DL Sm@rtSet

User's Manual

DATALOGIC

DL Sm@rtSet™

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DL Sm@rtSet™

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CONTENTS

1   GENERAL INFORMATION

1.1   DL Sm@rtSet™ DESCRIPTION

DL Sm@rtSet™ is a powerful and versatile solution that allows an easy device set-up. Extremely flexible, it guarantees the device configuration without reading from barcodes.

Thanks to Datalogic research, a Remote System has been developed allowing the Datalogic device management through Internet or Intranet. Using this feature, you can modify the device configuration, update the software, send commands and activate a chat line with the remote operator, simply knowing the IP address of the computer to which the device is connected.

DL Sm@rtSet™ offers a wide range of solutions to better satisfy any specific requirement from the user:

- Automatic Detection of the connected device: DL Sm@rtSet™ can automatically identify the COM port where the device is connected to, the device model and its software release. See par. 2.2.2 for details.

- Manual Selection of the device: the user can select the device to be configured from a series of images, representing all Datalogic products compatible with the program. This option, normally used with standard products, can also be used to prepare the configuration for devices not physically connected to the PC. At the end, the configuration can be printed, sent via e-mail or saved on the PC. See par. 4.1.2 for details.

- Loading and saving configuration: the defined configuration can be saved in .xml format and recalled at any time. In this way, you can have a backup of the configuration of your devices and recall/modify it whenever needed. You can also send the configuration file via e-mail to be sure that all devices having a different location will be configured in the same way. See par. 4.1.3 for details.

- Copy Mode: you can read the configuration parameters of a device and copy them to another device. See par. 4.3 for details.

- Print Function: it offers the opportunity to print the barcodes of new parameters. This provides a method to configure the devices which are not connected to the PC. See par. 6.2.6 for details.

- Software Upgrade: it allows upgrading the software of the device connected. See par. 4.2 and par. 5.2 for details.

- Mailing: it permits sending configuration parameters by using an e-mail message. See par. 6.2.2.

- Remote Mode: it allows the remote control of the device via Internet or Intranet. Software configuration and software upgrade can be performed by simply connecting you computer (Client PC) to the IP address of the computer that the device is connected to (Server PC). See par. 2.2 for details.

- Standard Windows graphic interface: DL Sm@rtSet™ does not require high programming skills. It is supported by an easy-to-use graphic interface, which offers a step-by-step approach to help you to create your own device configuration.

1.2   COMPATIBLE PRODUCTS

In the following list you find all Datalogic products which are compatible with DL Sm@rSet:

- DL Cordless Card

- DLC6065/90, DLC6165/90, DLC6265/90

- DLC7070, DLC7072, DLC7075

- DLD1000

- DLL5010, DLL5110, DLL5510

- DLL6010-M

- DLL6010-R, OM6010-R

- DLS2000

- DRAGON™ D101

- DRAGON™ M101, OM-DRAGON™

- GRYPHON™ D100/D110/D200

- GRYPHON™ D120/D220

- GRYPHON™ M100/M200

- GRYPHON™ BT

- OM-Gryphon™

- STAR★Modem™

- TC1100 PDF, TC1100 Std

2 COMMUNICATING WITH DL Sm@rtSet™

Two different communication modes allow configuring a device by using DL Sm@rtSet™:

Local Communication
It sets a device connected to a local PC through an RS232 interface (see par. 2.1).

Remote Communication
It provides an online device set-up thanks to a connection between a Server PC and a Client PC based on Internet (through modem or proxy server) or Intranet (see par. 2.2).

2.1 LOCAL COMMUNICATION

A Datalogic device is connected through an RS232 serial interface to a local PC running DL Sm@rtSet™ in one of the following modes:

- Serial Auto Detection (see par. 4.1.1)
- Manual Selection (see par. 4.1.2)
- Load From File (see par. 4.1.3)

Figure 1 – Local Communication

This connection offers different operations, such as:

- Reading device configuration
- Writing configuration
- Software upgrading
- Copy configuration

2.2   REMOTE COMMUNICATION

This communication occurs between a Server PC and a Client PC, where:

- Server PC = physically connected to the device to be configured through the serial interface, this PC must start DL Sm@rtSet™ in "Listen for Connection" mode (see par. 5.1.1 for details) in order to wait for the messages or commands sent by the Client PC.

- Client PC = not necessarily connected to a device, this PC must start DL Sm@rtSet™ in "Remote Connection" mode (see par. 5.1.2 for details) in order to control the communication and act upon the device connected to the Server PC. You may connect a device to this PC in order to load the configuration of the remote device and testing its functioning.

For a correct communication functioning always keep in mind the following guidelines:

1. Only if the "Enable Sm@rtSet Remoting" option has been disabled, available in the Options window, enable it again for both the Server and Client PCs, since it manages the remote properties activating this type of connection:
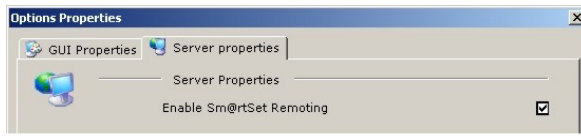

<p align="center">**Figure 2 – Enabling/Disabling Remote Connection**</p>

You can ignore this step in case this selection has never been changed, since it is enabled by default;

2. Start DL Sm@rtSet™ on the Server PC in "Listening For Connection" mode to prepare it for receiving commands/messages from remote;

3. <u>Once the Server PC is in listening mode</u>, activate the connection from the Client PC by using the desired type of remote connection.

The remote connection between the two PCs can be activated in two different ways:

- <u>manually</u>: this procedure can be used at any time, since the information required is to be inserted manually (see par. 2.2.1);

- <u>automatically</u>: only after setting the Server PC by means of the register properties given in the Options window (available from the Tools menu), the communication can start automatically (see par. 2.2.2);

2.2.1   Manual Remote Communication

A Datalogic device is connected to a Server PC running in "Listen For Connection" mode (see par. 5.1.1) and waiting for messages or commands to be sent by the Client PC via Internet/Intranet. The operator working with the Client PC may start the remote communication towards the Server PC in:

-   Peer-to-Peer mode
-   Web Server mode

by manually inserting all information required (such as, IP address of Server PC and Web Server name).
The available operations are listed in the following table:

Peer-to-Peer	Web Server
Software Upgrade	Configuration Transmission
Configuration Transmission	Single Command Transmission
Single Command Transmission	Chat
Chat	

Peer-to-Peer Connection

The Server and Client PCs are connected directly to Internet or Intranet.
The Client PC can send single commands by using the chat feature (see par. 5.3 for details), a complete configuration, or a new software for the device upgrade. The Server PC immediately processes all these commands.
Thanks to the chat line, the two operators (working with Client and Server PCs) can communicate exchanging messages.
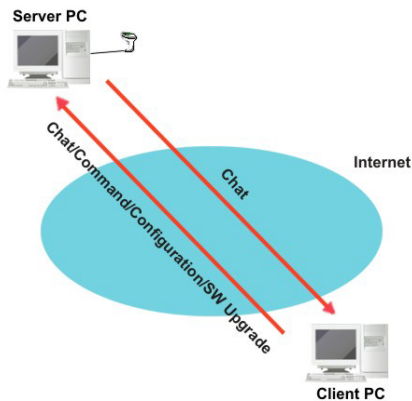

Figure 3 – Peer-to-Peer Connection

To communicate in Peer-to-Peer mode each element of the system must be configured as described below by following the given order.

Server PC - physically connected to the device to be configured through RS232 serial interface

- start DL Sm@rtSet™ in "Listen For Connection" mode

- if necessary, send your IP address to the Client PC through the dialog presented by the program after startup (see par. 5.1.1)

Client PC - start DL Sm@rtSet™ in "Remote Connection" mode

- select the Peer-to-Peer connection mode and manually insert the IP address of the Server PC

For more details about the selection of each option refer to chapter 5.

Web Server Connection

The Server PC is part of a LAN and has access to the Internet through a Proxy server. All Client PCs can communicate with the Server PC by means of a Web Server which belongs to the same LAN.

To exploit this connection mode, the Web Server PC must be configured by installing the software module files contained in the ASP Extension directory provided in the program installation path (follow the instructions given in the "readme.txt" file for correct installation).

During communication, the chat line is uni-directional and the Server PC can only receive messages. The Client PC can send commands and messages but it cannot upgrade the software on the device connected to the Server PC.
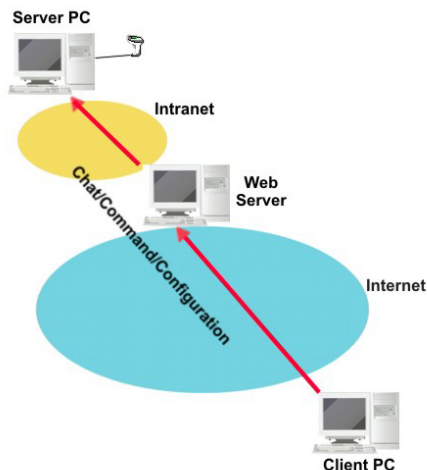

Figure 4 – Web Server Connection

To communicate in Web Server mode each element of the system must be configured as described below by following the given order.

