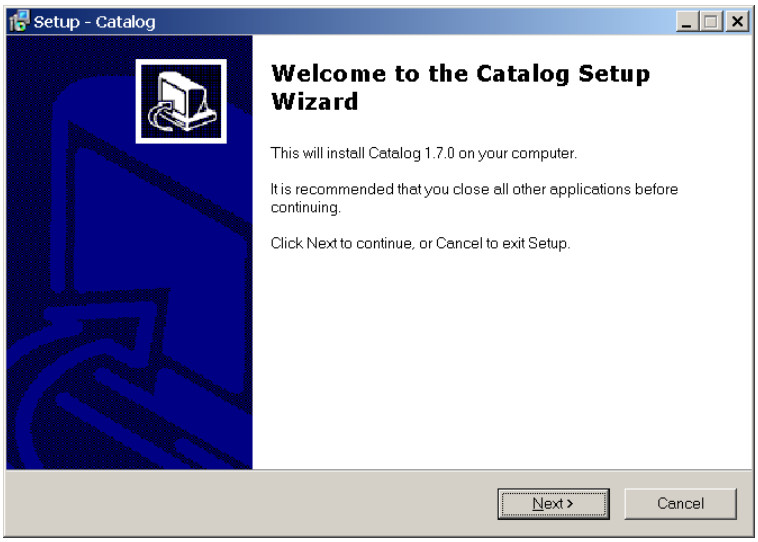
Installation

The GF_eXpress installation must be preceded by the installation of Catalog.

Installation of Catalog

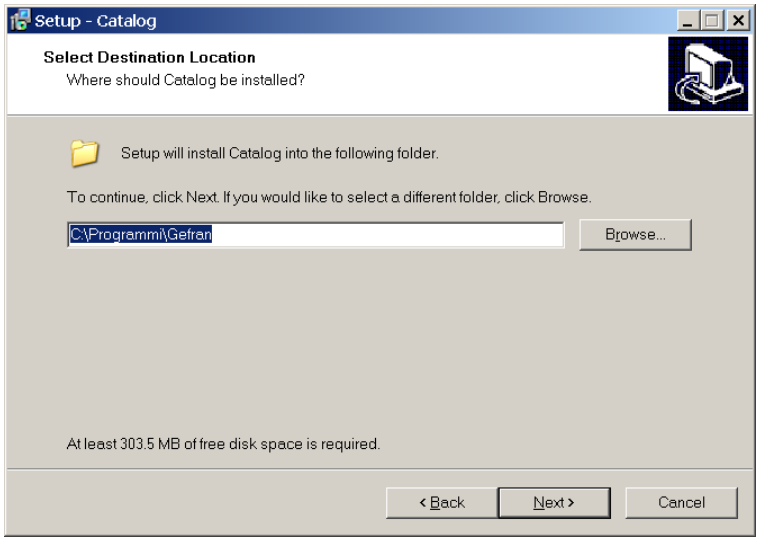
Follow the steps below to install Catalog:

- Execute *GF_ Catalog _#version#.exe* and the welcome screen appears:

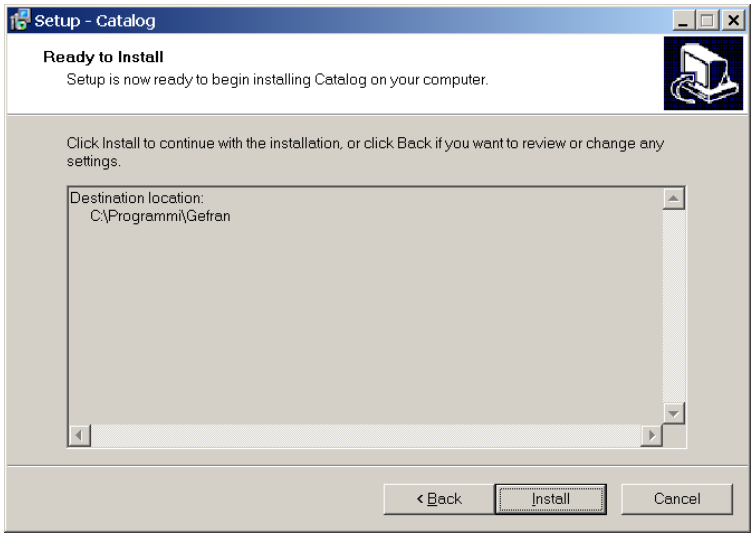


- Click *Next* to proceed to the next screen

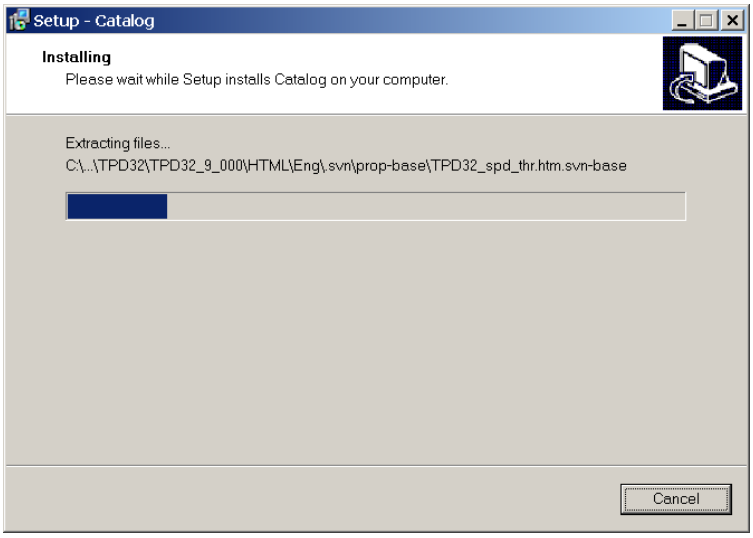
- Read the license agreement, choose *I accept the agreement* and click *Next* to proceed



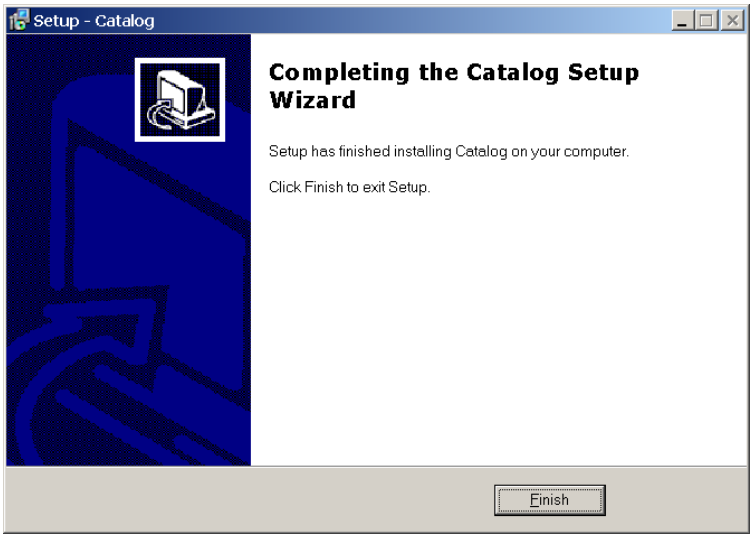
- Select the installation folder and click *Next* to proceed



- Check the settings and click *Install* to proceed; the extract phase starts



At the end of the extract phase the last window appears:

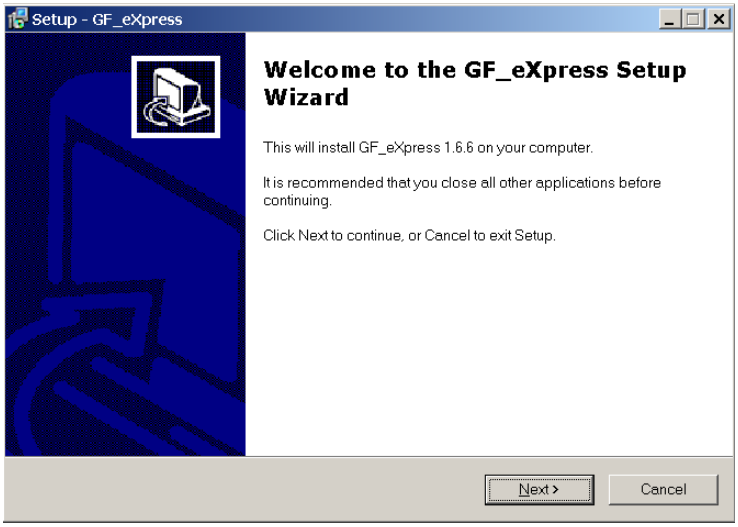


- Click *Finish* to close the setup program

Installation of GF_eXpress and RS-USBX driver

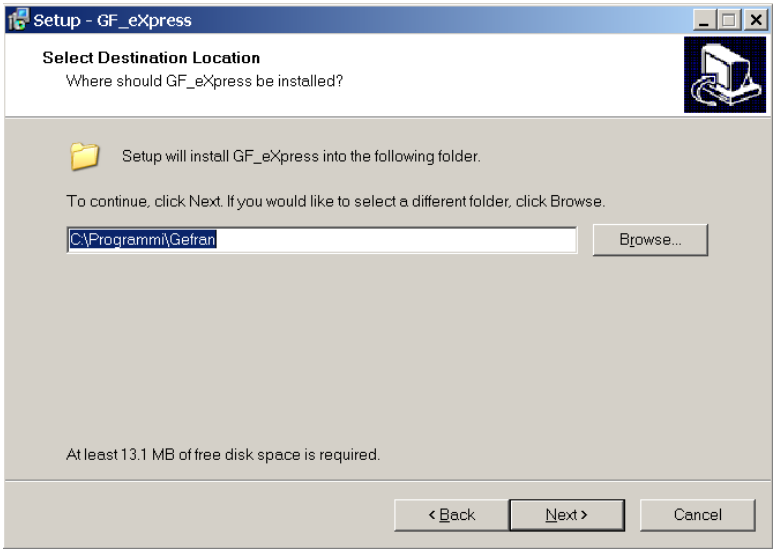
Follow the steps below to install GF_eXpress:

