

SIDEKICK PC USER'S MANUAL

VERSION 3.8

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1 INTRODUCTION

Sidekick Enterprise Solution is a standard system designed by the **Global Technology Center** (GTC) department of Electrolux for the after sales support organization. The main target of this system is to provide field support engineers with a handy tool that, together with proper interface modules, simplifies the execution of diagnostic procedures and that allows an easy way to configure electronic boards.

Sidekick is an enterprise-wide system that integrates the most up-to-date information about Electrolux products into a client software tool. The client software (**SidekickPC**) lets you quickly diagnose appliances and create spare electronic boards. This is the User's Manual of this application.

Data integration between corporate databases and SidekickPC seamlessly occurs by means of web services that exploit the latest technologies in order to minimize update time and improve user experience and security.

There are many advantages in using a computer-aided service tool, for example:

1. the possibility to diagnose the appliances in less time and in a more precise way, thus reducing the amount of spare components required to fix the problem and the time of intervention. SidekickPC identifies if possible the appliance to test, gets and decodes the internal status of the electronic controller, and it executes the diagnostic procedures and troubleshooting steps you require;
2. the possibility to create spare electronic boards starting from “generic boards” with a programming and configuration procedure. This function ensures that you create the spare part in the same way as it was originally produced in the factory.

1.1 ACRONYMS AND ABBREVIATIONS

AMI	Appliance Mini Interface
ANC	Article Number Code
ACK	Appliance Connection Kit
BITS	Background Intelligent Transfer Service
BMP	Bitmap File
CCF	Cycle Configuration File
CTI	Cross Technology and Innovation
DNS	Domain Name System
ELC	Engineering Level Code
ESD	Electrostatic Discharge
GIF	Graphic Interchange Format
HTML	Hyper Text Markup Language
IP	Internet Protocol
JPG	Graphics file type developed by the Joint Photographic Experts Group
LBL	Label Definition File extension
MCF	Machine Configuration File
MDAC	Microsoft Data Access Components
MDI	Multiple Document Interface
MMC	Microsoft Management Console
PC	Personal Computer
PNC	Product Number Code
PNG	Portable Network Graphics
Prog	Progressive Insertion Number
SKC	Service Kit Code
SP1	Service Pack 1
SSE	Service Support Europe
TCP	Transmission Control Protocol
TDS	Technical Documentation System
TIFF	Tagged Image File Format
URL	Uniform Resource Locator
USB	Universal Serial Bus
WMI	Windows Management Instrumentation
WSE	Web Services Enhancements

1.2 SYSTEM REQUIREMENTS

Software prerequisites for **SidekickPC** are the following:

1. Microsoft Windows 7 (except the Starter Editions), Windows 8 and Windows 10. Both 32-bit and 64-bit versions of Windows 7, Windows 8 and Windows 10 are supported.
2. Microsoft Windows Installer 4.5
3. Microsoft .NET Framework 3.5 – SP1
4. Microsoft WSE 3.0
5. Microsoft SQL Server 2008 R2 Express Edition SP2. If in your PC you have already installed another edition of SQL Server 2005/2008, this item is not required.

The automatic installation procedure of SidekickPC installs all software pre-requisites and the SidekickPC software using default settings in an unattended way.

The installation procedure automatically installs Microsoft SQL Server 2008 SP2 only if it does not detect the presence of an SQL Server 2008 R2 instance in the local computer.

The detection of the presence of SQL Server instances occurs by means of the Windows Management Instrumentation (WMI) technology. In case the software installation procedure detects the presence of more than one instance of SQL Server, the selected database instance will be the first Express Edition that WMI enumerates or, if no Express Edition is present, the first enumerated instance.

If you want to override the default installation parameters of SidekickPC, you must install it manually. Please refer to the appendix for further information on this matter.

If none of the software prerequisites is installed, the target PCs needs at least 15 GB of free hard disk space.

The minimum RAM quantity required is 1 GB (2 GB highly recommended) while the minimum processor speed required is 1 GHz. A CD or DVD drive, as appropriate, is required for installation from CD or DVD media.

SidekickPC requires at least a monitor resolution of 1024x768 pixels for best usability. However it is also possible to install it in PCs with a screen resolution of 1024x600 pixels. In this case, a vertical scroll bar allows you accessing the entire contents of the user interface forms.

1.3 AUTOMATIC SOFTWARE INSTALLATION

The automatic installation procedure consists in the **AutoInstall.cmd** command file. This is a sequence of batch commands that install all software pre-requisites and the SidekickPC software using default settings.

You must log on as full Administrator in order to make the installation of the software.

By default, the automatic software installation procedure installs SidekickPC in the **C:\Electrolux\SidekickPC** folder.

You can however override this default and setup the software in a different directory. Please refer to the next paragraph if you need to change the default installation directory.

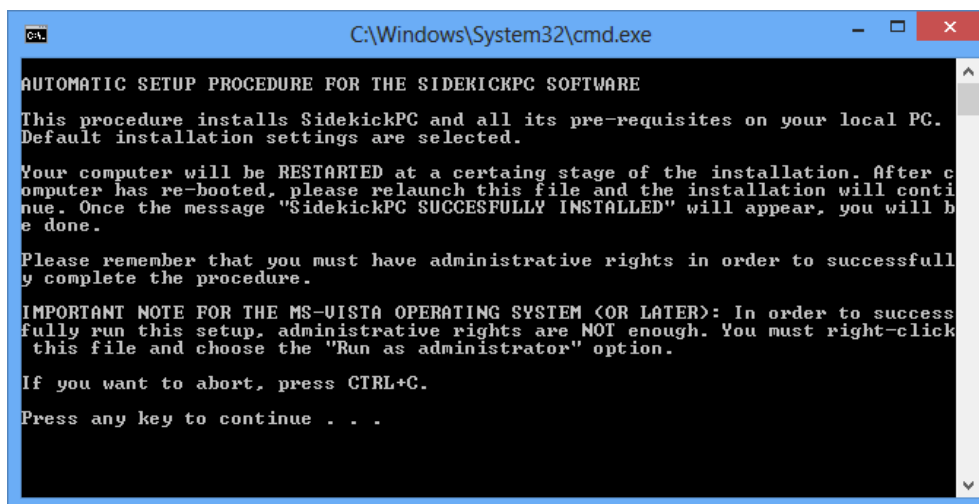
In the specific case of **Windows 8**, there is a **preliminary step** that must be done manually before launching the **AutoInstall.cmd** file. This preliminary step is documented in chapter 1.3.1. If you are installing on Windows 8, please read that chapter and then continue from here.

The following recommendations apply:

1. **Windows 7, Windows 8 and Windows 10:** right-click the **AutoInstall.cmd** file and then select the **"Run as Administrator"** option. Depending on your actual configuration, the operating system may ask you for a further authorization. Please remember that you must explicitly execute **AutoInstall.cmd** as administrator even if you are already logged in with an administrative account.

Please remember that this setup procedure does not install the programs that are already installed in your PC. In addition, the automatic setup procedure implements some workarounds to a few known setup problems of the SQL Server software. The workaround is that of forcing a reboot of the PC right before the installation of SQL Server 2008.

After you start the execution of **AutoInstall.cmd**, you can see the welcome screen:



```
C:\Windows\System32\cmd.exe

AUTOMATIC SETUP PROCEDURE FOR THE SIDEKICKPC SOFTWARE

This procedure installs SidekickPC and all its pre-requisites on your local PC.
Default installation settings are selected.

Your computer will be RESTARTED at a certain stage of the installation. After c
omputer has re-booted, please relaunch this file and the installation will conti
nue. Once the message "SidekickPC SUCCESSFULLY INSTALLED" will appear, you will b
e done.

Please remember that you must have administrative rights in order to successfull
y complete the procedure.

IMPORTANT NOTE FOR THE MS-UISTA OPERATING SYSTEM (OR LATER): In order to success
fully run this setup, administrative rights are NOT enough. You must right-click
this file and choose the "Run as administrator" option.

If you want to abort, press CTRL+C.

Press any key to continue . . .
```

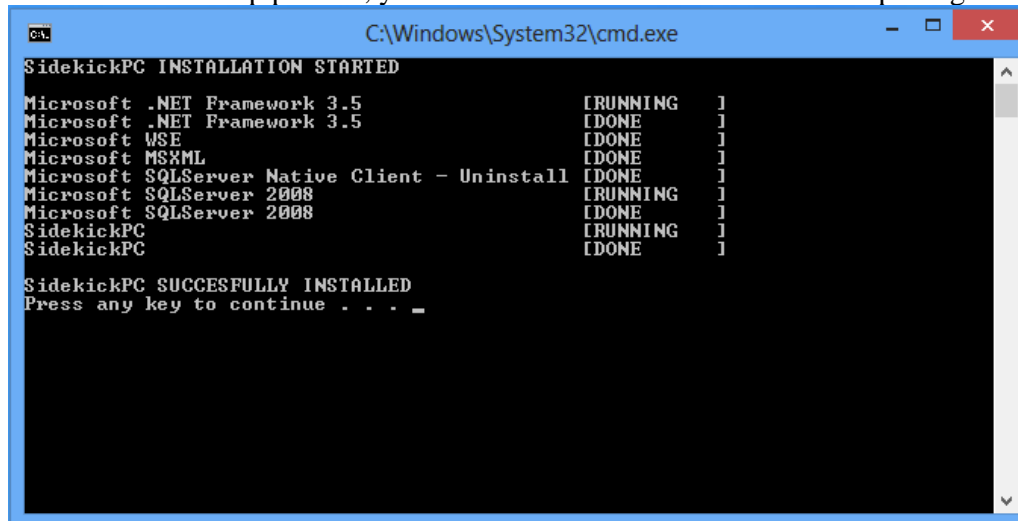
Fig. 1. Automatic setup: welcome setup

If you press CTRL+C you can abort the procedure.

If you press instead any other key combination, the automatic setup starts. Depending on your computer configuration, the setup procedure may last several minutes.

If the setup decides to install SQL Server 2008 then a **reboot will be forced right before the installation of SQL Server 2008**. Once your PC has rebooted, please re-launch AutoInstall.cmd and the installation will complete.

At the end of the automatic setup process, you can see the list of installed software packages:



```
C:\Windows\System32\cmd.exe
SidekickPC INSTALLATION STARTED
Microsoft .NET Framework 3.5 [RUNNING ]
Microsoft .NET Framework 3.5 [DONE ]
Microsoft WSE [DONE ]
Microsoft MSXML [DONE ]
Microsoft SQLServer Native Client - Uninstall [DONE ]
Microsoft SQLServer 2008 [RUNNING ]
Microsoft SQLServer 2008 [DONE ]
SidekickPC [RUNNING ]
SidekickPC [DONE ]
SidekickPC SUCCESSFULLY INSTALLED
Press any key to continue . . . _
```

Fig. 2. Automatic setup: end of procedure

There is the possibility that during the setup something goes wrong. In order to help you solve setup problems Electrolux has documented all known setup issues and workarounds.

You can find the solution for these problems here:

<http://sidekick.electrolux.com/SidekickPortal/UsersReservedArea/DownloadDetails.aspx?ContentID=ApplicationNote3>

In case you have problems with the automatic setup procedure, you should try installing SidekickPC in a manual way. Please refer to the Appendix for information concerning the manual setup.

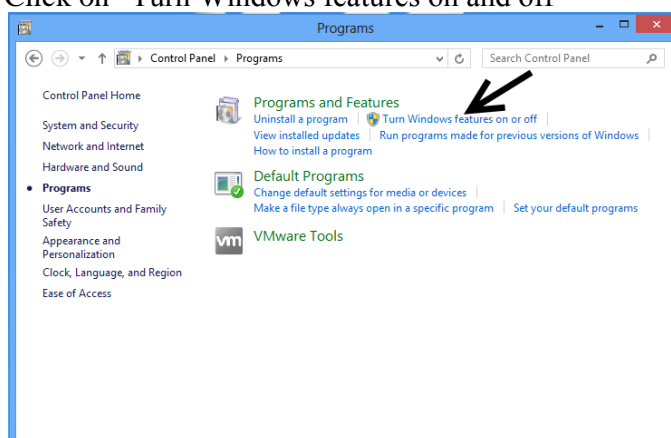
1.3.1 Preliminary step for Windows 8

In the following, we document the step that must be done manually when installing SidekickPC on Windows 8 before launching the **AutoInstall.cmd** file. This step cannot be automated and consists in enabling the .NET 3.5 Framework. This step is not needed with any other Windows operating system. Please, follow these instructions:

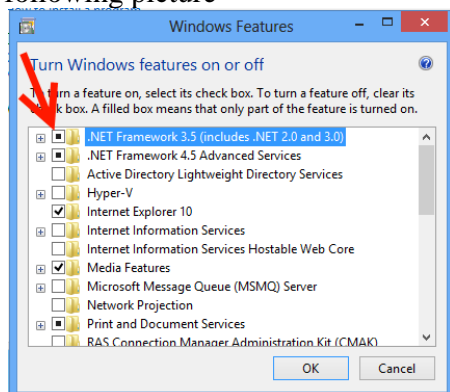
1. Open the Control Panel and click on “Programs”



2. Click on “Turn Windows features on and off”



3. Make sure that “.NET Framework 3.5 (includes .NET 2.0 and 3.0)” is selected as in the following picture



4. Click OK

If not already installed, Microsoft .NET 3.5 will be then downloaded and installed automatically by Windows. You can then proceed with the installation procedure.

1.3.2 Overriding the default installation folder

If you want to install SidekickPC in an automatic way but not in the default folder (C:\Electrolux\SidekickPC), you can open the **AutoInstall.cmd** file with any text editor (such as, for example, Notepad) and change the following line:

```
SET SK_DIR=C:\Electrolux\SidekickPC
```

You should assign to the **SK_DIR** environment variable the full path of the target directory. For example, if you want to install the software in the D:\ driver instead of the C:\ one you can change the line in the following way:

```
SET SK_DIR=D:\Electrolux\SidekickPC
```

Then you should save the file and quit the editor. Finally run the modified **AutoInstall.cmd** command as the previous paragraph describes.

Please ensure that **SK_DIR** is assigned a valid folder name.

In addition, please remember that you cannot install SidekickPC within the following special directories:

1. **Program Files:** this is the folder that usually contains applications. In English versions of the operating system this is the **C:\Program Files** folder;
2. **Common Application Data:** this is the common application data folder. In English versions of the operating system this is the **C:\Documents and Settings\All Users\Application Data** folder;
3. **System:** this is the folder that contains system files. In English versions of the operating system this is the **C:\Windows\System32** folder.

1.3.3 Setup of the USB drivers for the Appliance Connection Kit

After completing the installation of SidekickPC, there is another important installation that you must perform prior leaving the administrative mode in the PC: you must install the USB drivers for the Appliance Connection Kit.

In order to perform this step you must have an Appliance Connection Kit (ACK) that Service Support Europe (SSE) should have given you. You should connect the USB interface of the interface module to the PC by means of the supplied cable. The operating system recognizes that this is the first time that you connect the device to the PC and prompts you for the installation of the drivers.

The drivers are copied to the hard disk during the setup of SidekickPC in the **USB Drivers** directory starting from the installation folder. The default driver directory is:

C:\Electrolux\SidekickPC\USB Drivers

You can find detailed instructions on how to setup the USB drivers in the “**Appliance Interface Modules USB Setup v 4.3**” manual that is installed during the setup of SidekickPC.

Please remember that the sequence of operations that are required to install USB drivers varies a lot depending on the actual operating system and configuration of your PC.

1.3.4 Uninstalling SidekickPC

At a certain point you may want to remove the application from your PC. You can remove it as any other Windows application by means of the **Add/Remove Programs** applet in the **Control Panel**.

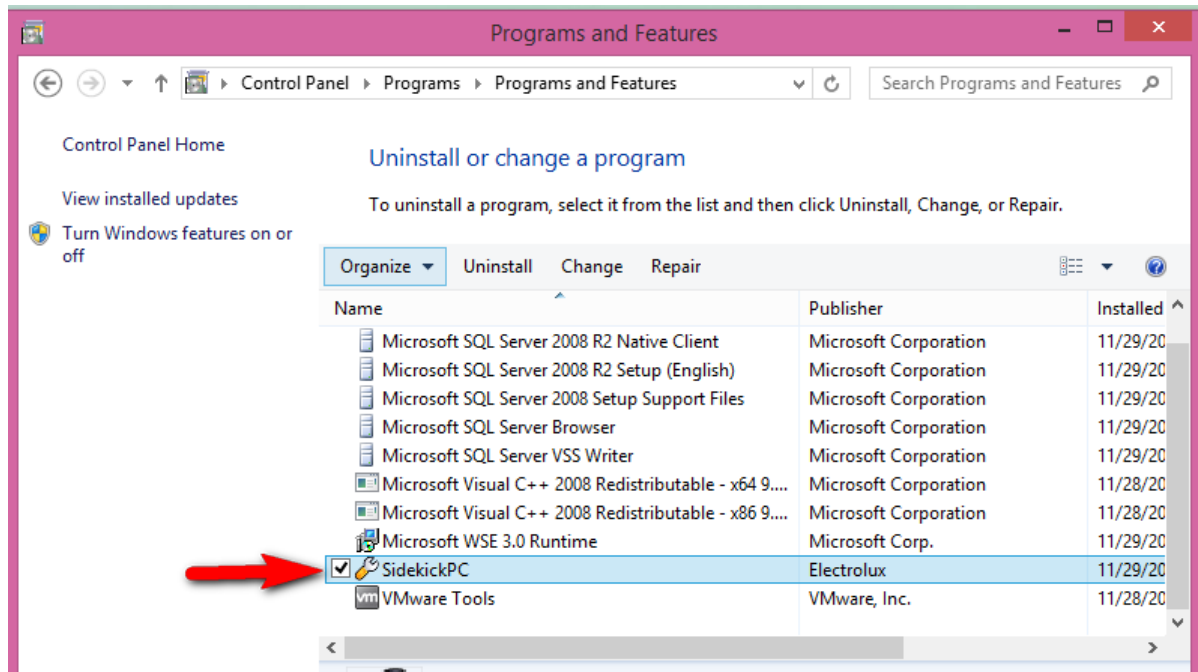


Fig. 3. Removing the SidekickPC application

You must log on as full Administrator in order to remove the software.

When you remove SidekickPC, the uninstall procedure asks you if you want to delete also the local SQL Server database.

1.4 SOFTWARE INITIALIZATION

1.4.1 License Activation

After that you have successfully installed the program and the USB drivers you can log off as Administrator and log on as a normal user. At any rate, the first thing that you are required to do the first time you run SidekickPC is to activate the software license. Please remember that, in order to activate the software license, your PC must be connected to the internet.

The first time you run the software, you can see this message:

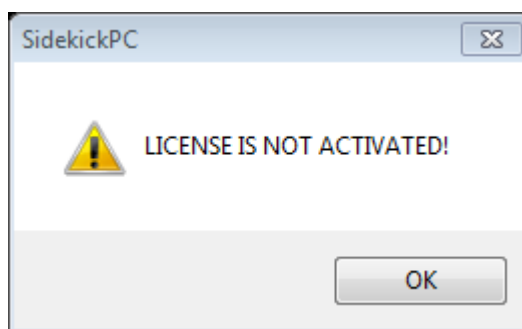


Fig. 4. License Activation Request

After you press the **OK** button, you should execute a few initial configuration steps for your software:

- Language (optional)
- Internet Settings (mandatory when your PC is not directly connected to the internet)
- License Activation (mandatory)

You may want to choose a display language other than English. In this case you must use the dialog box that you can see if you select the **Language** command in the **Options** menu.

If your PC is not directly connected to the internet, you must select proper Internet Settings. You can see the corresponding dialog if you select the **Internet Settings** command in the **Commands** menu. For detailed information on this matter, please refer to the corresponding section later in this chapter.

Finally, you must activate your software license by means of the **License Manager** dialog. You can see this dialog if you select the **License Manager** command in the **Commands** menu.

Sidekick licensing, activation and deactivation are executed through the interaction of SidekickPC application with a remote web service.