Server PC - physically connected to the device to be configured through RS232 serial interface

- start DL Sm@rtSet™ in "Listen For Connection" mode

- if necessary, send your IP address to the Client PC through the dialog presented by the program after startup (see par. 5.1.1)

Client PC - start DL Sm@rtSet™ in "Remote Connection" mode

- select the Web Server connection mode and manually insert the IP address <u>and</u> the Web Server name (URL) of the Server PC

For more details about the selection of each option refer to chapter 5.

2.2.2 Automatic Remote Communication

Datalogic S.p.A. provides a web service on its site through which the Server and Client PCs can exchange all information necessary to automatically start a remote communication. In particular:
- Server PC: registers its data for remote identification;
- Client PC: is in **Server List** mode and gets this data to automatically start the communication.
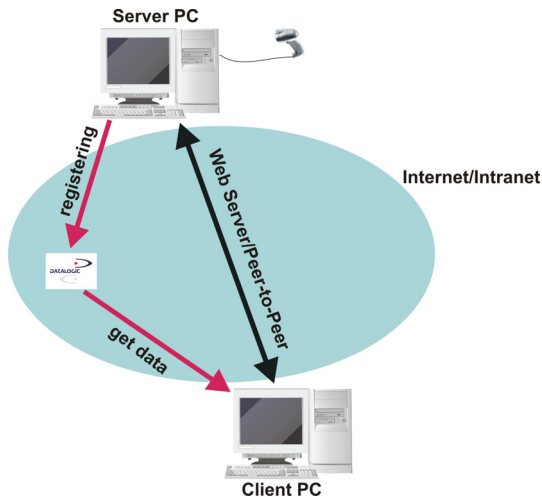

Figure 5 – Server List Mode

Preliminary Settings on the Server PC

To exploit this automatic connection the Server PC must be set as described in the following procedure. Its setting is to be performed in one of the following cases:

- when communicating in Server List mode for the first time;
- when changing the "Registering" information defined in a previous session.

To set the Server PC proceed as follows:

1. Start the program in offline mode by selecting the "Manual Selection" mode from the opening window, or by skipping it through the "Cancel" button;

2. Open the Options window from the Tools menu and set the Server PC by means of the "Register Service" area available in the "Server Properties" folder:
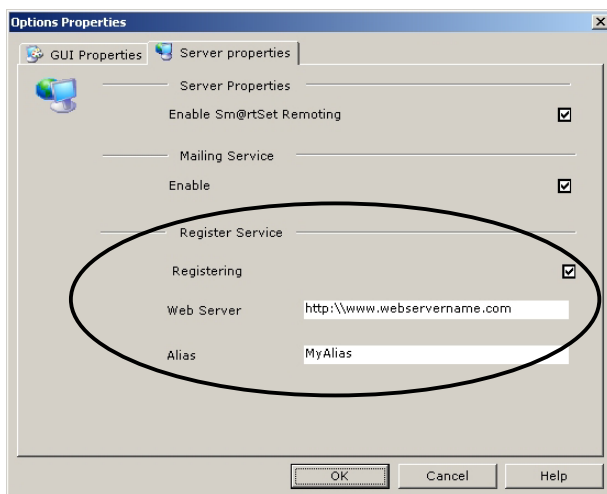

Figure 6 – Enabling/Disabling Remote Connection

Tick on the Registering check box. Then, you can define an Alias identifying the Server PC and insert its Web Server name (for ex. http://www.datalogic.com) if working in a LAN:

Type of Connection	Required Information
Direct connection to Internet	Alias
Connection to Internet through a Web Server	Alias + Web Server name

3. Close the window and exit the program. The information defined is saved and maintained in the following sessions, until different data are inserted.

Server List

The Server PC runs the program in "Listen For Connection" mode registering the information already defined in the Options window (see previous page for details).
Once the registration has been successfully completed, the Client PC can connect to the Server PC according to the information registered.

Registered Information (Server PC)	Remote Connection Mode (Client PC)
Alias	Peer-to-Peer
Alias + Web Server name	Web Server

All operations available depend on the connection mode adopted.

To start the automatic connection, the system must be configured as described below by following the given order:

Server PC
- physically connected to the device to be configured through RS232 serial interface
- start DL Sm@rtSet™ in "Listen For Connection" mode to register the information defined in the Options window (see previous page)

Client PC
- start DL Sm@rtSet™ in "Remote Connection" mode
- choose the Server List mode and select the Server PC to automatically start the connection according to the information registered by the Server PC (see par. 5.1.2 under Server List).

2.3   TERMINOLOGY

Local Communication	a communication in which the device can be configured from a local PC. They are connected together through an RS232 serial interface.
Remote Communication	a communication in which the device connected to a PC through an RS232 serial interface is configured by a remote PC via Internet/Intranet.
Server PC	a PC connected to the device to be configured and running DL Sm@rtSet™ in "Listen For Connection" mode. It cannot act upon the connected device but only wait for messages or commands sent by a remote PC.
Client PC	a PC not necessarily connected to a device and running DL Sm@rtSet™ in "Remote Connection" mode. It communicates with the Server PC via Internet/Intranet controlling the device it is connected to.
Web Server	a PC controlling a local network (LAN) to which the Server PC belongs.
Peer-to-Peer connection	a direct connection between the Server and Client PCs via Internet.
Web Server connection	an Internet connection between the Server and Client PCs through a Web Server.
Server List	a Web service provided by Datalogic S.p.A. to simplify the remote communication and start an automatic connection between the Client and Server PCs.

3   INSTALLATION

3.1   MINIMUM CONFIGURATION REQUIRED

In order to install and use the DL Sm@rtSet™ software, it is necessary to have at least the following:

- PC with a Pentium processor;
- One of the following operating systems:
        Windows 95
        Windows 98
        Windows 2000
        Windows NT
        Windows XP
- Free serial port;
- 16 MB memory for Windows 95/98, 32 MB memory for Windows 2000/NT/XP;
- Internet Explorer 4.01 at least for Windows 95;
- hard disk with at least 1054 KB free space to run;
- VGA video card or better.

3.2   INSTALLING DL Sm@rtSet™

Two different versions of DL Sm@rtSet™ can be installed:

- Free version available on the Datalogic web site and providing the local device configuration only;
- Enterprise version available on the installation CD-ROM and providing both the local and remote configuration.

Free Version

This software version can be freely downloaded from the Datalogic web site after filling in the download form.
Once the installation file has been launched, simply follow the suggestions given by a wizard to complete the operation.

Enterprise Version

This software version is available only on the installation CD-ROM. For a successful installation, follow the given steps:

1. Insert the DL Sm@rtSet™ CD-ROM into the CD-ROM driver of your PC;
2. Launch the Sm@rtSet™_Ent.exe file;

3. Follow the steps suggested by the installation wizard until the following dialog box appears:
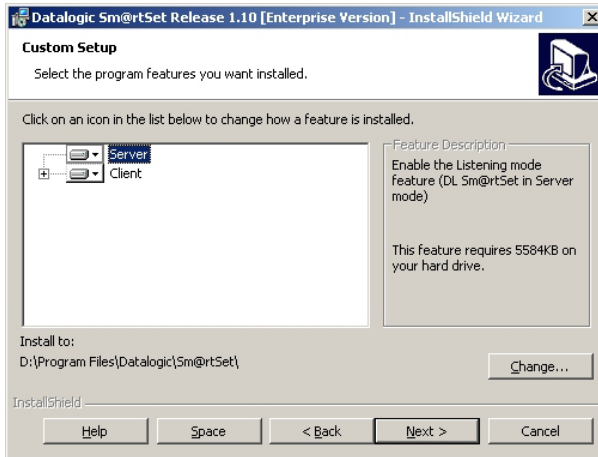

Figure 7 – Enterprise Installation

The "Server" and "Client" icons allow choosing the feature to be installed.
The "Server" one is always installed on your PC. If you want to install this feature only, it is necessary to disable the "Client" feature by means of the pull-down menu:
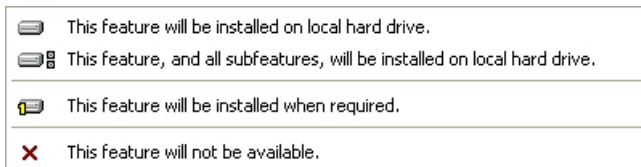

Figure 8 – "Client" Pull-down Menu

This "Server" installation does not require any software authorization (see par. 3.3).

The "Client" feature is optional. If installed, at first program startup the License window appears requiring an authorization key to be assigned by Datalogic S.p.A. (see par. 3.3 for details).

If ignoring the selection of these features, both of them will be automatically installed allowing your PC to work either as a Server or as a Client according to your applications.

3.2.1   Utilities

Once the installation has been completed, the following Utility Tools will be available in same installation directory containing DL Sm@rtSet™:

- **Device List Upgrade**: allows upgrading the DL Sm@rtSet™ device database by adding existing models loading a special software or a new software release (see par A.1 for details).