- If you need to install the RS-USBX interface make sure to disconnect it from USB port
- Execute *GF_eXpress_#version#.exe* and the welcome screen appears:

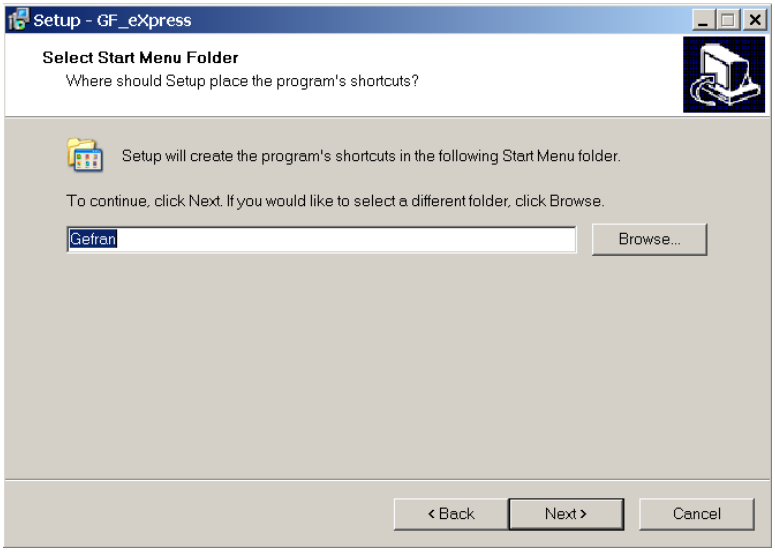


- Click *Next* to proceed to the next screen

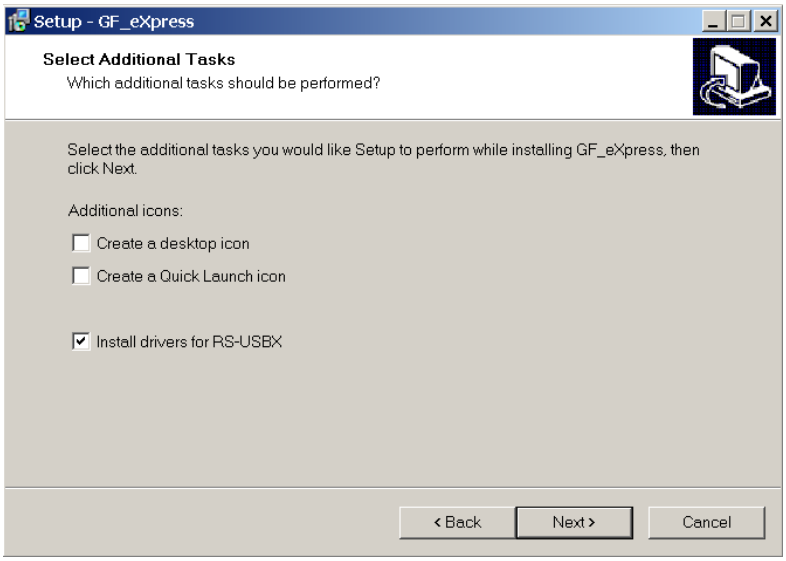
- Read the license agreement, choose *I accept the agreement* and click *Next* to proceed



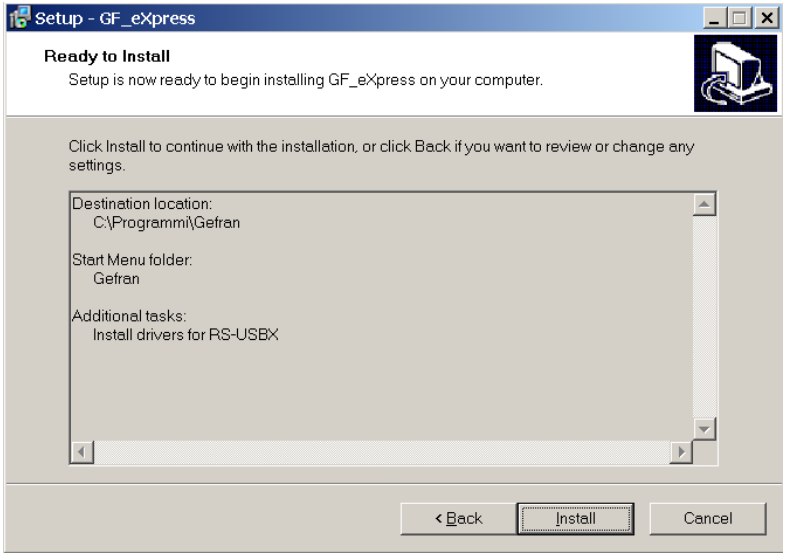
- Select the installation folder and click *Next* to proceed



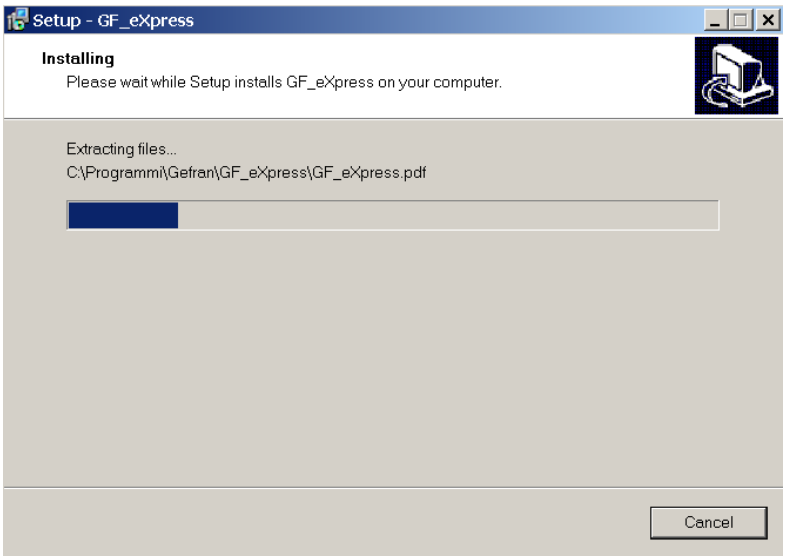
- Select the Start menu folder and click *Next* to proceed



- Select the additional tasks you want to install (for example drivers for RS-USBX) and click *Next* to proceed



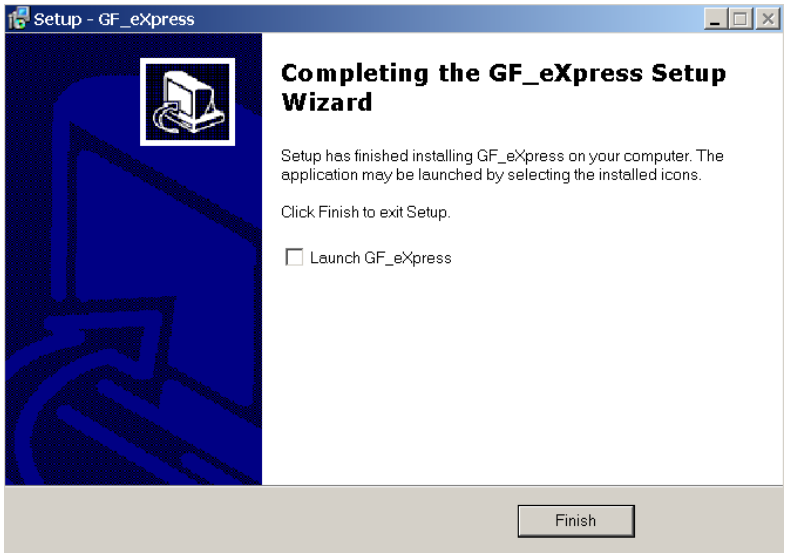
- Check the settings and click *Install* to proceed; the extract phase starts



- *Only when install drivers for RS-USBX:* the following message may appear on PCs running Windows XP, when setup program begins to install the USB drivers:

Ignore this message and continue with installation

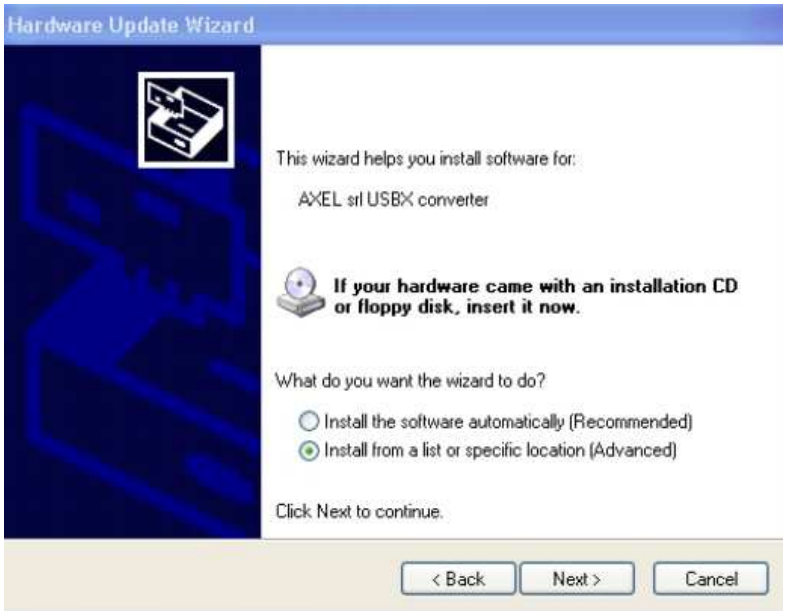
At the end of the extract phase the last window appears:



