GeniusPlus
Help On Line

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Version 1.12 and later

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ПРОМЭЛЕКТРОНИКА/ sales@prom-elec.com

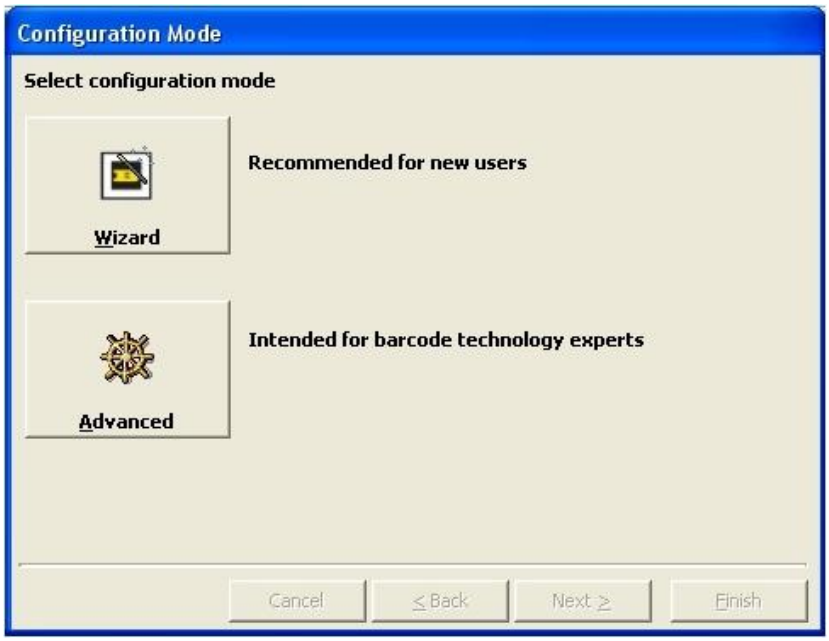
Guide to Rapid Configuration

A step-by-step Configuration Wizard is available to help rapidly configure a scanner. This Wizard is particularly helpful to new users and is documented in the product specific Parameters Help Guide.

Wizard for Quick Reader Setup

> **NOTE**
> A complete description of this wizard is found in the product specific Parameters Help Guide.

After installing the GeniusPlus software program the following window appears asking the user to choose the desired configuration level:

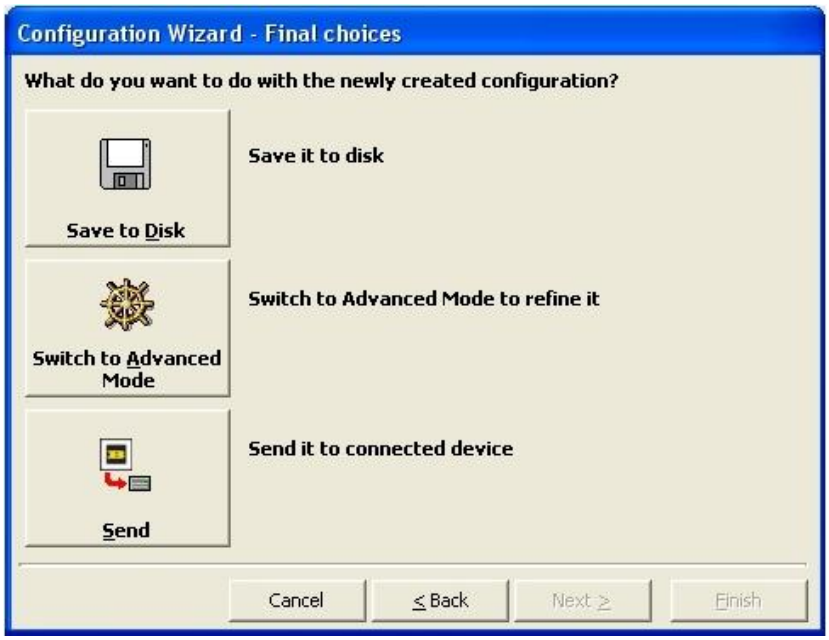


The Wizard option is advised for new users, since it shows a step by step scanner configuration. The parameters to be defined are the following:

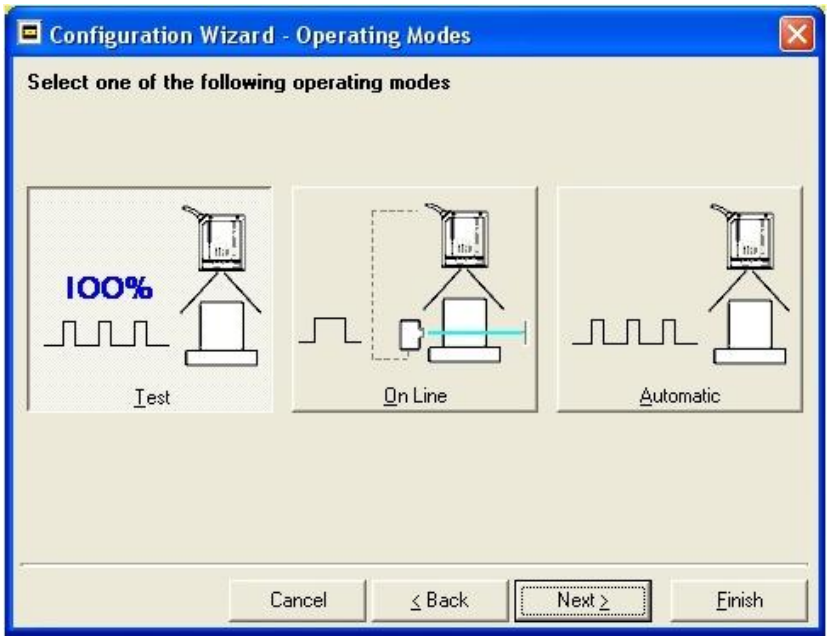
- Barcode selection and definition;
- Operating mode selection and definition;
- Digital Inputs/Outputs configuration;
- Hardware interface selection;
- Output data format configuration.

After defining the parameter values the following window appears allowing to complete the reader configuration as follows:

- Saving the configuration to disk;
- Switching to Advanced mode;
- Sending the configuration to the scanner.

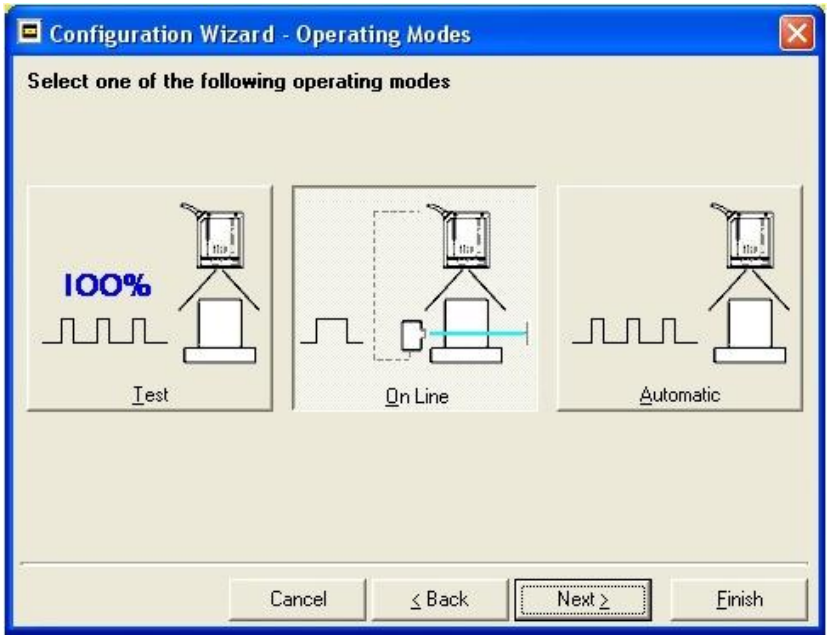


Test Operating Mode



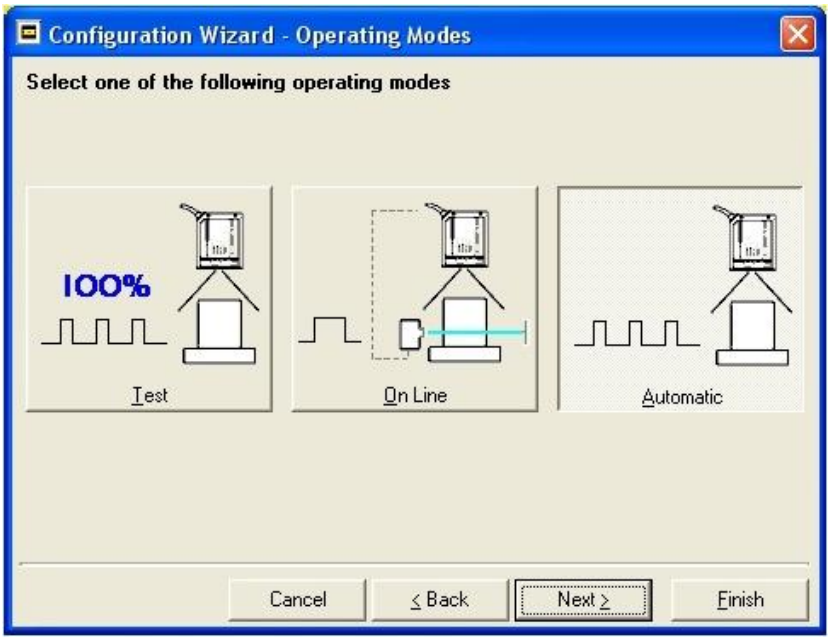
This operating mode causes the reader to be continuously activated allowing to verify its reading features and its reading position with respect to the barcode. For this reason, it is particularly advised during the installation phase of the reader.
After 100 scan, the values relative to an internal counter and the decoded code are displayed and transmitted on the serial interface. The counter reports the percentage of good reads of the label.

On Line Operating Mode



This operating mode causes the reader to be connected to an external Presence Sensor using EXT TRIG+ and EXT TRIG- inputs.
During the active phase of the presence sensor, the DS6500 reader tries to acquire and correctly decode the code.
In case the decoding phase is successful, the barcode characters are transmitted on the serial interface. Otherwise, a no read message is sent.

Automatic Operating Mode



This operating mode does not require the connection to an external Presence Sensor.
When working in this mode the reader is continuously scanning, while the reading phase is activated each time a barcode enters the reader reading zone. The reader stops reading after an N number of scans without a code.
Barcode characters are transmitted on the serial interface. In case of a failed reading phase no message is sent to the host computer.

Starting the Application

You can either launch GeniusPlus by clicking on the desktop icon, or from the Start Menu > All Programs > Banner Engineering path.

Command-line switches

You can create a personalized desktop icon to launch GeniusPlus with a command line switch. To do this, right click on the desktop and create a new shortcut. Browse to the Programs > Banner path and select Genius.exe. After the icon is created, right click on it and select properties. Modify the destination field and add the desired command line switch. Click OK.

TCP IP

For Ethernet connections, GeniusPlus can be run connecting directly to the Host using TCP/IP protocol, by inserting the IP address in the command line:
Genius [/HOST <IP Address>],
or by inserting the command: Genius [/HOSTSEL (or /HOSTSELECT, or /SELECTHOST)], in which case a dialog box appears with a host selection list.



Password

The command: Genius [/L {installer} [*password*]]
allows to log-in the program with a level different from "user". In this case a password must be supplied, either on the command line or using the following login dialog.



File Menu

 **New**
Starts a new configuration session, allowing to create a new Configuration file to work offline. The user will first be prompted to select model/package.

 **Open**
Opens a dialog box where selecting a previously saved configuration to be opened.

Close
Closes the current configuration, asking to save it if modified.

 **Save**
Saves the current configuration. If it has not been named, the user will be prompted for a new name through the Save As dialog.

Save As
Saves the current configuration, allowing to rename it using the Save As dialog box.

Export
Exports the current configuration to a ZIP compressed file, allowing to choose the destination folder from the opening dialog box.

Install Package
Installs new Device or Configuration Packages. See also Install Package dialog box**.**

Uninstall Package
Removes previously installed Device or Configuration Packages. See also Uninstall Package dialog box.