- **Downloader**: is very useful when you need only to upgrade the software of a device (refer to par. A.2 for details). The same procedure may be performed using DL Sm@rtSet™ (see par. 4.2 and par. 5.2) but this choice is particularly advised when the device must also be configured.

- **On Line Upgrade**: allows performing an on-line software upgrade of the DL Sm@rtSet™ program (see par. A.3 for details).

3.3   AUTHORIZATION

When running DL Sm@rtSet™ for the first time after a complete installation (both Server and Client features installed), the following window appears:
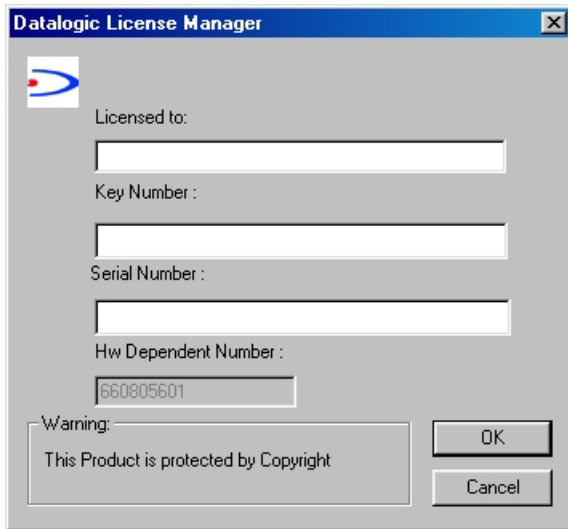

Figure 9 - License Window

Licensed to

It requires to type the user name.

Key Number

It is the authorization key the user must get from Datalogic S.p.A. by sending an e-mail request with the following information:

- addressee = smartset@datalogic.it
- subject field = authorization request
- text body = authorization request
  Serial number: NNNNNNNNN
  PC Hardware number

The Datalogic e-mail response will provide the authorization key (case sensitive) to be typed in the License window.

Serial Number

It is the number provided on the user's DL Sm@rtSet™ packaging.

4 DL Sm@rtSet™ LOCAL COMMUNICATION

The local connection allows defining a device configuration when it is connected to the COM port of your Host PC through an RS 232 serial interface.

4.1 DETECTION MODE

Among all the detection modes listed within the starting window, the detection modes for local configuration are:

- Serial Auto Detection
- Manual Selection
- Load From File

Figure 10 - Starting DL Sm@rtSet™

4.1.1   Serial Auto Detection

The selection of this detection mode opens the following dialog box showing the COM port(s) available, their status and setting:
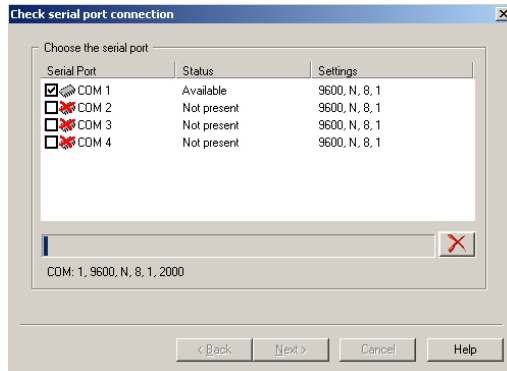
Figure 11 - Auto Detection

By clicking on the "Next" button the program automatically detects the COM port(s) available taking into account all possible values of the communication parameters.
If you know the specific values of the COM port the device is connected to, click twice on the COM port to open a further dialog box where you can define the value of each communication parameter.

Once the device is recognized, a dialog box appears reporting the serial port number the device is connected to, and other information about the device's name and its software release.

Clicking again on the "Next" button opens another window displaying summary information about the system, where the "Read Configuration" check box allows getting the current device configuration.

Finally, enter the configuration window by clicking on the "Finish" button.
The desired device configuration can be defined by clicking on the parameter group

available in the tree structure and clicking on the [icon]. A secondary window appears displaying all the parameters to be set (see par. 6.1 for details).

4.1.2   Manual Selection

The manual detect mode starts an offline configuration which can be saved to an .xml file, printed, sent in an e-mail message as an enclosed document, or sent to a connected device after performing the Synchronize operation (see par. 6.2.3).

The selection of this detection mode activates a wizard allowing to choose the model of the device to be configured and its software release.
Then, a final dialog box appears giving summary information about the system.
Finally, enter the configuration window by clicking on the "Finish" button. The desired device configuration can be defined by clicking on the parameter group available in

the tree structure and clicking on the [icon] icon. A secondary window appears displaying all the parameters to be set (see par. 6.1 for details).

After defining the parameter values, you can complete the configuration by:

- Clicking on the [icon] icon or selecting the Save/Save as option from the File menu to save the configuration to an .xml file;

- Clicking on the [icon] icon or selecting the Synchronize Device option from the Configuration menu to start the synchronize procedure and send the configuration to the connected device. This procedure requires that the connected device corresponds to the device model chosen for the configuration. If not, a message appears signaling the error and the configuration cannot be sent to the device;

- Clicking on the [icon] icon or selecting the Print option from the File menu to print the complete configuration and read the printed barcodes with the Datalogic device to be configured;

- Clicking on the [icon] icon or selecting the Send to option from the File menu to send the configuration as an .xml file enclosed in an e-mail message.

4.1.3   Loading Configuration from File

The selection of this detection mode opens a dialog box to browse for an .xml configuration file previously saved.
Then, a final dialog box appears giving summary information about the system.
Finally, enter the configuration window by clicking on the "Finish" button. The desired device configuration can be defined by clicking on the parameter group available in

the tree structure and clicking on the ![icon] icon. A secondary window appears displaying all the parameters to be set (see par. 6.1 for details).

After defining the parameter values, you can complete the configuration by:

- Clicking on the ![icon] icon or selecting the Save/Save as option from the File menu to save the configuration to an .xml file;

- Clicking on the ![icon] icon or selecting the Synchronize Device option from the Configuration menu to start the synchronize procedure and send the configuration to the connected device. This procedure requires that the connected device corresponds to the device model chosen for the configuration. If not, a message appears signaling the error and the configuration cannot be sent to the device.

- Clicking on the ![icon] icon or selecting the Print option from the File menu to print the complete configuration and configure the device by reading the printed barcodes;

- Clicking on the ![icon] icon or selecting the Send to option from the File menu to send the configuration as an .xml file enclosed in an e-mail message.

4.2   SOFTWARE UPGRADE

This operation can be performed when a device is connected to the program. For this reason, when working in "Manual" or "Load from File" mode, it is necessary to perform the synchronize procedure to start the transmission between the program and the device itself.

Clicking on the ![icon] icon opens an optional area in the bottom part of the main window allowing to select a .HEX file and download it onto the connected device:
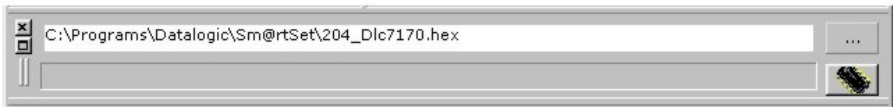

Figure 12 – Downloading Area

The successful downloading will be signaled by an acoustic signal emitted from the device and a message displayed by the program.

> *Some devices require being reset to complete this operation.*
>
> **NOTE**

4.3 COPY CONFIGURATION

This feature allows copying the configuration of a device to another one of the same model and loading the same software release. To perform this operation the system requires that more than one device is connected to the same PC by means of one or more COM ports.
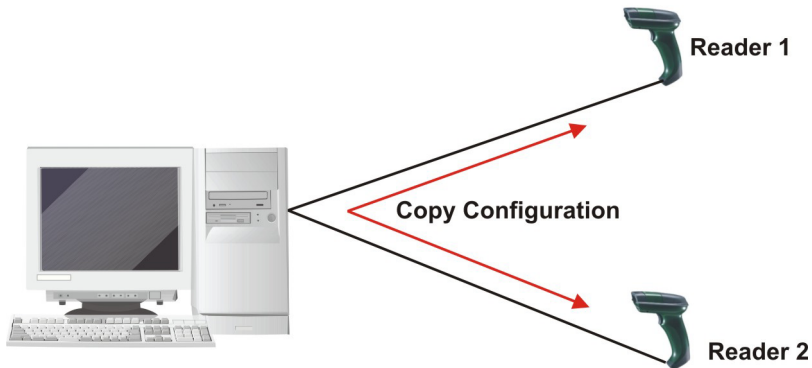

Figure 13 – Copy Command

First, click on the [icon] icon to get the configuration of the device (ex. Reader 1) to which the program is connected.

Then, click on the [icon] icon and a dialog box appears displaying the COM port(s) available on your PC

- if working with only <u>one COM port</u>, substitute the device (ex. Reader 1) with the one to be configured (ex. Reader 2), then click on the "Next" button to send it the copied configuration;

- if working with <u>more than one COM port</u>, select the COM port to which the device to be configured (ex. Reader 2) is connected and click on the "Next" button to send it the copied configuration.

Once the configuration has been copied, a final dialog box reports information about the procedure and lists all copied command strings.