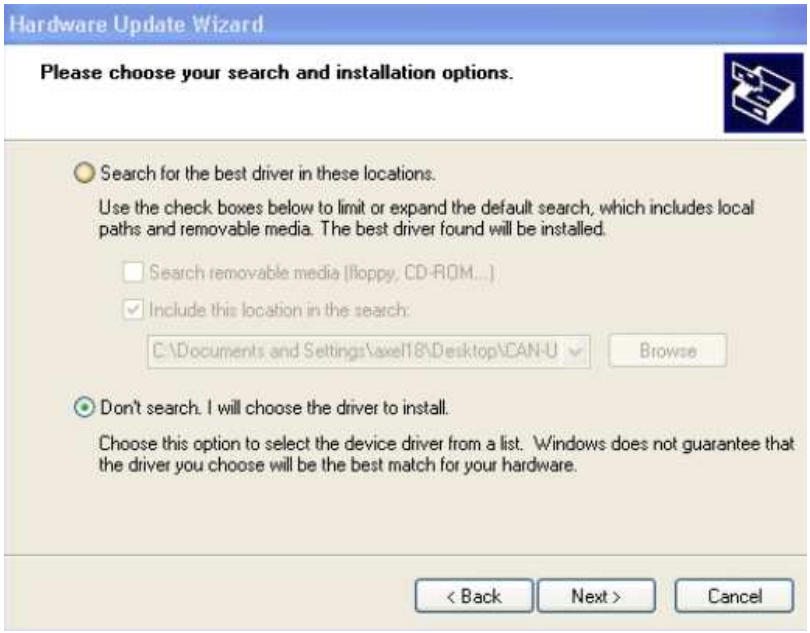
- Click *Finish* to close the setup program

Usage of RS-USBX with Windows Xp

During the first usage of the interface on a specific USB port, it should be possible that a driver search message will appear. In this case follow the below procedure:



1. Choose *Install from a list or specific location* and click *Next* to proceed



2. Choose *Don't search* the driver and click *Next* to proceed

3. Select the compatible hardware (appears only one choice) and click *Next* to proceed

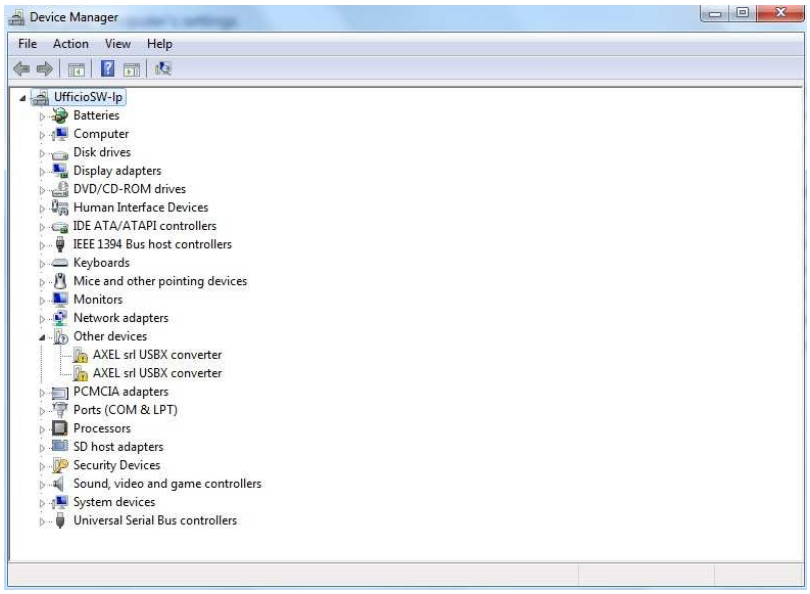
4. Ignore the Windows Logo message and click *Continue* to proceed

5. Click *Finish* for complete the procedure
6. **IMPORTANT**: the procedure must be repeated twice because the RS-USBX has two different device drivers

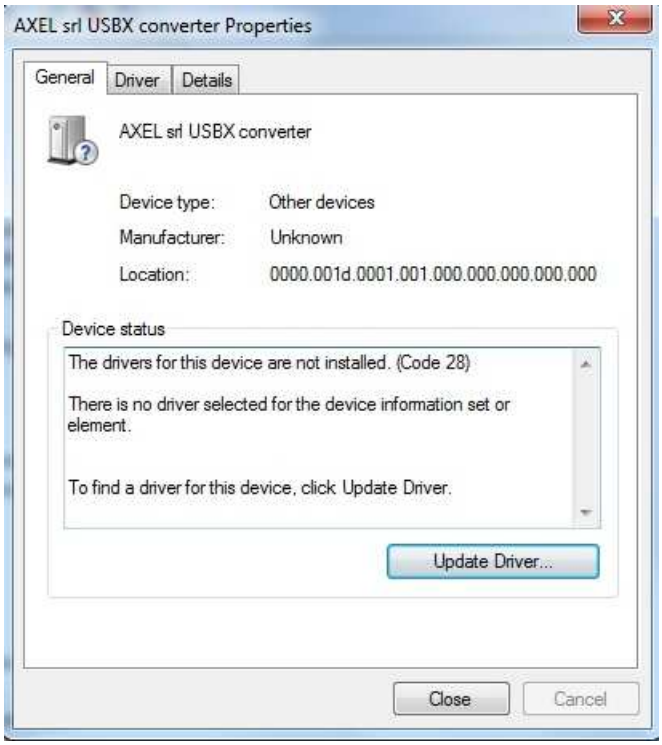
Usage of RS-USBX with Windows 7 64bit version

During the first usage of the RSUSBX interface on a specific USB port, the system could fail the automatic installation of the driver software. In this case follow the below procedure:

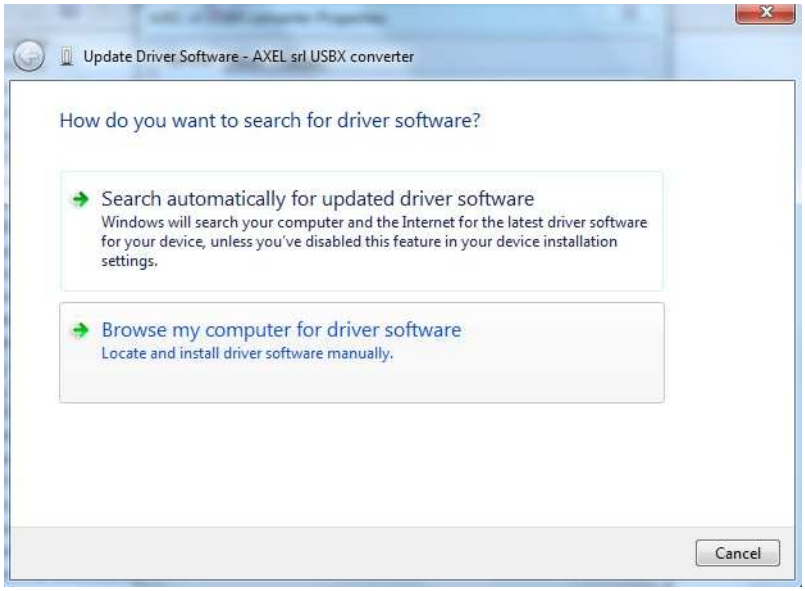
1. Choose *Device Manager* from *Control Panel*



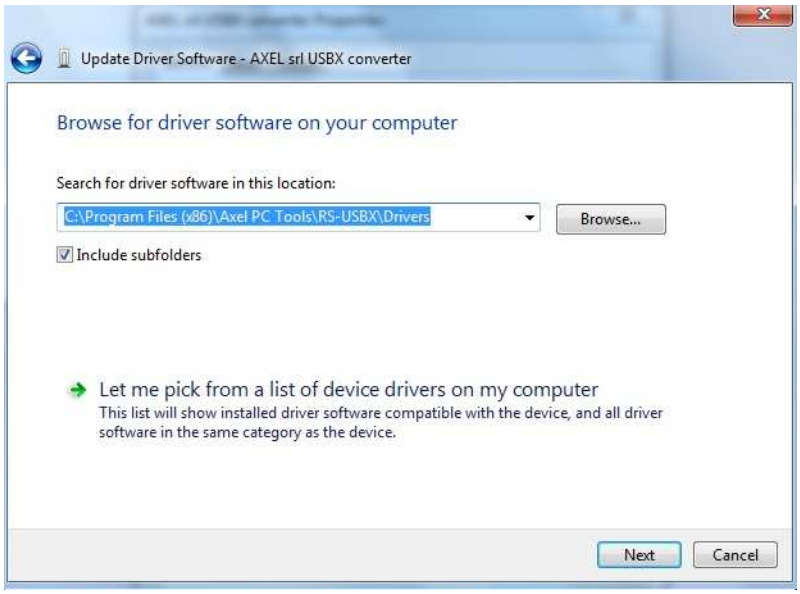
2. Click on the first *Axel srl USBX converter* in *Other devices* to proceed