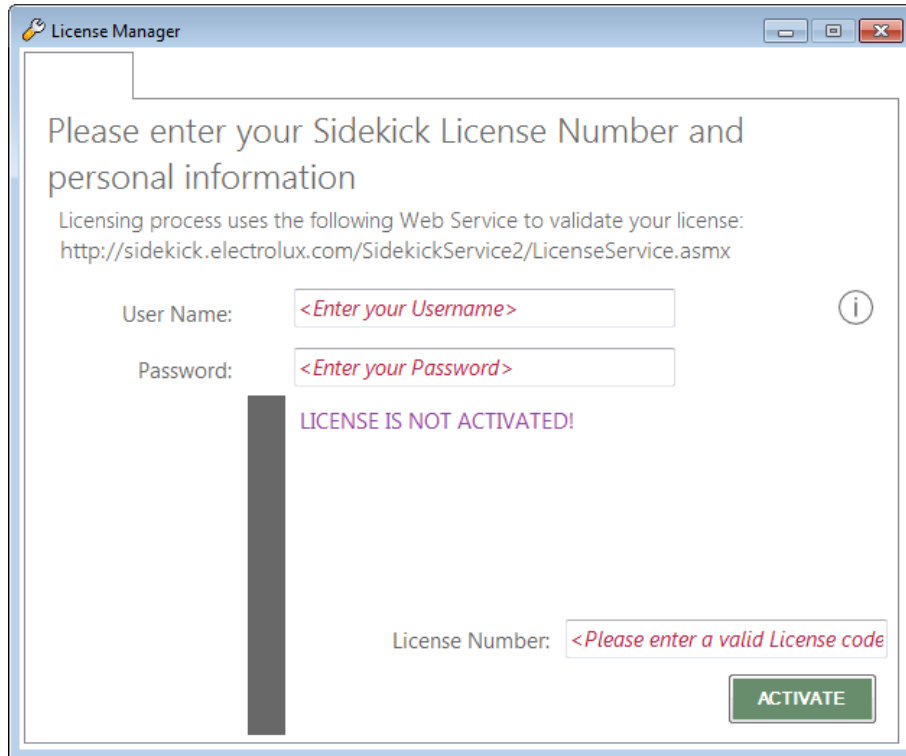
The License Web Service is located at the following URL:

<https://sidekick.electrolux.com/SidekickService2/LicenseService.aspx>

SidekickPC Activation section lets you specify the connection options for the web service:

User Name and **Password** allow you to specify your personal credentials to access the web service. You should use the User Name and Password that you receive by mail when your license is activated. (same credentials to enter also the reserved area in the Sidekick web portal)

License Details section lets you specify the **License Number** (if you have not already specified it during manual setup) and press the **Activate** command:



The screenshot shows a window titled "License Manager". Inside, there is a text box that says "Please enter your Sidekick License Number and personal information". Below this, it states "Licensing process uses the following Web Service to validate your license: <http://sidekick.electrolux.com/SidekickService2/LicenseService.aspx>". There are three input fields: "User Name:" with a placeholder "<Enter your Username>", "Password:" with a placeholder "<Enter your Password>", and "License Number:" with a placeholder "<Please enter a valid License code>". A green "ACTIVATE" button is at the bottom right. A purple error message "LICENSE IS NOT ACTIVATED!" is displayed in the center. A vertical black bar is positioned to the left of the error message.

Fig. 5. License Activation Request

After you press the **Activate** button, you should quickly see the following message:

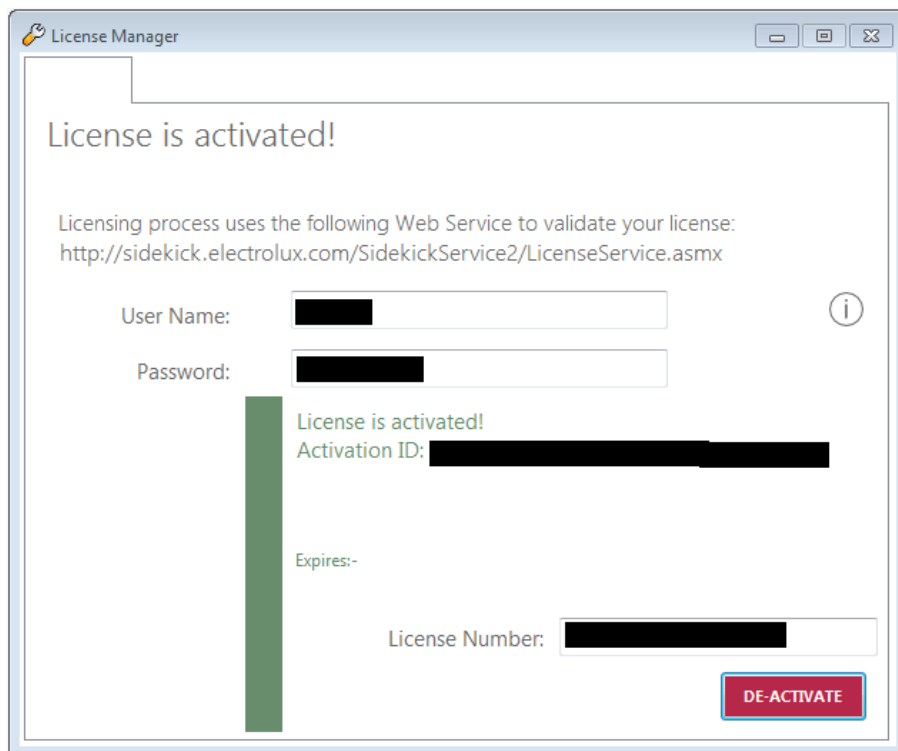


Fig. 6. License Activation Request

To save the settings, close the License Manager dialog box.

The **De-activate** command allows you removing the license from your PC. After you de-activate the license in one PC you can activate it in another PC.

1.4.2 Internet Settings

If an internet connection error occurs, please verify that you are really connected to the network and check your proxy settings in the dialog that you can activate in **Commands >> Internet Settings**:

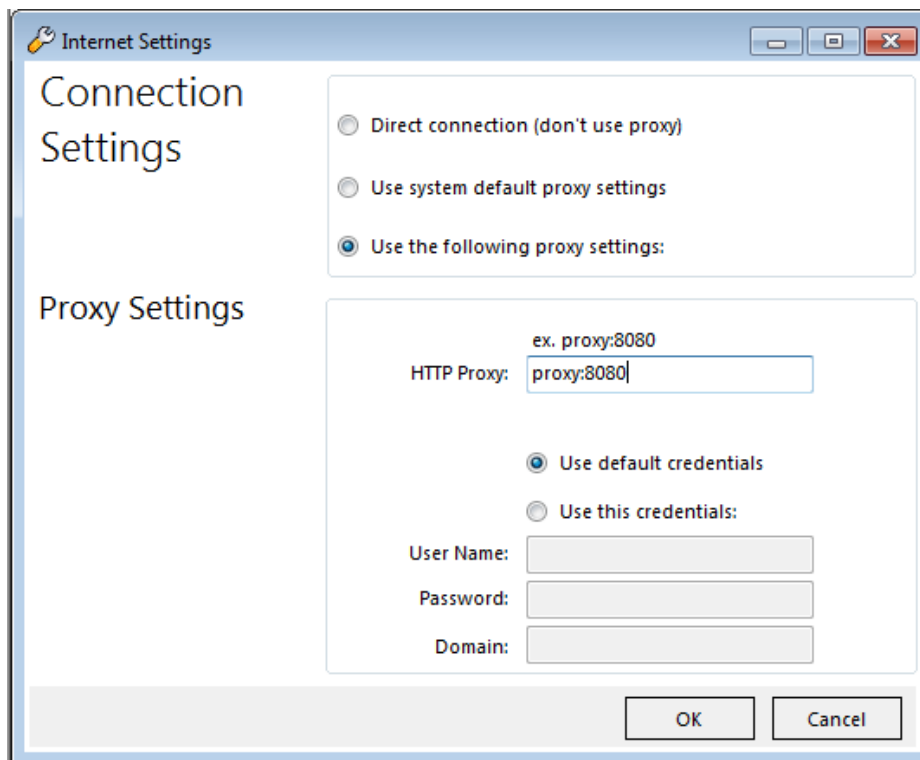


Fig. 7. Internet Settings Dialog

Sometimes invalid proxy settings are the reason of internet license activation and local database update failures. By default the setup program activates the option that uses “system default proxy settings”. In some cases this option does not work and you must explicitly specify your proxy configuration. The **Connection Settings** section lets you specify the way you are connected to the internet. The following options are available:

1. **Direct connection (don't use proxy)**: use this option if your PC is directly connected to the internet;
2. **Use system default proxy settings**: use the settings that you have specified in the Internet Explorer web browser, if you have installed it in your PC. If the proxy you are using requires explicit authentication (username and password), you cannot use this option but you must explicitly specify credentials with the “**Use the following proxy settings**” option;
3. **Use the following proxy settings**: use this option to explicitly specify your proxy settings. If you use this option you must fill-in the **Proxy Settings** section. The **HTTP Proxy** field allows you to specify the DNS name or the IP address of your proxy. The default TCP port for the proxy is 80. You can specify another port by separating the DNS name (or IP address) to the port number by means of a colon. If your proxy requires authentication, you must specify also the **User Name**, **Password**, and **Domain** fields.

1.4.3 Update Dialog

The Update Dialog allows you to perform the update of the local database and the auto-update of the software by means of a connection to the remote web server. You can activate this dialog with the **Commands >> Update** menu item.

Opening the dialog, if the software loads from the configuration file wrong settings, a dialog box advice you that all default parameters will be applied:

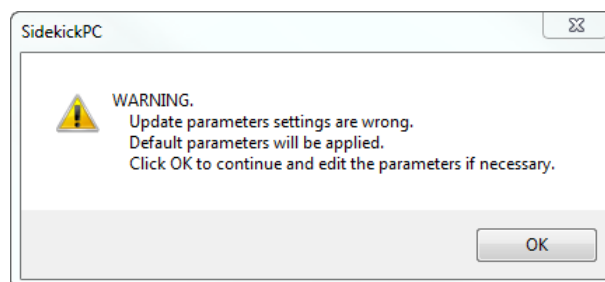


Fig. 8. Invalid Parameters Warning dialog

In this case all textbox in the form will be editable.

By default the content of all textbox is read-only; to edit the parameters, unlock the dialog clicking on the top right side of the form.

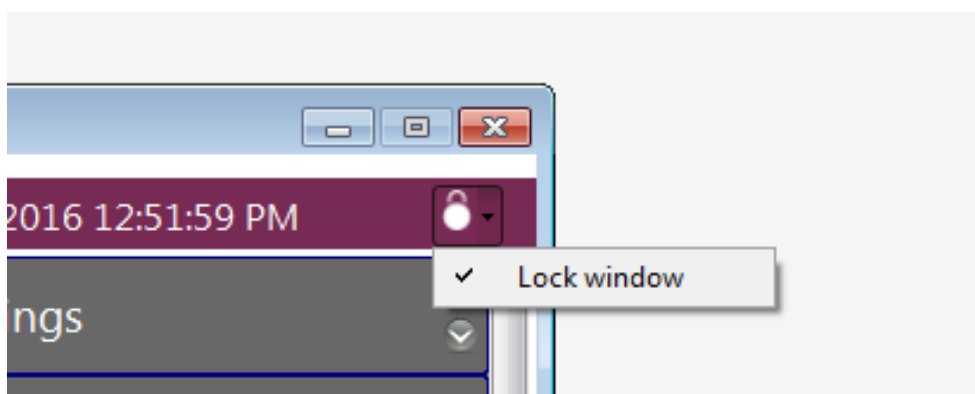


Fig. 9. Lock/Unlock option

Local database updates occur in a very simple way and are executed through the interaction of SidekickPC with a remote web service that copies information from the Electrolux central Sidekick database to your local computer.

The software fully relies on the local database contents. You cannot operate the software if the local database is empty. For this reason, you must perform the initial full database update, prior using SidekickPC for the first time.

Software auto updates are instead executed through the interaction of the application with the web portal which provides a dedicated section for the publication of update files.

Each update consists in a single ZIP file that contains all necessary information that you need to perform the software update of your local installation of SidekickPC. The system first downloads this

file in your local PC, and then it extracts information and applies the software upgrade. For the download of the software upgrade file, the software uses a technology from Microsoft called Background Intelligent Transfer Service (BITS).

Both software and database updates start by clicking the **Start update** button. Every time you issue this command, SidekickPC automatically checks for available software updates before executing the database update procedure.

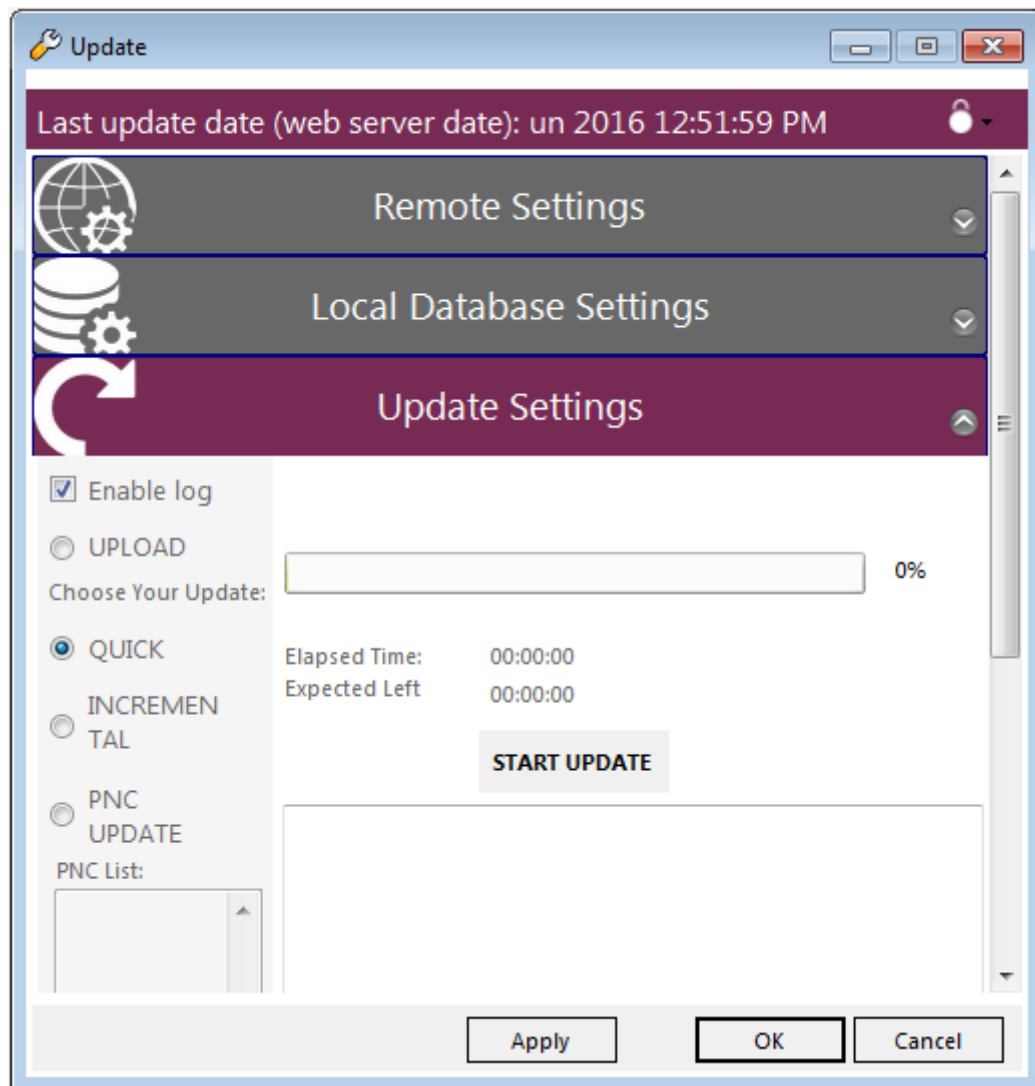
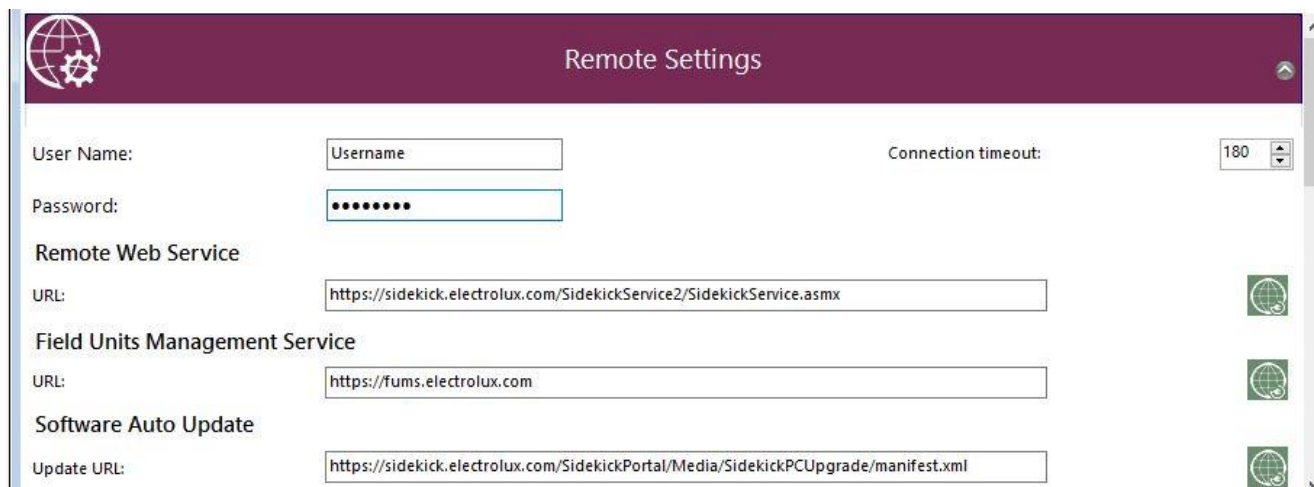


Fig. 10. Update Dialog

The **Remote Settings** section lets you specify the connection options for the web service:



The screenshot shows a web application window titled "Remote Settings". It contains several input fields and a connection timeout spinner. The fields are: "User Name:" with a text box containing "Username"; "Password:" with a masked text box containing "*****"; "Remote Web Service" with a "URL:" field containing "https://sidekick.electrolux.com/SidekickService2/SidekickService.asmx"; "Field Units Management Service" with a "URL:" field containing "https://fums.electrolux.com"; and "Software Auto Update" with an "Update URL:" field containing "https://sidekick.electrolux.com/SidekickPortal/Media/SidekickPCUpgrade/manifest.xml". A "Connection timeout:" spinner is set to "180". On the right side, there are three green circular icons with a globe and a gear, each corresponding to one of the service sections.

Fig. 11. Remote Settings section

1. **User Name** and **Password** allow you to specify your personal credentials to access the web service. You should use the User Name and Password that you receive by mail when your license is activated. You can use the same credentials to enter also the reserved area in the Sidekick web portal that, depending on the different situations, you can reach with one of the following addresses:

- a. <https://sidekick.int.electrolux.com/SidekickPortal>
- b. <https://sidekick.electrolux.com/SidekickPortal>

Also for the URLs of the Sidekick web portal are valid the same remarks as the URLs for the web service;

2. **Service URL:** the intranet or internet address to reach the web service. Depending on the different situations, you can use one of the following URLs:

- a. <https://sidekick.int.electrolux.com/SidekickService2/SidekickService.asmx>
- b. <https://sidekick.electrolux.com/SidekickService2/SidekickService.asmx>

Addresses containing the “int.electrolux” portion are only visible from inside the Electrolux network or through the Access Manager application (intranet). Electrolux may change or remove some of the above URLs in the future. For this reason, you should ask Service Support Europe to know which address you should actually use in your case;

3. **Field Units Management Service:** the intranet or internet address to contact the FUMS Service that provides the Network Unit management feature of the software. Depending on the different situations, you can use one of the following URLs:


- a. <https://fums.int.electrolux.com>
- b. <https://fums.electrolux.com>

4. **Connection Timeout:** this option allows you to specify the maximum response time of the web service in seconds. If your internet connection is very slow and you get a timeout error during updates, you can increase this value and try again;

With the manual installation procedure, which this document describes in the appendix, you can explicitly select the initial value for the options in this section. The automatic installation instead defines default settings that you may need to override. For sure you must define at least your personal credentials to access the web service: **User Name** and **Password**.

5. **Update URL:** the intranet or internet address to reach the web portal that provides the auto update feature of the software. Depending on the different situations, you can use one of the following URLs:
 - a. <https://sidekick.int.electrolux.com/SidekickPortal/Media/SidekickPCUpgrade/manifest.xml>
 - b. <https://sidekick.electrolux.com/SidekickPortal/Media/SidekickPCUpgrade/manifest.xml>

Addresses containing the “int.electrolux” portion are only visible from inside the Electrolux network or through the Access Manager application (intranet). Electrolux may change or remove some of the above URLs in the future. For this reason, you should ask Service Support Europe to know which address you should actually use in your case;

6.  **Test connection** command allows you to connect to the web portal to verify if you have specified the correct internet address.