5   DL Sm@rtSet™ REMOTE COMMUNICATION

The remote configuration allows configuring a device connected to a Server PC from a Client PC.

5.1   DETECTION MODE

Among all the detection modes listed within the starting window, the detection modes for remote configuration are:

- Listen For Connection
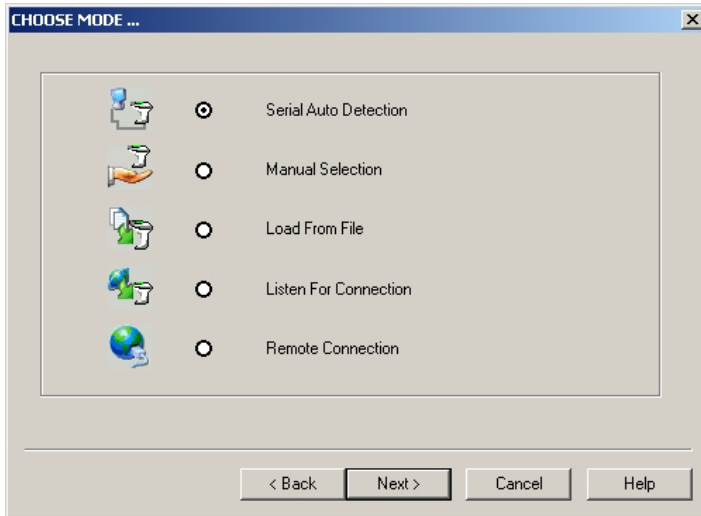- Remote Connection

Figure 14 - Starting DL Sm@rtSet™

5.1.1   Listening for Connection – Server PC

This detect mode requires a device to be connected to the Host PC serial port and causes the PC to work as a Server (see par. 2.1).
By selecting this detect mode, first an autodetect procedure is activated to search for the connected device. Then, a dialog box appears giving summary information about the system before displaying the configuration window which shows the current device configuration (see par. 6.1 for details).
The display of the configuration window is preceded by the following dialog box, <u>only</u> when the Server PC has <u>not registered</u> its alias or web server name (see par. 2.2.2). This dialog box asks to send an e-mail message containing your computer IP Address:
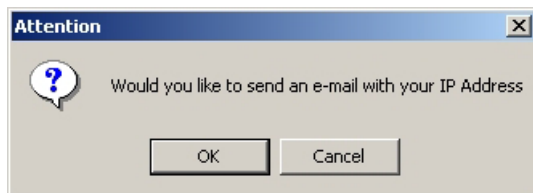

Figure 15 - Sending E-mail with IP Address

If accepting, the Mail window is opened reporting the IP address value in the subject field and allowing to write a message (see par. 6.2.2). This feature is very useful when working in Manual Remote Configuration, because it allows communicating the IP address to the Client PC to be connected to.
This dialog box does not appear when the Server PC registration occurs, since all information is automatically provided to the Client PC.

When working in this mode it is not possible to act upon the connected device, since the Server PC waits for commands, configuration, messages or software upgrades sent by the Client.

Only by clicking on the icon (refer to par. 6.1.2), this state is interrupted and the device configuration can be modified in local communication.

5.1.2   Remote Connection – Client PC

This detect mode causes the PC to work as a Client PC controlling the device connected to the Server PC (see par. 2.2).
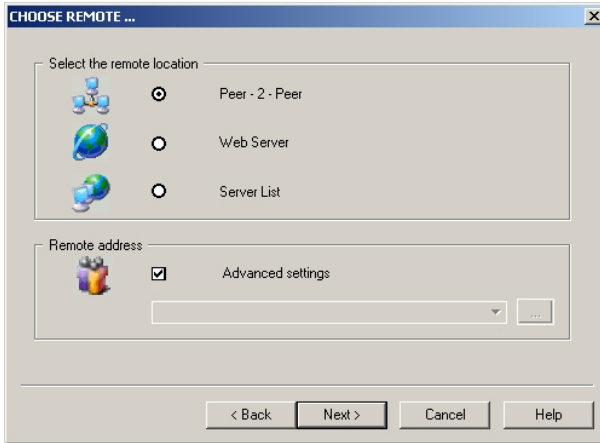By selecting this detect mode the following dialog box appears:

Figure 16 - Choosing Remote Communication

Three different possibilities are available to start the remote connection:

- Peer-to-Peer
- Web Server
- Server List

Peer-to-Peer

The Peer-to-Peer connection requires defining the IP address of the Server PC (see par. 2.2.1 under Peer-to-Peer Connection).
You can select it from the pull-down list available in the "Remote address" area. This list reports only the IP addresses already registered in the Address Book (see par. 6.2.5).

Otherwise, the IP address can be inserted by ticking the "Advanced settings" check box and clicking on the "Next" button.
The following window appears allowing to insert the IP address of the Server PC or its DNS address:
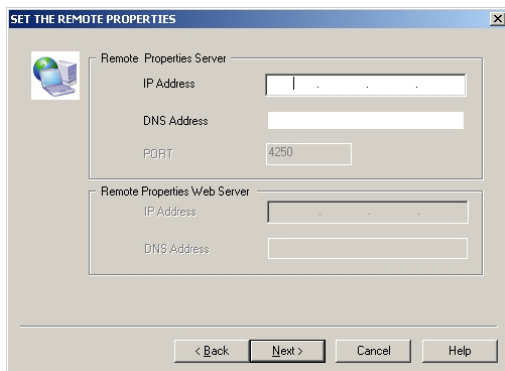

Figure 17 – Peer-to-Peer

After inserting the IP address, click on the "Next" button to start the remote connection.
If successful, a final dialog box appears giving summary information about the system.
Finally, enter the configuration window by clicking on the "Finish" button. The desired device configuration can be defined by clicking on the parameter group available in

the tree structure and clicking on the [icon] icon. A secondary window appears displaying all the parameters to be set (see par. 6.1 for details).

Web Server

The Web Server connection requires defining the IP address and the Web Server name of the Server PC (see par. 2.2.1 under Web Server Connection).
To start this connection select the user name from the pull-down list available in the "Remote address" area, whose Web Server name has already been defined in the Address Book (see par. 6.2.5).
The Web Server can also be defined by ticking the "Advanced settings" check box and clicking on the "Next" button.
The following window appears allowing to insert the IP address of the Server PC and the DNS Address (URL):
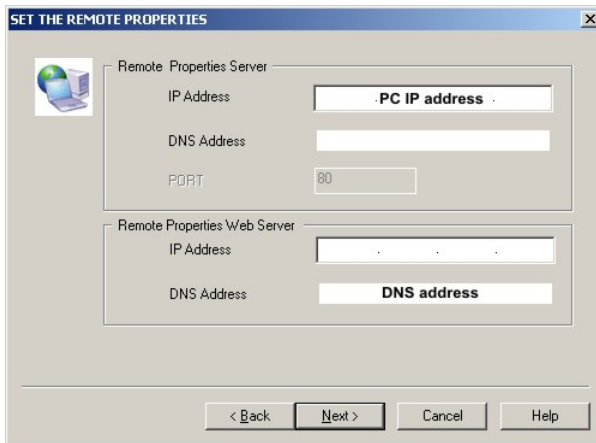

Figure 18 – Web Server

After inserting the IP and DNS addresses, click on the "Next" button to start the remote connection. If successful, a final dialog box appears giving summary information about the system.
Finally, enter the configuration window by clicking on the "Finish" button. The desired device configuration can be defined by clicking on the parameter group available in

the tree structure and clicking on the [icon] icon. A secondary window appears displaying all the parameters to be set (see par. 6.1 for details).

Server List

The Server List connection only requires the selection of the Server PC. Then, the
remote connection is started automatically (see par. 2.2.2).

To start the connection click on the "Next" button to display the following dialog box
listing all server PCs registered within the system.

The ![icon] icon signals that the Server PC is not available at that moment.
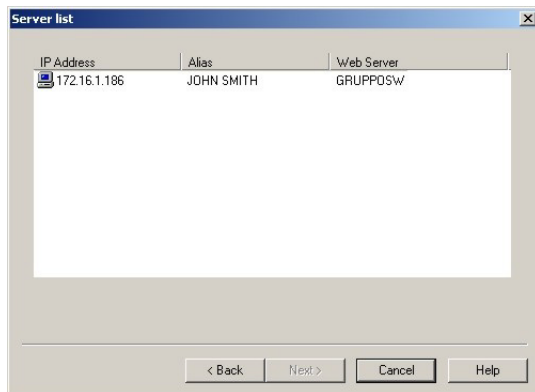

Figure 19 – Server List

After selecting the desired Server PC, click on the "Next" button to start the
connection. Depending on the information registered by the Server PC (Alias, Web
Server name) the connection will be started in Peer-to-Peer or Web Server mode
(see par. 2.2.2 under Server List). Once the connection has been completed
successfully, a final dialog box appears giving summary information about the
system.

Finally, enter the configuration window by clicking on the "Finish" button. The desired
device configuration can be defined by clicking on the parameter group available in

the tree structure and clicking on the ![icon] icon. A secondary window appears
displaying all the parameters to be set (see par. 6.1 for details).