 **Print**
Prints contents of the current Configuration, including the parameter list and its values. It is possible to change print settings through the Print dialog box**.**

 **Properties**
Displays properties of the current configuration in the Properties dialog box.

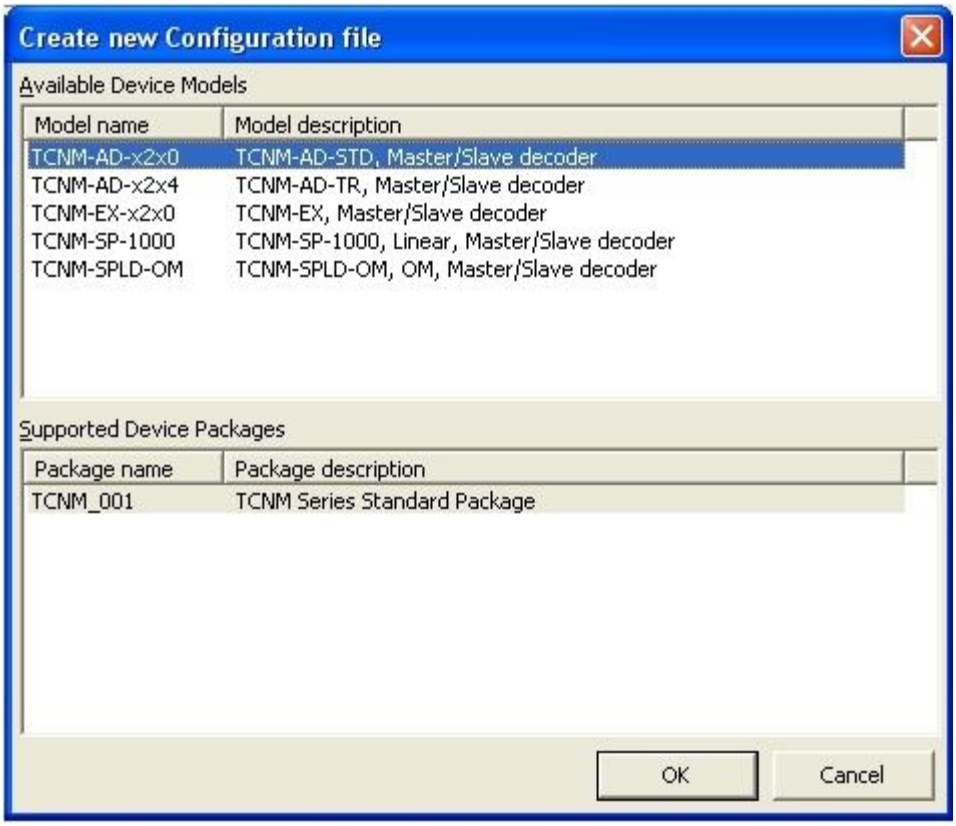
#n Recent Configuration
Lists the last 4 opened configurations.

Exit
Exits the GeniusPlus program.

New Configuration/Model and Package Selection

This option starts a new configuration session allowing to create a new Configuration file to work offline.

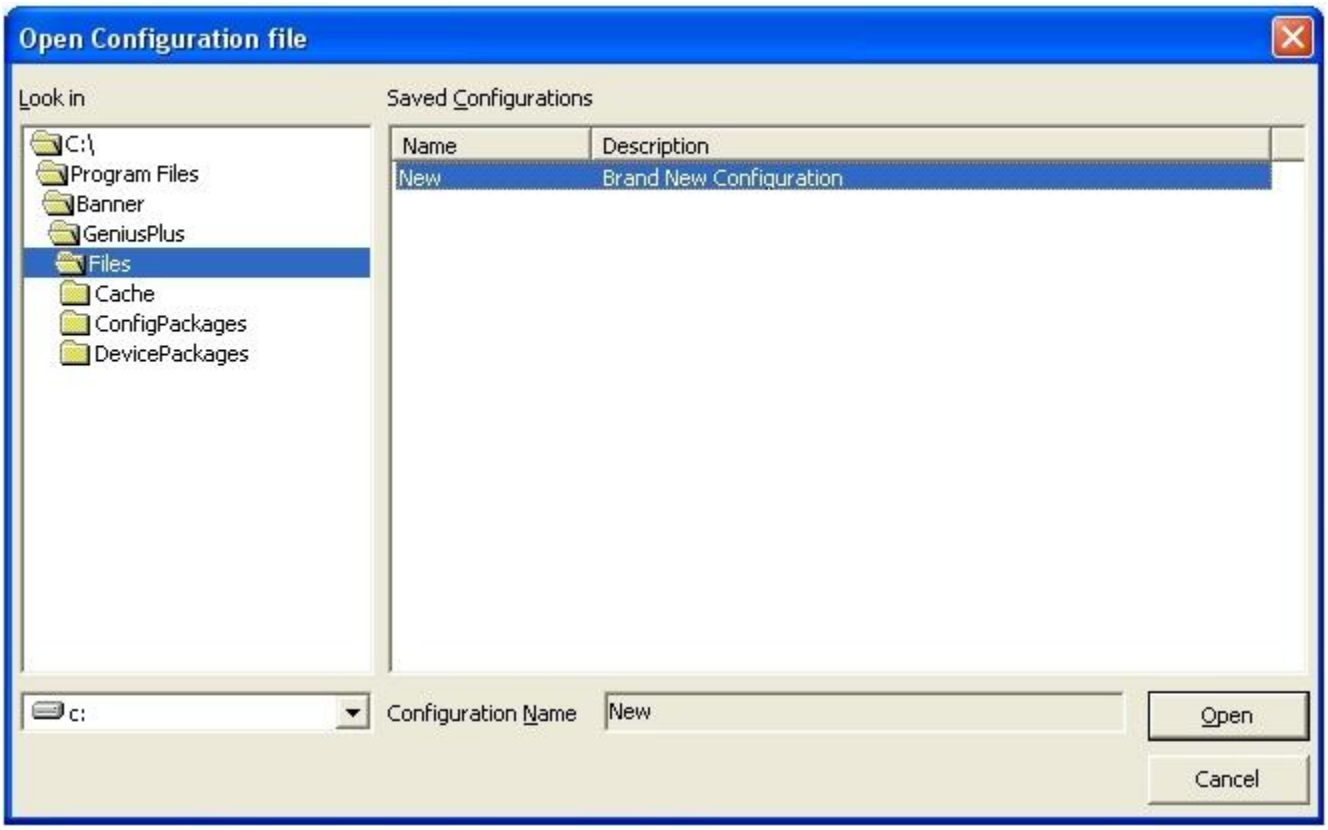
To create a new configuration, it is necessary to choose the desired device model and package among the installed packages, as shown in the following dialog box.



After selecting a device model in the upper list, the lower list will display the device package supported by the selected model.

Open Configuration

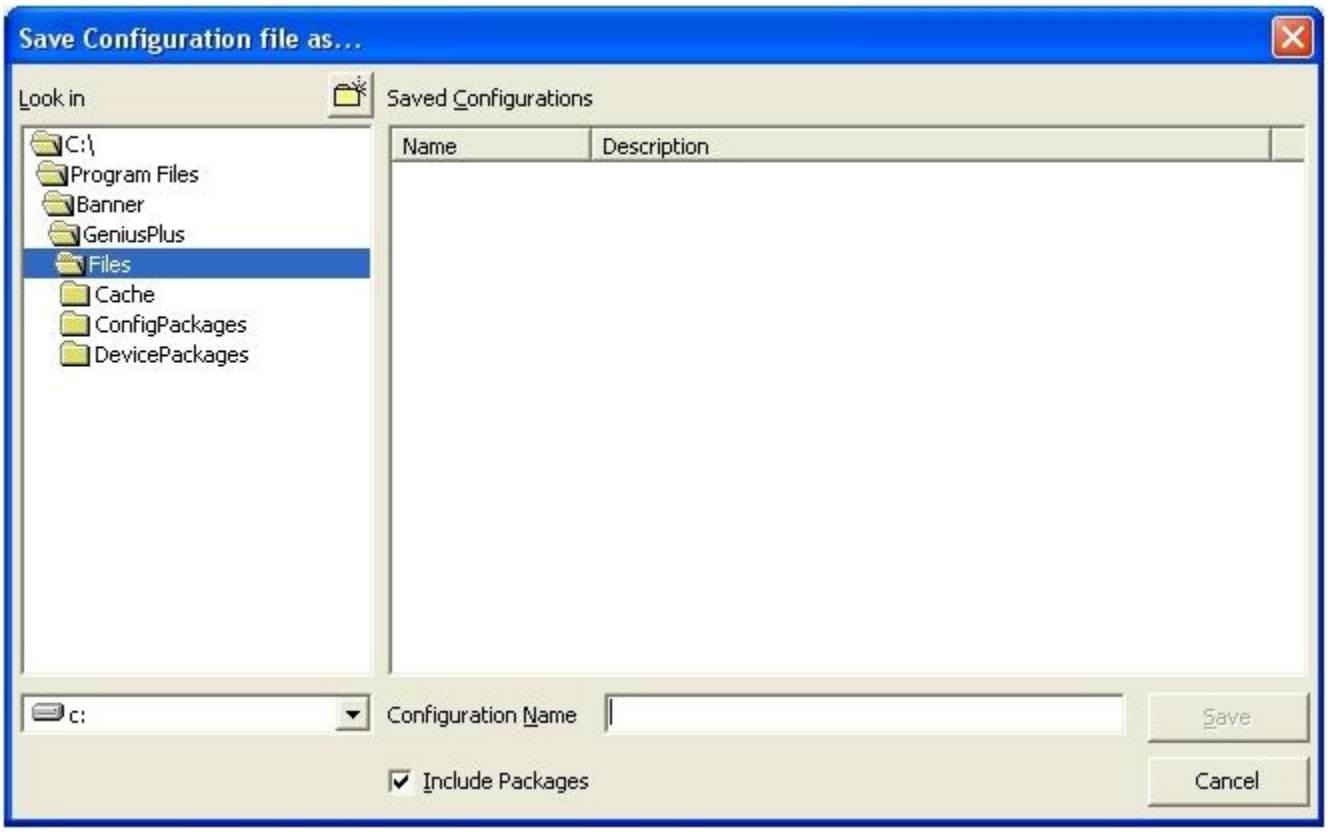
This option opens a previously saved configuration.



First, it is necessary to browse folders in left panel. Then, select a saved configuration from the list displayed in the right side.

Save Configuration As...

This option saves and renames the current Configuration. The following dialog box opens up allowing to select both the destination folder and the configuration name.

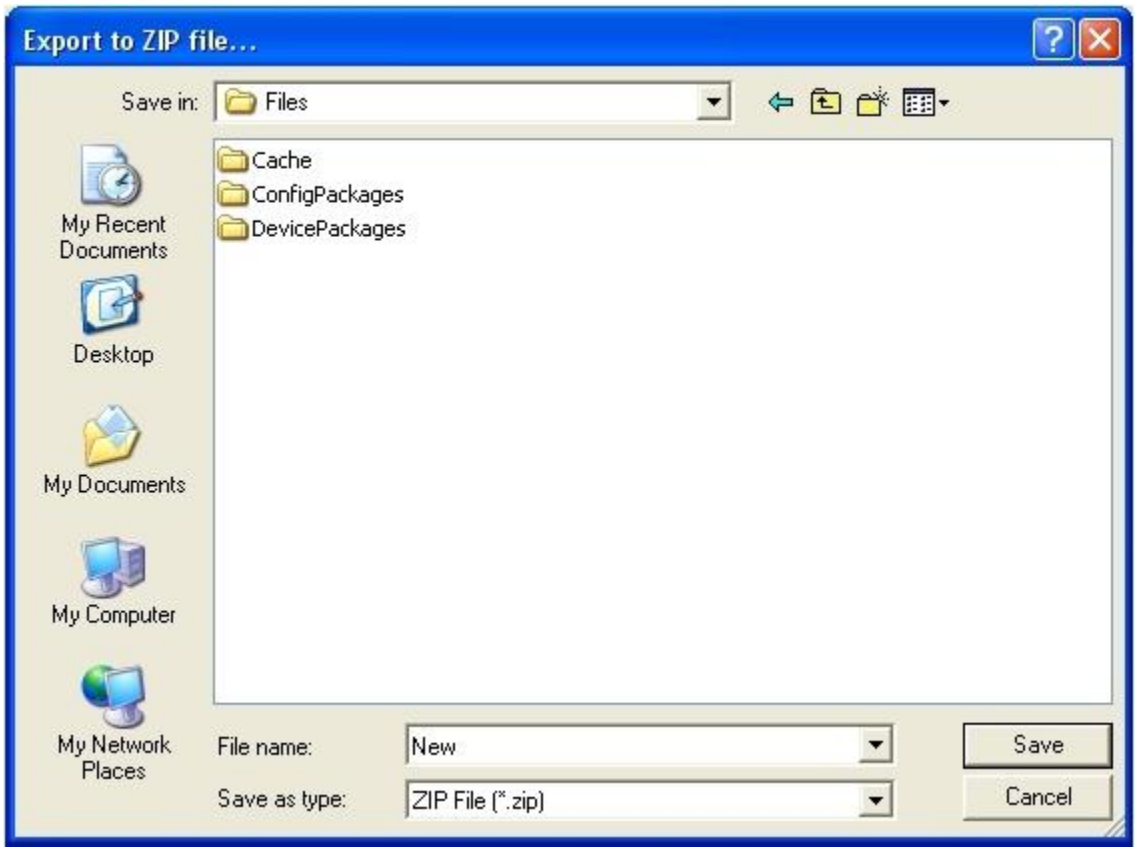


First, it is necessary to browse the destination folder in left panel. Then, type the name to give to new configuration.