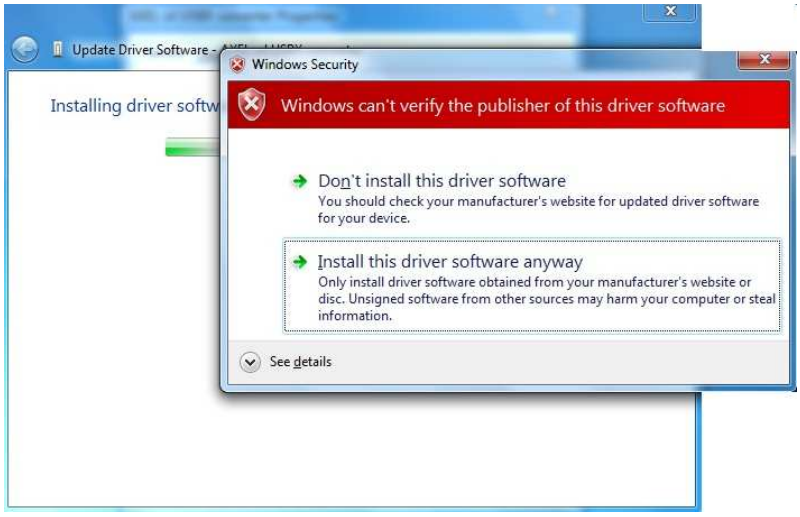
3. Click *Update Driver…* to proceed



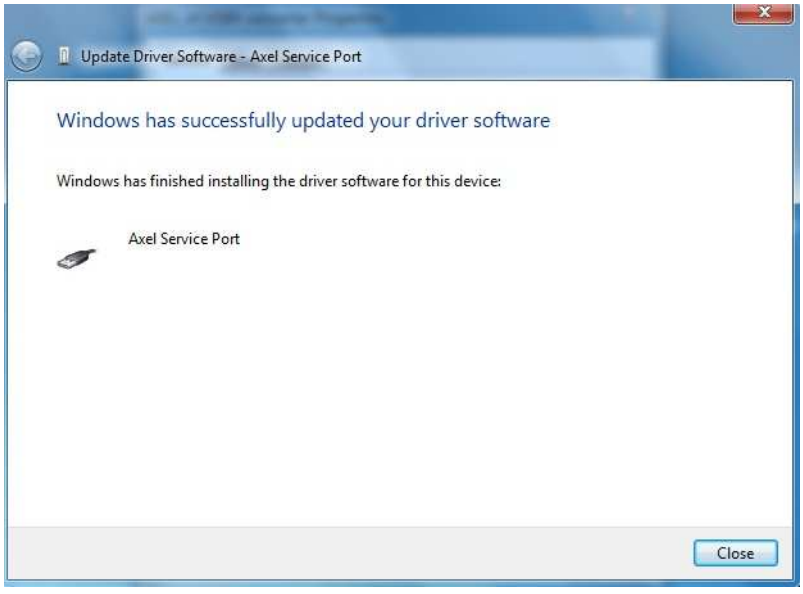
4. Click *Browse my computer for driver software* to proceed



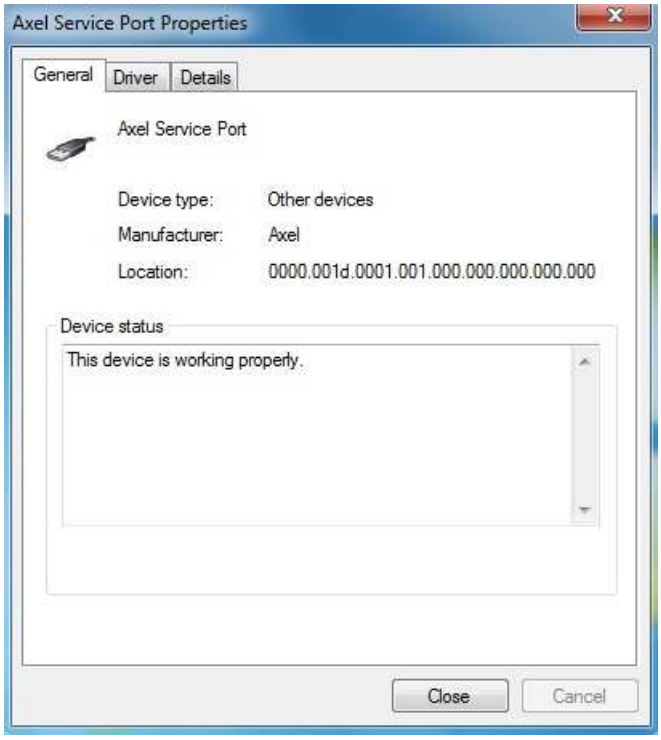
5. Click *Next* to proceed



6. Ignore the Windows Security message and click *Install this driver software anyway* to proceed



7. Click *Close* to proceed

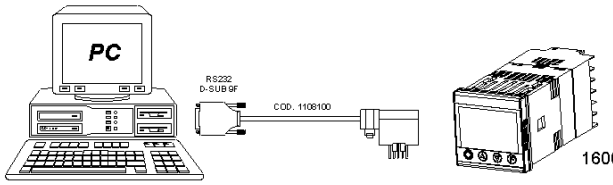


8. Verify in the Device status box the device is working properly; click *Close* for complete the procedure
9. **IMPORTANT**: the procedure must be repeated for the second *Axel srl USBX converter* in *Other devices* because the RS-USBX has two different device drivers

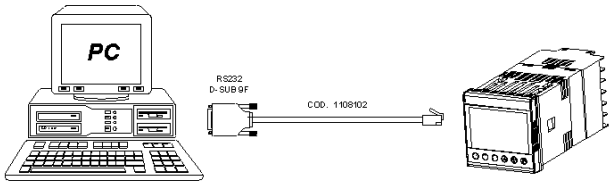
Wiring with Gefran instrumentation

The connection between PC and Gefran instrumentation is possible by using the interface kits and wiring called GF_eXK-x-x-x.

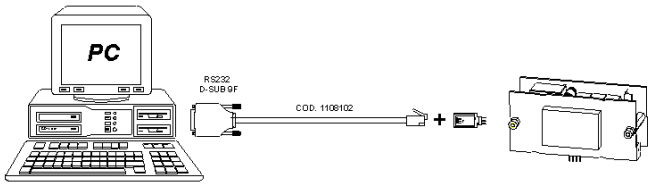
GF_eXK-0-0-0: RS232 (PC side)-TTL (instrument side)



Series:
400-401
600
800-800P-800V
1000 1001
1200-1300
1600-1600V-1600P-1800-1800P-1800V
40A-40B-40F-40T-40T72-40TB
4A-4B-4T

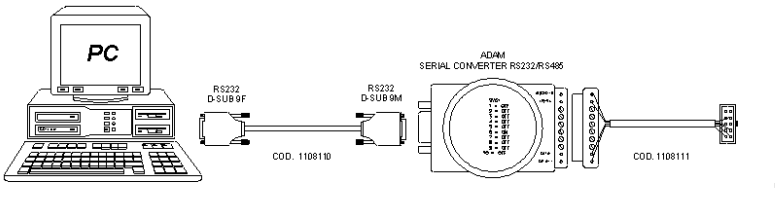


Series
2400/2500
GTF-xxx-xxx-x-x-x-0

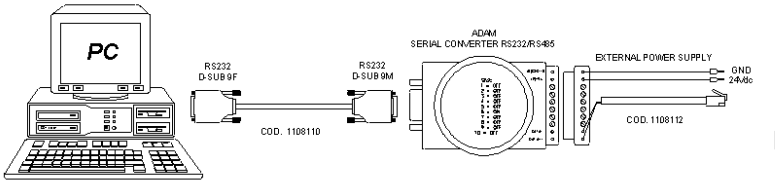


Serie:
600-OF

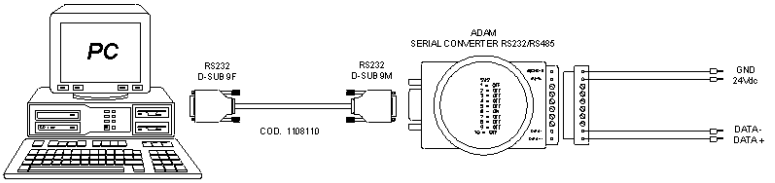
GF_eXK-1-1-0: RS232 (PC side)-RS-485 (instrument side)



Series:
GFX 25/120A
GFX 5/15A



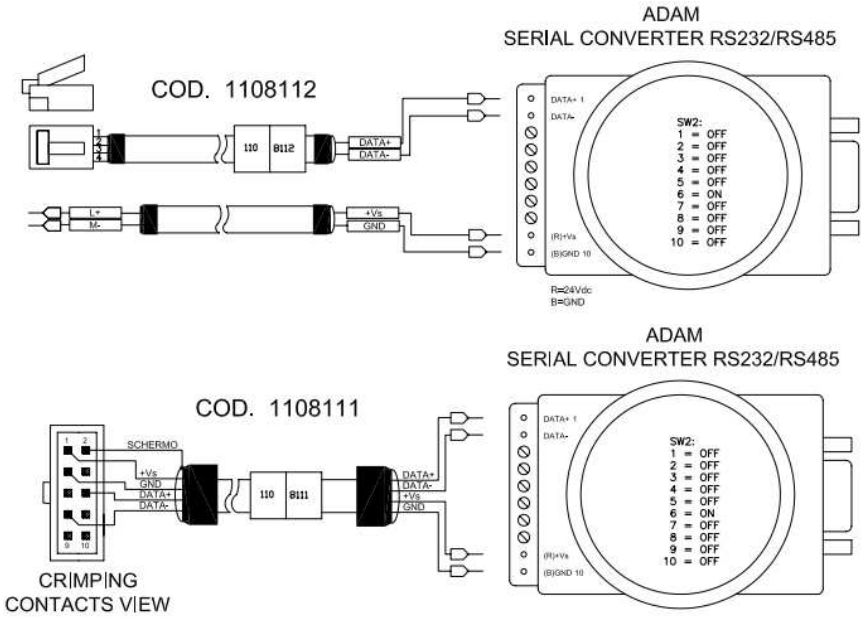
Series:
GFX4
GFXTERMO4
GFX4-IR
GTF-xxx-xxx-x-x-x-M
GFW