5.2   SOFTWARE UPGRADE

This operation is performed only by the <u>Client PC</u> when connected in <u>Peer-to-Peer</u> mode (or in Server List mode working as Peer-to-Peer).

Clicking on the [icon] icon opens a dialog box allowing to search for the .HEX file to be transferred to the Server PC. Once the file has been transferred, it is automatically loaded onto the device. The successful downloading will be signaled by an acoustic signal emitted from the device and information about the procedure reported in the bottom part of the Server PC main window:

Figure 20 - Server PC Optional Areas

The downloading area reports the path used to position the downloading temporary file.

Some devices require being reset to complete this operation.

NOTE

5.3   CHAT

This feature is performed by both Client and Server PCs if working in <u>Peer-to-Peer</u> connection mode. In case of <u>Web Server</u> connection mode, it is only the Client PC which can send messages/commands to the Server PC.

By clicking on the [icon] icon the following area is displayed in the bottom part of the window:
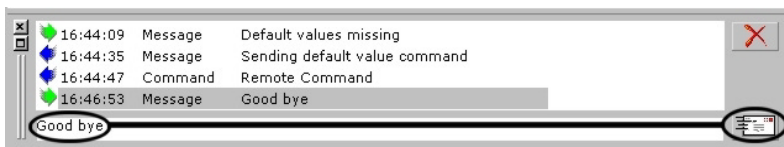

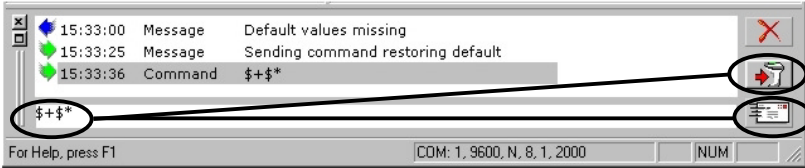**Figure 21 - Chat Feature from Server in Peer-to-Peer**

Figure 22 - Chat Feature from Client PC

The upper part of this area reports information about all received/sent messages during communication and it cannot be modified.
The lower part is the input area for typing a message or the string of the command to be sent to the device.

Click on the icon or on the icon to send a message or a command string respectively.

After transmission, the message will be reported in the upper part of the chat area of the PC. If sending a command string, its correct transmission will also be signaled by the device beeper.

5.4   APPLICATION EXAMPLE

The following example shows how the remote communication in Peer-to-Peer mode can be exploited to define the same configuration for all the devices present in the system.
The Client PC communicates with each Server PC through the Internet or Intranet and can control each device connected.
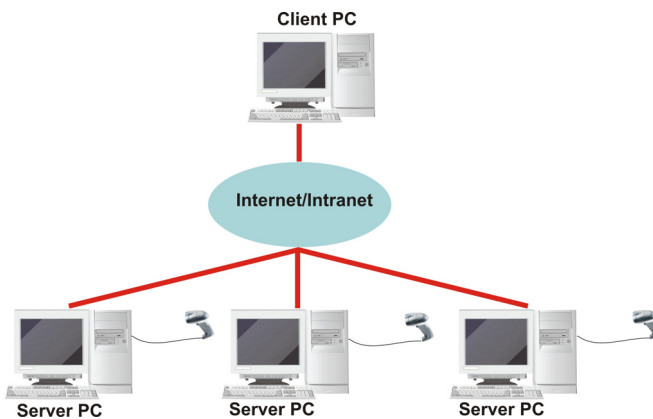

Figure 23 – Example of Peer-to-Peer Connection

6   DL Sm@rtSet™ FUNCTIONING

6.1   DL Sm@rtSet™ CONFIGURATION WINDOW OVERVIEW

The configuration window provides all the parameters to be set when configuring the device. The following image gives an example of the configuration window, since the display of the optional area depends on the detect mode the system is working with:
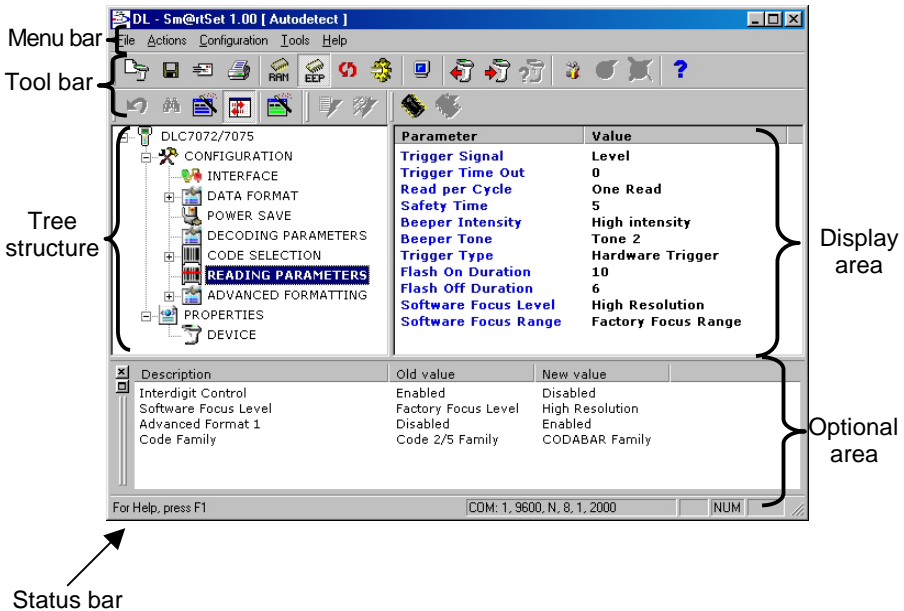

Figure 24 - Configuration Window Example

The left side of the window displays a tree structure providing all the configurable parameters, while the right side works as a display showing the value of the parameters belonging to the selected group.

To change the parameter value it is necessary to click on the parameter group and

then on the icon (see par. 6.1.2 for details). A secondary window appears displaying all parameters to be set.

The optional area is displayed in the bottom part of the window when:

- changing parameter values (**report area**);

- downloading the software upgrade from either remote or local PC (**downloading area**);

- sending commands/messages from the Client PC to the Server PC during remote configuration (**chat area**);

- starting "Listen for Connection" mode during remote configuration (**logging area**).

The **report area** (see Figure 25) appears when configuring the device from a local PC (see Chapter 4).

The **downloading area** appears when sending the software upgrade file from either a local PC or a remote one. The following image gives an example when working with a local PC:
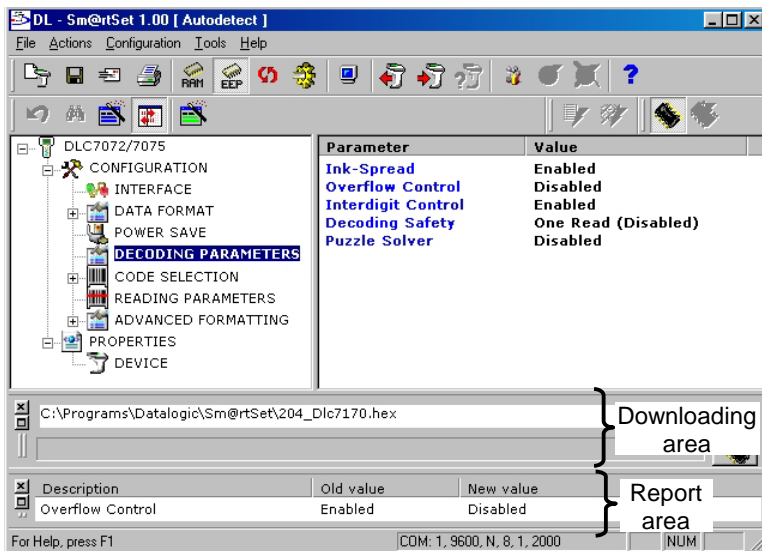

Figure 25 - Optional Areas in Local Communication

The **logging** and **chat** areas are displayed only when working in remote connection and appear like in the following example:
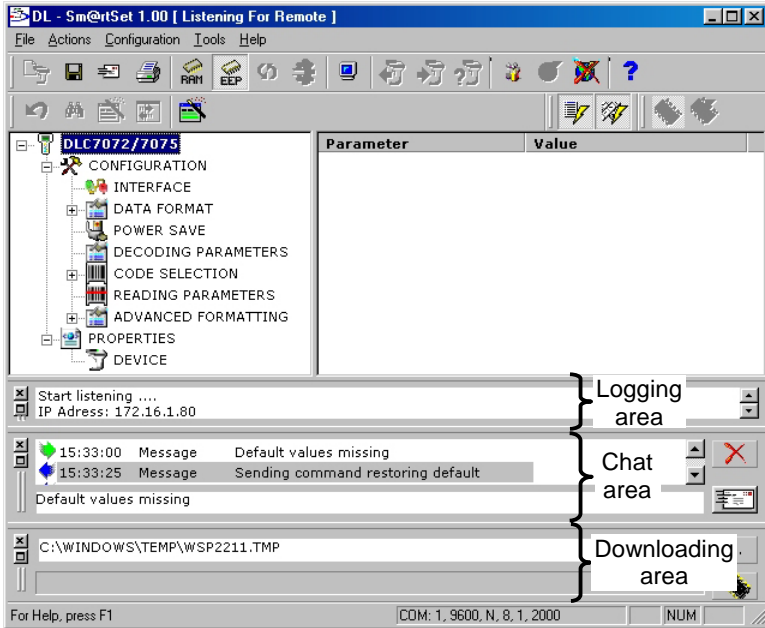

Figure 26 - Optional Areas in Remote Communication

The display of all optional areas can be managed by using the corresponding icons (see par. 6.1.2 for details):

 = report area

 = downloading area in local communication

 = downloading area in remote communication

 = chat area

 = logging area

6.1.1   Menu Bar

The menu bar provides the major functions managing the system communication. Select the desired option from the menu by clicking on it within the pull-down list.