The **Include Packages** check box allows including all packages in the configuration file. Thanks to this option, it is not necessary to install each package when opening the configuration on different target systems.

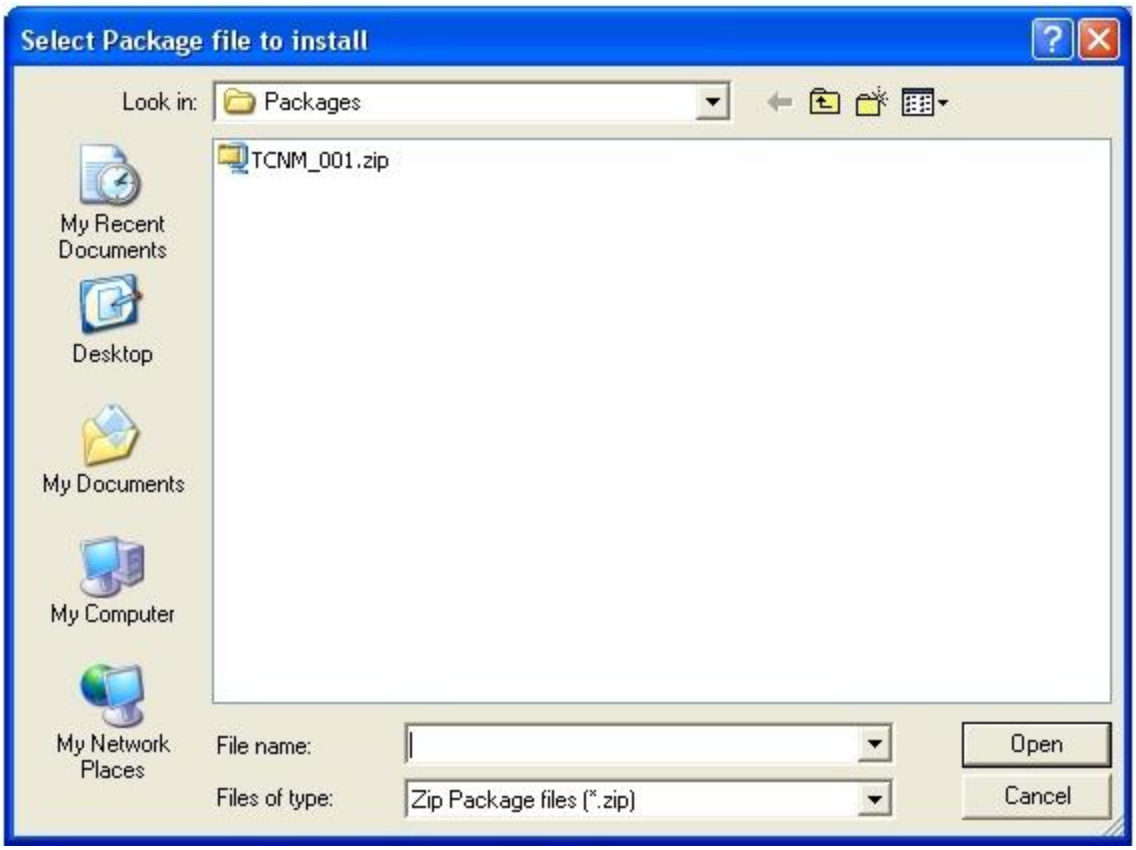
Export Configuration

This option, available only at installer level, exports the current configuration to a ZIP compressed file. The following dialog box allows selecting the destination file name and folder.



Install Package

The following dialog allows browsing for package files to install:



You can choose to install different package types:

Zip Package files, either Device or Configuration type.
Device Package files
Configuration Package files

Once installed, each package gives more choices when creating new configuration files.
See also Uninstall Package.

Uninstall Package

The following dialog box allows selecting installed packages to be removed from GeniusPlus:



WARNING

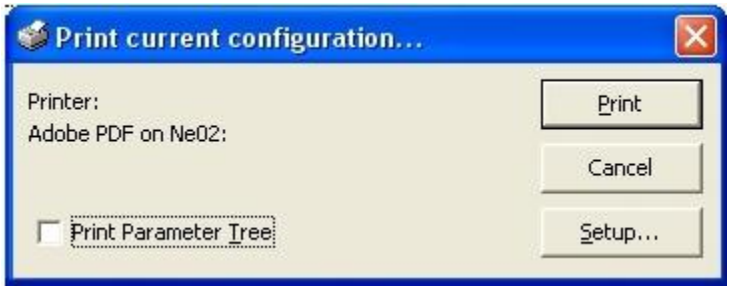
Be careful when removing packages, since some configurations do need a package installed to be opened. Therefore, uninstalling a package may prevent a configuration from opening.

Print Target

This option prints contents of the current configuration, including parameter list and its values.

The printout shows parameters tree in a semi-graphical style.

The following dialog box will appear, allowing to change and configure the current printer by clicking on the "Setup" button.

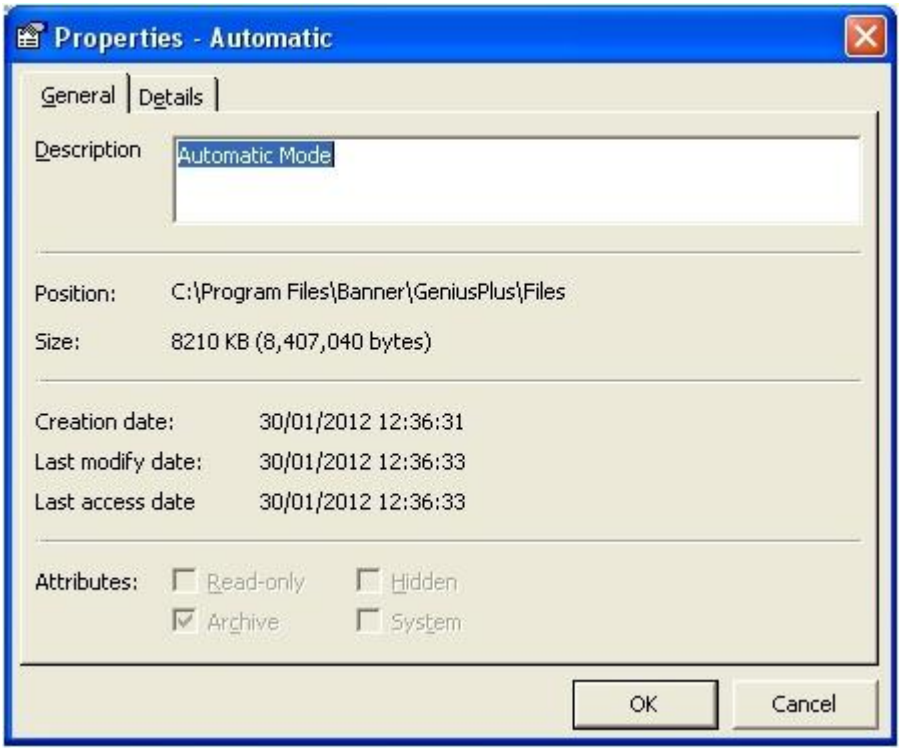


Configuration Properties

This option displays properties of the current configuration.

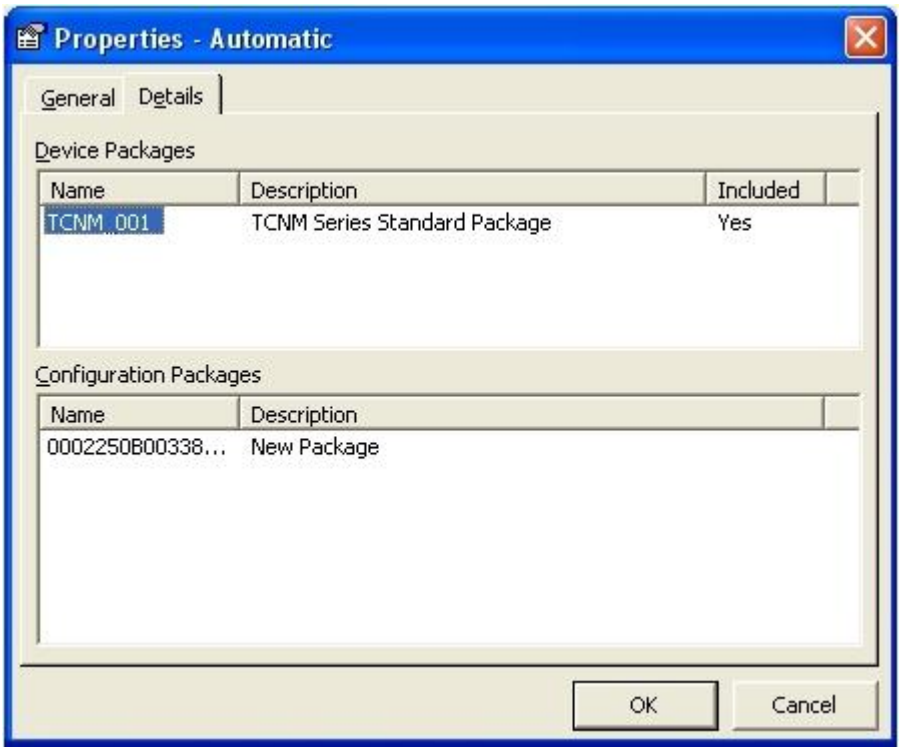
General properties

This folder reports the configuration description (changeable) and various file information.



Details

This folder shows the packages required by the configuration and indicates which device packages are included.



Device Menu

 **Get**
Gets the configuration from the local device which is currently connected to the PC. If working with a cluster of devices, it gets only the configuration of the selected ones.

 **Send**
Opens a dialog box allowing to define how to send the current configuration parameters to the selected device (several devices in case of cluster).

 **Default**
Opens a dialog box allowing to define how to send the default parameters to the selected device (several devices in case of cluster). The configuration parameters of the local device, which is currently connected to the PC, will be also turned to default values.

Send with Options
Sends parameters to selected devices using advanced options available in the Send with options dialog box.

Replace
Replaces the scanner configuration parameters on the selected devices of the cluster with a previously saved backup file. In this way, the parameter configuration, the environmental parameters and all application programs of the selected scanner will be replaced, while its system specific and topologic parameters are left unchanged. In case the replacing configuration does not contain the scanner application programs, an error will be generated.

Network Wizard
See *Network Setup* in the device specific Help On Line.

Express Network Setup
See *Network Setup* in the device specific Help On Line.

NET-AUTOSET
See *Network Setup* in the device specific Help On Line.