The **Local Database Settings** section lets you specify the connection options for the local SQL Server database:

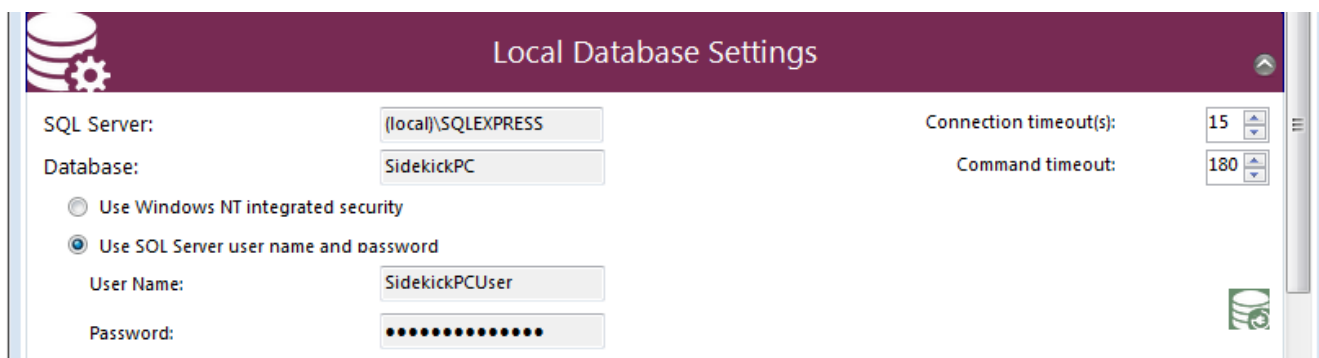



Fig. 12. Local Database Settings

1. **SQL Server:** the name of the SQL Server instance that stores your local database. By default the instance name is (local)\SQLEXPRESS. You select the server name at installation time only if you perform the manual installation procedure as this document describes in the appendix;
2. **Database:** the name of the local Sidekick database. By default the database name is **SidekickPC**. You choose the database name at installation time only if you perform the manual installation procedure as this document describes in the appendix;
3. the **Use Windows NT Integrated Security** option allows you to access the database through the integrated security of the operating system;
4. the **Use SQL Server user name and password** option allows you to access the database by means of explicit credentials. This is the default way to access to local database. The **User Name** and **Password** fields allow you to specify your personal credentials to access the database. You choose the user name and the password to access the local database at installation time only if you perform the manual installation procedure as this document describes in the appendix;
5. with the **Connection Timeout** and **Command Timeout** you can specify the connection and command timeouts (in seconds) for the operations related to the local database. Usually you do not need to alter these settings;
6.  **Test Connection** command allows you to connect to the database to verify if you have specified the correct settings.

The **Update Settings** section lets you specify the type of the update.

1. **Quick update:** use this option if you want to perform a full update of the local database. This method uses a plain HTTP download of all zip file which is on Sidekick remote server
2. **Full update:** use this option if you want to perform a full update of the local database. This method uses a different mechanism for sending file over the Internet.

In both cases all local data are removed (if any) prior executing a full copy of the remote database contents to the local database. The full update involves all Electrolux appliance models (PNCs) supported by SidekickPC. A full update is mandatory prior using the software for the first time after the setup;
3. **Incremental update:** use this option if you want to download only the new records from the remote database. This is the most common update after the initial setup. The incremental update involves all Electrolux appliance models (PNCs) supported by Sidekick;
4. **PNC update:** use this option if you want to download only the new records related to a certain set of PNCs from the remote database. The **PNC List** entry allows you to specify the list of PNCs (one or more up to 20) that you are interested in. The PNC list is a sequence of comma-separated PNCs. A PNC (Part Number Code) is a numeric code of 9 digits that identifies a certain appliance model from Electrolux. In the **PNC List** you should not supply the ELC (Engineering Level Code): downloading data for a certain

PNC means getting the update for all related ELCs. Instead of commas you can also use semicolons (;), hyphens (-), and forward slashes (/) as a separator. An example of a valid PNC List the following one: 914791101, 913101218, 914521544;

5. the **Enable log** option creates a log file during the update process. This option is useful for troubleshooting purposes.

The **Start update** command both starts the auto-update of the software and the update of the local database.

1.4.4 Software Auto Update

Every time you click on **Start update** button, the software checks if there is a software update available.

If not, the process continues with the update of the local database. Instead, in case an update is available, a dialog box that specifies a short description of the upgrade is shown:

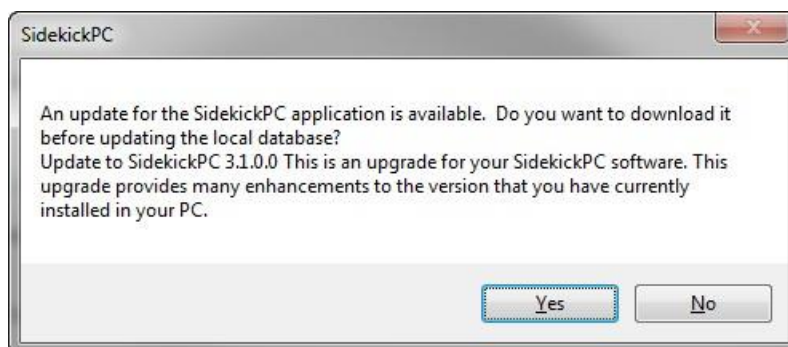


Fig. 13. Optional Software Update Notification

If the update is mandatory, the software informs you that the update will be applied before proceeding with the local database update. If the update is instead optional you can skip it and start immediately the database update.

By clicking the **Yes** button the download of the upgrade files starts. During the download of the software upgrade file, the Update dialog box shows you a progress bar and some messages that indicate the state of the process.

When the download is finished a message asks you to quit the application in order to apply the changes.

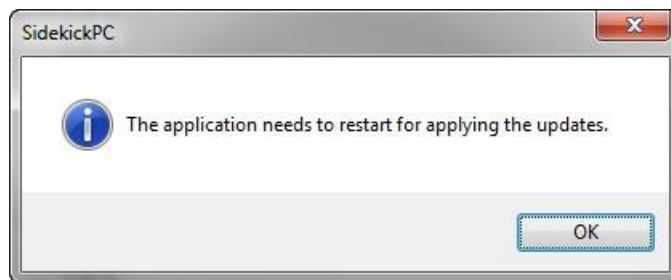


Fig. 14. End of Software Update Download

By pressing the **OK** button, the real software update starts. The downloaded files are extracted from the ZIP archive and, after a backup of the existing application files, the current application files are replaced with the new ones. In addition, the software upgrade may also involve changes in the configuration parameters and/or in the structure of the local database.

While the system applies the software upgrade you can see a dialog that shows you some information. As soon as this process finishes you should press the **OK** button in the SidekickPC Software Upgrade dialog:

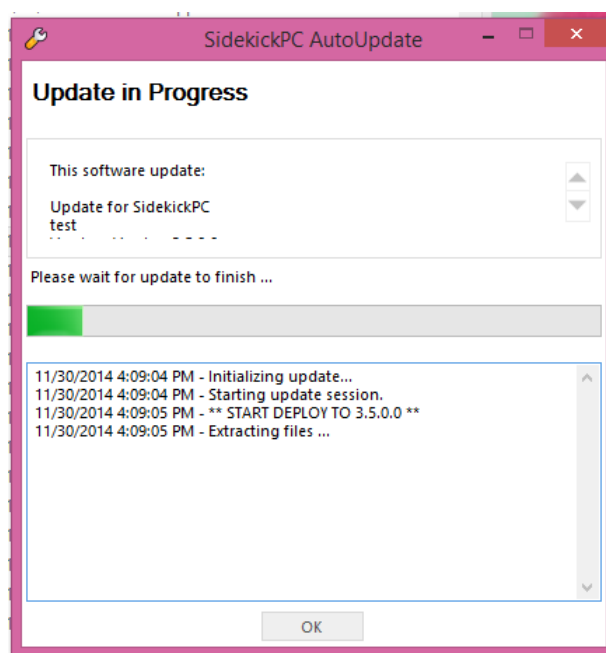


Fig. 15. End of Software Update Application

After you press the **OK** button, SidekickPC restarts automatically.

If any errors occur during the software upgrade process, the system rolls-back all changes.

1.4.5 Database Update

The update of the local database starts when you press the **Start update** button and either there is no software update available, or after that you have decided to skip an update that is not mandatory.


Depending on your update options and internet connection speed, the update process may require a long time to complete. During the update, a progress bar and some feedback messages indicate the state of the update process. The update occurs within a local database transaction. This means that if you press **Cancel update** or any error occurs during the update, all changes to the local data will be roll-backed and the local data will stay unchanged. Changes to the local data are committed only at the end of the update, if no error occurs.

The **Cancel update** command cancels the update procedure.

The **OK** button closes the dialog and saves the settings you have changed.

The **Cancel** button closes the dialog without saving the settings you have changed.

As previously specified, prior using SidekickPC for the first time you must execute a Full update.

Please click the **Test Connection**  in the Remote and Local Database sections to check if the connections to the remote web service and to the local database work. If necessary, select the **Full Update** option and then press the **Start update** command. You should see feedback messages indicating the progress of the operation. The initial full update may take several minutes or even hours to complete, please be patient. At the end you should see the completion notification:

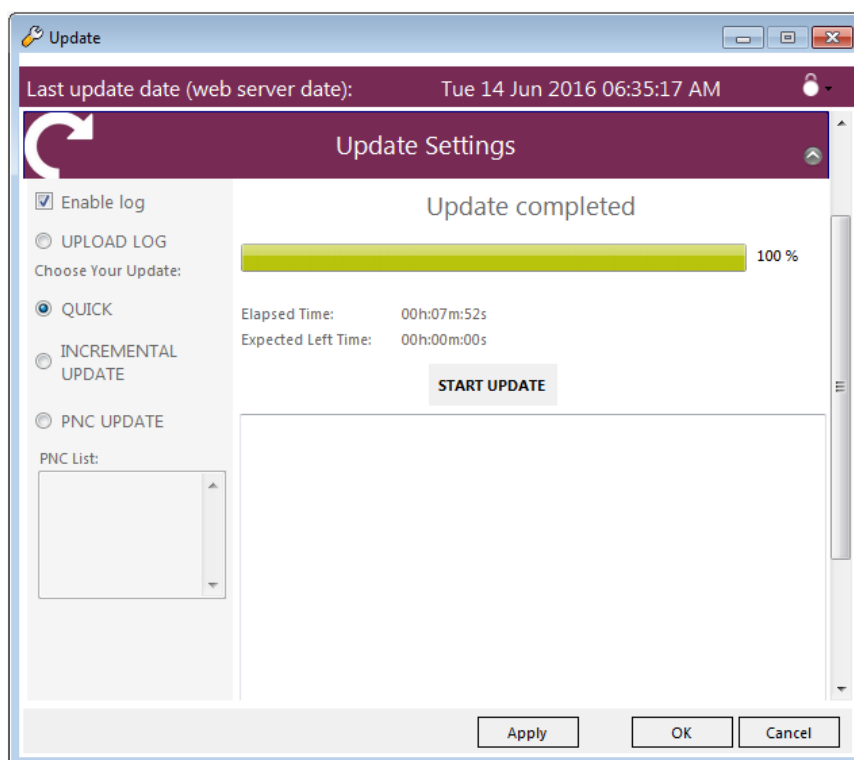


Fig. 16. Update Dialog: operation complete

On the top status bar of the dialog is shown the date and time of the last update.

It displays the date and time of the last Full or Incremental update. Keep in mind that this is the date of the server not the date of your local PC. Please remember that the PNC update does not change this value.

Press **OK** and you are ready to start using the software.

2 HARDWARE CONNECTIONS

This chapter provides information regarding the correct way to connect and disconnect the Sidekick system to the appliance under test or to the electronic board to configure.

2.1 CONNECTING THE APPLIANCE TO THE PC

CAUTION! In order to avoid the risk of electrical shock only skilled personnel should use and install the Appliance Connection Kit. The connection of all items should occur only when the appliance is powered off and, if possible, unplugged from the power supply. Also the adapter module should be off.

If the Appliance Connection Kit uses the USB interface of your PC, please remember that you should always employ a fully-shielded High-Speed USB 2.0 cable. This type of USB cable provides a good level of reliability for the communication between the PC and the appliance.

If you want to diagnose an appliance or update its electronic board configuration, you should connect it to the PC. To connect the appliance to the PC you need to do the following steps:

- Turn off the interface module (if it has a separate power supply).
- If necessary, disconnect the interface module from the PC (disconnect the USB cable).
- Turn off the appliance and, if possible, unplug it from the power supply.
- **Important: wait at least 5 seconds BEFORE touching the board or the interface cable to prevent Electro Static Discharge (ESD) damage risk.**
- Open the appliance cabinet in order to reach the electronic board connector. For instance in a typical washing-machine: remove 2 screws from the cover on the backside of appliance.

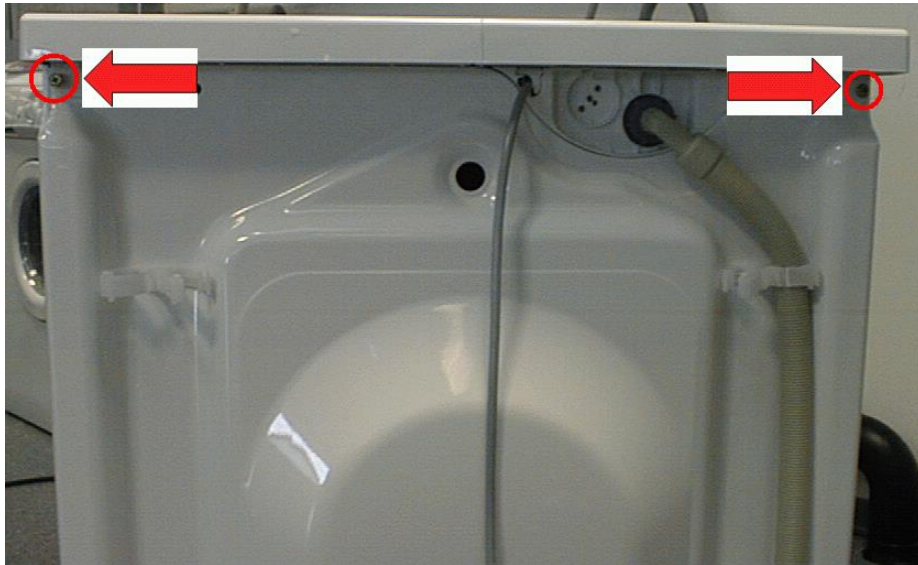


Fig. 17. Appliance backside view

- Typical washing-machine example: slide the top cover back and (if necessary) remove the plastic shield from the electronic board using the plastic tips, which you find at each end. In some types of appliance you only need to open the plastic tip that protects the interface connector in the electronic board.
- Connect the adapter module to the appliance using the interface cable as shown in the following picture.



Fig. 18. Appliance with adapter connected

- Connect back the appliance to the power supply and turn it on.
- Turn on the adapter module (if it has a separate power supply).
- Connect the adapter module to the PC using the USB cable.



Fig. 19. Laptop PC backside view

- Run the SidekickPC software.

The above sequence of steps guarantees user's safety and reduces the risk of damage due to electrostatic charges. It also avoids the storage of the FREQUENCY OF APPLIANCE INCORRECT (EH1 or EB1 in Fabric Care appliances) alarm that is generated when the board is supplied by the interface module instead of the mains power supply (230 VAC).

VERY IMPORTANT NOTE!

Since the interface module is able to power the electronic board even if the appliance is not connected to the mains supply, the appliance may detect false alarm conditions if the adapter is turned on before the appliance.

For this reason you should ALWAYS turn on the appliance under test BEFORE turning on the adapter and connecting it to the Personal Computer.

Conversely, you should ALWAYS turn off the adapter and disconnect it from the Personal Computer BEFORE turning off the appliance under test.

2.2 DISCONNECTING THE APPLIANCE FROM THE PC

You should do the following steps to disconnect the PC from the appliance:

- Disconnect the USB cable from the PC.
- Turn off the appliance and, if it possible, unplug it from the mains power supply.
- **Important: after the power off of the appliance, wait at least 5 seconds BEFORE touching the board or the interface cable to prevent Electro Static Discharge (ESD) damage risk.**
- Disconnect the adapter module interface cable from the electronic board.

The above sequence of steps guarantees user's safety and reduces the risk of damage due to electrostatic charges. It also avoids the storage of the FREQUENCY OF APPLIANCE INCORRECT (EH1 or EB1 in Fabric Care appliances) alarm that is generated when the board is supplied by the interface module instead of the mains power supply (230 VAC).

2.3 CONNECTING THE SPARE BOARD TO THE PC

CAUTION!

In order to avoid the risk of electrical shock only skilled personnel should use and install the Appliance Connection Kit. You should NEVER power on the spare board from the mains supply (230VAC) when it is not installed in the appliance.

The adapter interface module provides the necessary power to the board during the configuration procedure, without the need of connecting the mains supply.

Before handling the electronic board, you should discharge your body from possible electrostatic charges, by touching one conductive object connected to earth.

In addition, you should never touch both neither the board nor the adapter module interface connector during configuration program download and, in general, when the board supply is present. These precautions reduce the risk of damaging the electronic board because of electrostatic discharges.

If you want to create a spare board for a specified appliance, you should connect the naked board to the PC for the configuration. To connect the board to the PC you need to do the following steps:

- Turn off the interface module (if it has a separate power supply).

- Connect the adapter module to the board using the interface cable as shown in the following picture.



Fig. 20. Board with appliance cable connected

- Connect the adapter module to the PC using the USB cable and turn on the adapter module. This operation turns on the spare board as well.

VERY IMPORTANT NOTES!

You may hear an intermittent beep when the spare board is powered on by the adapter. This beep is due to the fact that the board detects a false alarm condition since it is not yet installed in the appliance.

When you turn on an appliance for the first time after you have reconfigured it, or after you have replaced the electronic board, the machine may automatically start the electric test (the electric test is only used in the factory at the end of the assembly line). Turn the appliance on and off to set it back in normal mode.

2.4 DISCONNECTING THE SPARE BOARD FROM THE PC

CAUTION!

In order to avoid the risk of electrical shock only skilled personnel should use and install the Appliance Connection Kit. You should NEVER power on the spare board from the mains supply (230VAC) when it is not installed in the appliance.

The adapter interface module provides the necessary power to the board during the configuration procedure, without the need of connecting the mains supply.

Before handling the electronic board, you should discharge your body from possible electrostatic charges, by touching one conductive object connected to earth.

In addition, you should never touch both neither the board nor the adapter module interface connector during configuration program download and, in general, when the board supply is present. These precautions reduce the risk of damaging the electronic board because of electrostatic discharges.

You should do the following steps to disconnect the PC from the spare board:

- Disconnect the USB cable from the PC.
- **Important: wait at least 5 seconds BEFORE touching the board or the interface cable to prevent Electro Static Discharge (ESD) damage risk.**
- Disconnect the adapter module interface cable from the board.

2.5 DETAILS FOR MACS CABLE CONNECTIONS

When using the Sidekick MACS cable it is important to properly set the **Secondary Power Switch** in the Appliance Mini Interface (AMI).

With this switch you select if the AMI module should provide or not power supply to the target board.

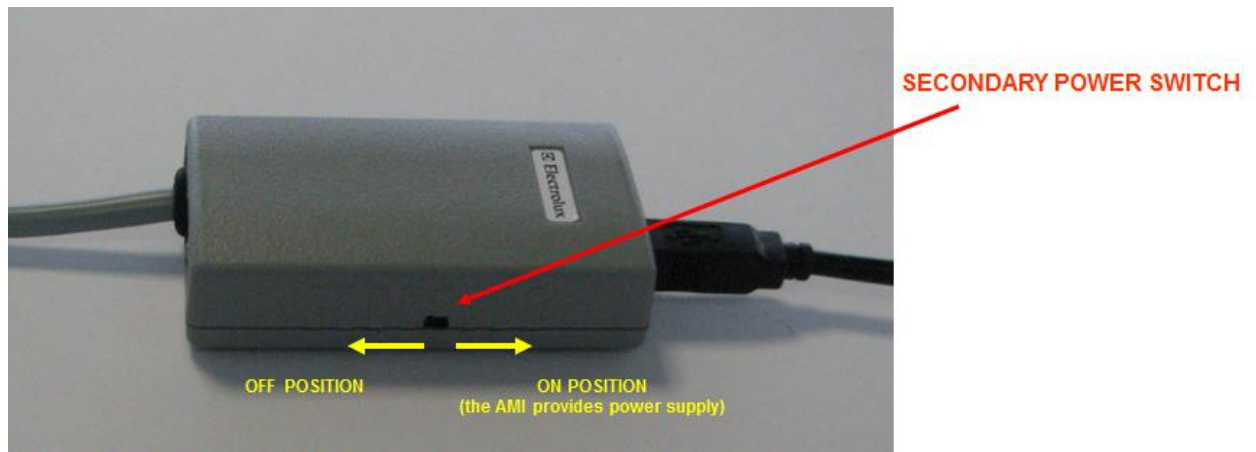


Fig. 21. AMI Power switch

When the Secondary Power Switch is in the **ON position**, the USB cable is connected to the PC, but the target cable is NOT connected to the board or appliance, the **Secondary Power LED** on the side of the target cable is ON.

When the Secondary Power Switch is in the **OFF position**, the **Secondary Power LED** turns ON only when the target cable is connected and the board or appliance under test is turned on with the mains power supply.

As a general rule:

1. you should turn the switch ON when programming standalone boards not connected to the mains power supply;
2. you should turn the switch OFF when programming standalone boards connected to the mains power supply or when connecting to appliances.