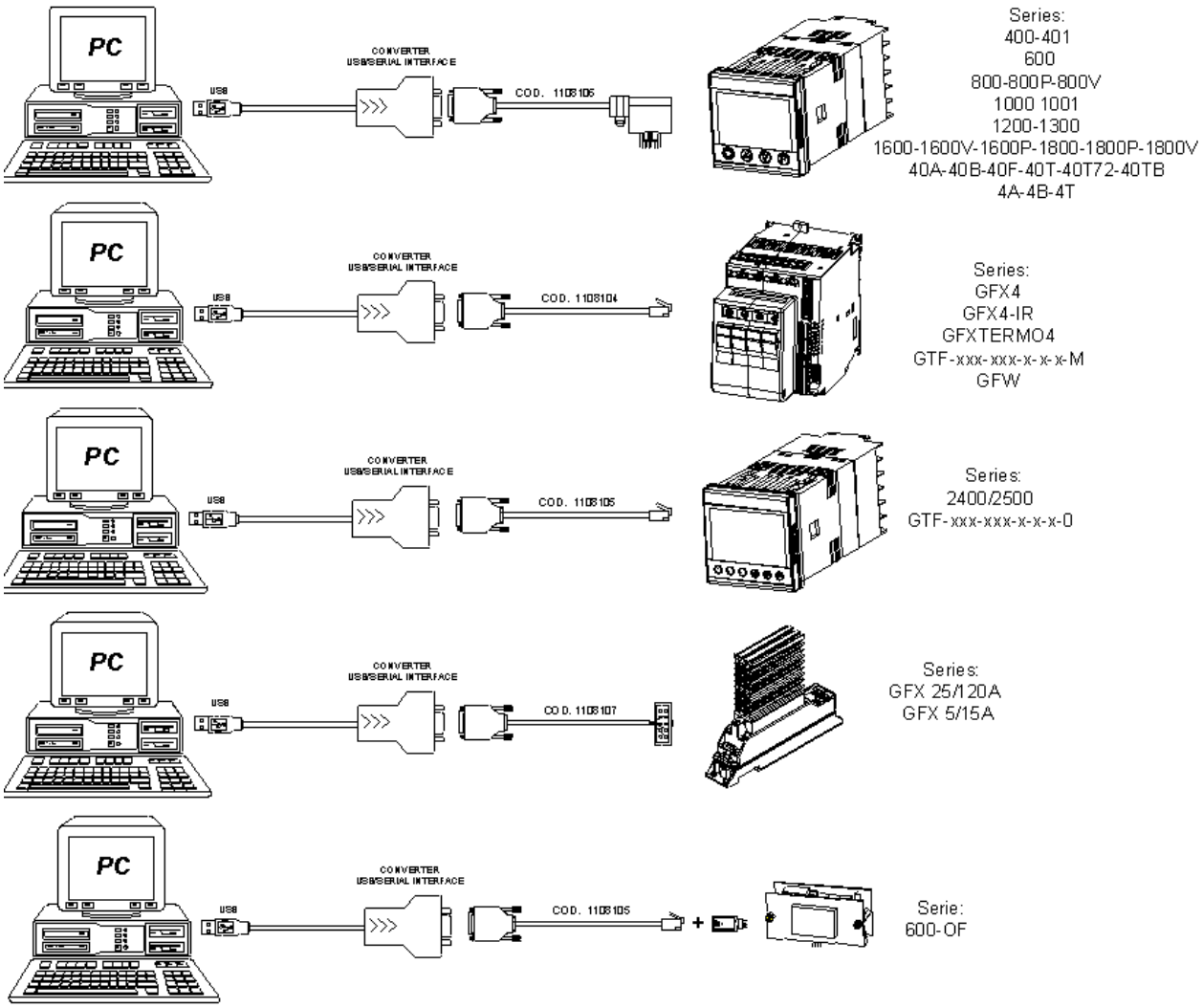
EXTERNAL POWER SUPPLY

Other GEFRAN devices with RS485 option

GF_eXK-1-1-0: wiring details



GF_eXK-2-0-0: USB (PC side)-TTL (instrument side) and
USB (PC side)-RS-485 (instrument side)



Work session

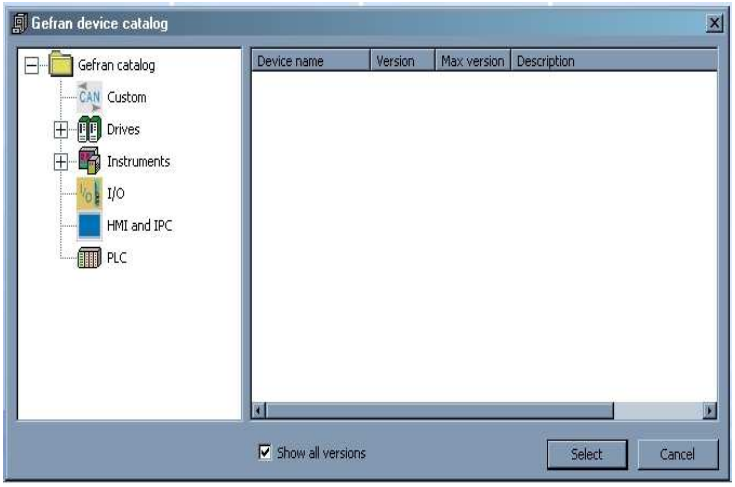
To work with the GF_eXpress you have to:

- Create a new configuration or use a previous session by opening a file with extension ".gfe"
- Properly configure the communication options (protocol type, COM port, baud rate)

There are three ways to start a work session:

- Open a parameters file with extension "gfe" via the "Open" command on the "File" menu. Do this every time you want to work with a previously saved configuration.
- Create a new configuration with "New configuration" on the "File" menu.

This command opens the “Gefran devices catalogue” window, which lets you choose a device from a list of devices grouped by category



Selecting a device displays the main HTML page of the device.

- Use wizard mode to create a new session. To do this, first click the appropriate device category and then the device needed

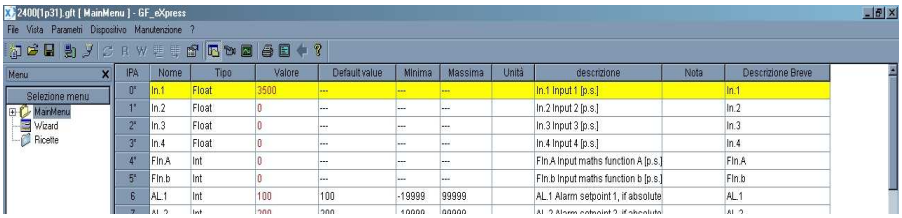
GEFRAN
GF_eXpress
Strumenti
Sensori
PC-HMI-PLC-I/O
Drive

GEFRAN
GF_eXpress
Instruments
Controllers
Geflex
Indicators
1200
1300
1600 3.20
1600V 3.20
1800 3.20
1800V 3.20
2500
400 3.00
401 3.00
600 1.00
800 3.20
800V 3.20

Parameters file

After starting the GF_eXpress work session by opening the appropriate parameters file, you can display the information for the parameters.

Each parameter is defined by the following fields:



- IPA: identifies the parameter
- NAME: mnemonic name used to identify the parameter
- TYPE: type of parameter datum (ex.: int, enum...)
- VALUE: current parameter value
- DEFAULT VALUE: parameter default value
- MIN: minimum parameter value
- MAX: maximum parameter value
- UNIT: unit of measurement for the parameter value
- DESCRIPTION: explicit description of the parameter
- NOTES: optional information on the parameter
- BRIEF DESCRIPTION: contains a brief description of the parameter.

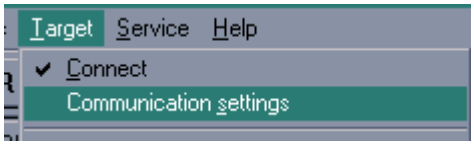
GF_eXpress parameters can be organized in different menus; this lets you display the complete list or a subset of the parameters.

The user can change the values of only the read/write parameters.

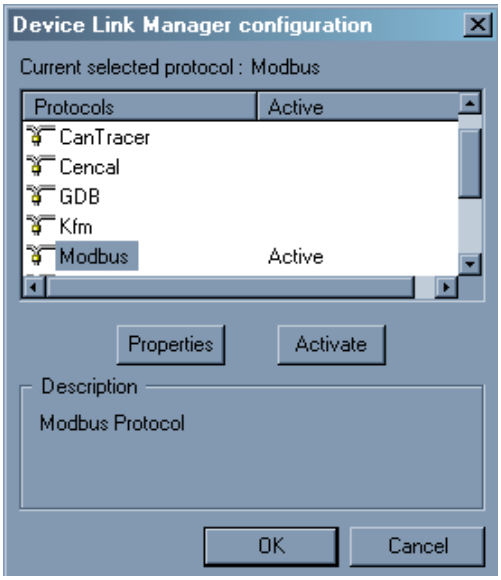
If one or more parameters are changed and you want to close the work session, GF_eXpress automatically asks if you want to save the configuration in a gfe file.