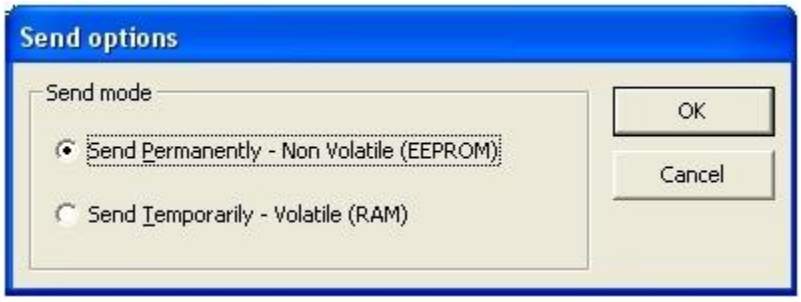
External Memory Backup & Restore
Launches the External Memory Backup and Restore application which allows the entire scanner (and relative network) configuration to be saved to the external memory, typically the backup memory module. Once saved, the external memory can then be used to restore the configuration, for example for scanner replacement.

Local Device Network Settings
Defines the topology role of the local scanner. For more details see *Network Setup* in the device specific Help On Line.

Send

> **NOTE**
> Before using this option, it is necessary that the configuration of all selected devices has been previously loaded.

When selecting the "Send" option from the Device menu, the following dialog box appears:



Send mode

Specifies how current configuration parameters will be sent to the selected devices.

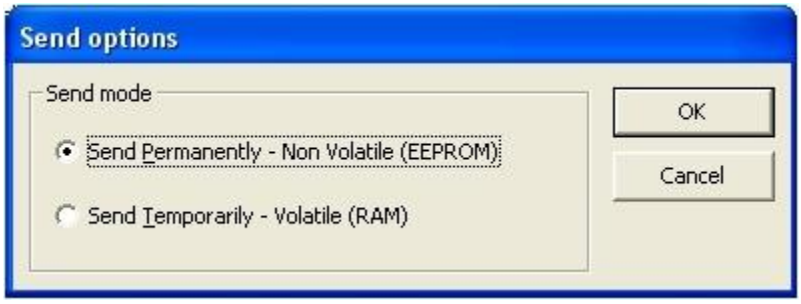
Send Permanently – Non Volatile (EEPROM)
Sends the current configuration parameters to the selected devices keeping them permanently active.

Send Temporarily – Volatile (RAM)
Sends the current configuration parameters to the selected devices keeping them active until the following reset.

Default

> **NOTE**
> Before using this option, it is necessary that the configuration of all selected devices has been previously loaded.

When selecting the "Default" option from the Device menu, the following dialog box appears:



Send mode

Specifies how default parameters will be sent to the selected devices.

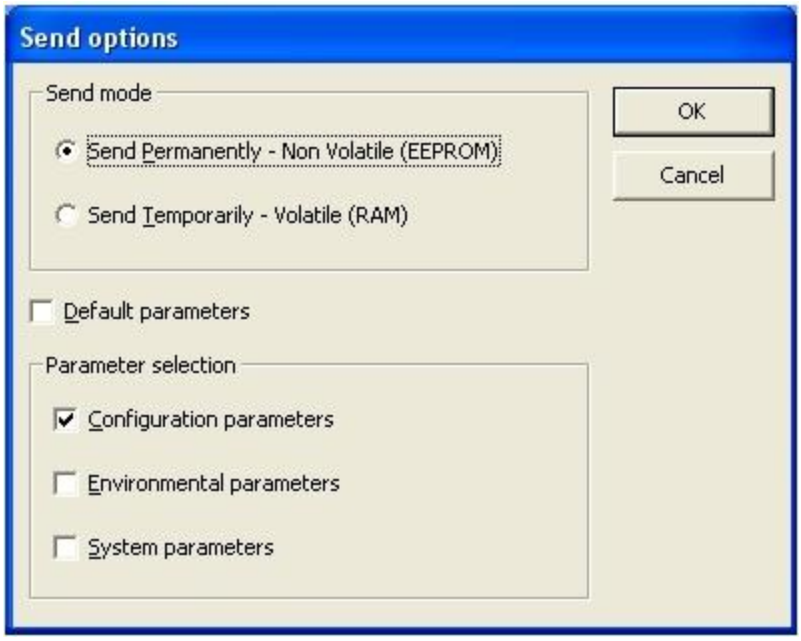
Send Permanently – Non Volatile (EEPROM)
Sends the default parameters to the selected devices keeping them permanently active.

Send Temporarily – Volatile (RAM)
Sends the default parameters to the selected devices keeping them active until the following reset.

Send with Options

> **NOTE**
> Before using this option, it is necessary that the configuration of all selected devices has been previously loaded.

The following dialog box allows selecting the following sending options.



Default parameters
If checked, it restores default values both in device and current configuration.

Send mode

Specifies how long new parameters will be active on the connected devices.

Send permanently – Non Volatile (EEPROM
Sends the current configuration parameters to the selected devices keeping them permanently active.

Send temporarily – Volatile (RAM)
Sends the current configuration parameters to the selected devices keeping them active until the following reset.

Parameter selection

Specifies how current configuration parameters will combine with values existing on devices.

Configuration parameters
Sends to devices only configuration specific parameters, preserving all environmental and system specific parameters resident on devices.

Environmental parameters
Sends to devices environmental specific parameters, preserving only system specific parameters.

System parameters
Sends all configuration, environmental and system specific parameters overwriting all values existing on devices.

> **NOTE**
> This option is not always available, depending on device models and current configuration.

Edit Menu

 Cut, copy, paste and  delete work as the Windows standard clipboard commands.

In addition, the following device-specific edit commands are available:

Copy Device
Copies the configuration of the local device which is currently connected to the PC.

Paste Device
Pastes a previously copied configuration to the current device. The environmental, system specific and topology parameters are left unchanged.

View Menu

Toolbar
Alternatively shows/hides toolbar.

Status bar
Alternatively shows/hides status bar.

Events log
Shows/hides Events Log window.

System Info
Displays the System Information window (available only when a configuration is opened).

Toolbar

This option allows exploiting a subset of the functions offered by GeniusPlus menu system.



It may be divided into four toolbars:

Main Toolbar
The available buttons allows creating new configuration, opening an existing configuration, saving a current configuration; printing a current configuration; showing the current configuration properties; get the connected device configuration, sending defaults; cutting, copying, pasting and deleting text; viewing devices; showing help.

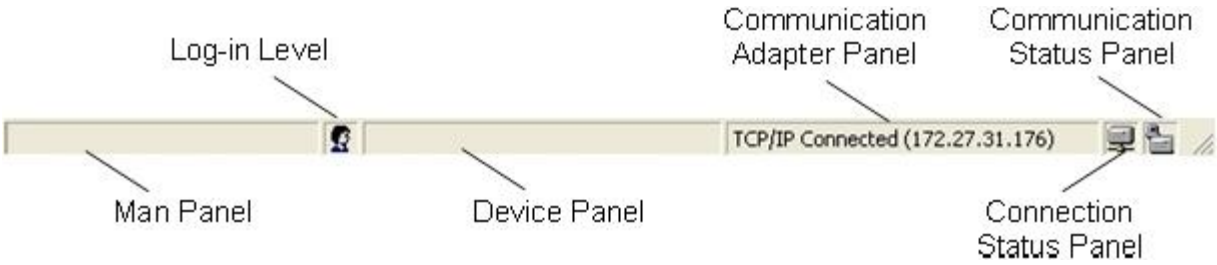
Tools Toolbar
The buttons allows running tools available in Tools menu: Explore Parameters, Compare Parameters, Download, Terminal.

Addons Toolbar (available when a configuration is opened)
The buttons open addons related to the current configuration.

Active Addon Toolbar (available when the parameters explorer is opened)
The buttons allow managing the functions available in the current Addon window (ex.: Parameters Explorer toolbar buttons).

Status Bar

Displays information about the system status.



It may be divided into five panels:

Main panel
Reports messages about the system status.

Login level
Shows an icon indicating the current login level:
User level
Installer level

Device panel
Shows messages about the device status.

Communications adapter panel
Displays information about currently configured communications adapter.

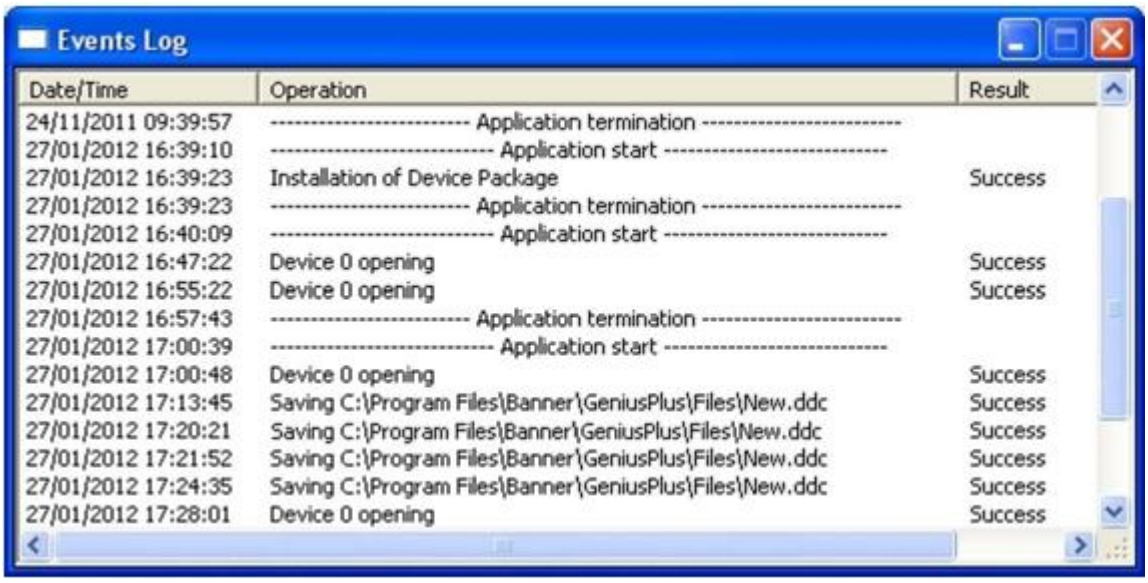
A short cut to the Communication Folder is made possible by double-clicking on this area.

Connection status panel
Shows an icon indicating the current connection status:
Communication not initialized (errors)
No connection (offline)
Connected (online)

Communications status panel
Shows an icon indicating the current communication status:
Communication in progress (active)
Communication not in progress (idle)

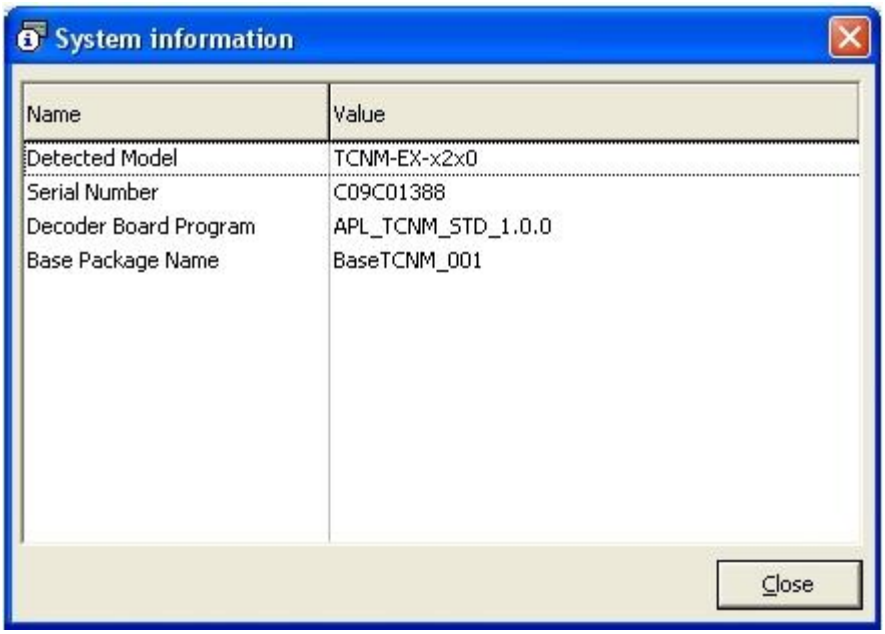
Events Log

The following window displays relevant events logged by GeniusPlus, sorted by Date/Time.



System Information

The following dialog window summarizes information about the system of the current Configuration.