❑ **File Menu**

The File Menu manages the following options:

New Reader	= allows starting a new configuration.
Save, Save As	= saves the current file or saves a copy of it with a different name. Configuration files share the extension *.xml.
Send To	= opens the mail window (see par. 6.2.2).
Print	= opens a window giving an overview of the codes to be printed (see par. 6.2.3 for details)
Print Setup	= sets the printer properties.
Exit	= exits DL Sm@rtSet™.

❑ **Actions Menu**

The Actions Menu manages the following options:

Properties	= if selected after clicking on the desired parameter group, it opens a secondary window to set the parameter values.
Show Report	= opens a report area in the bottom part of the window showing all the changed parameters and their old and new values.
Show Changes	= shows the changed parameter by highlighting in blue its new values.
Show Default	= highlights in green the configuration parameters having a value different from the default one.
Show Target	= if selecting a changed parameter within the report area, it highlights the parameter group position within the tree structure.
Undo	= deletes the operation selected from the report area available in the bottom part of the window.
Stop Listening	= stops the "Listen for Connection" mode during remote configuration (see par. 5.1.1 for details).
Show Remote Log	= opens a logging area showing all the commands received from the Client PC during the remote configuration.
Show Remote Chat	= opens a chat area showing all the messages sent between the Client and Server PCs during the remote configuration (see par. 5.3).

❑ **Configuration Menu**

The Configuration Menu manages the following options:

Read Configuration	= Gets the device current configuration through the PC serial port
Write Configuration	= sends the <u>complete</u> configuration to the connected device via serial interface.
Synchronize Device	= opens the synchronize window (see par. 6.2.3).
Write to Remote	= sends the <u>complete</u> configuration to the device connected to the Server PC during the remote configuration.
Restore Default	= Restores the device default configuration
Save to RAM	= Saves the configuration file to the device temporary memory (RAM)
Save to EEPROM	= Saves the configuration file to the device permanent memory (EEPROM)

❑ **Tools Menu**

The Tools Menu manages the following options:

Activate Terminal	= if the device is connected to a free serial port through an RS232 interface, this command activates a device terminal window showing the barcodes the device is reading (see par. 6.2.4 for details).
Download Firmware	= opens a downloading area allowing to search for the software upgrade file to be sent to the device and to log the downloading procedure in local communication (see par. 4.2).
Download Remote Firmware	= opens a dialog box allowing to search for the software upgrade file to be sent to the device connected to the Server PC. After the file transferring, a downloading area appears on the Server PC logging the downloading procedure (see par. 5.2 for details).
Address Book	= opens a dialog box managing a personalized address book (see par. 6.2.5 for details).
Options	= opens a dialog box managing the Server properties and graphical user interface in the program (GUI). See par. 6.2.1.

❑ **Help Menu**

The Help Menu manages the following options:

Contents F1	= provides the topic structure in an active outline form making the topic search easier and supplying the relative information.
About	= provides information about the software version.
http://www.datalogic.com	= connects to Datalogic web site.

6.1.2 Tool Bar and Status Bar

The icons available on the Tool bar have the following function:

= Opens the starting dialog box to configure a new device.

= Saves the current configuration with a different name. Configuration files share the *.xml. extension.

= opens a window allowing to send an e-mail message enclosing an .xml configuration file (see par. 6.2.2).

= opens a window providing an overview of the barcodes to be printed (see par. 6.2.3 for details).

= saves the current configuration on the device RAM.

= saves the current configuration on the device EEPROM.

= restores the default configuration.

= opens a dialog box to define the values of the selected group of parameters.

= opens the terminal emulator (see par. 6.2.4 for details).

= gets the current device configuration via serial interface.

= sends the complete configuration to the device via serial interface.

?🔍	= opens the synchronize window (see par. 6.2.3).
🐞	= opens the Address Book window (see par. 6.2.5 for details).
✅	= sends the <u>complete</u> configuration to the device connected to the Server PC during <u>the</u> remote configuration (see chapter 5 for details)
❌	= stops the remote communication of the Server PC.
?	= opens DL Sm@rtSet™ help on-line.
🔙	= deletes the operation selected from the report area available in the bottom part of the window.
🔍	= if selecting a changed parameter within the report area, it highlights the parameter group position within the tree structure.
📝	= shows the changed parameter by highlighting in blue its new values.
📑	= opens/closes report area in the bottom part of the window showing all the changed parameters and their old and new values.
📗	= highlights in green the configuration parameters having a value different from the default one.
📋	= opens/closes a logging area in the bottom part of the window showing all the commands received from the Client PC during the remote configuration.
💬	= opens/closes a chat area in the bottom part of the window showing all the messages sent between the Client and Server PCs during the remote configuration (see par. 5.3 for details).
💾	= starts the downloading procedure by sending the software upgrade to the device from the local PC.
💾	= starts the remote downloading procedure by sending the software upgrade file to the device connected to the Server PC from the Client PC.

The Status bar provides further information about the communication parameters of the current connection (device/PC) on the right side, while on the left side it is possible to get a short help about the menu options, if selected, or about the command activating the help on-line.

6.2 DL Sm@rtSet™ SECONDARY WINDOWS

Secondary windows are provided for a better management of the following functions:
- Options
- Mail
- Device Synchronization
- Terminal Emulator
- Address Book
- Print

6.2.1 Options Window

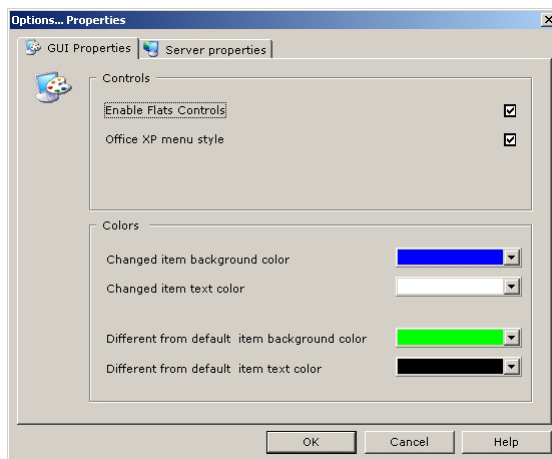By selecting "Options" from the Tools menu the following window appears:

Figure 27 - GUI Properties

The "GUI Properties" folder allows enabling/disabling the management of the graphical user interface (GUI), that is of interactive buttons or scroll bars.
The program must be restarted to activate the selection. It is also possible to adopt the XP menu style and to define a new color to signal changed items, and values different from the default ones.

The "Server Properties" folder is fundamental for managing the program remote properties:
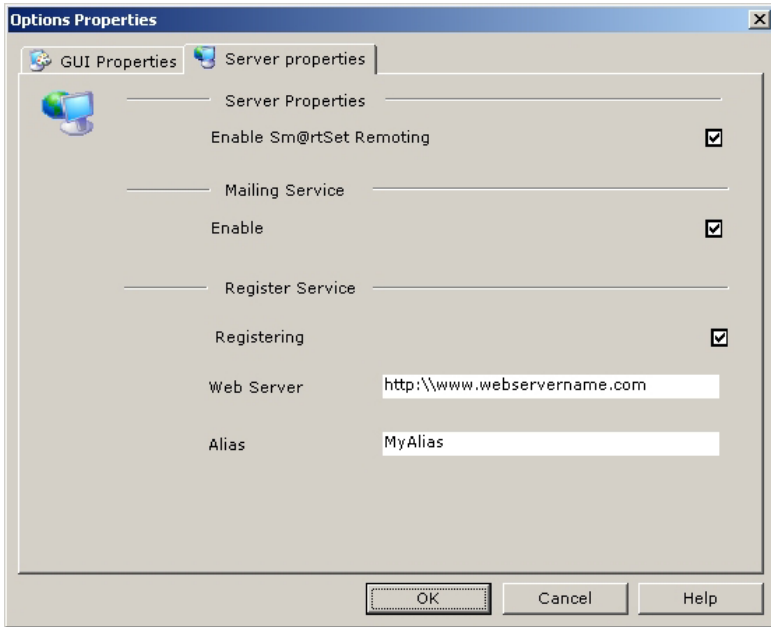
Figure 28 - Server Properties

The "Server Properties" area enables/disables the remote communication (see par. 2.2).