Communication

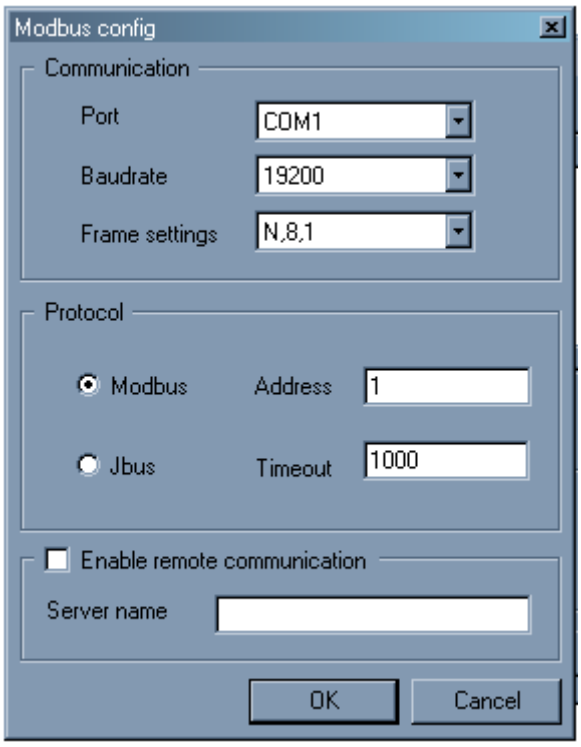
Communication with the device takes place via serial or CAN line. To communicate with the device, you need an appropriate serial or CAN adapter. Communication with the device starts every time the user opens a parameters file or creates a new configuration. The user can also enable or disable the connection via Connect on the target menu. When the connection is active, the item Connect is checked and the toolbar button is pushed.



The “Communication settings” command lets you select and define communication options. A window lets you select and set the specific protocol.



To activate a specific protocol, select the protocol and click “Activate”. Click “Properties” to enable the configuration window for the specific protocol..

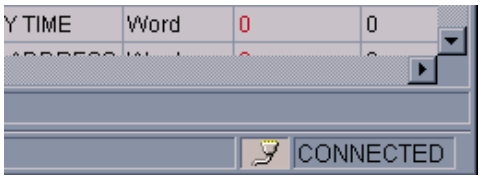


Each protocol has specific default values, which may vary from device to device.

EXAMPLES :

Device	Protocol	Communication properties
XVY	Slink3	COM1, 38400 baud, no parity, 8 data bits, 1 stop bit, address 0, time out 1000
GFX4	Modbus	COM1, 19200 baud, no parity, 8 data bits, 1 stop bit, address 0, time out 1000

Note: To correctly activate communication with the device, the device address must be the address set in GF_eXpress. Once the right address is selected, the parameters have to be saved on the device flash to make the setting definitive. GF_eXpress displays every communication error in a message box containing the specific error code and its description. Communication status is shown on the right side of the status bar.



Parameter control

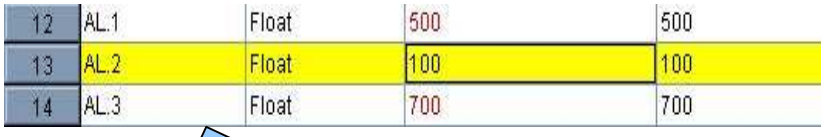
Parameter value

When a parameter value is not updated with the device value, it is displayed in red. It is assumed that parameters are not updated when:

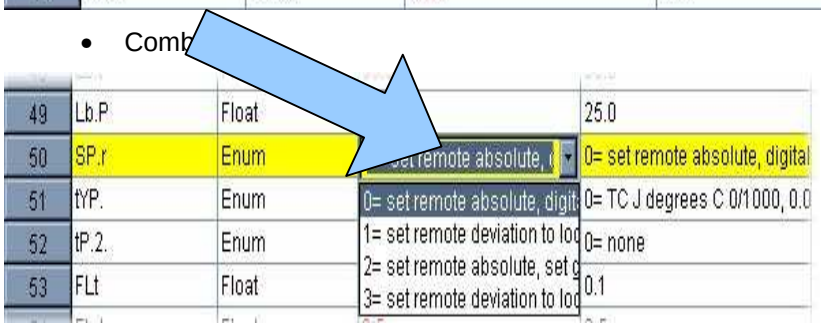
- they are just loaded after an “Open” procedure
- the user changes a value by editing it

It is assumed that the value is updated after a read or after a write procedure. A value can be changed via:

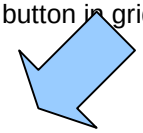
- Textbox

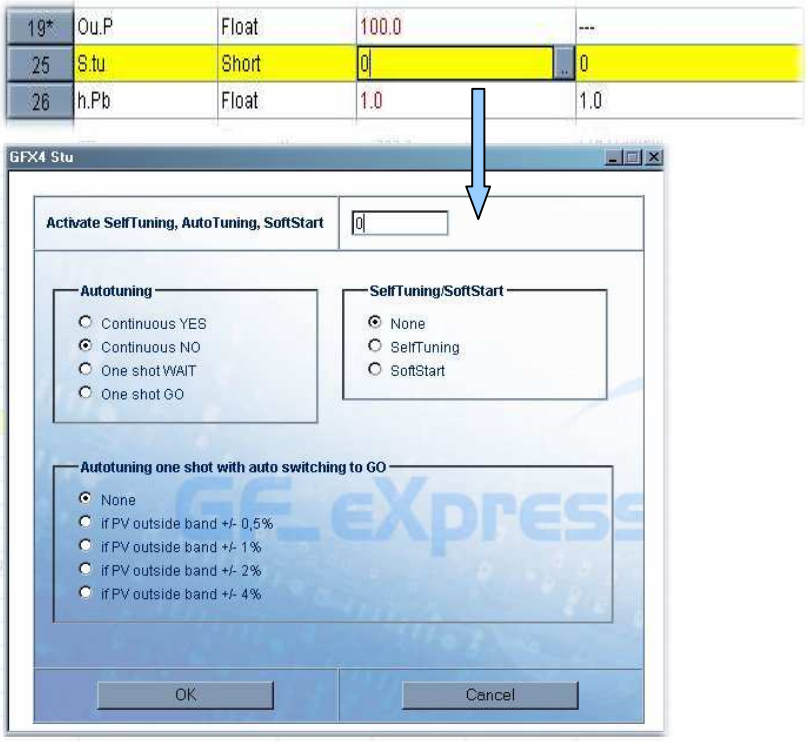


- Comb



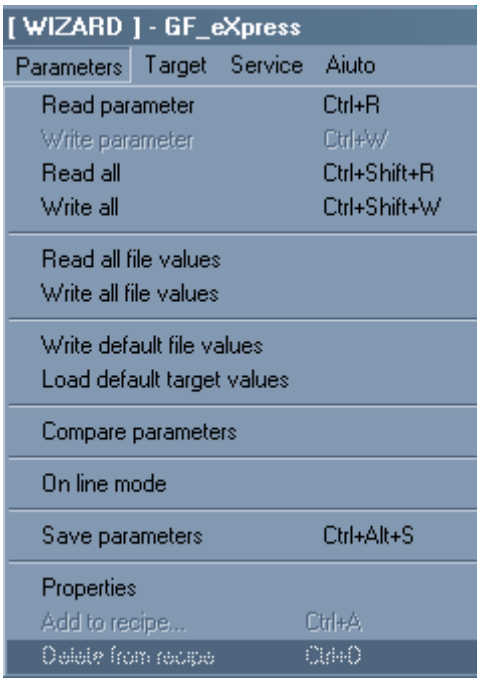
- Specific forms (activated by specific button in grid)





Read and write commands

To send a parameter value to the device, the user can use the “Write parameter” command. The user can also read the current value of a parameter directly on the device with the “Read parameter” command. The read and write commands refer to the currently selected parameter on the GF_eXpress grid. You can also read and write all parameters or a set of parameters by using the “Read all” and Write all” commands. To read or write all device parameters regardless of the currently selected menu, use the "Read all file values" and "Write all file values" commands. By using “Write default file values" you can load the device with the default values contained in the parameters file. For some devices, you can use “Load default values,” which tells the device to load its default values (these values are contained in the device).

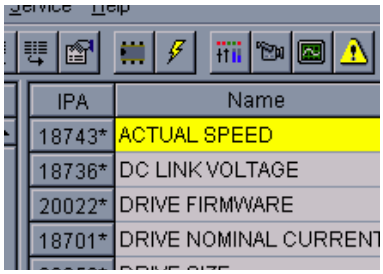


On-line mode

On-line mode, activated with the “Online” command, allows to GF_eXpress to update the value of every parameter displayed into active window (only those ones). Likewise, the parameter is immediately transmitted to the device each time the user changes the value of the parameter selected on the grid.

Read-only parameters

Some parameters are read-only and are called variables. Variables cannot be edited or written, and are marked by an asterisk next to the IPA of the parameter in the IPA field (see figure below).