Tools Menu

 **Explore Parameters**
Opens a new Parameters Explorer window. Available only if there is a configuration opened.

 **Compare Parameters**
Toggles on/off the display of reference values in Parameters Explorer window.
The reference values will be presented in the Parameters Grid, just at the right of each value.
The first time the parameter comparison is activated a dialog will be prompted to specify what kind of values should be assumed as a reference.

 **Program Download**
Starts Download Wizard providing a step-by-step procedure to download programs to connected devices.

Backup
Opens a dialog box starting a backup of the whole system by uploading configuration and programs of all the devices of the network.

Restore
Restores the currently opened configuration with a previously saved backup file. All environmental, system specific and topologic parameters are restored. If the currently opened configuration does not contain the application programs of each device, the restore procedure cannot be performed.

Restore Parameters Only
Restores the currently opened configuration with a previously saved backup file. Only device specific parameters are restored.

 **Terminal**
Opens the Terminal window.

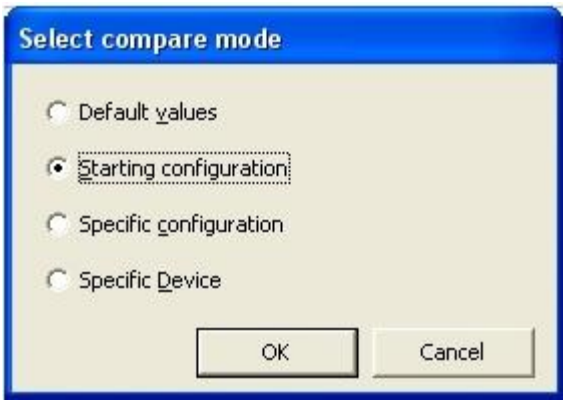
 **Wizard**
Opens the Wizard window allowing to define a new configuration for products that support this feature. See the specific Parameters Help Guide.

File Tranfer
Manages the file tranfer access. The device allows TFTP file reading or/and writing, depending on the user's level.

Options
Displays the Options dialog box.

Select Compare Mode

The following dialog box allows comparing the current configuration to one of the following:



Default values
Compares the current configuration values to their default.

Starting configuration
Compares the current configuration values to their initial values.

Specific configuration
Allows specifying a previously saved configuration to be compared to the current one.

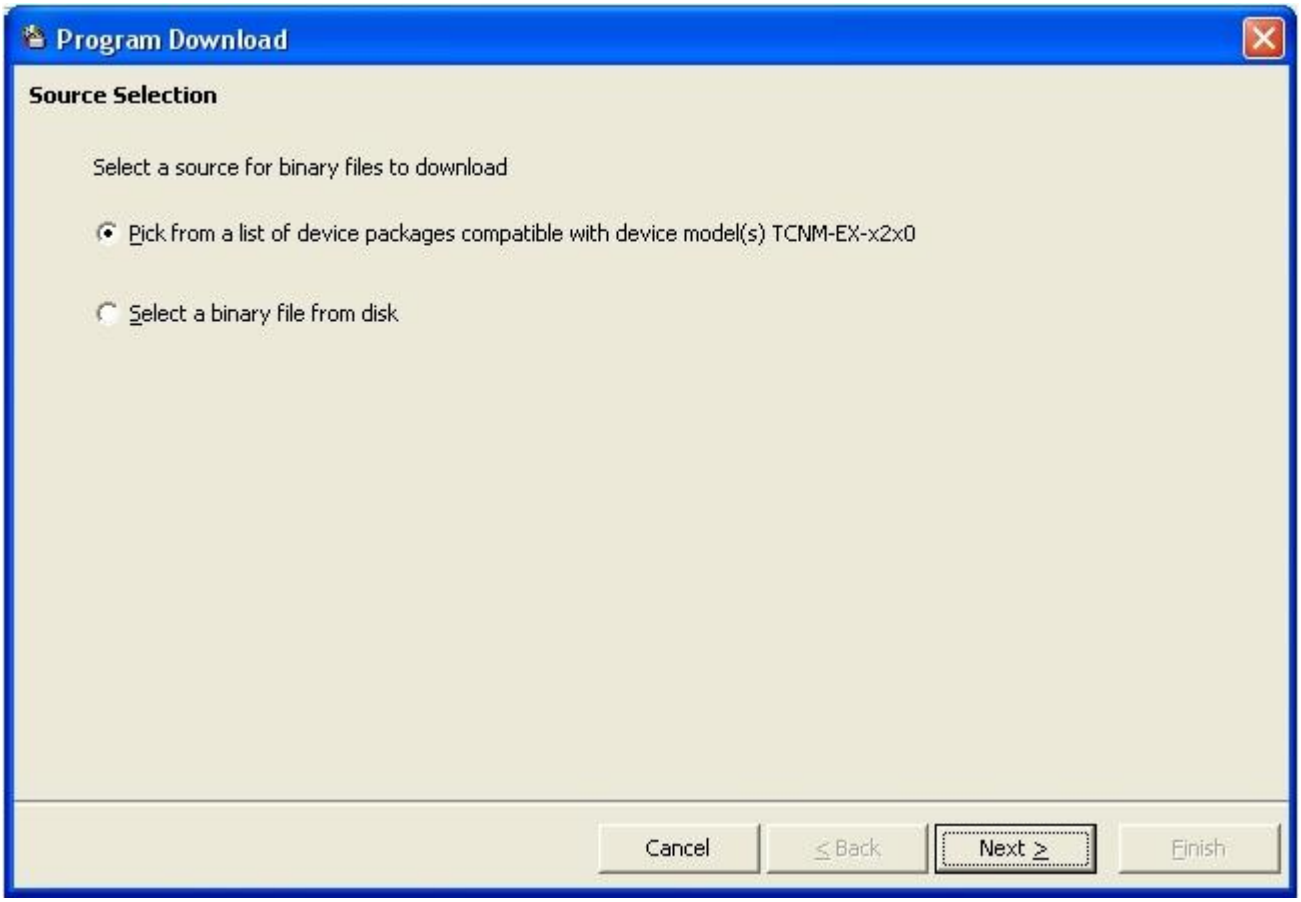
Specific device
Opens a dialog box to select one of the cluster devices, if any. The configuration of the selected device will then be compared to the current device.

Program Download Tool

This tool allows transferring one or more binary program files to the connected device. If working with a device cluster, the files will be transferred to the selected devices.
The file transport will be performed according to the parameters as set in the communications folder of the Tools > Options Menu.

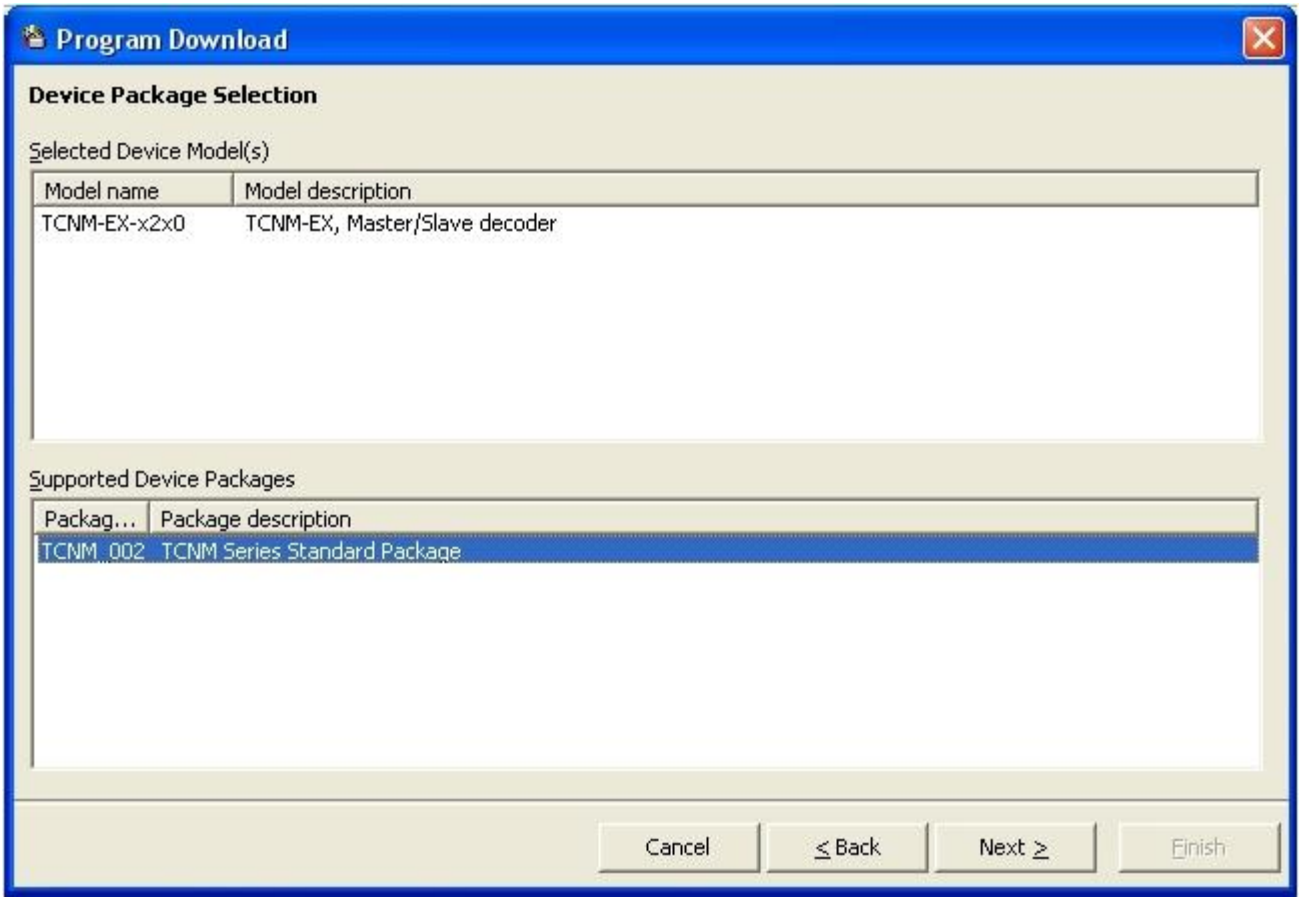
By selecting Tools > Program Download, a wizard giving a step-by-step procedure is opened. Click on the **Next** button to advance through the dialogs, or on the **Back** button to review the previous choices.

After GeniusPlus connects to the device, you will be prompted for the Program Source Selection:



You can select one of the following sources:
Programs included in any Complete Device Package supporting the connected device model;
Binary file from disk