3 SOFTWARE OPERATION

This chapter deals with the **SidekickPC** utility functions. The program consists of a main window that is a container of all other functional windows (forms). The main window follows the Multiple Document Interface (MDI) approach. Using MDI allows you opening many forms at the same time during the diagnostic procedure.

The following figure displays the main form:

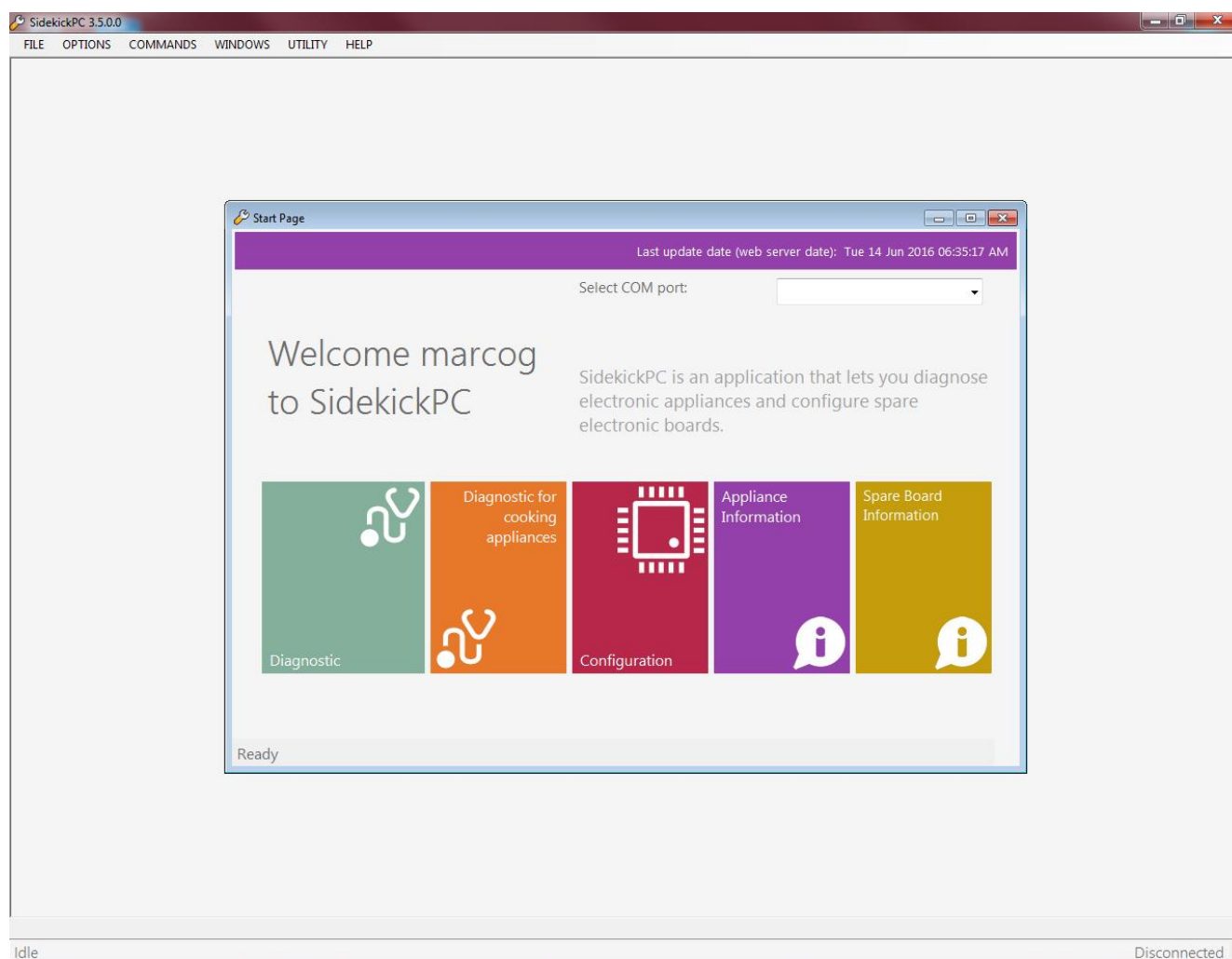


Fig. 22. Main Form

The main form contains the **pull-down menu** placed just below the title bar. The main menu items are: **File**, **Options**, **Commands**, **Window**, **Utility**, and **Help**.

The **Start Page** command in the File menu activates the Startup Form.

The **Exit** command in the File menu quits the application.

The **Communication** command in the Options menu shows the **Connection Settings** dialog box that allows specifying the maximum communication speed for connecting to the target appliance or to the board:

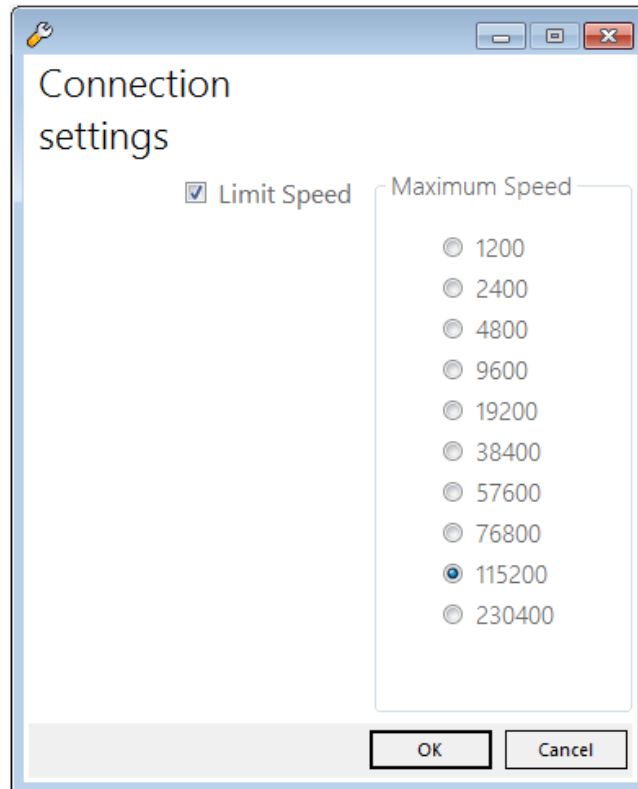


Fig. 23. Connection Settings

You do not usually need to change any settings in this dialog box.

The **Language** command in the Options menu shows the **Language** dialog box that allows choosing the display language:

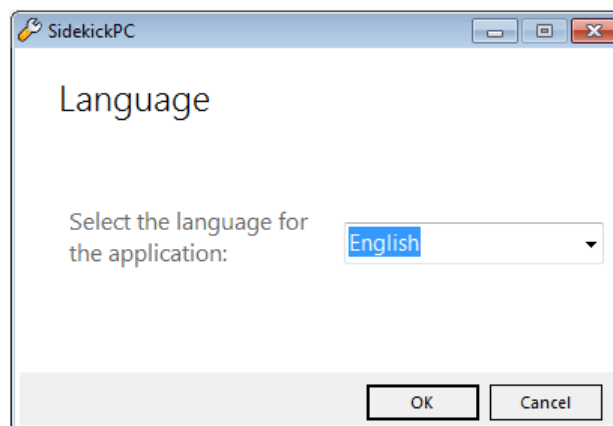


Fig. 24. Language Selection

The **Update** command in the Commands menu shows the Update Dialog already described in Chapter 1.

The **License Manager** command in the Commands menu shows the License Manager Dialog already described in Chapter 1.

The **Internet Settings** command in the Commands menu shows the Internet Settings Dialog already described in Chapter 1.

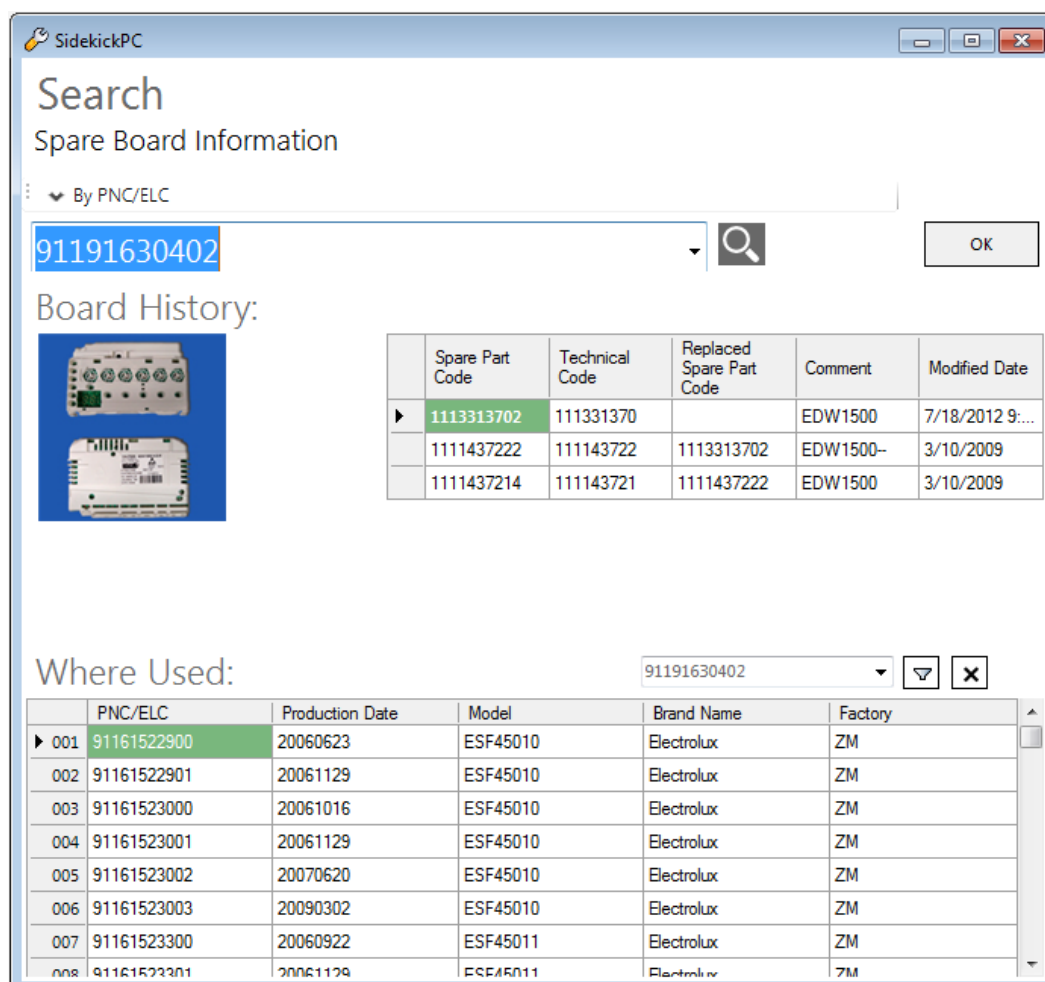
The **Windows** menu contains various commands that simplify arrangement of forms in the workspace.

The **Utility** menu contains the **Spare Board Information** command that allows you to see all information from TDS (Technical Documentation System) database about a spare board code, the replacement history and the list of all PNC/ELC that are related to the selected board. The next paragraph describes this function.

The **Help** menu contains only the command to display the About Dialog box.

3.1 Spare Board Information Form

The **Spare Board Information** window displays all information about a spare board starting either from the board code (with check digit) or from the PNC/ELC of the appliance.



Search
Spare Board Information

By PNC/ELC

91191630402

OK

Board History:

	Spare Part Code	Technical Code	Replaced Spare Part Code	Comment	Modified Date
▶	1113313702	111331370		EDW1500	7/18/2012 9:...
	1111437222	111143722	1113313702	EDW1500-	3/10/2009
	1111437214	111143721	1111437222	EDW1500	3/10/2009

Where Used:

91191630402

	PNC/ELC	Production Date	Model	Brand Name	Factory
▶ 001	91161522900	20060623	ESF45010	Electrolux	ZM
002	91161522901	20061129	ESF45010	Electrolux	ZM
003	91161523000	20061016	ESF45010	Electrolux	ZM
004	91161523001	20061129	ESF45010	Electrolux	ZM
005	91161523002	20070620	ESF45010	Electrolux	ZM
006	91161523003	20090302	ESF45010	Electrolux	ZM
007	91161523300	20060922	ESF45011	Electrolux	ZM
008	91161523301	20061129	ESF45011	Electrolux	ZM

Fig. 25. Spare Board Information Form

In the top side of this form there is the **Selection** group that lets you choose search criteria. You can start your search either from the PNC/ELC of the appliance or from the Spare Part Code that in TDS identifies the generic not configured electronic board. The text field lets you enter either the **PNC/ELC** or the **Board Code**. You can insert optional blank and slash (/) characters in order to increase the readability of the code that you enter.

When you click the combo box, a drop-down list, containing the last 5 used codes appears.

If you click on  image, a list containing all the PNC/ELC Codes or Board Codes stored in the database appears.

You can select one item from the generated list and you have the possibility to restrict the selection list by filling the **Starts with** field.

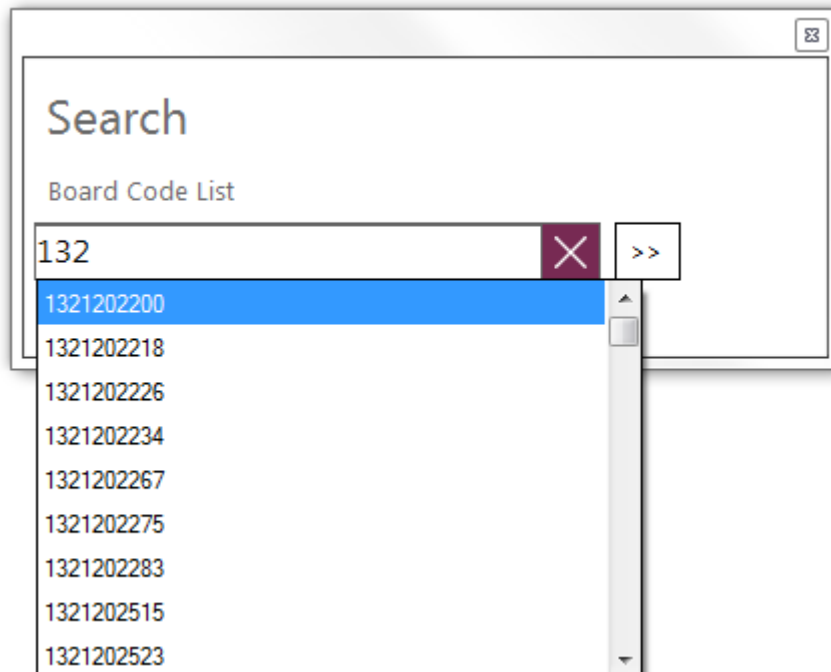
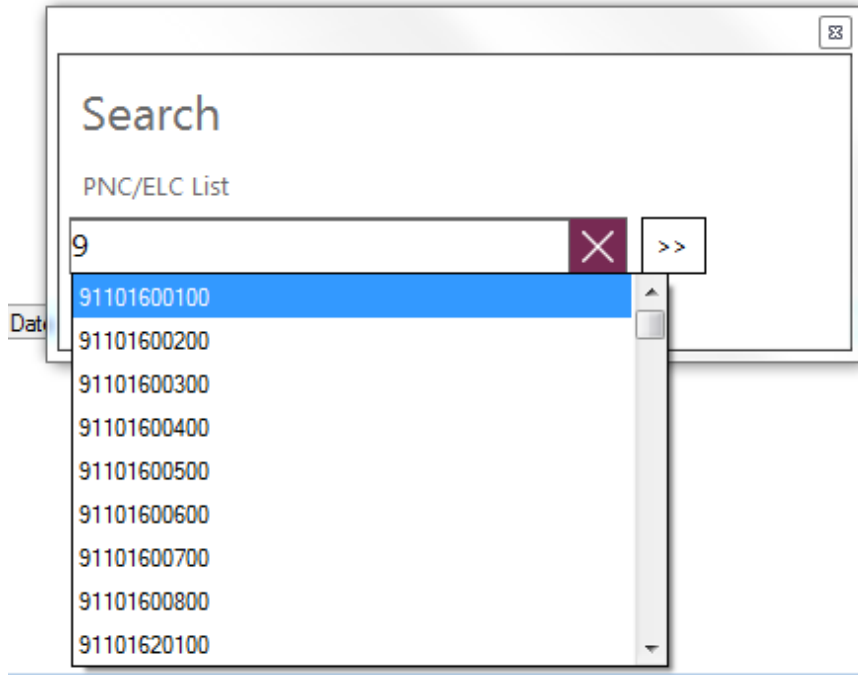


Fig. 26. PNC/ELC and Board Code List Forms

When you enter the code and press either the **ENTER** key or the **OK** button, SidekickPC searches for matches with the specified code in the local database. If it finds the specified code, the software automatically populates the form.

This form shows search results in 2 grids.

The upper grid provides the **Board History** that shows a list of spare board codes (with related Technical Code) as well as additional information. In particular **Replaced Spare Part Code** shows the code of a more recent board that replaces the board identified by the current record. If the value of this field is **(Empty)** this board is the most recent one since it has not been replaced yet.

The software sorts the list so that the first record refers to the most recent board according to the information from TDS.

The software highlights in red the board code used to populate the grid. At the top left side of the form the software also displays a picture of this board, if available.

While the **Spare Part Code** refers to the code that you should use to buy the not configured board from Electrolux, the **Technical Code** indicates the code that Electrolux uses to buy it from suppliers.

In many cases the Technical Code and the Spare Part Code are the same except the check digit. However, sometimes, these codes are different.

The Technical Code is often printed in a label attached to the board or to its plastic case. As a consequence, the code that you read in this label may differ from the code that you use to buy the part from Electrolux.

The lower grid, **Where Used**, shows all PNC/ELCs, with the corresponding Model, Brand, the factory code and the date of first production that employ the selected board code. This information is similar to the "Where Used" function in TDS, with the advantage that it takes into consideration the replacement history, not only the bill of material from factories at the date of production.

In some cases, selecting a code by PNC/ELC, more than one board may be present in that specific product. As a consequence, more than one record may be found inside the local database. In this case a list containing **Spare Part Code**, **Plant**, **Board Name**, **Product**, and **Platform** appears, allowing you to choose the specific electronic board that you want to analyze.

Select	Service Kit Code	Plant	Board Name	Platform	Firmware	FirmwareRev	Sp Co
<input checked="" type="checkbox"/>	973925781831012	ZS	COOLER	ERF2001	242569408	000	238
<input type="checkbox"/>	974925781831011	ZS	FREEZER	ERF2001	242569409	000	238

Fig. 27. Board Selection Form

3.2 Startup Form

When you run the program you see the Startup form:

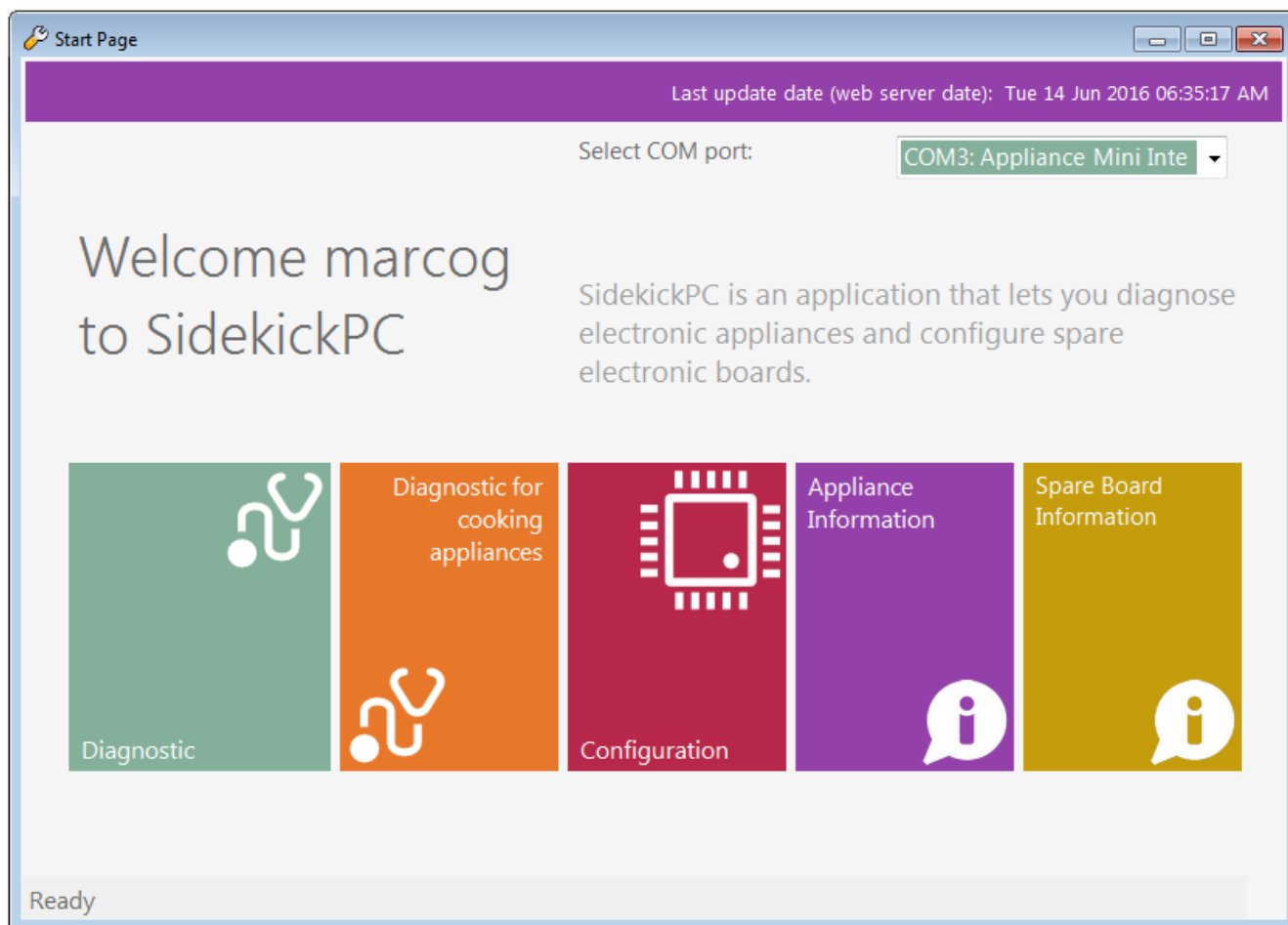


Fig. 28. Startup Form

The **Select COM port** list lets you choose the communication port. The software automatically detects the available serial ports on the PC and, if possible, it selects the port that you have selected in the previous SidekickPC session.