The "Register Service" area is to be defined when starting a remote communication in Server List mode (see par. 2.2.2).

The "Mailing Service" area manages the dialog box displayed when connecting in "Listening for Connection" during the remote connection (see par. 5.1.1). This option is automatically disabled when defining and registering the information in the "Register Service" area.

6.2.2 Mail Window

When clicking on the [icon] icon or selecting the "Send to" option from the File Menu, the following dialog box appears:
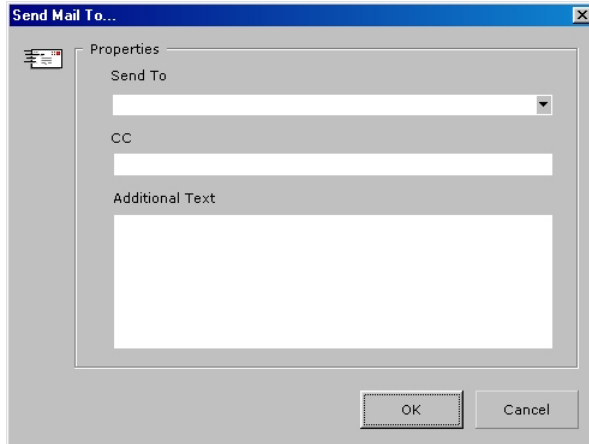
Figure 29 - Mail Window

It always sends the current configuration as an enclosed .xml file document. In addition, it allows sending written text to the desired addressee as in a typical Microsoft Office mail message.

Once the message has been sent, a dialog box will appear reporting the transmission result.

6.2.3 Synchronize Window

When working in offline mode ("Manual selection", or "Load from File"), it is possible to synchronize the selected device to the connected one. If the connected device corresponds to the device model selected for the configuration, it is possible to send it the defined configuration.

By clicking on the [icon] icon or selecting the "Synchronize Device" option from the configuration menu, the following dialog box appears:
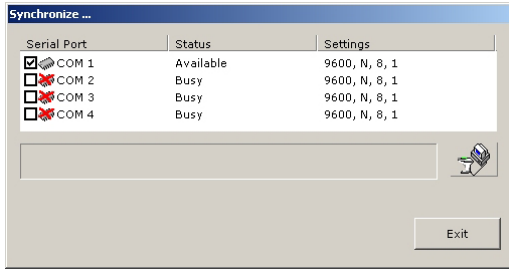
Figure 30 - Synchronize Window

This procedure starts by clicking on the icon; then, different messages will be displayed depending on the right or wrong device synchronization.

6.2.4   Terminal Emulator

The terminal emulator appears when clicking on the icon or selecting the "Activate Reader Terminal" option from the Tools menu:
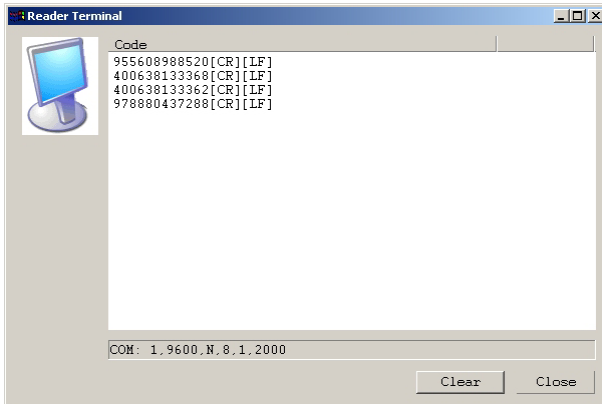

Figure 31 - Terminal Emulator

It allows testing the device functioning while reading barcodes.

6.2.5   Address Book Window

The Address Book window appears by clicking on the [icon] icon or selecting the "Address Book" option from the Tools menu:
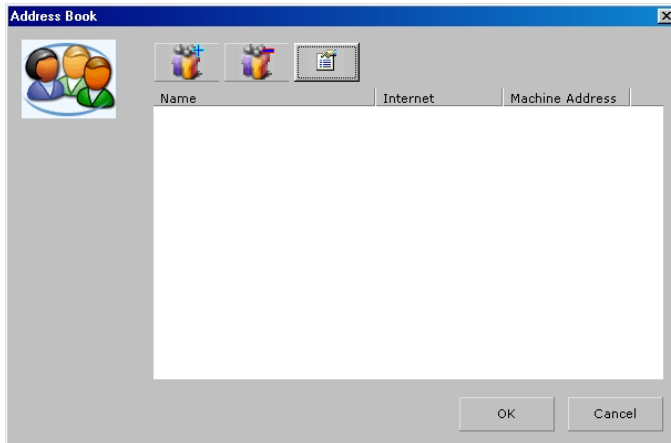

Figure 32 - Address Book Window

[icon] = adds a new user name to the list and to define details by means of the dialog box displayed below.

[icon] = deletes the selected name from the list.

[icon] = opens the following dialog box allowing to get more details about the user or to modify them.

All users registered will be listed in the "Remote Address" area when starting a Peer-to-Peer or a Web Server connection mode (see par. 5.1.2 for details).

Figure 33 - Adding New User

Fill in the "Internet address" edit box with the Web Server name. Insert the computer IP address in the "Machine address" edit box.
Then, click on the "Add" button and then on the "OK" button to add a new user name to the list.

6.2.6   Print Window

The Print window appears when clicking on the icon or selecting the "Print" option from the File menu:
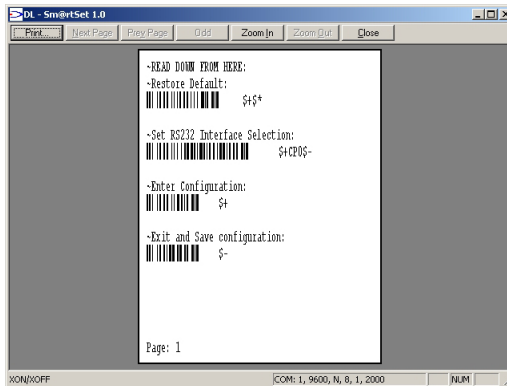

Figure 34 - Print Window

The commands are printed with the corresponding barcodes and strings.
If the device connected to the PC is a slot device, the print will automatically be executed on the border of the pages.

7   TROUBLESHOOTING

Auto(detect) mode: in case some problems arise during the detect procedure and no device is found ensure the connection cable has been inserted correctly.

Downloading Procedure: if the .hex software upgrading file is not loaded onto the device, check if the downloading optional area displays the following message:
"Device not responding. Reset the device please".
This means your device needs to be reset to cause the upgrade to be uploaded.

Remote Connection: if you are not allowed to start the connection as a Server or Client PC, verify that the Server Properties within the Options window have been enabled (see par. 6.2.1).

Server List Connection   if the connection through the Server List fails, verify that the Server PC alias and/or Web Server name have been registered correctly.

A   DL SM@RTSET™ UTILITY TOOLS

Three different utility tools are available when installing DL Sm@rtSet™:

-    Device List Upgrade

-    Downloader

-    On Line Upgrade

A.1   DEVICE LIST UPGRADE

When starting a communication, DL Sm@rtSet™ always verifies that the connected device is compatible with one of those listed in the program database. The devices with a special software or a new software release may not satisfy this compatibility, since they are not listed in the DL Sm@rtSet™ database. The Device List Upgrade utility tool is intended to upgrade the program database by adding the incompatible products. In particular, it allows defining a compatibility between a device already existing in the DL Sm@rtSet™ database and the one to be added.

⚠ **CAUTION**	*Contact your Datalogic local distributor to get information about the compatibility between your device and a device already existing in the DL Sm@rtSet™ database. Defining a wrong compatibility may cause errors and an unpredictable behavior of DL Sm@rtSet™.*

When starting the utility, the following dialog box appears warning the user to set the device communication parameters to their default values. If the communication parameters are set differently, it will not be possible to proceed with the upgrading procedure:

Figure 35 – Warning Message

After a right configuration of the communication parameters, the utility starting window appears as follows:
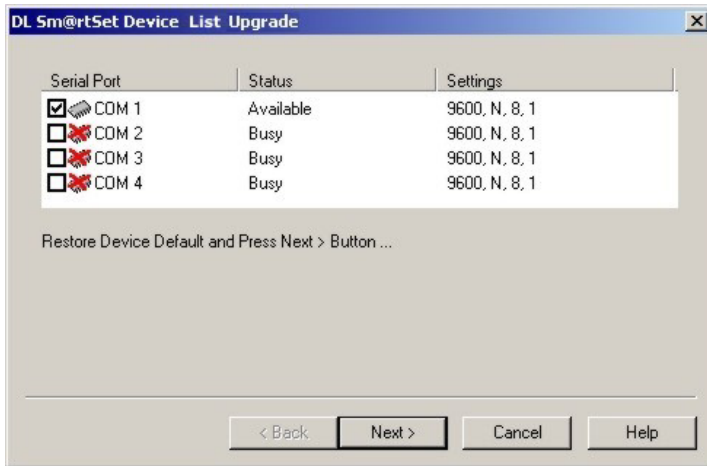

Figure 36 – Starting Device List Upgrade

From the list of the available serial ports select (check) the one the device is connected to. Then, press the "Next" button to start an automatic detection of the selected COM ports.