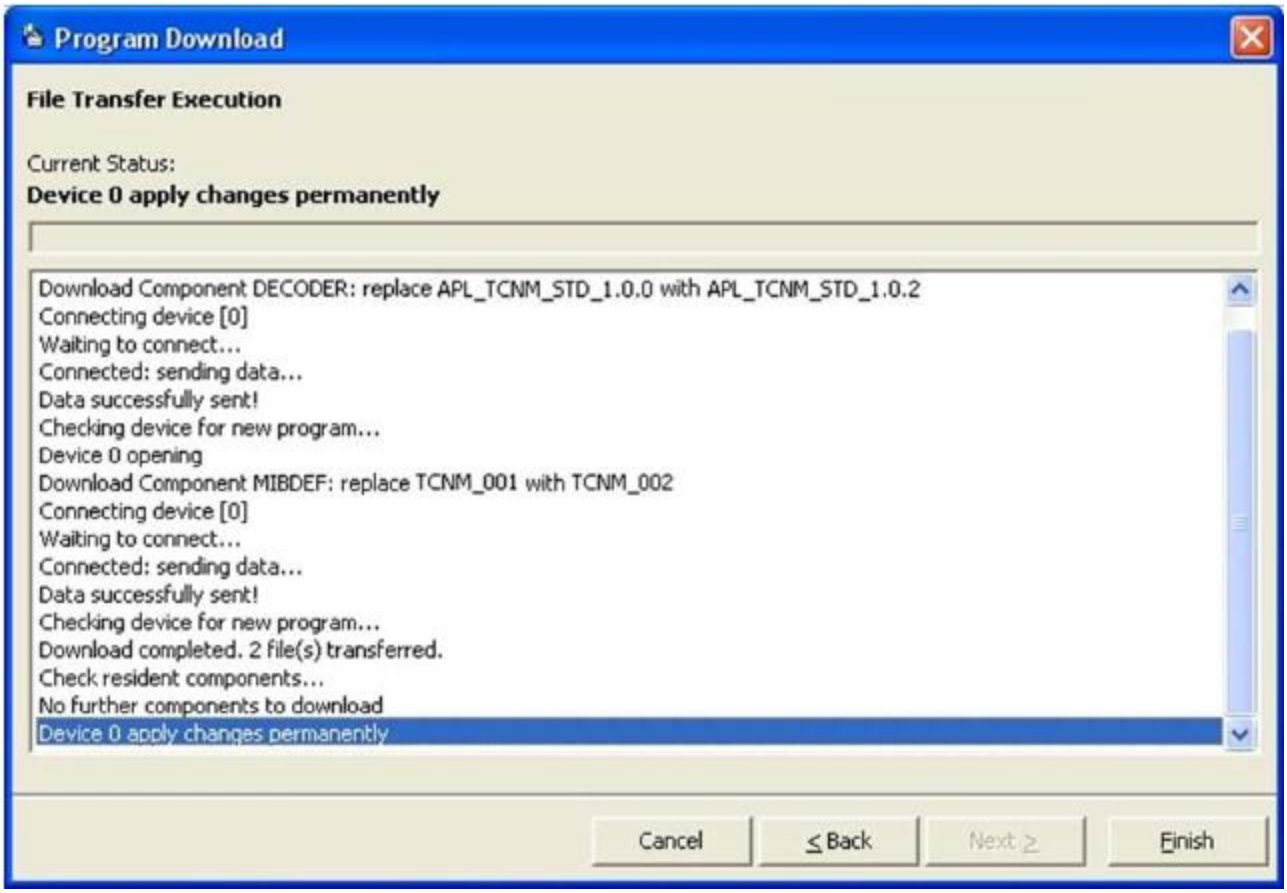
The first choice opens a further dialog box asking for the device package selection:



The device package must be selected from "Supported Device Packages" list. Only complete Device Packages can be used for downloading. You can recognize a complete Package because it does not have the word "Base" in front of it and it is a "Standard Series package".

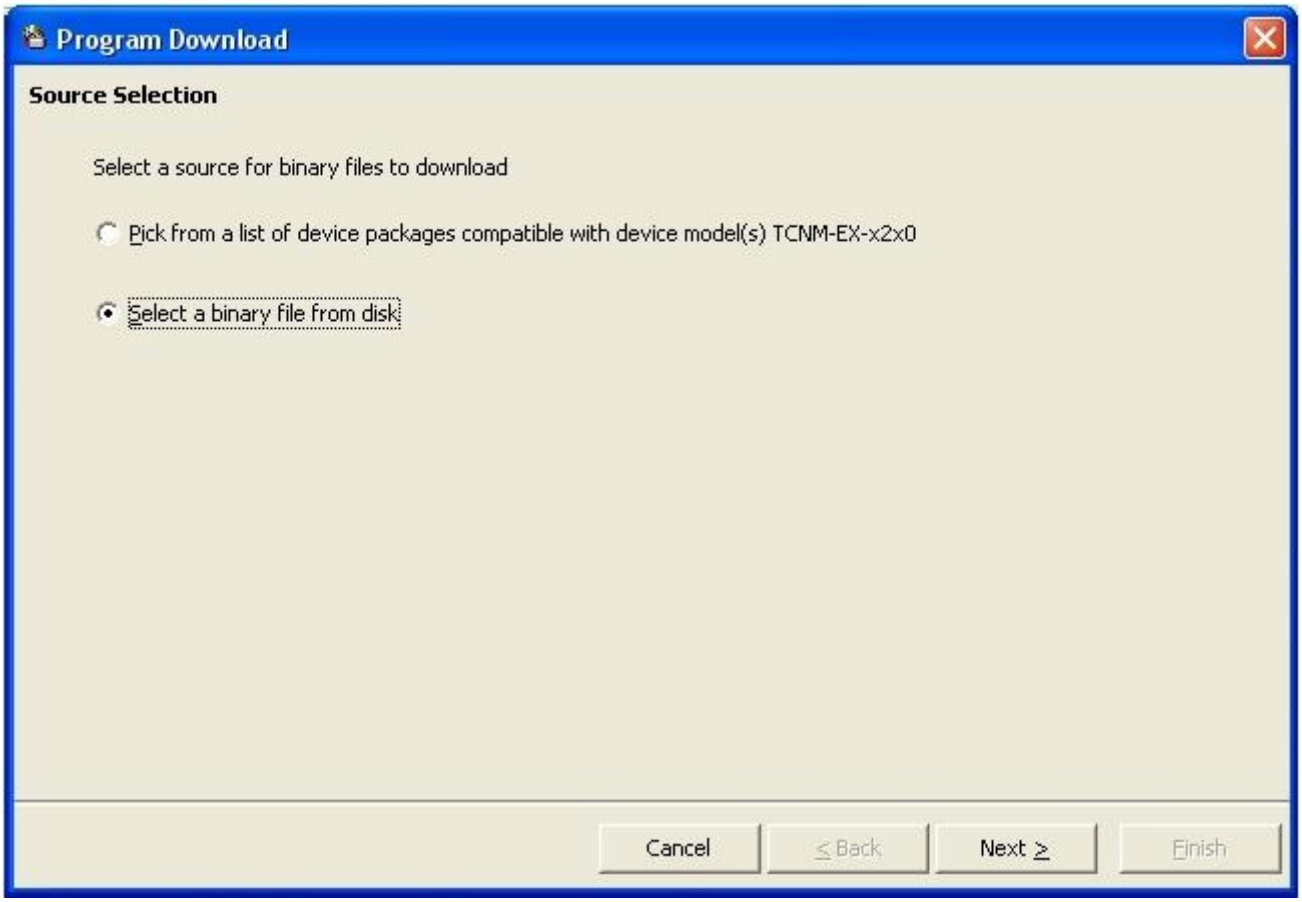
After selecting the program source, click Next to begin the download. GeniusPlus will automatically check and download only the updated program components.

At the end of a correct upgrade GeniusPlus shows a list of all parameter differences with respect to the previous program: new parameters may have been introduced with their default values and/or others may have been deleted. Unchanged parameters will maintain their previously configured values.



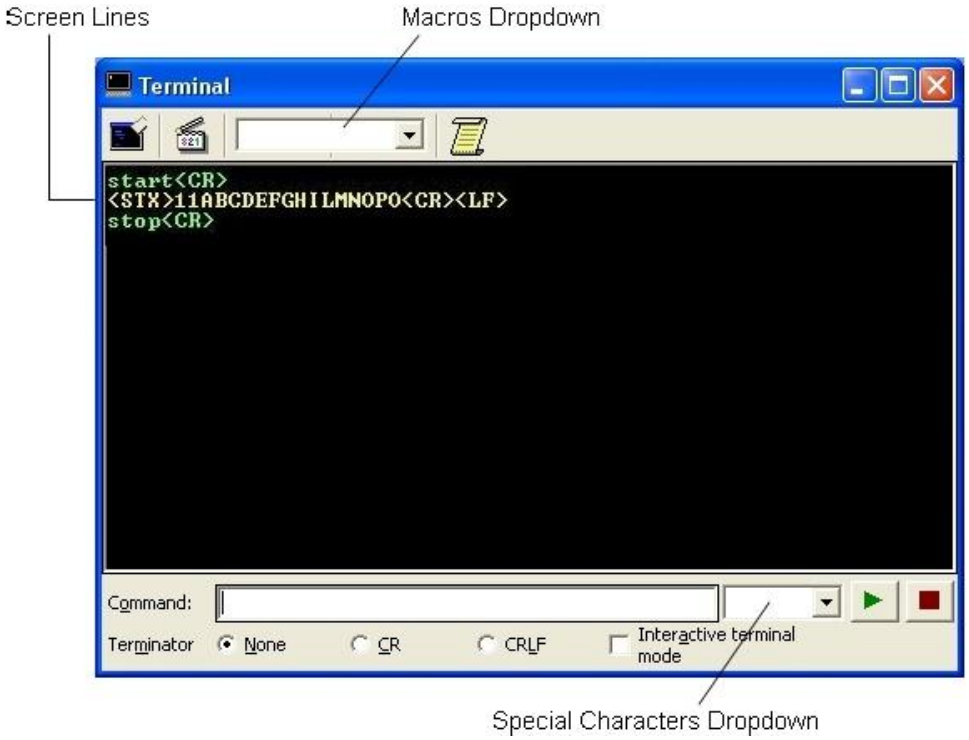
Click Finish to end the procedure.

The second choice in the Source Selection windows, allows manual software upgrading, by means of individual binary file component download. For details on the procedure, contact your Banner Representative.



Terminal Tool

This tool allows interacting with any connected device through a terminal emulator user interface:



Command
Types the command string to be sent to the connected device. Pressing Enter starts command transfer.

Terminator
Allows specifying the characters to be automatically appended to command string. Possible values can be chosen among None, Carriage Return or Carriage Return-Line Feed characters.

Interactive Terminal Mode
If checked, every single character typed in the Command edit box will be immediately sent to the connected device. No terminator will be appended to command string.

Special chars dropdown
Allows inserting a special character in the command edit box.

Macros dropdown
Allows sending a previously saved Macro command string.

Terminal Buttons and Menus

Clear Screen
Clears all screen lines.

Start/Stop Logging
Activates or suspends logging the received and sent data to a text file. When activated, it is possible to choose destination file path and name.

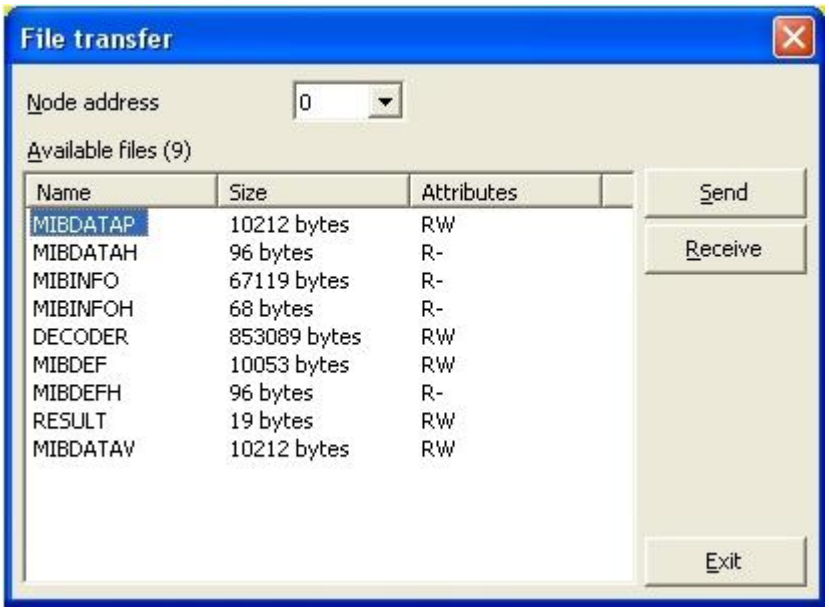
Edit Macro
Allows defining and saving command strings using the Macro Editor dialog.

Serial Start / Serial Stop
Sends Serial Start/Stop commands as specified in the current configuration StartTrigger/StopTrigger parameters.

> **NOTE**
> These buttons are disabled either if no configuration is currently open or if current configuration do es not support Start/Stop triggers

File Transfer

This tool allows transferring files between the scanner and the program, and enables file writing or/and reading, depending on the program entry level.