Diagnostic lets you start the appliance diagnostics function. When you click this icon the software connects to the appliance under test and identifies it (*). Then the program shows you the Identification form with the main configuration parameters in the connected appliance.

(*) The identification procedure depends on the type of the appliance, for diagnostic functionality of cooking appliances refers to chapter 3.41.



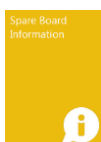
Configuration lets you enter to the board configuration function. When you click on this icon, SidekickPC shows you the Board Configuration form.



Appliance Information lets you to get detailed information regarding test, alarms, and the troubleshooting procedures of a specific appliance model that you identify by means of the PNC/ELC. Please remember that this function only works for those appliances that SidekickPC is able to diagnose.



Diagnostic for cooking appliances lets you start the appliance diagnostics function for the cooking appliance.



Spare Board Information displays all information about a spare board starting either from the board code (with check digit) or from the PNC/ELC of the appliance.

3.3 Configuration Form

This is the form that appears when you press the **Configuration** button in the Startup Form. The Configuration form allows you either to create a spare board or to upgrade the electronic configuration of an appliance.

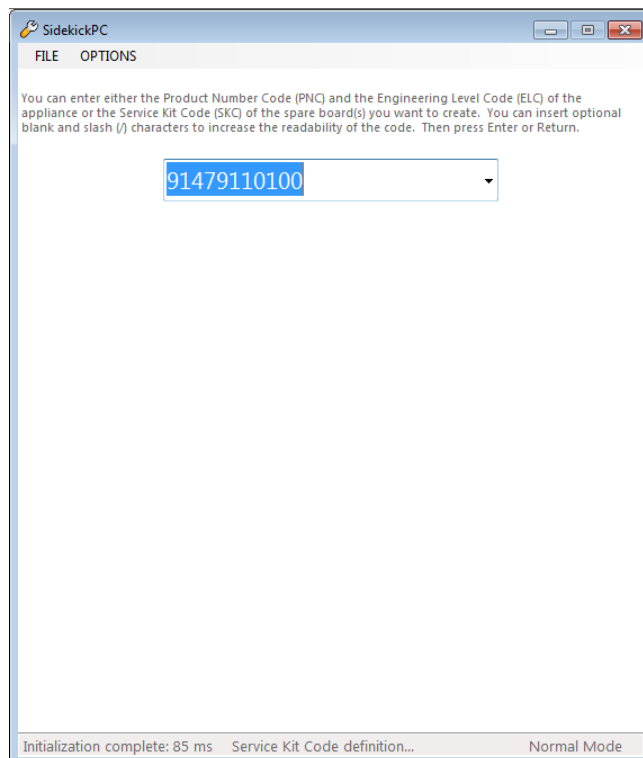



Fig. 29. Configuration Form

The **Code Selection** field lets you enter either the **PNC/ELC** of the appliance that you want to upgrade or the **Service Kit Code (SKC)** of the configured spare board that you want to create.

The PNC/ELC is always an 11-digit code that identifies the Electrolux appliance model.

You can insert optional blank characters, hyphens and slashes, between one digit and another, to increase the readability of the inserted code. The software ignores all extra characters that you may insert for improving the readability of the code.

SidekickPC keeps a list with the most recently used codes. You can click the select button  on the right side of the Code Selection field and choose one of these items instead of manually entering the digits each time you enter a new code.

When you press the ENTER key, SidekickPC searches for matches with the specified code in the internal database. If it finds the specified code, SidekickPC automatically processes the information for the configuration of the specified spare board.

3.3.1 Service kit code

The Service Kit Code (SKC) identifies the code of the kit for a configured electronic board, for direct replacement on a specific appliance model (PNC/ELC). This code is created by Spares Operations Team and added in the TDS system.

3.3.1.1 973 Coding rule

In **Fabric Care**, **Dish Care**, **Food Preservation (*)** and **Food Preparation (*)** product lines, configured boards are coded as spare part for each PNC/ELC in the following way:

Prefix	PNC	ELC	Checkdigit
973 to 982	XXXXXXXX	XX	X

Fig. 30. SKC Convention for Fabric Care, Dish Care, Food Preservation and Food Preparation()*

As you can see, in the above case, the SKC is always a 15-digit code.

- **973 to 982:** reserved prefixes in TDS are from 973 to 982. This means that each PNC/ELC can define up to 10 different configured boards.
- **PNC:** the Product Number Code that identifies the appliance model
- **ELC:** the Engineering Level Code that identifies the appliance model
- **Check digit:** It consists of a single digit computed automatically by an algorithm from the other digits in the sequence input. It is used for error detection.

The actual value of the prefix within the same PNC/ELC depends on the numeric value of the ANC of the board used in production. The SKC prefix is assigned in ascending order with respect to the ascending order of the ANC.

In other words, the lowest prefix (973) is assigned to the board with the lowest ANC.

See example

PNC: 94959 60 88 ELC 01 – split user interface induction boards

Board w. E.Taffel	ANC	Seniority	Resulting kit
UI right	561 21 65-34	1	973 94959 60 88-01 / 4
UI left	561 21 65-35	2	974 94959 60 88-01 / 3

(*) see “New 982 kit rule”

If the specified code does not exist in the database, the software just shows an error message.

If the specified code exists in the database, first panel information appears:

- **Brand** and **Model** of the corresponding appliance is shown on top;
- **Naked Board** if available, with photo and description;
- **Cable Connector** if available, the corresponding board cable connector to use with photo and description.

You can then enter the number of identical boards to configure:

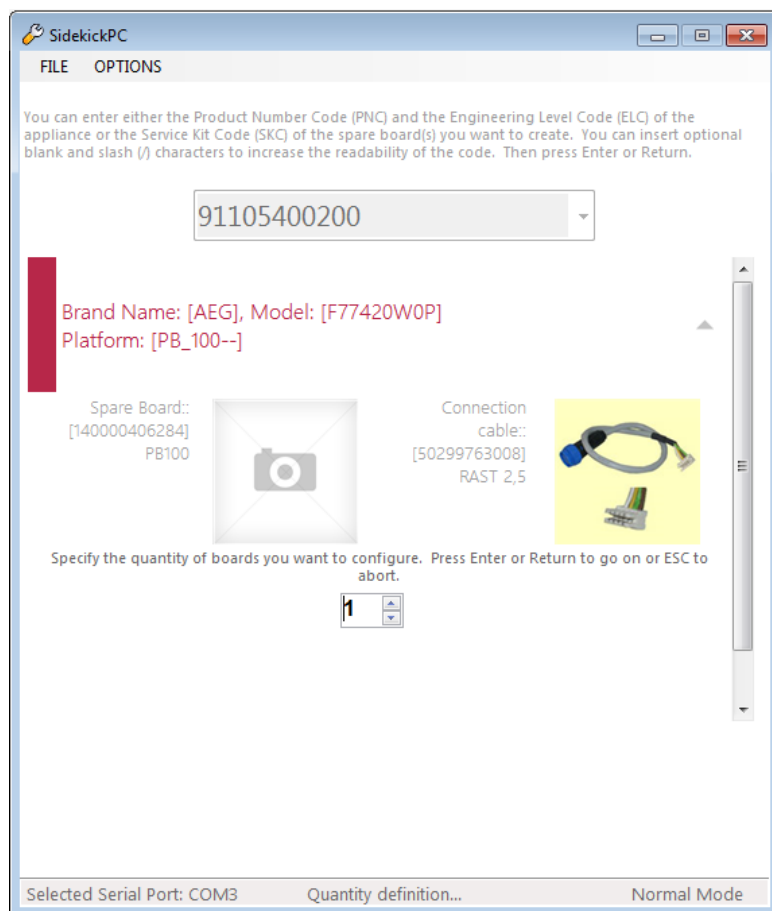


Fig. 31. Quantity Definition

After the quantity definition, press the ENTER key again and you are ready to start the configuration. This means that you can connect the appliance board to the PC and press OK to start the programming procedure:

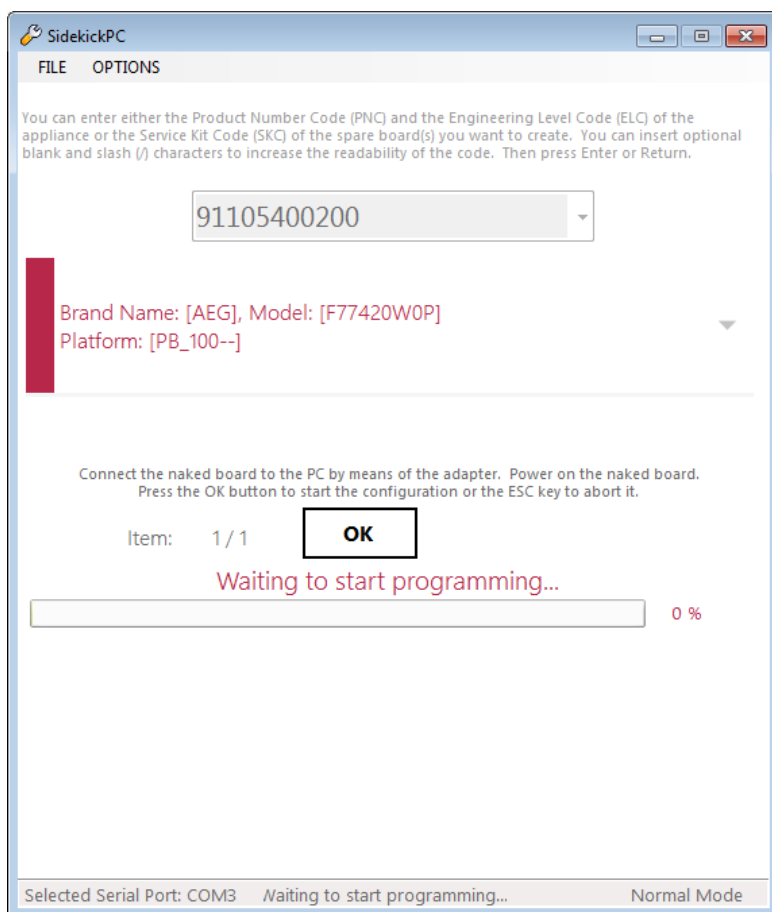



Fig. 32. Start Programming

When you press the OK button to start the configuration of the board, at first the program identifies the naked board. If the naked board you are using is not suitable for the appliance model you have selected, SidekickPC issues an error message and prevents you further actions with the board. Otherwise it immediately starts the board configuration procedure.

The board configuration procedure occurs using the information contained in the local database. During the execution of this command the target device goes into a special mode. After the programming procedure, SidekickPC resets the board and it performs a check of the configuration.

The **Last operation results** panel shows the result of the last board programming operation.

The GREEN color highlights successful result, RED failure. In case of success, you can see statistics regarding the operation. In case of failure you can see a description of the error (click on the **Copy to**

Clipboard button  on the right side of the panel, it is possible to copy the message result to clipboard):

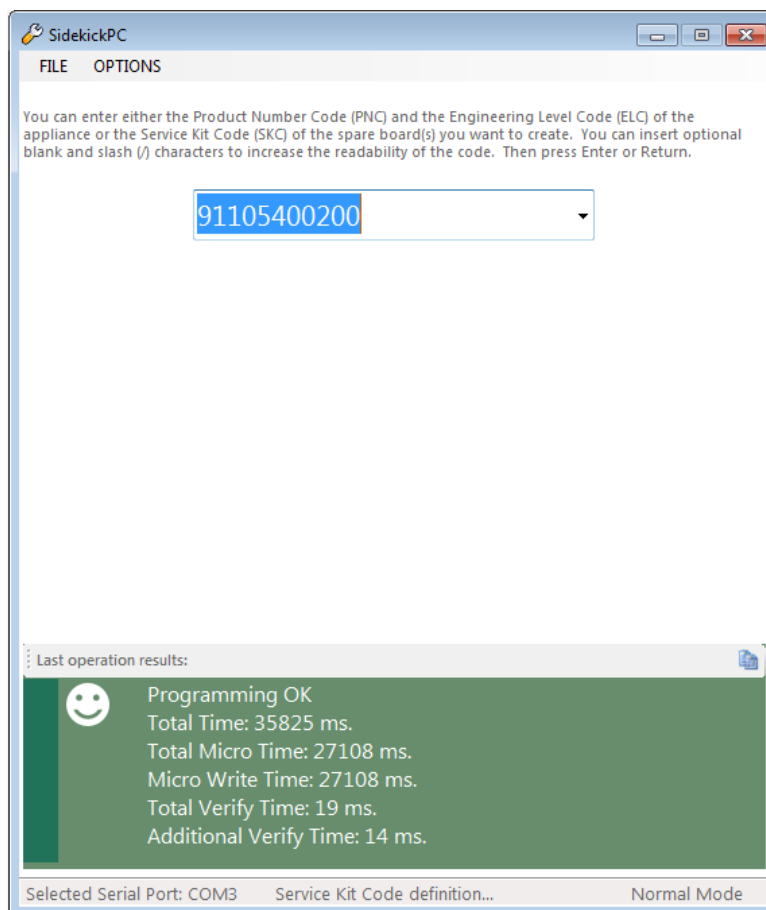


Fig. 33. Last operation result

Please note that all board programming operations are recorded in the local database (Database Log) and that are uploaded to the remote server whenever you execute a database update operation.

3.3.1.2 New 982 kit rule

To solve the pending issues on the data flow for Spare Operations concerning cooking electronic boards, a new Service Kit coding scheme for the **Food Preparation** product line is been approved.

The Spares Documentation team has started using the new service kit codes since 19th May 2014.

All cooking boards coded before 19th May 2014 use the old 973-982 rule (this rule is still valid also for all others product lines)

The new 982 service kit code is a 13-digit code. It is defined according to the following convention:

Prefix (3 digit)	ANC (9 digit)	TDS check digit (1 digit)
982	561 21 65-41	6

- **982 prefix:** it is a fixed prefix (3 digit)
- **ANC:** it is the Article Number Code that identifies the variant software of the board (9 digit)
- **TDS check digit:** It consists of a single digit computed automatically by an algorithm from the other digits in the sequence input. It is used for error detection. (1 digit)

See example

PNC: 949596300 ELC 00 – split user interface induction boards

Board w. E.Taffel	ANC	Seniority	Resulting kit
UI left	561 21 65-41	do not care	982 561 21 65-41 / 6
UI middle	561 21 65-34	do not care	982 561 21 65-34 / 1
UI right	561 21 65-26	do not care	982 561 21 65-26 / 7

The benefits from new 982 coding are:

- Significant reduction in the number of service kit code; a 982 service kit code can be used for different appliance;
- The service kit prefix is fixed - no dependencies on ANC seniority. It is possible to update the list of spare boards at a later time;
- Significant reduction of IT architecture complexity to populate the central database: since the kit code embeds the original factory ANC code, it is no longer necessary the automatic software procedure that exports all information about electronic boards from factory bill of material system (COPICS). This means that the central database can be updated only with a lookup in the Technical Documentation System database (TDS).

New 982 service kit coding rule for Fridge and Freezer boards

The Spares Operations team has started using the new service kit codes also for fridge and freezer boards since September 2015 (at present, the only Food Preservation factory involved is Susegana).

3.3.1.3 982 + 140 Service kit coding rule

Due to the fact that new ANC codes created with Teamcenter software start with an alphabetic character (i.e. A03726201) and that, the Technical Documentation System (TDS) is not able to handle it, the Spares Operations Team has introduced a translation mechanism that converts 'A' to the prefix number 140 (3 digit).

All service kit codes that embed ANC codes starting with 'A' are defined according to the following convention:

Prefix (3 digit)	ANC Prefix (3 digit)	ANC (8 digit)	TDS check digit (1 digit)
982	140	037262-01	7

- **982 prefix:** it is a fixed prefix (3 digit)
- **140:** it is a fixed prefix (3 digit) stands for 'A' char
- **ANC:** the Article Number Code (excepts the first alphabetic letter 'A') that identifies the variant software of the board (8 digit)
- **TDS check digit:** It consists of a single digit computed automatically by an algorithm from the other digits in the sequence input. It is used for error detection. (1 digit)

VERY IMPORTANT NOTES!

The board may become unusable if the board programming operation fails for any reason.

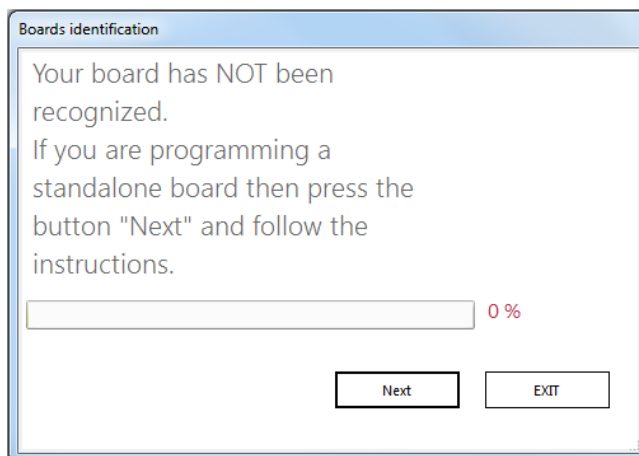
During the programming procedure it is highly recommended not to detach the connection cables, not to switch off the interface module, not to touch the board to prevent Electro Static Discharge (ESD) damage risk or otherwise interrupt the operation since the board may become unusable. Interrupting a programming operation may lead to an unusable naked board.

In the above cases, recovering the board may require special programming tools. This program does not provide this capability.

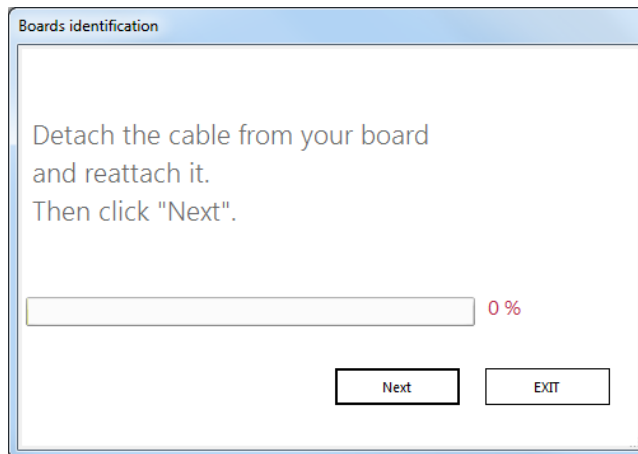
3.3.2 Special Case of failure during configuration

During configuration, there is a special case of failure that can be worked around with the user intervention. At the moment of this writing, the only boards that could manifest this type of failure belong to the Food Preparation product line. This kind of failure happens at the beginning of the configuration procedure. The user will be presented with a wizard that guides through a sequence of steps; at the end of the procedure, the user will have a chance to configure the board with different settings. This procedure must be used **exclusively only if configuring a standalone board** (i.e., a single board outside the appliance).