If the device software is already present in the DL Sm@rtSet™ database, a warning message appears and the DL Sm@rtSet™ database will be not upgraded.

If the device loads a special software or a new software release not present in the database, the following window is displayed:
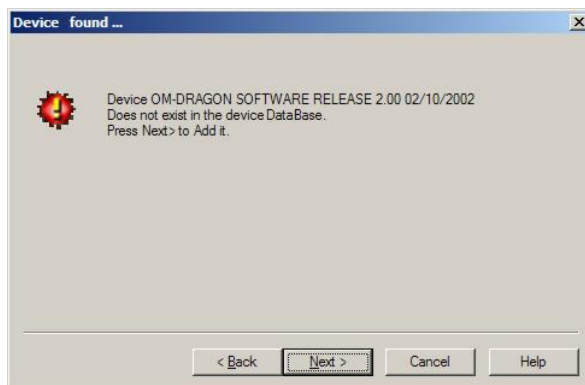

Figure 37 – New Device Found

A

By pressing the "Next" button it is possible to add the device.
The following window appears listing all the device models, and the related software release, configurable in DL Sm@rtSet™. By scrolling this list, select the model which is compatible with the device to be added. Then, click on the "Finish" button to complete the upgrade.
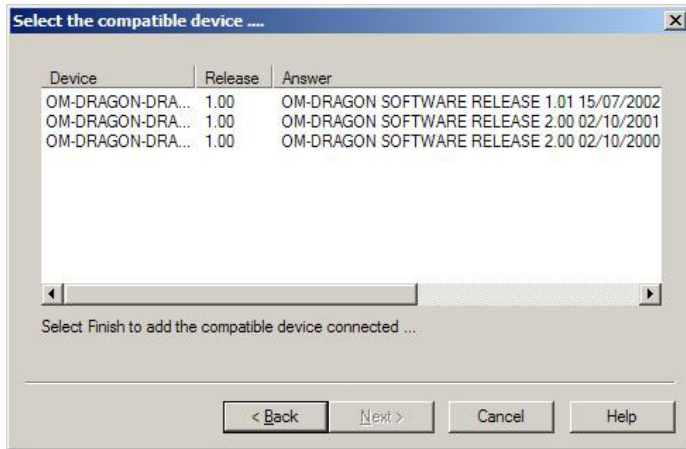

Figure 38 – Adding a New Device

A.2   DOWNLOADER

DL Sm@rtSet™ Downloader tool allows upgrading the firmware of the device connected to the Host PC. In particular, an upgrading .hex file has to be downloaded onto the device.

The Downloader is very useful for upgrading in a very simple and fast way the software of a device.
In case the device needs to be configured and updated, it is advised to complete both operations through DL Sm@rtSet™ (see par. 4.2 and 5.2).

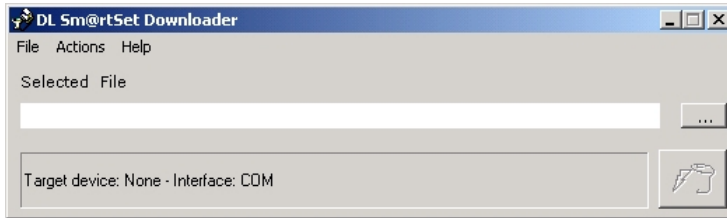When starting the utility the following window appears:

Figure 39 – Downloader Starting Window

It is possible to browse for the upgrading .hex/.bin file in the dialog box displayed by

clicking on the [**...**] button or by selecting the Open option from the File menu.
Once the file has been selected, it will be displayed in the "Selected File" edit box.

Then, it can be downloaded onto the connected device by clicking on the
button or by selecting the Download option from the Action menu.
The downloading procedure can be stopped at anytime by clicking on the

[**✗ Cancel**] button.

<table>
<tr><td>**NOTE**</td><td>*To upgrade a USB device, start the program; then, reset and connect the device to the USB port by keeping the device trigger pressed. The program will open a dialog box reporting the name of the connected USB device and allowing to stop the connection or continue with the program download.*</td></tr>
</table>

A.2.1 Communication Settings

The communication parameter values can be changed according to your system settings by selecting the COM Interface option from the Actions menu:

Figure 40 – Communication Settings

Through the two edit boxes it is possible to set the COM port, to which the device to be upgraded is connected, and the transmission speed (baud rate).
Once the desired values have been defined, click on the "OK" button to enter the main window again. Then, it is possible to start the downloading procedure.

A.2.2 Help

If more information about the firmware upgrade procedure is required, it is available in the window displayed by selecting the More Info option from the Help menu:
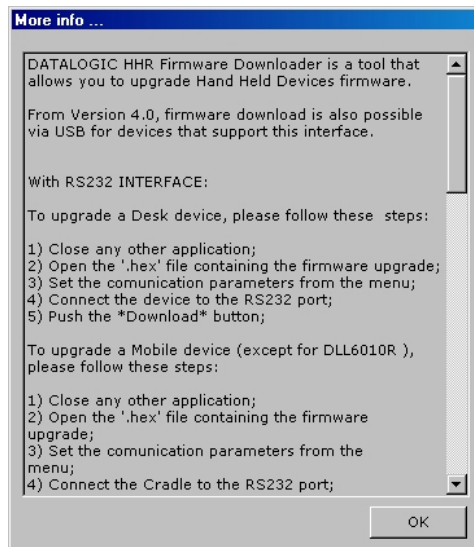

Figure 41 – Help Window

A.3   ON LINE UPGRADE

The On Line Upgrade tool allows upgrading the DL Sm@rtSet™ application by downloading the last version of its components on line. This procedure exploits the same web service provided by Datalogic on its site and used for the Server List connection (see par. 2.2.2 for details).

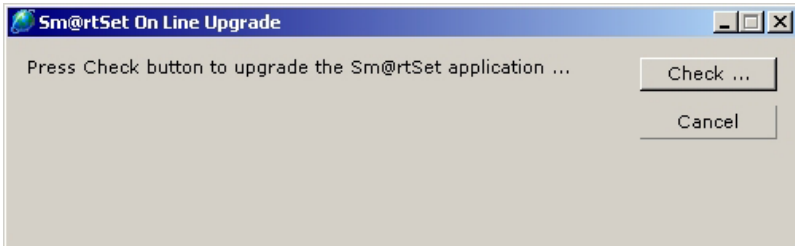When starting the utility the following window appears:

Figure 42 – On Line Upgrade

To start the On Line Upgrade, first click on the "Check" button. The utility connects to the Datalogic web service searching for a new version of the DL Sm@rtSet™ software components.
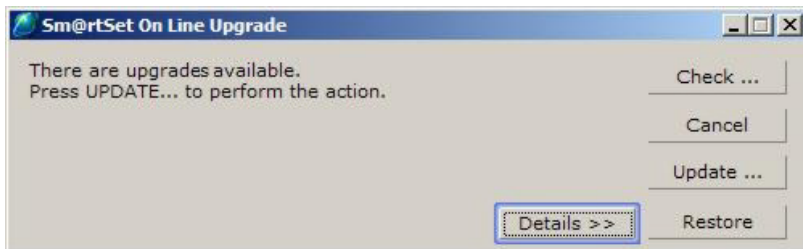If the upgrade is available, the following window appears:

Figure 43 – Upgrading DL Sm@rtSet™

By clicking the "Details" button the following window is displayed reporting the status of all the DL Sm@rtSet™ files:
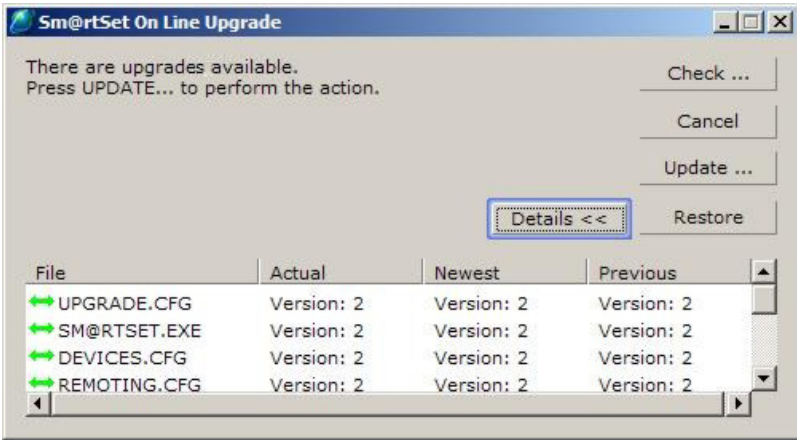

Figure 44 – DL Sm@rtSet™ File List

For each file is available its current, newest and previous version.

By clicking on the "Update" button, the upgrading procedure starts by downloading the new files and recovering the old ones in a backup directory.

In case one or more files will be not upgraded correctly, it is possible to restore their previous version by clicking on the "Restore" button.

> *Both the Upgrade and Restore procedures involves all files. For this reason, it is not possible to upgrade or restore a single file.*

NOTE