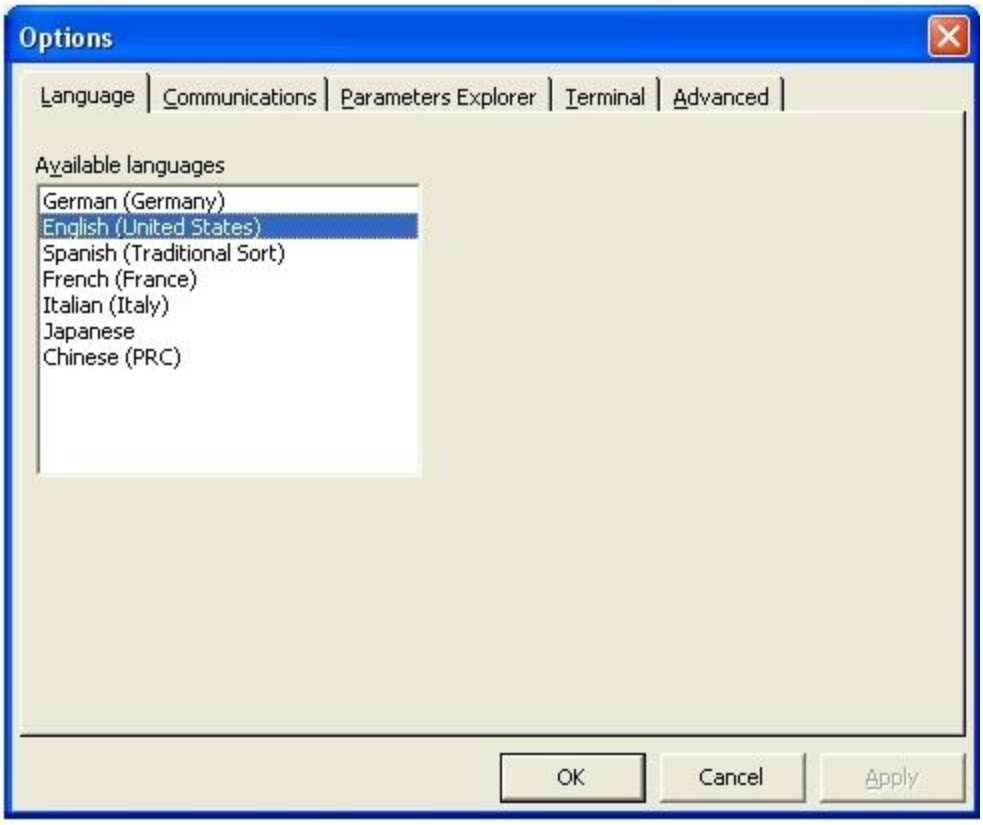
Options

This tool allows configuring the application.

The options are grouped into six folders:

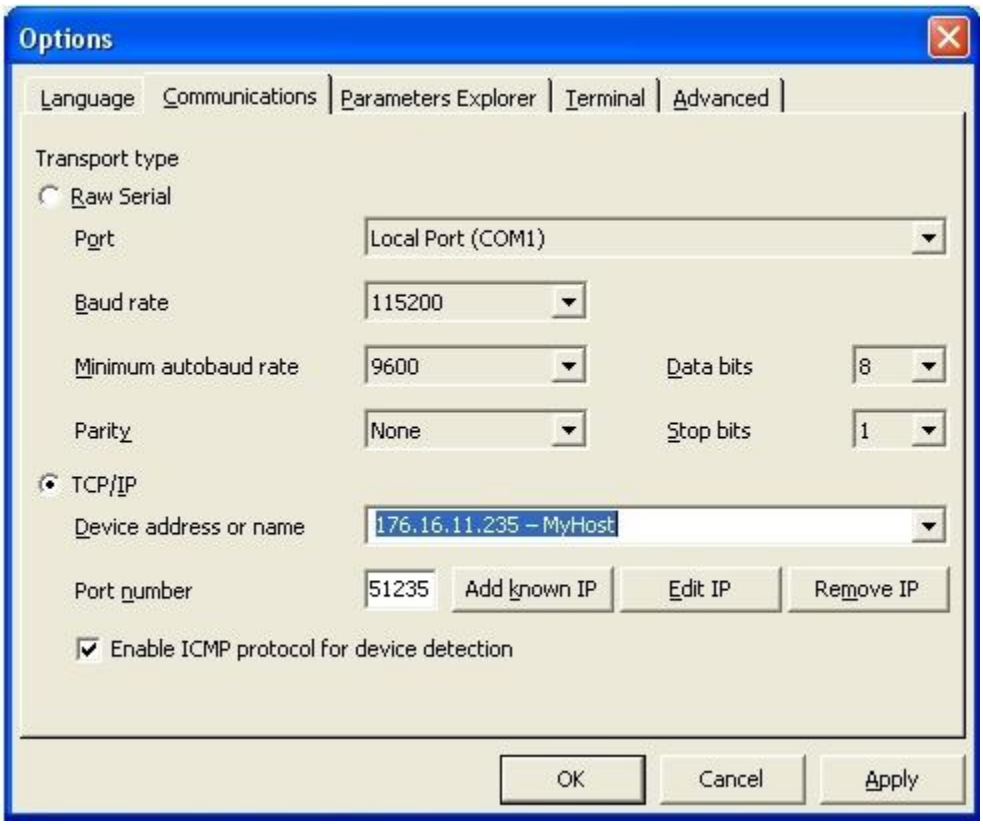
Language, Communications, Parameters Explorer, Terminal, Advanced.

Language



Available languages
Lists all the languages available in the system.

Communications



A short cut to the Communication Folder is made possible by double-clicking on the Status Bar Communication parameter area.

Transport type

Raw Serial

Serial type transport. The following parameters can be configured:

- Port
- Baud rate
- Minimum autobaud rate (the lowest rate checked during automatic detection of baud rate)
- Parity
- Data bits
- Stop bits

TCP/IP

Ethernet type transport. The following parameters can be configured:

- Device Address or Name (also selected from the dropdown menu)
- Port Number (it is strongly advised not to change the Port Number displayed)

Add known IP

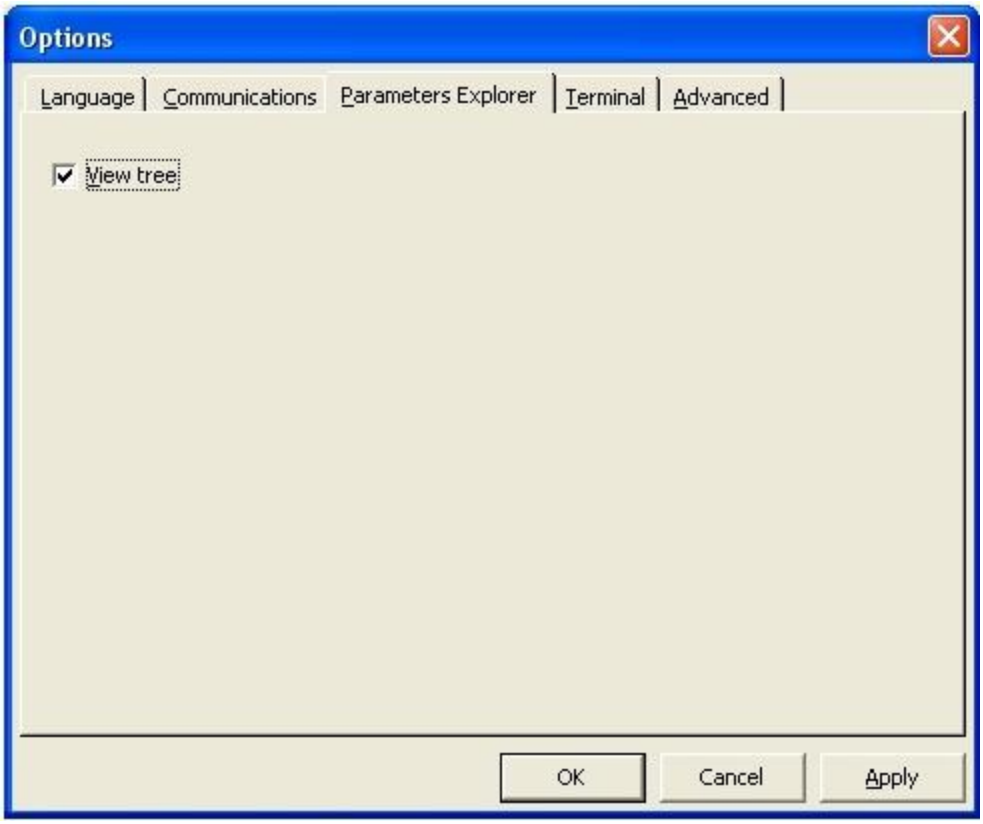
Allows adding new IP addresses to a memorized list. The Hosts in this list can be connected to directly at Start-up (see command line switches).
Clicking on the Add known IP button, a dialog box appears and a description as well as the device address can be inserted.



Edit IP
Allows editing IP addresses

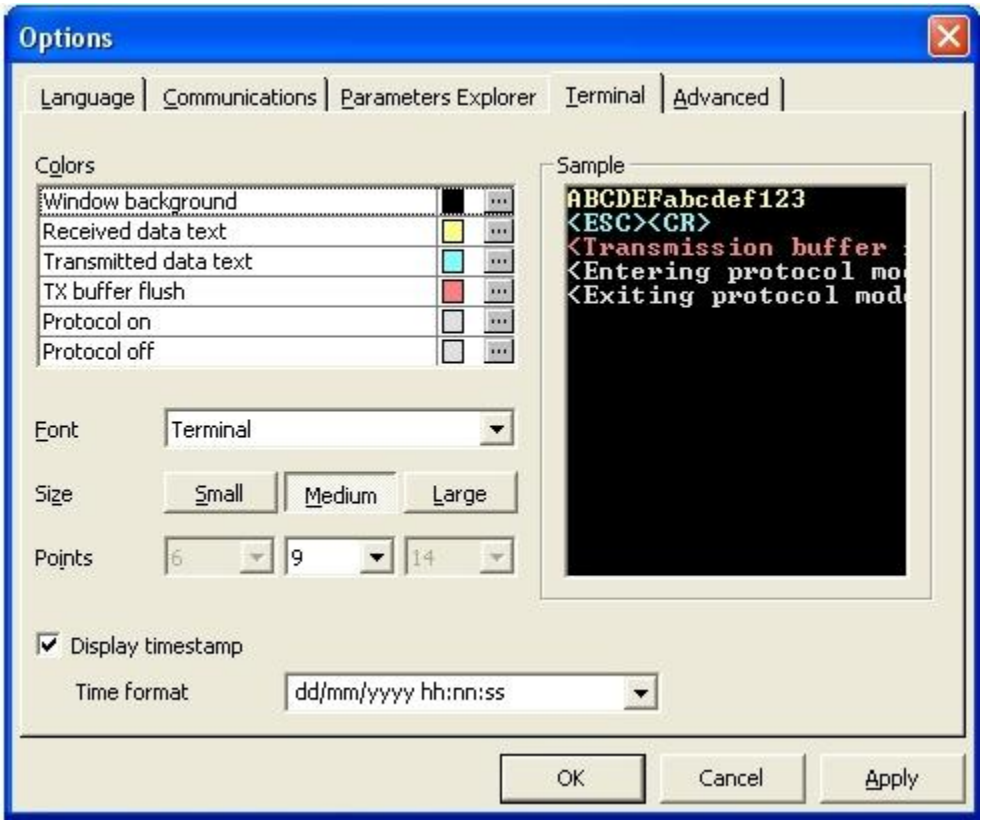
Remove IP
Removes IP addresses

Parameters Explorer



View tree
If checked, it enables the folder tree area on the left side of the Parameters Explorer window in order to control and improve the parameter navigation.

Terminal



Colors
Configures the color of different window elements.