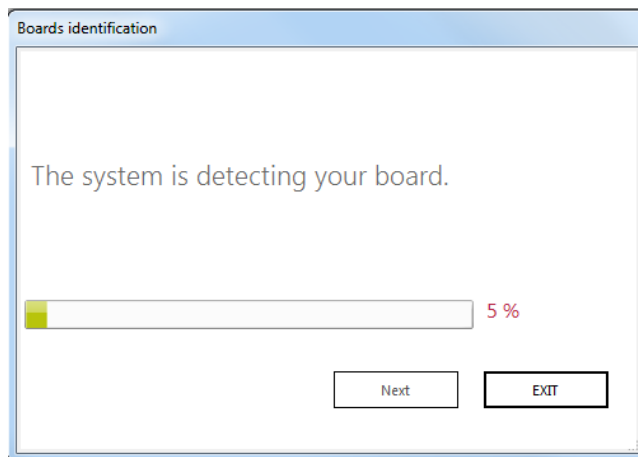
This is the wizard that will appear:



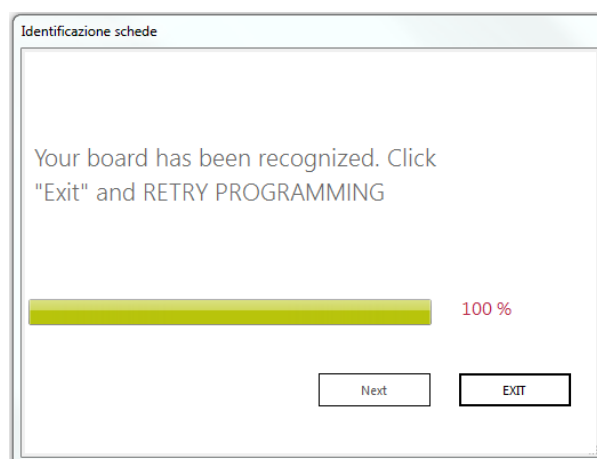
By clicking “Exit” the user can refuse to execute the procedure. By clicking next, the user will be asked to detach and reattach the board:



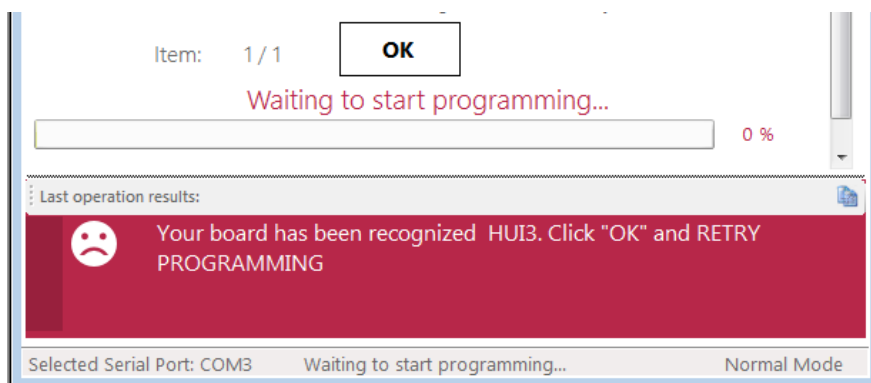
By pressing “Next”, a procedure will try to detect the attached board and the user will just have to wait:



If the board is detected then special settings for the configuration procedure will be prepared. The user will then click “Exit” to retry configuring:



The user will be presented with the standard Configuration form:



The user will then proceed configuring the board as usual. The special settings (retrieved during the board detection procedure) will be valid only for the first configuration.

3.3.3 Configuration Form Menu Commands

The Configuration form has a pull-down menu with the following items: **File** and **Options**.

The **Exit** command in the File menu just closes the form.

The **Additional Verify** command in the Options menu shows the **Additional Verify** dialog box that allows activating an extra configuration step after the board programming procedure:

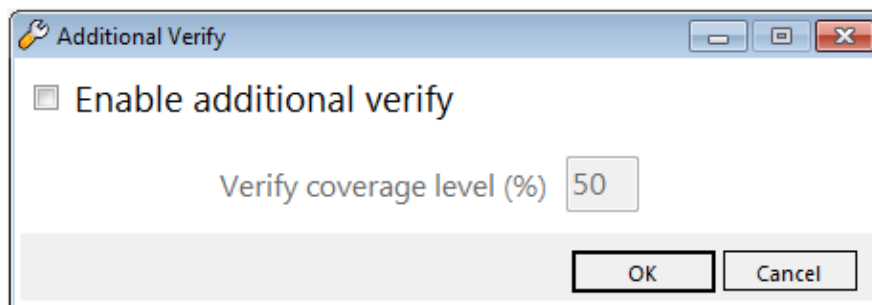


Fig. 34. Additional Verify Dialog

This dialog allows you to enable/disable an additional board configuration check and set the coverage of memory locations (in percent of whole memory space) that will be checked after the programming procedure. Greater values mean more verifying time. The minimum coverage value is 5%.

The **Programming Log** command in the Options menu shows the **Programming Log** dialog box:

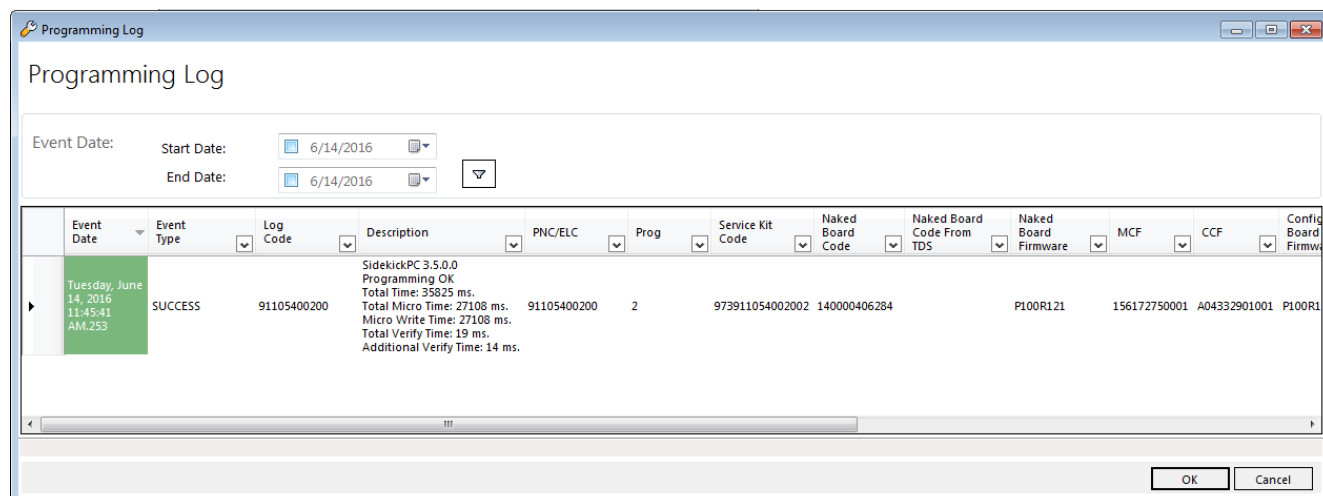


Fig. 35. Programming Log Dialog

The Programming Log dialog shows you information regarding board configuration activities. The program is able to keep a track of all boards that have been configured in the workstation.

Each record stores the information regarding a programming operation. The meaning of each field in the programming log record is the following:

- **Event Date:** date and time of the programming operation;
- **Event Type:** a string that identifies the result of programming (ERROR, SUCCESS);
- **Log Code:** a short string that stores the code as inserted by the operator;
- **Description:** additional information regarding the programming operation;
- **PNC/ELC:** the PNC/ELC in the database record selected for programming the board;
- **Prog:** the progressive insertion number that identifies the database record selected for programming the board;
- **Service Kit Code:** the service kit code related to the spare board to configure;
- **Naked Board Code:** the code of the naked board;
- **Naked Board Code From TDS:** the code of the naked board as specified in the TDS database;
- **Naked Board Firmware:** is the firmware identification string in the board before the configuration step;
- **MCF:** code and revision of the PNC parameters stored in the board. For Fabric Care and Dish Care appliances this field refers to the Machine Configuration File (MCF). For a Food Preparation board and this field shows a dummy string. For a Food Preservation board this field shows the configuration code and revision of the complete board;
- **CCF:** code and revision of the base model parameters stored in the board. For Fabric Care and Dish Care appliances it refers to the Cycle Configuration File (CCF). For Food Preparation and Food Preservation boards this field shows the configuration code and revision of the complete board;
- **Configured Board Firmware:** For Fabric Care and Dish Care appliances this field shows the firmware identification string in the board after the configuration step. For Food Preparation

and Food Preservation boards this field shows the configuration code (without revision) of the complete board;

- **Configured Board SN:** serial number stored in the configured board, if any. The serial number provides the date and time of the programming operation. It is a decimal number with the following format:

YYMMDDHHmm

YY programming year modulus 40 (0..39 => 39=2039, 00=2040)

MM programming month (01..12 => 01= January, 12=December)

DD programming day (01..31)

HH programming hour (00..23)

mm programming minute (00..59)

Example: 708081155 => this serial number indicates that the board has been programmed on the 8th August 2007 at 11.55 AM.

- **Algorithm Name:** the algorithm used for programming the board;
- **Communication Speed:** the actual communication speed (baud rate) employed for board programming;
- **Always Replace Firmware:** when this flag is 'true', the program always overwrites the firmware even when the same firmware is already present in the target board;
- **Skip Verify After Programming:** when this flag is 'true', the program skips the check of the operation after the board programming step.

Electrolux uses the programming log information both for collecting data that is useful for improving the quality of products and for troubleshooting problems that you may experience while programming electronic boards.

The software uploads the programming log to the central Sidekick server each time you execute an Update operation. Programming log records are removed from your local PC after each update operation if they are older than a specified period called "programming log retention time". The programming log retention time is typically 30 days.

The **Verify Only** option allows you checking for the correct configuration of an already configured board. When this option is set, SidekickPC verifies for proper configuration rather than programming the board. This verification has 100% coverage of memory locations.

The **Spare Board Label** command in the Options menu shows the **Label** dialog box that allows the activation of label printing after each board programming operation:

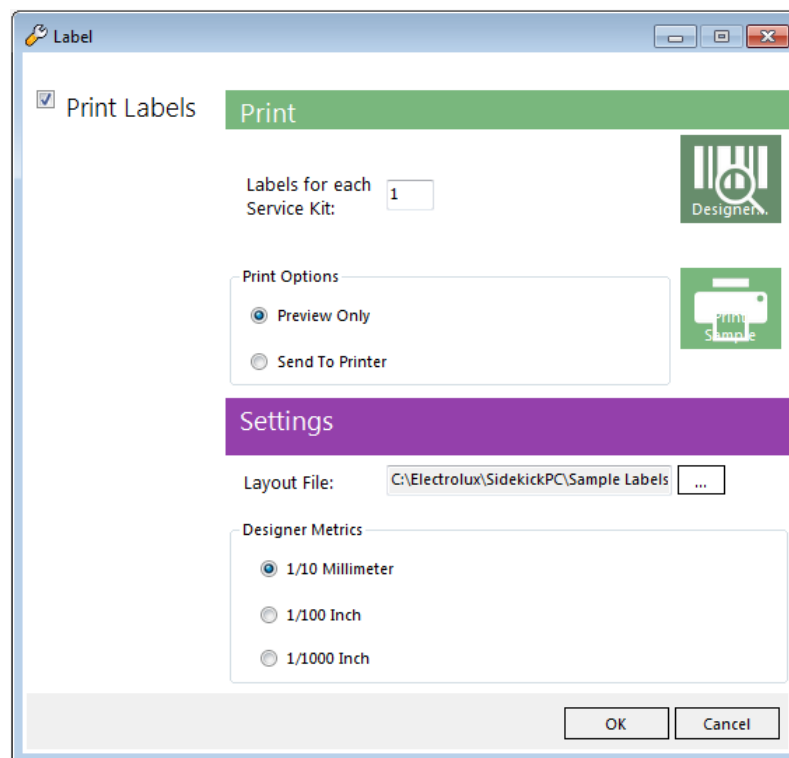


Fig. 36. Label Dialog

This dialog box allows you to:

- ☒ **Print label** enable/disable printing one or more labels after the successful programming of each board.

Print section:

you can select how many identical labels to print for each board (the number is limited to 10 labels)



Print Sample lets you preview or print sample of the selected label, according to the Print Options selection.



Designer allows you to enter the integrated label layout Designer. The Label Designer enables you to modify an existing layout, to create a new one from the scratch, and to print sample labels. This is a graphical editor that provides you with the full control over the label appearance and contents. The description of the layout Designer is outside the scope of this manual.

Settings section:

- **Layout File** field where you define the label layout by means of external files (*.lbl)
- **Designer Metrics** options allow you to specify the units of measure the editor displays.

The following is an example of label that you obtain:

973 914 791 101 00/4
00-01-132197270.000-132225610.000-W4A30111.000
SN = 708081155 created with SidekickPC 1.0

Fig. 37. Label Example

As you can see, the label shows all identification data regarding the spare part, appliance model, and database record used for the configuration:

973 914 791 101 00/4 is the Service Kit Code formatted for better readability;

00-01-132197270.000-132225610.000-W4A30111.000 indicates which database record has been used for programming the spare part or upgrading the appliance configuration. Each piece of information is separated from the following one by a hyphen. In the above example, from left to right, the meaning of the various fields is the following one:

00: ELC field in the selected record. Sometimes the ELC field may be different from the ELC that the Service Kit Code specifies;

01: Progressive Number field (Prog) in the selected record;

132197270.000: code and revision of the PNC parameters (machine configuration file for Fabric Care appliances) programmed in the configured board;

132225610.000: code and revision of the base model parameters (cycle configuration file for Fabric Care appliances) programmed in the configured board;

W4A30111.000: code and revision of the firmware programmed in the configured board;

SN = 708081155 created with SidekickPC 1.0 shows the serial number stored in the programmed board (if any). The meaning and format of the serial number has been previously described in this chapter, in the section that deals with the programming log.

3.3.4 Printing Extended Information in the label

It is possible to print extended information in the label(s) that the software is able to print after each board configuration.

Normally SidekickPC prints 3 lines of text.

By activating the **Print Extended Information** option in the Configuration Form, you can print additional information that you can enter before programming each board. In this case, if you use the proper label layout file (*.LBL), SidekickPC prints 4 lines of text.

This function is useful in all situations where the Service Kit Code is not used to identify the configured spare board. This is true for some geographical areas outside Europe. In this case you can manually specify the code to be printed on the label before programming each board.

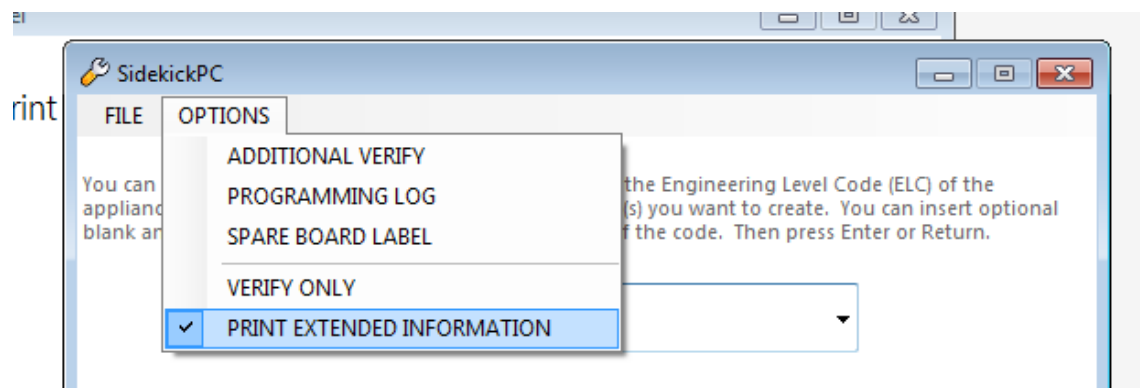


Fig. 38. Print Extended Information Option

If you quit SidekickPC and enter again, the software restores the state of the **Print Extended Information** option from the previous session (this option is persistent).

Please remember to choose a proper label layout file. In order to print all information, it is necessary that the selected label layout file refers to all 4 “Variables” that are available from within the Label Layout Designer. The figure below highlights these variables:

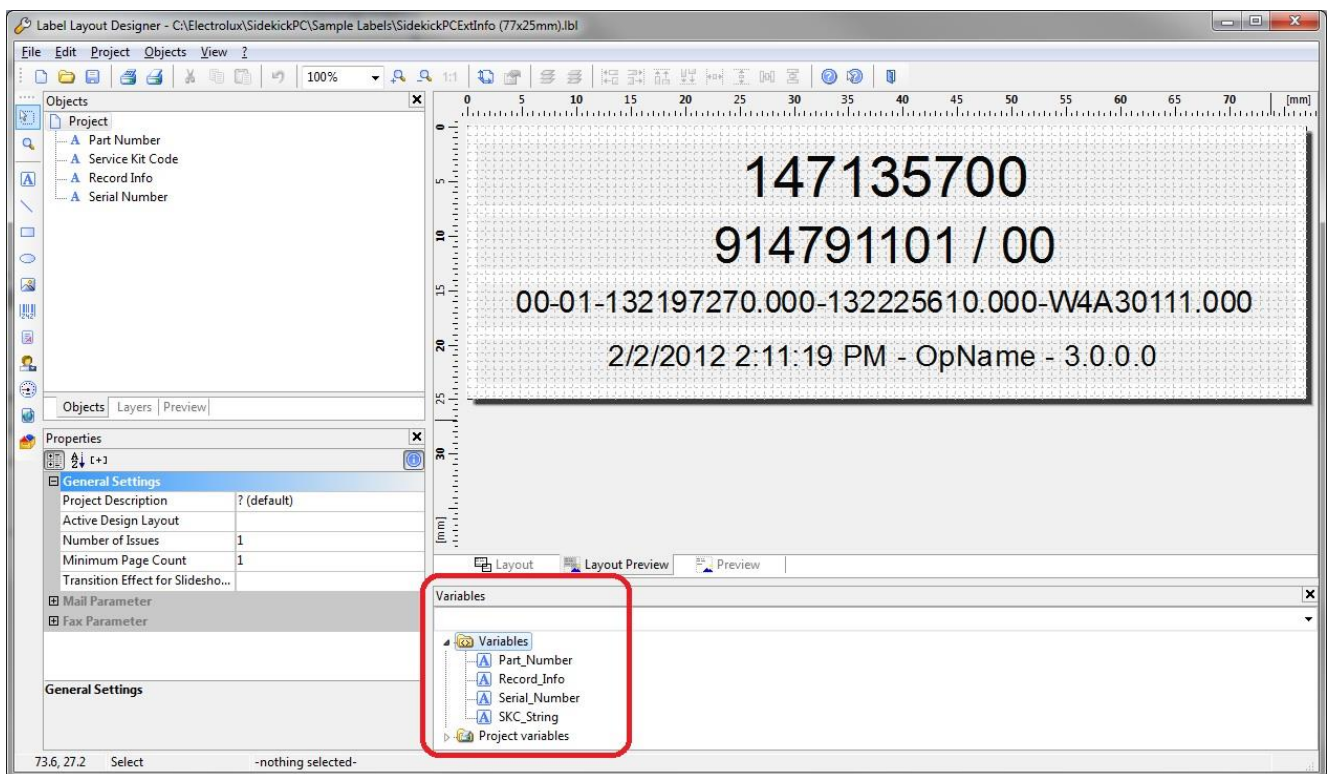


Fig. 39. Label Layout Designer Variables

The **Part Number** variable displays the part number as entered by the operator, as explained later in this section.

You can however start from one of the provided samples that support extended information:

1. SidekickPCExtInfo (77x20mm).lbl
2. SidekickPCExtInfo (77x25mm).lbl

Even if you start from one of the above samples, you must open the Layout Designer and adjust the label settings to your actual printer.

You can do that by means of the **Page Setup** command that you can find in the **Projects** menu. This command opens the **Layout** dialog box.