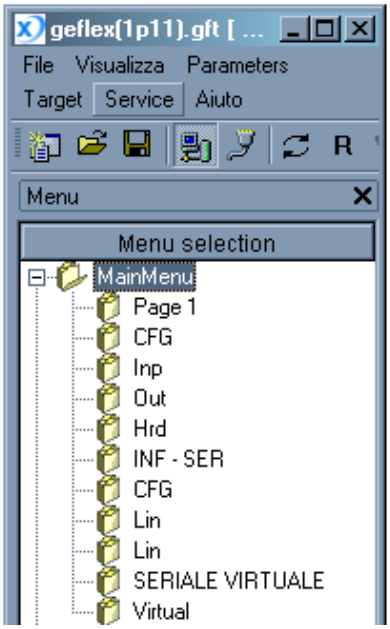
Saving parameters

Parameters are saved in the device flash via the “Save parameters” command. Saving in the flash is required in order to permanently save values in the device. For some devices, this command is inactive because Write also includes saving directly in the device flash.

Menu selection windows

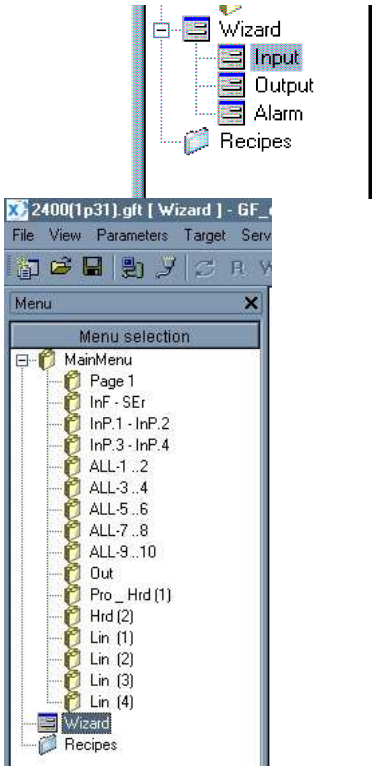
Parameter selection menu

Parameters are divided into menus that are displayed in the Menu selection window and are organized in a tree structure for easy selection of parameter subsets.



Wizard selection menu

The Menu selection window can also contain a list of wizard pages and/or a list of recipes.



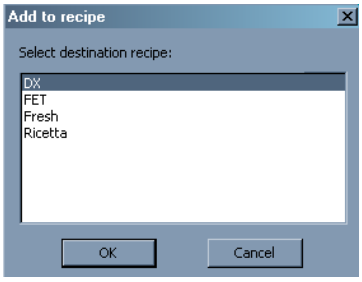
The wizard pages can be used to control some parameters as shown in the following figure:

Recipe selection

A recipe is a subset of parameters. This subset is a menu defined by the user.

To create a new recipe, just right-click the “recipes” menu, select “add”, and write the recipe name.

To insert a parameter in a recipe, just select the parameter from the grid and drag it to the recipe. As an alternative, you can select the parameter you want, select “Add to recipe” on the “Parameters” menu, and select the destination recipe as shown in the figure.



Import Export

On the “Parameters” menu, or by right-clicking the mouse on “Recipes,” you can import or export single recipes in separate files.

The reference file has extension .GFR and contains the recipe parameters list with assigned values (see below).

Set Recipe Value

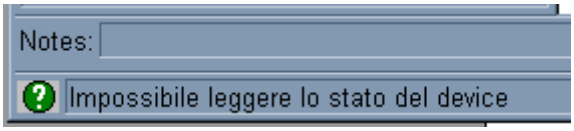
The “Default Value” column takes the named “Recipe Value” in the recipes.

The “Recipe Value” column does not allow direct input. To change the value, you first have to change the value in the “Value” column and, on the “Parameters” menu, press Set Recipe Values, which copies the value from the “Value” column.

As opposed to the “Value” column, which is changed after read/write operations, the “Recipe Value” column is never changed. In this way, the recipe value is protected against any accidental changes..

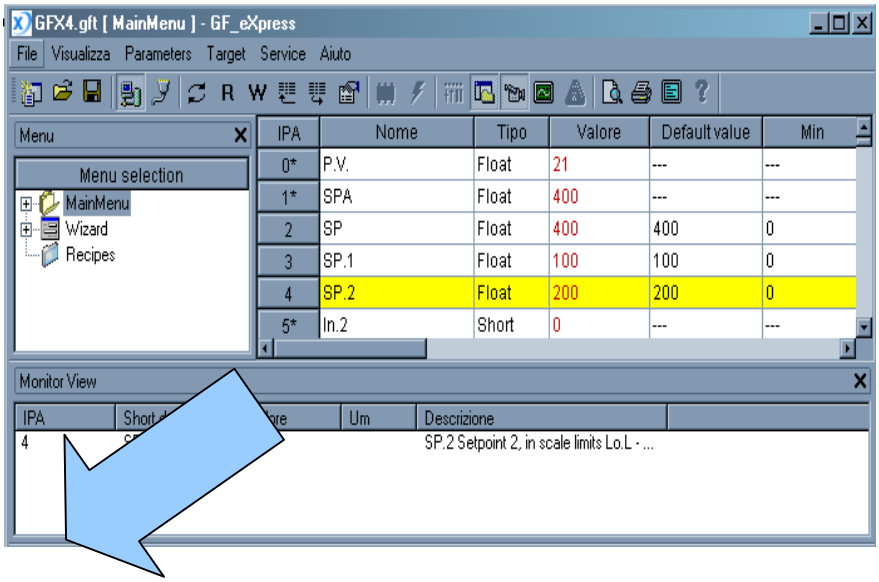
Alarms

The current device status (normal work or alarm) is displayed on the right side of the status bar.



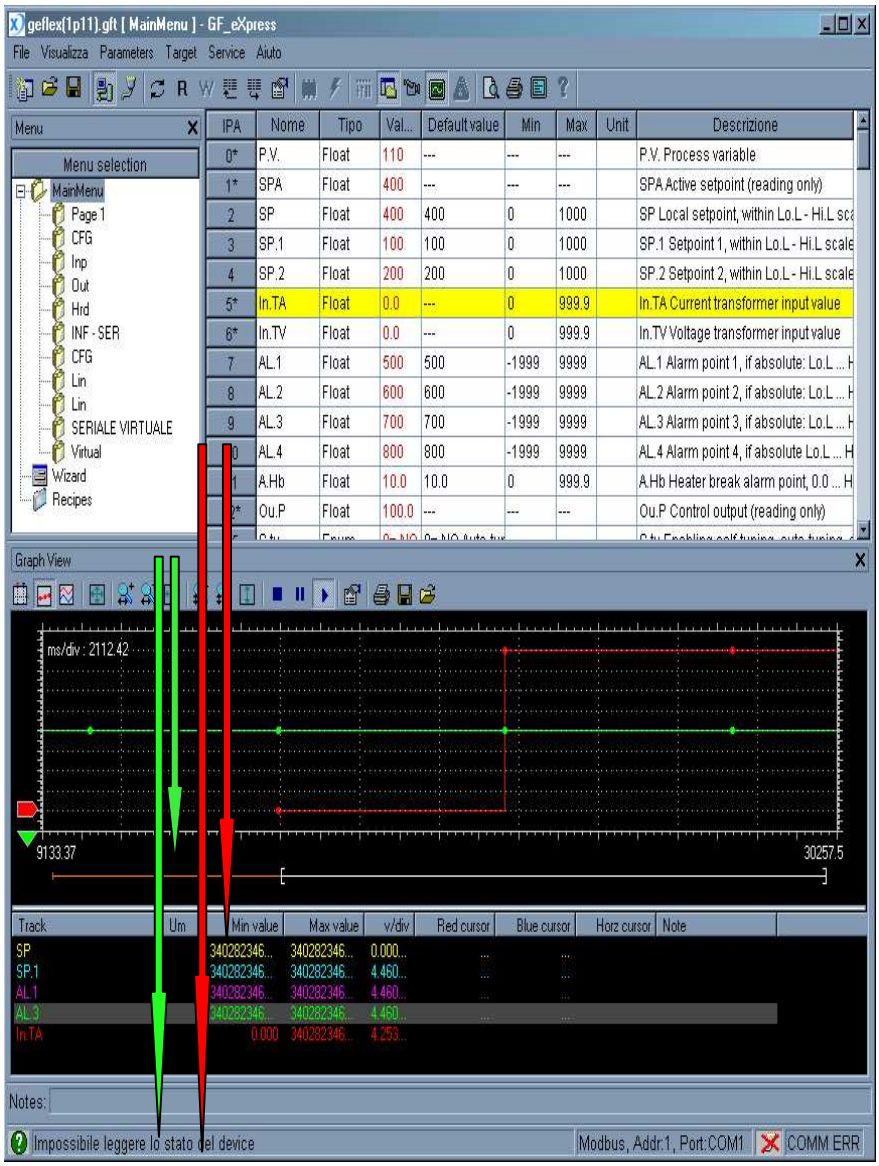
Monitor window

The monitor window displays the value of the current parameter (or parameters). The value displayed in the monitor window is constantly updated with the current device value. The user can insert the required parameter in the monitor window by selecting it and dragging it from the parameters grid.



Graphic window

The graphics window is a tool that displays the graphics flow of some parameter values. The parameters to be displayed can be dragged from the parameters grid to the graphics window. A track is assigned to each parameter; each track has a different colour. A maximum of 8 tracks can be displayed simultaneously. This window also has a series of graphics display tools, such as (for example) zoom and scale.



Remote Update

By default, remote updating of the program starts automatically when the software launches.