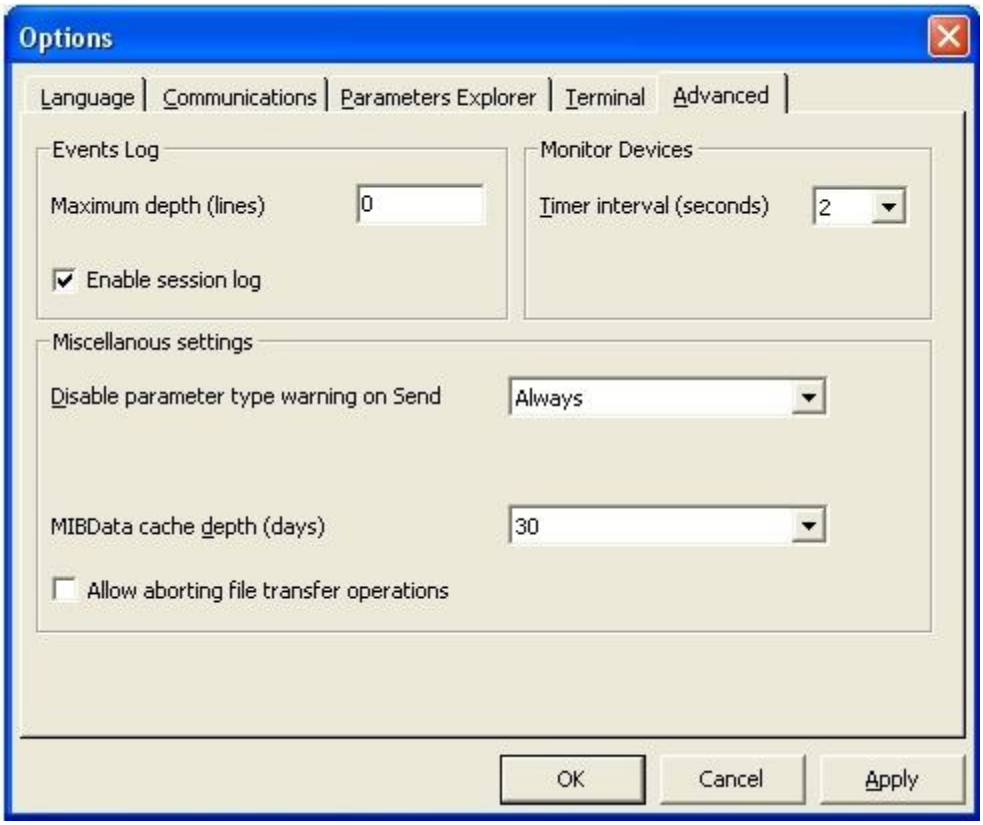
Font
Sets the font used in the terminal window

Size
Sets the current text size (small, medium or large)

Points
Allows specifying the font size in points for the three different text sizes.

Sample
Displays a preview the parameter settings.

Advanced



Events Log

Maximum depth

Defines the maximum number of levels that the Event Log Viewer must keep track of.

Monitor Devices

Timer interval

Defines the interval between two consecutive polling procedures of the network.

Miscellaneous settings

Disable parameter type warning on Send

Disables the display of the warning message generated when sending a configuration to a device having a different serial number.

Idle time after Program Download (sec)

This is an Ethernet or DeviceNet Scanner parameter. It allows to set the device restart time, and can only be set at installer level.

Window Menu

Tile Horizontally, **Tile Vertically**, **Cascade** and **Arrange Icons** work as the Windows standard window management options.

Help Menu

 **GeniusPlus Help**
Opens GeniusPlus Help On-Line (this file) giving information about the program management and functioning.

Parameters Help
Opens the configuration Help On-Line of the specific connected device describing all the configuration parameters to be set.

About GeniusPlus
Opens a dialog box providing information about the software version.

Parameters Explorer

This tool allows navigating through the device configuration parameters "tree" and viewing, editing or changing parameter values.

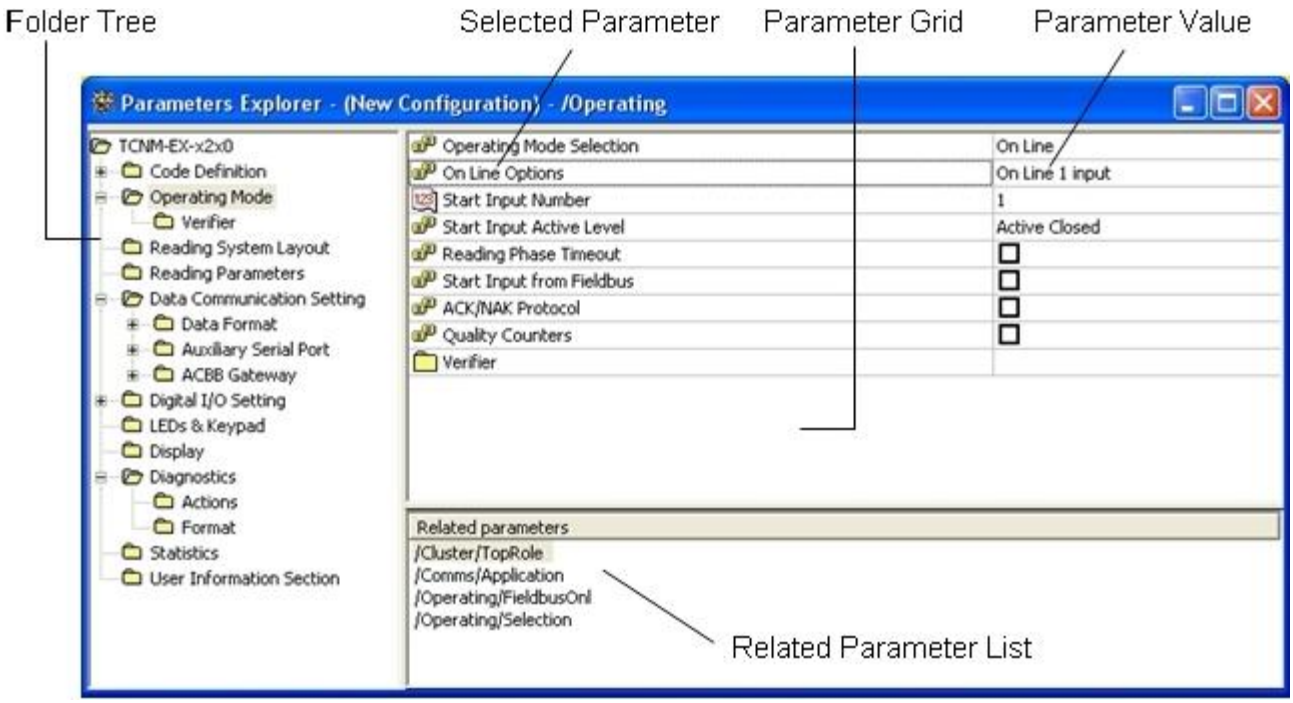
User Interface

Menus and Toolbar buttons

Parameters Explorer User Interface

The window may be divided into three areas: Folder Tree, Parameter Grid and Related Parameter List.

Each panel size can be adjusted as a standard Windows explorer.



Folder Tree
Device configuration parameters are grouped into different folders which are hierarchically organized. Selecting a folder will cause the refresh of the Parameter Grid.
The root folder always reports the device model.
Folder tree can be optionally hidden, see Options/Parameter Explorer.

Parameter Grid
It displays the parameters grouped in the folder selected from the Folder Tree.
The first column shows each parameter label preceded by the related type symbol.
The second column contains the current parameter value.

Type symbols
Numeric (integer) parameter
Enumeration parameter
String parameter
Binary parameter*
Floating point parameter
Reference parameter

* For binary parameters, in the corresponding value field you can select either ASCII character format or hexadecimal format, simply by right-clicking on it.

ASCII
Displays each byte value using the corresponding ASCII characters. Non printable characters are displayed using special acronyms, e.g. <STX> for ASCII 2.

HEX
Displays each byte value in hexadecimal format.

Insert (only when value edit box is open)
Allows you to insert a special character.

The *modified* ( ) symbol may appear over type symbols indicating that the parameter value has been modified. The same symbol also appears in the Folder Tree area next to those the folders containing modified parameters.

Related Parameter List
By selecting a parameter this area lists all the related parameters (in the short "path" form), if any. To jump to these parameters simply click on them.

Parameters Explorer Menus/Toolbar buttons

The following options may be selected either from the Tools menu/Active Addon Toolbar Panel or by right-clicking on the Folder Tree and Parameter Grid areas (popup menu):

 **Up one level**
Jumps to the parent folder of current folder.

 **Back to previous folder**  **Next folder**
Moves back and forth to recently visited folders.

 **Show history**
Displays a History window listing all the folders visited during the current configuration. By clicking on the desired folder name it is possible to jump to it.

 **Interactive mode**
Toggles Interactive Mode on/off.

 **Undo**
Deletes the last modify applied to a parameter value.

 **Redo**
Repeats last undone change.

The following options are only available in the popup menu which appears by right-clicking either on the Folder Tree area or on the left column of the Parameter:

Open in new window
Opens the selected folder in a new Parameter Explorer window.

Expand branch
Opens recursively all descending folders of the selected folder.

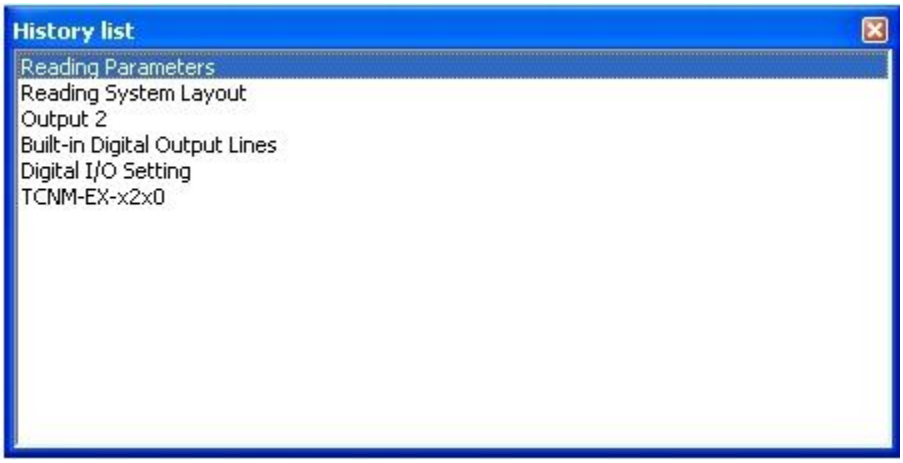
Collapse branch
Closes recursively all descending folders of the selected folder.

Properties
Displays the selected folder/parameter Properties window.

History List

This window lists the recently visited folders, in chronological order.

Double click or press Enter on any list item to return to related folder.

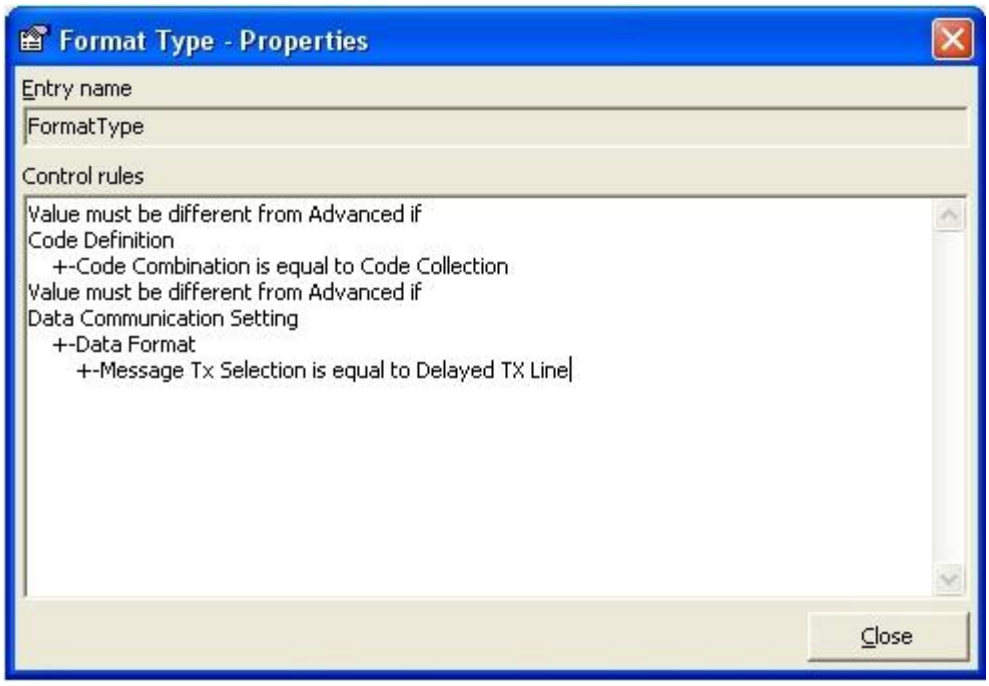


Interactive Mode

When this mode is active, all parameter changes will be immediately sent to connected devices, if any.

Parameter/Folder Properties

Displays currently selected parameter/folder properties.



Entry name
Is the internal name associated to current entry (parameter or folder).

Control rules
Lists rule set used in parameter value validation and/or to control entry visibility depending on other parameters value.