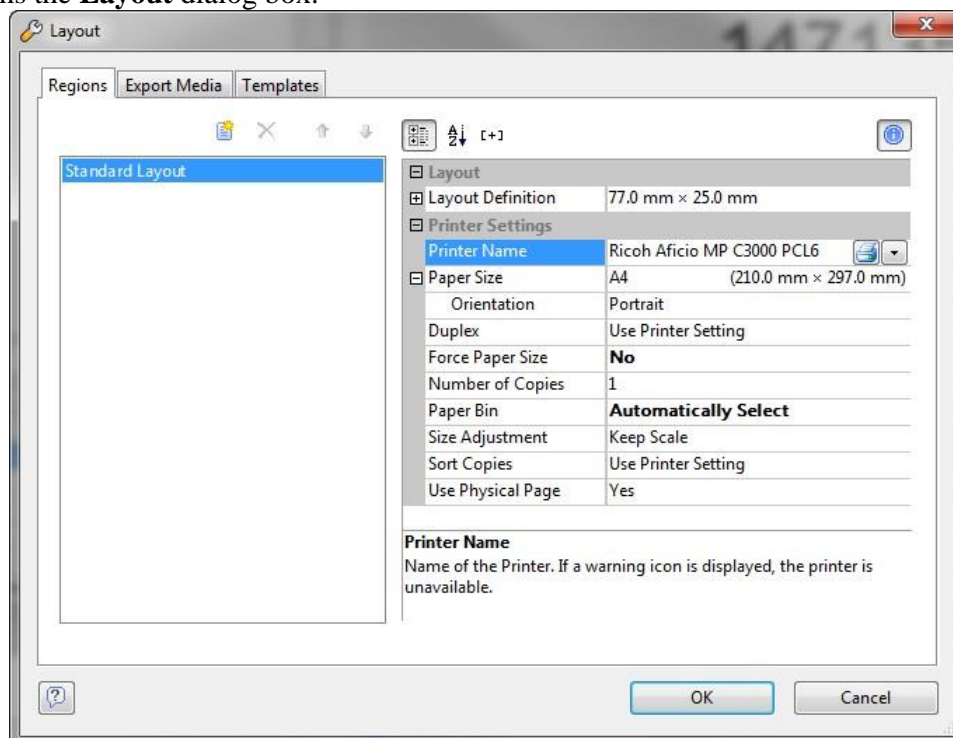



Fig. 40. Label Layout Designer Dialog box

This dialog box provides the **Printer Settings** section where you can select the **Printer Name** :

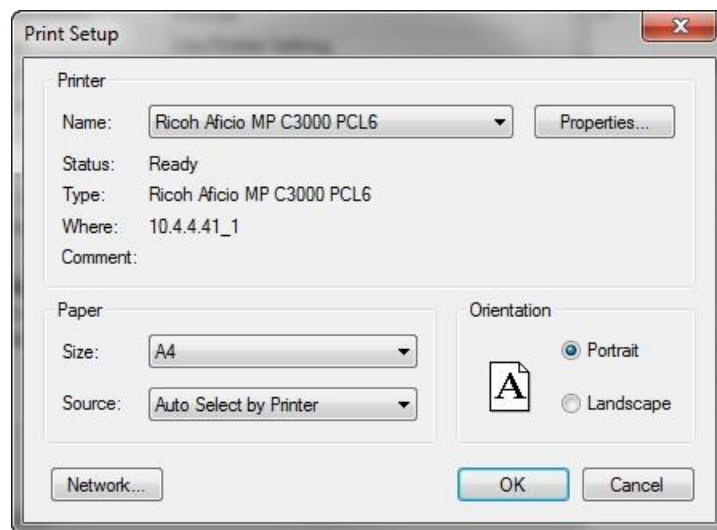


Fig. 41. Printer Selection

Please remember to adjust margins and sizes in the **Page Setup** tab:

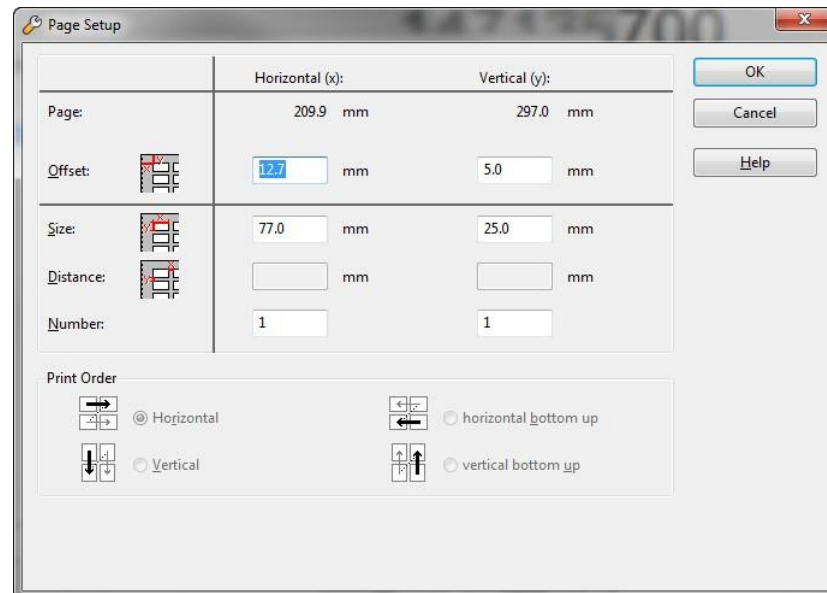


Fig. 42. Page Setup

When this option is enabled, the board programming operation consists in one step more. This step occurs just before the actual start of programming.

After you specify the quantity, you can enter also the name of the operator and the part number. This figure shows the new text entry controls:

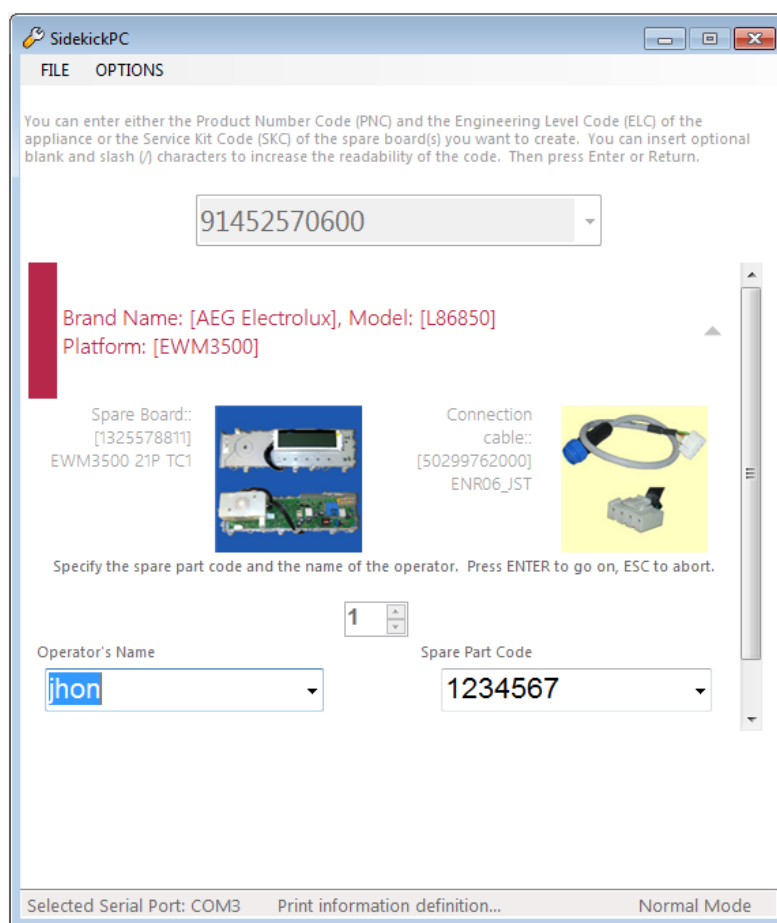


Fig. 43. Extended Information Controls

Both **Operator's Name** and the **Spare Part Code** are options that are persistent between one session of SidekickPC and the next one.

The software stores the last 5 settings of these options. You can choose the most recent values from the corresponding list.

The function is devised in order to minimize data insertion efforts for the operator. After you specify the quantity, the focus moves automatically to the Spare Part Code, because it is more likely necessary to change it with respect to the Operator's Name.

The following is an example of an extended information label that you can obtain starting from one of the sample LBL files that SidekickPC supplies:

12345
914904904 / 00
00-10-192560050.000-132535209.021-WBE20306.000
3/19/2009 5:10:43 PM - JOHN - 1.1.2.0

Fig. 44. Extended Information Label Example

The meaning of the above information is the following:

12345 is the manually inserted code;

914904904/00 is the PNC/ELC;

00-10-192560050.000-132535209.021-WBE20306.000 has the same meaning as in the normal label described in the previous paragraph;

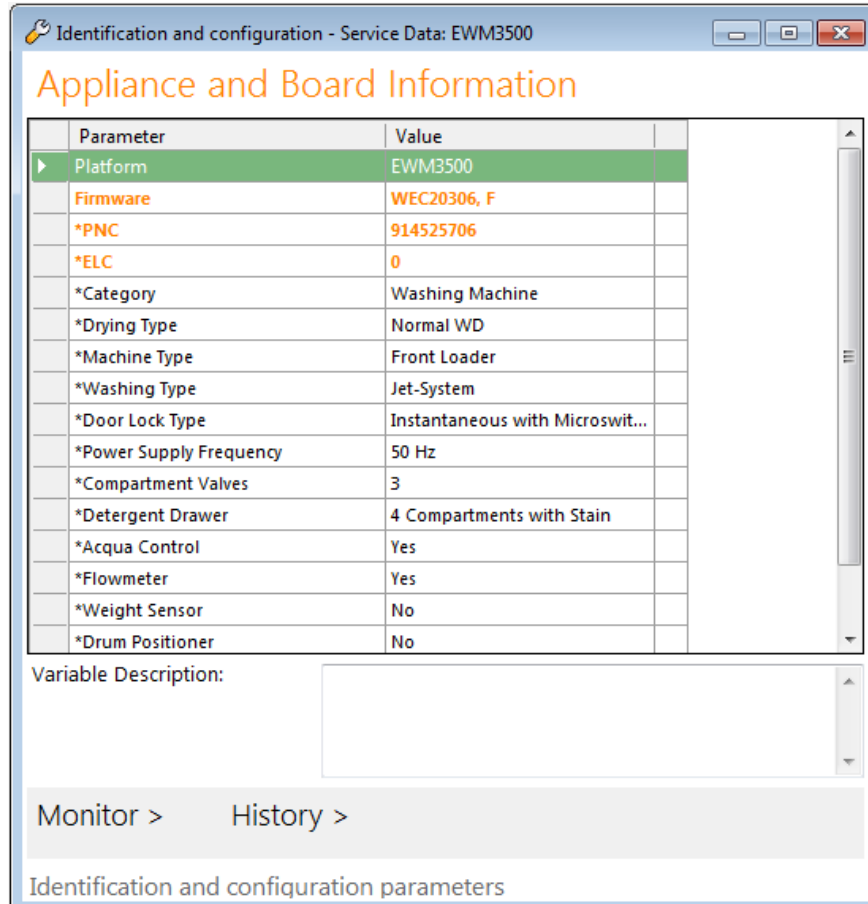
3/19/2009 5:10:43 PM indicates the date and time of the programming;

JOHN is the manually inserted operator's name;

1.1.2.0 is the version of SidekickPC.

3.4 Identification Form

This is the form that appears you when press the **Diagnostic** button in the Startup form just after the software successfully connects to the appliance and identifies it.



Parameter	Value
Platform	EWM3500
Firmware	WEC20306, F
*PNC	914525706
*ELC	0
*Category	Washing Machine
*Drying Type	Normal WD
*Machine Type	Front Loader
*Washing Type	Jet-System
*Door Lock Type	Instantaneous with Microswit...
*Power Supply Frequency	50 Hz
*Compartment Valves	3
*Detergent Drawer	4 Compartments with Stain
*Acqua Control	Yes
*Flowmeter	Yes
*Weight Sensor	No
*Drum Positioner	No

Variable Description:

Monitor > History >

Identification and configuration parameters

Fig. 45. Identification Form

The title bar of this form shows the Service Data set that has been selected for the appliance under test. Service Data provide all information that is necessary for appliance diagnosis activities. Such information is associated to families of products (platforms), not to single appliance models. SidekickPC automatically associates the correct service data to use for diagnostic operations after it properly identifies the appliance.

This panel has three main groups of items.

The **Appliance and Board Information** group provides information about the current appliance (platform, PNC/ELC if known, firmware ID, board type), its main features and configuration. Items in orange background show appliance identification parameters. Items in white background show appliance configuration data.

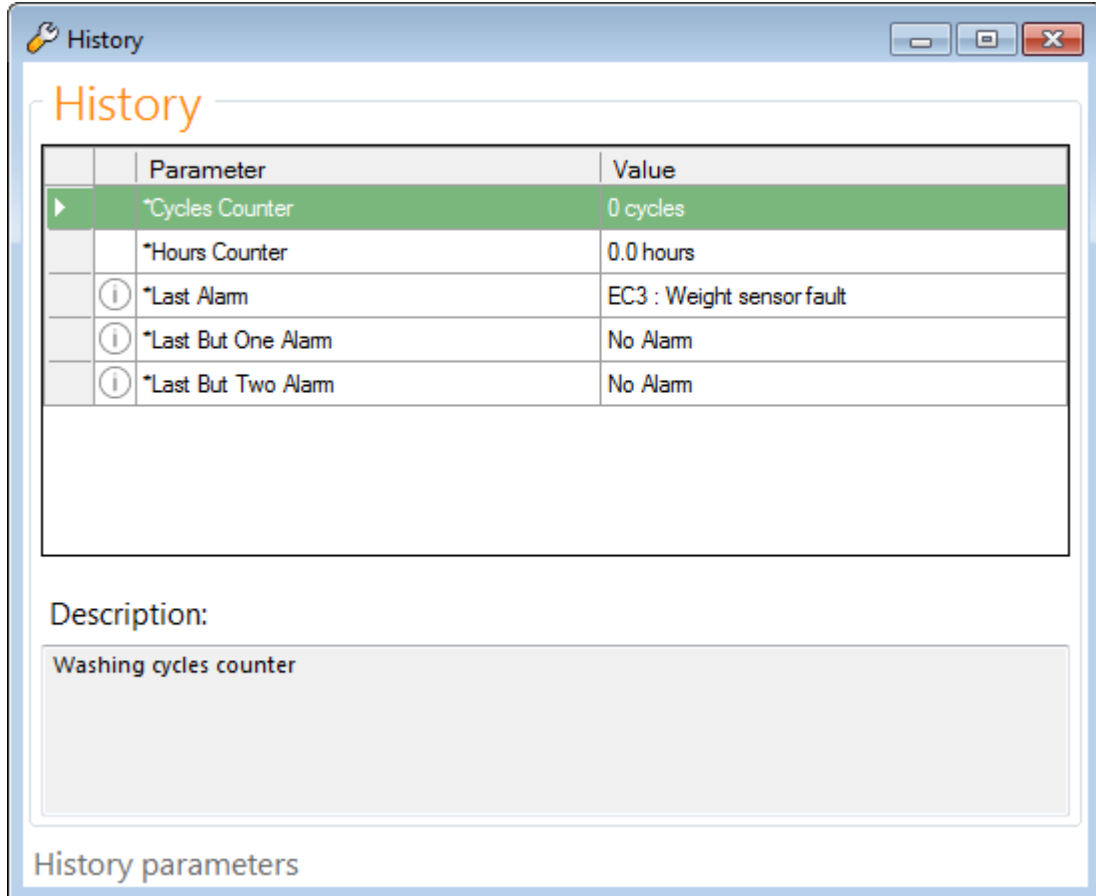
History click option opens the History Form. This icon is not active if the database does not specify any history reference information for the connected appliance.

Monitor click option opens the Monitor Form.

If you want a detailed description about each parameter in the **Variable Description** box, just select the corresponding item in the above list.

3.5 History Form

The History form provides information about the device usage history stored in the non-volatile memory of the appliance.



	Parameter	Value
▶	*Cycles Counter	0 cycles
	*Hours Counter	0.0 hours
ⓘ	*Last Alarm	EC3 : Weight sensor fault
ⓘ	*Last But One Alarm	No Alarm
ⓘ	*Last But Two Alarm	No Alarm

Description:

Washing cycles counter

History parameters

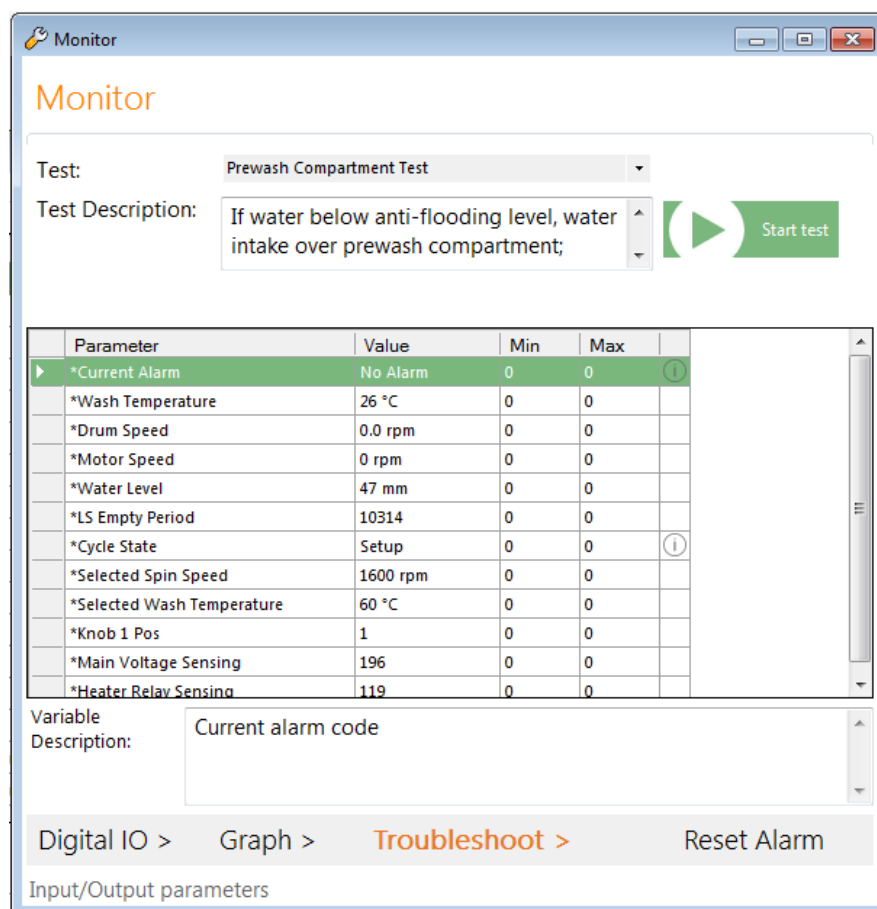
Fig. 46. History Form

At the top of History form you can see a list that shows the history information. To see the detailed description of each parameter in the **Description** textbox, just select the corresponding item in the above list.

The actual items listed in the list depend on the appliance model and local database contents.

3.6 Monitor Form

The Monitor form allows you watching appliance parameters and run the device tests.



Parameter	Value	Min	Max
*Current Alarm	No Alarm	0	0
*Wash Temperature	26 °C	0	0
*Drum Speed	0.0 rpm	0	0
*Motor Speed	0 rpm	0	0
*Water Level	47 mm	0	0
*LS Empty Period	10314	0	0
*Cycle State	Setup	0	0
*Selected Spin Speed	1600 rpm	0	0
*Selected Wash Temperature	60 °C	0	0
*Knob 1 Pos	1	0	0
*Main Voltage Sensing	196	0	0
*Heater Relay Sensing	119	0	0

Fig. 47. Monitor Form

At the top there is the **Test** selection list with all tests for the connected appliance.



Start test: In order to start a test, just select an item from the list and click on the icon. When a test is in progress, the same icon becomes red (Stop test)



Stop test. In this case, you can click the icon to stop the current test and, usually, reset the appliance.

Test Description provides a short description about the selected test (if any).

In the middle of the Monitor form there is a list of input/output parameters that provide meaningful information during the tests. In this list you can see the current values of the parameters. Please note that SidekickPC displays all items whose values are outside the minimum/maximum limits in red. The program usually updates these values every second. To see the detailed description of the variable in the **Variable Description** field, just select it by clicking the corresponding item.

Digital I/O allows you to enter the Digital I/O form that displays the current state of the digital inputs and outputs in the appliance.

Graph click option allows you to enter the Graph form that shows you some parameters in graphical form.

Troubleshoot shows the list of troubleshooting procedures defined by the local database for the appliance under test (if any). For more information on the troubleshooting feature of SidekickPC, please refer to the next paragraph.

Reset Alarm resets the last alarm stored in the non-volatile memory of the electronic board. This command is only active if the local database defines a procedure to reset the last alarm. Please note that if one alarm is currently still active, you cannot clear the last stored alarm as it will be immediately set back again.

Troubleshooting Wizard

If the local database defines troubleshooting procedures for the appliance under test, the software is able to guide you step-by-step to the resolution of the fault, starting from the alarm code.

A troubleshooting procedure is a sequence of interactive dialog boxes.