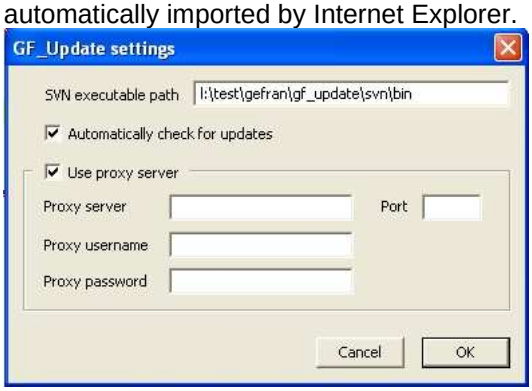
To start it manually, press “?” on the menu and launch “Check for updates.”

GF_Update will check for updates on the Gefran website and will display any new versions of the catalog and software in the window.

To update the program and the catalog, select the update and press the “Update” button.

The Change Log window lists the changes included in the new version.

You can deactivate automatic updating by unchecking “Automatically check for updates” on the “Connection Settings” menu in “Settings” and manually setting any network settings for the proxy. On the first startup, any such settings will be automatically imported by Internet Explorer.



In case of problems with the remote updating of Catalog or GF_eXpress, it is possibile proceed with a manual updating following these steps:

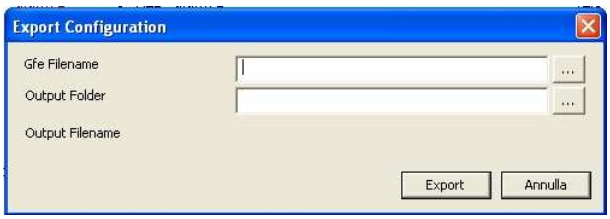
- From Windows *Control Panel* uninstall the programs:
  - Catalog
  - GF_eXpress
  - SetIpTools (if installed)
- Verify that the folder where Catalog and GF_eXpress were installed (eg c: \ Program Files \ Gefran) is empty; if not execute the backup and then delete them
- Delete, if exists, the GF_EXPRESS.ini file in c: \Documents and Setting\User\ Application Data
- Download from *www.gefran.com* the setup files of Catalog and GF_eXpress, and procceed with their installation

Import Export configuration

With the “Import Configuration” and “Export Configuration” commands on the “File” menu, you can import and export GFE files with assigned GFT in a single ZIP packet.

This function lets you reuse the configuration and the definition of a specific custom device created by the user.

It is used to export to another PC a device not inserted in the standard catalog ; typically a device written with MDPLC program.



This window tool has the following input boxes:

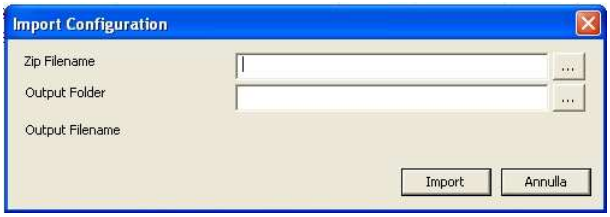
- Gfe FileName : path of the input file (.gfe)
- Output Folder: path of the folder containing the .zip output file

It builds a .zip file containing the .gfe file and the relative .gft file,

inclusive of all over folders until Catalog\.

For example, if the saved file.gfe refers to .gft file ADV200_1_X_0.gft,

located in C:\Programmi\Gefran\Catalog\Custom\App\ADV200_1_X_0, then the program will generate a .zip file named saved file.zip, containing the file saved.gfe and the folder Custom\App\ADV200_1_X_0\ADV200_1_X_0.gft



This window tool has the following input boxes:

- Zip FileName : path of the input file (.zip), already made by exportaion option
- Output Folder: path of the .gfe file just extracted

It unzips the .zip file checked, then places the .gft file in the original position and

saves the .gfe file in the desired path.

All the existing files will be overwritten.

Maintenance

The “Maintenance” menu has a list of specific commands for each device.

You can also add external tools by means of the ServiceCommand.INI file. Links to the two conversion tools par2gfeW and par2gftW are present by default..

GFX4

The GFX4 device has the following commands:

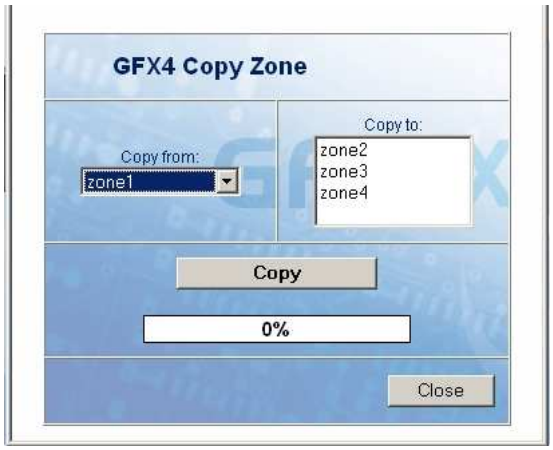
Auto Baud

The AutoBaud command is used for setting device Baud Rate and Parity via software.

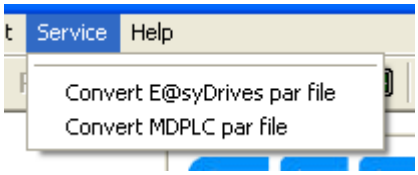
Press the Start key to send values to the device.

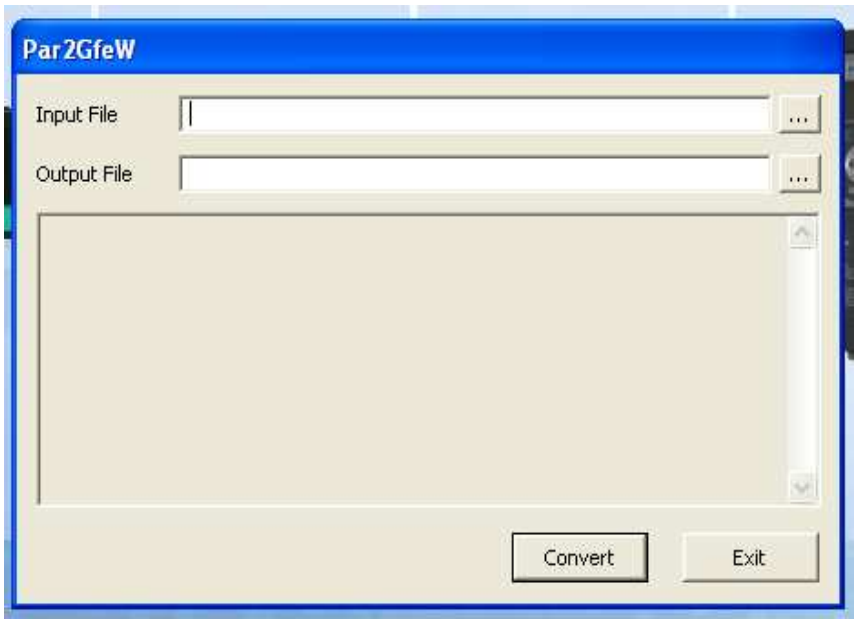
Copy zone

The Copy Zone command is used for copying the values of a Zone and pasting them in another zone. Values are automatically copied and pasted when the Copy key is pressed. You can copy values to one or more destination zones by selecting multiple zones in the “Copy to“ list.



Converting E@syDrives saved .par file



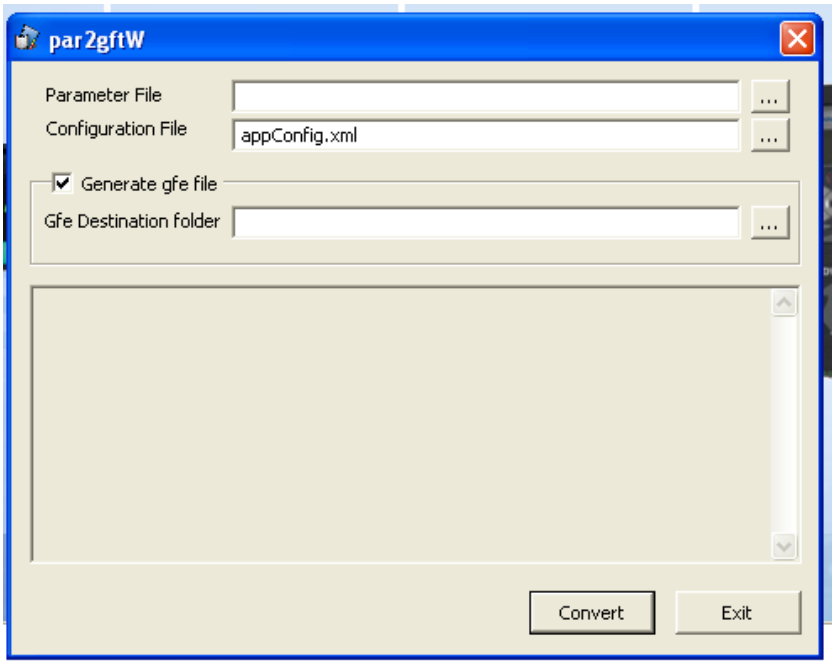


This program has the following input boxes:

- Input File : path of the input file (.par)
- Output File: path of the output file (.gfe)

It builds an .xml file extended as .gfe (Output File) starting from a .par saved file (Input File) of a version already existing inside Catalog.

Convert MDPLC par file



This tool is to convert a par file created by MDPLC.

This program has the following input boxes:

- Parameter File : path of the input file (.par)
- Configuration File : path of the configuration file (AppConfig.xml)
- gfe destination folder: path of the folder containing the .gfe output file (optional)

It builds :

- a .xml file extended as .gfe (Output File)
- a .gft file of the MDPLC application (Output File), that will be used from GF_Net (network setting tool)

starting from a .par file.

Configuration File path is already set.

Glossario

Indice

M

Menu testuali 2, 4