When there is an alarm condition and the software detects that one troubleshooting procedure is associated to that alarm, the **Troubleshoot** icon in the Monitor form becomes red:

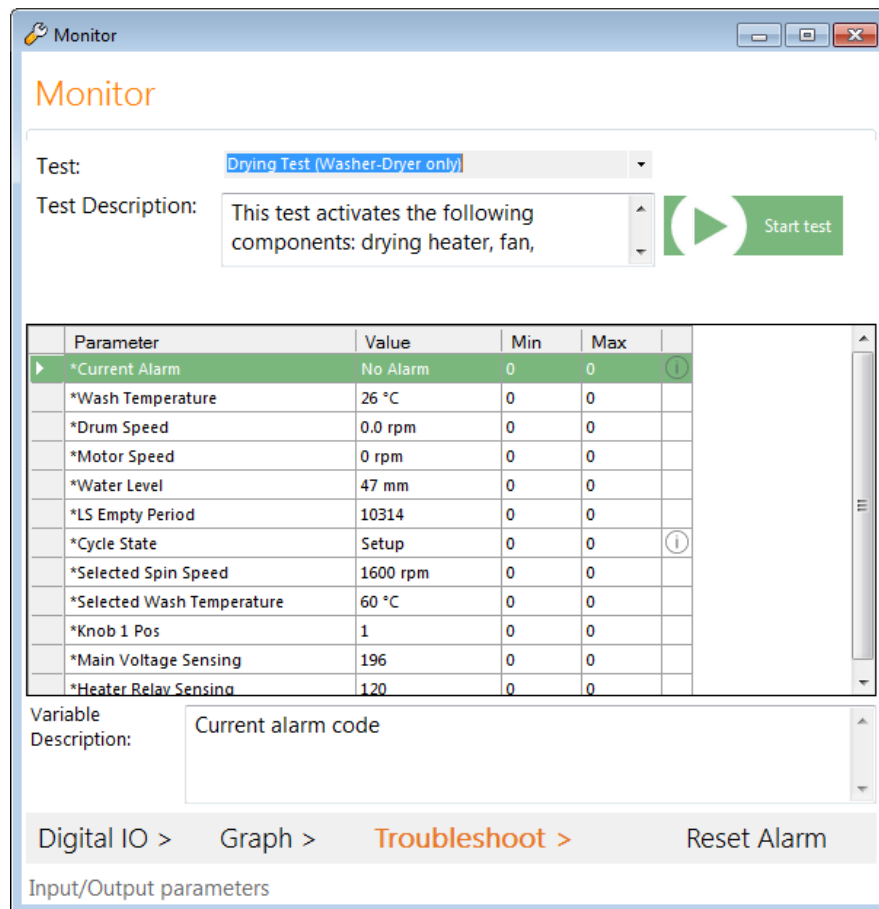


Fig. 48. Available Troubleshooting Procedure

If you click the Troubleshoot icon you can see the **Troubleshooting List** dialog:

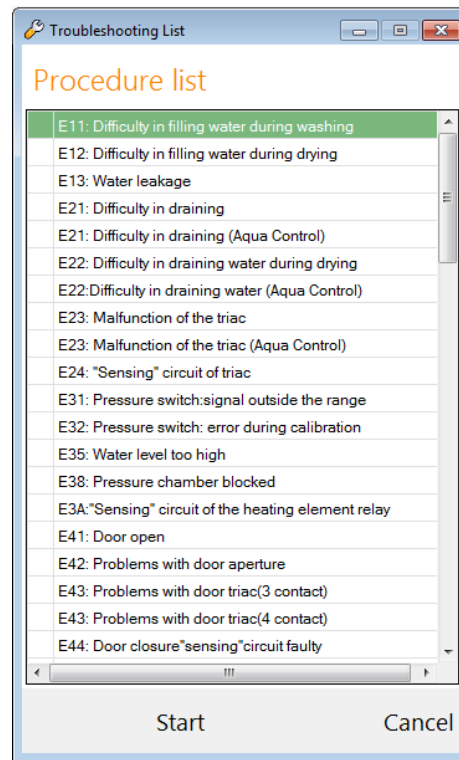


Fig. 49. Troubleshooting List

This dialog shows the list of all available troubleshooting procedures in the database. All procedures that are related to the current alarm condition (if any) are highlighted in red. In order to start the Troubleshooting Wizard for a certain procedure, just select it from the list and click the **Start** tab.

Each step consists in a dialog box that shows instructions and up to two images:

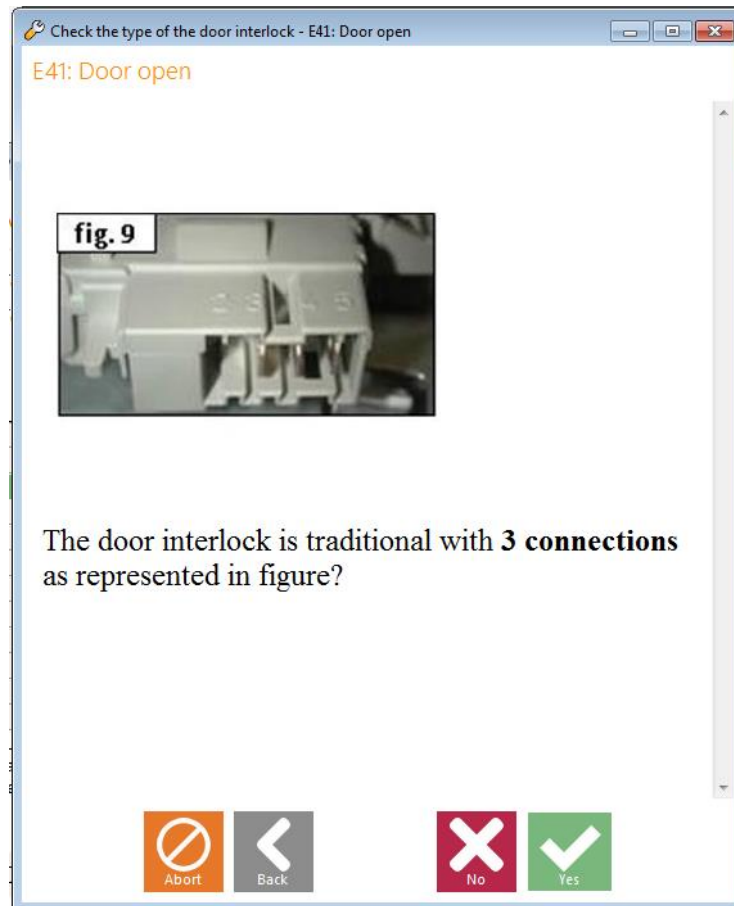


Fig. 50. Troubleshooting Wizard Step

The instructions provide information regarding the specific operation to execute. You should provide a result to the wizard in terms of a **Yes** or **No** answer. The next step, if any, depends on the answer you provide.

Troubleshooting steps either can be only manual or can involve the interaction with the electronic board. The management of such interaction is completely automatic for the end user.

3.7 Graph Form

The Graph form allows you to see the evolution of the appliance parameters in graphical form.

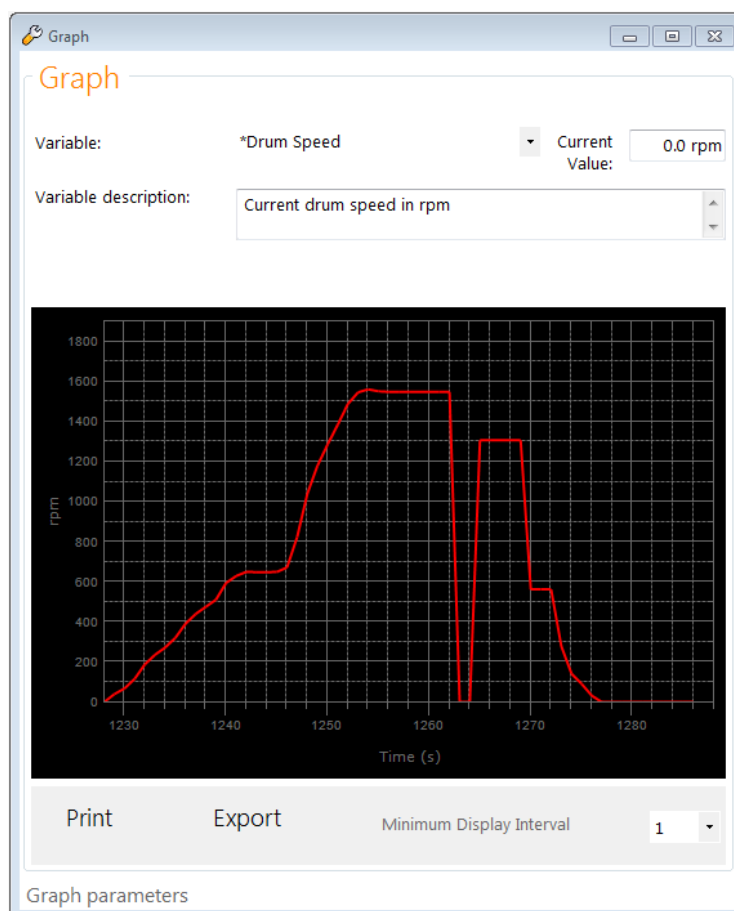



Fig. 51. Graph Form

To see the graphical representation of one appliance variable, you should choose it from the **Variable** selection field at the top of Graph Form. Click with the mouse the selection button () and choose the variable name. The detailed description of the variable appears in the **Variable description** field. In the **Current Value** field you can see the present value of the selected parameter.

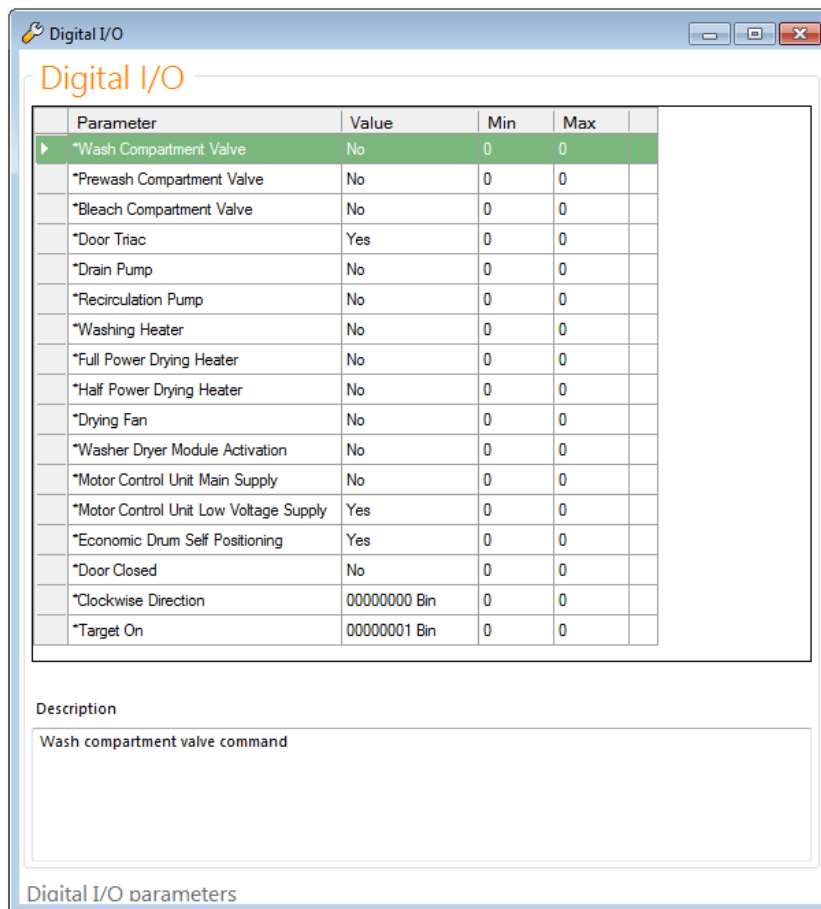
The **Maximum Display Interval (min)** control allows you to select the display width of the graph. The default interval is 1 min, but you can change it from 1 minute up to 5 hours. For each variable, the program reads a new data sample from the appliance every 1 second.

Print click option allows you to create a hardcopy of the current graph.

Export Graph click option allows you to export the current graph in one of the following image formats: BMP, GIF, JPG, PNG, and TIFF.

3.8 Digital I/O Form

The Digital I/O form displays the current state of the digital inputs and outputs in the appliance.



Digital I/O

Parameter	Value	Min	Max
*Wash Compartment Valve	No	0	0
*Prewash Compartment Valve	No	0	0
*Bleach Compartment Valve	No	0	0
*Door Triac	Yes	0	0
*Drain Pump	No	0	0
*Recirculation Pump	No	0	0
*Washing Heater	No	0	0
*Full Power Drying Heater	No	0	0
*Half Power Drying Heater	No	0	0
*Drying Fan	No	0	0
*Washer Dryer Module Activation	No	0	0
*Motor Control Unit Main Supply	No	0	0
*Motor Control Unit Low Voltage Supply	Yes	0	0
*Economic Drum Self Positioning	Yes	0	0
*Door Closed	No	0	0
*Clockwise Direction	00000000 Bin	0	0
*Target On	00000001 Bin	0	0

Description

Wash compartment valve command

Digital I/O parameters

Fig. 52. Digital I/O Form

You can see a list of the digital inputs and outputs states that are meaningful during the diagnostic procedures. The program updates these values every second.

To see the detailed description of each parameter in the **Description**, just select the corresponding item in the list.

3.9 Identification and Monitoring for Cooking Appliances

The cooking appliances supported by the system are:

- Oven
- Induction hob
- Radiant hob


With these appliances click on **Diagnostic** in the Startup form, 2 first preliminary steps are executed:

- Detection of all boards attached to the appliance communication bus (all board communicate each other on the same bus by means of a MACS protocol messages)
- Identification of the corresponding detected board codes

The boards of cooking appliances are identified by an Identifier code (Board Id) and a description or Unit Type as the table shows:

BoardId	Unit Type
HC1	hob controller 1
HC2	hob controller 2
HC3	hob controller 3
OC1	oven controller 1
OC2	oven controller 2
OC3	oven controller 3
PD1	pot detection 1
PD2	pot detection 2
SC1	smart controller 1 (*)
SC2	smart controller 2 (*)
HUI1	hob user interface 1
HUI2	hob user interface 2
HUI3	hob user interface 3
OUI1	oven user interface 1
OUI2	oven user interface 2

During the detection, all boards could be in one of the following status:

- To Detect
-  Detected
-  Not Responding
- Not Sidekick Enabled

Below the form that describes the process:

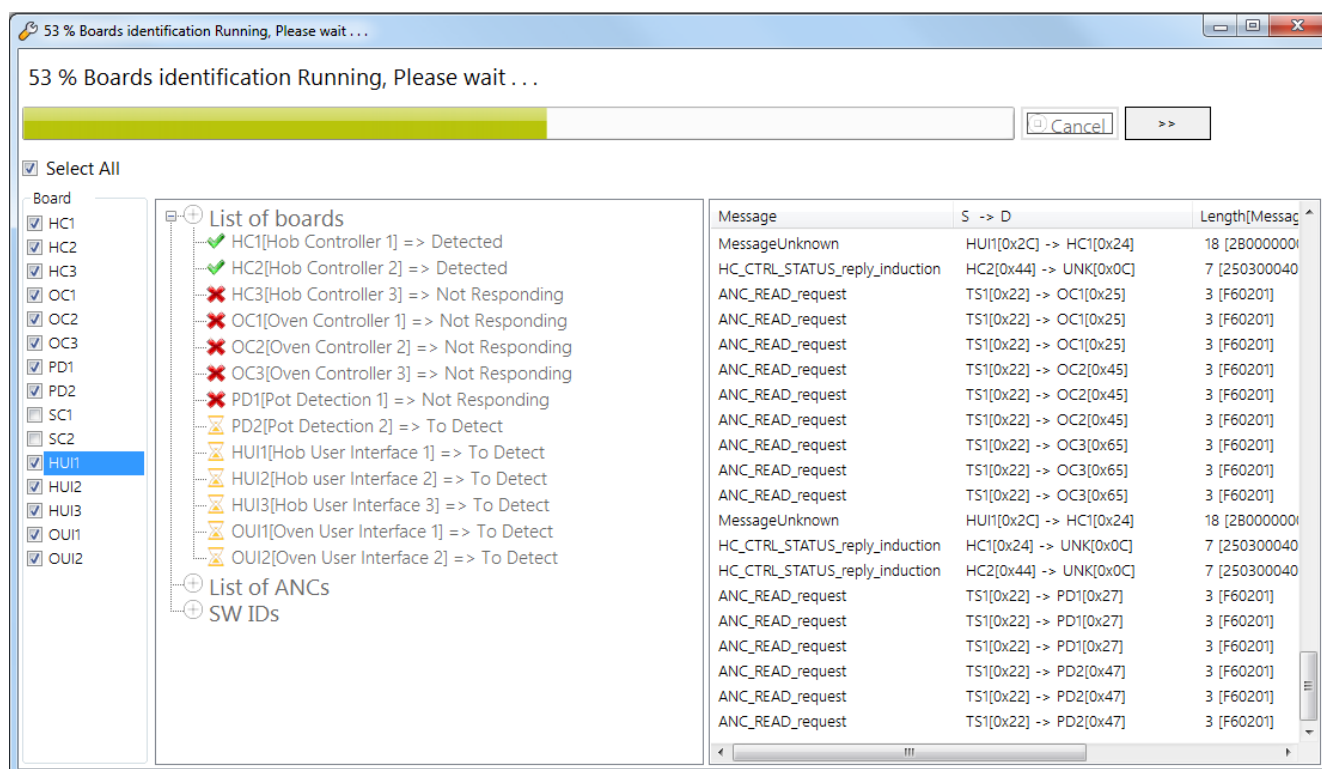


Fig. 53. Cooking: board detection step

For all the boards signed as detected, automatically the software gets from the board all the necessary information for the identification as the Firmware and Configuration ANC (Article Number Code) codes and the hardware ID string (HW_ID) that identifies the hardware of the board (on the right the panel displaying the MACS protocol messages coming from the bus)

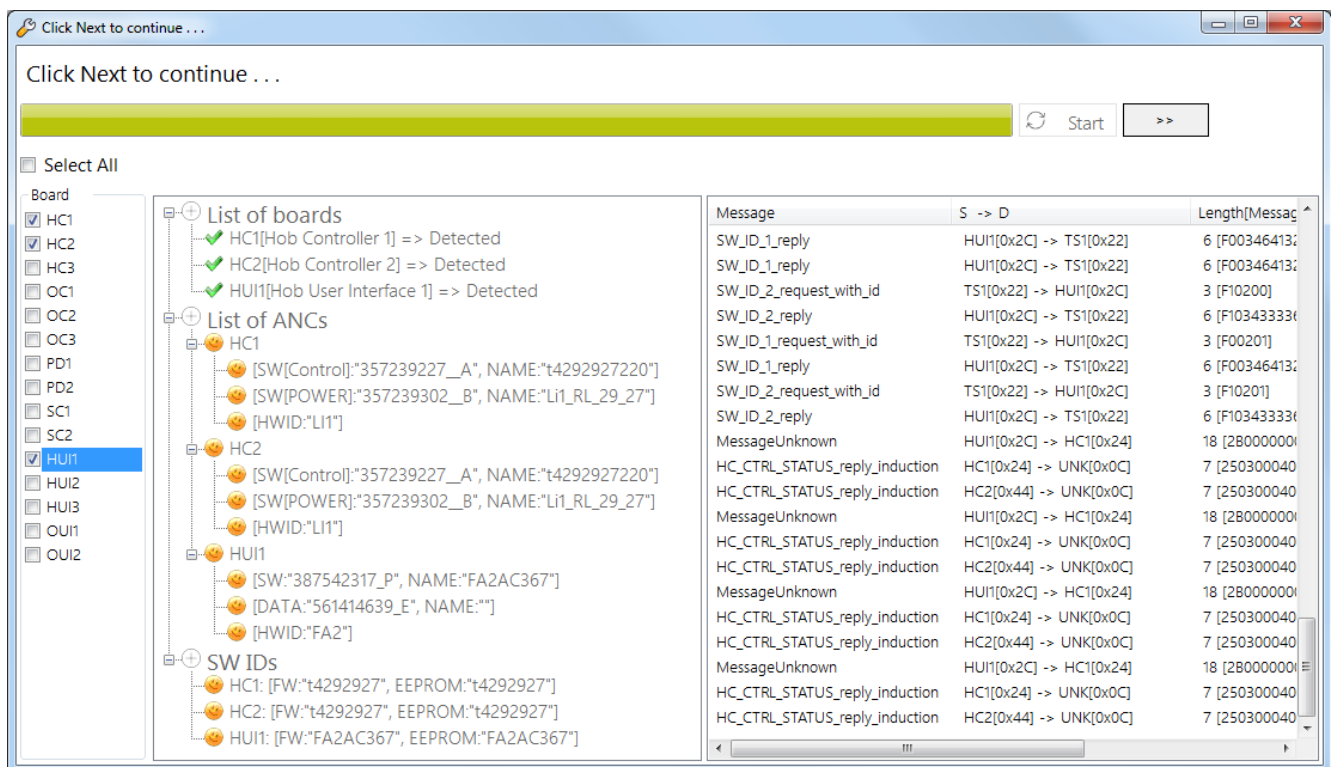


Fig. 54. Cooking: ANC retrieval step

When identification session startup is completed, the software retrieves the power board configuration in order to get the load configuration and interpreter it (only loads that are present will be shown)

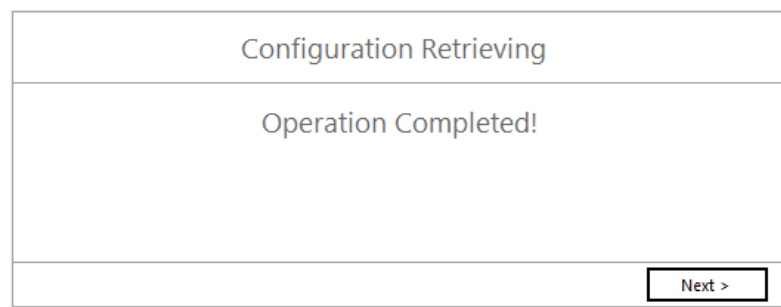
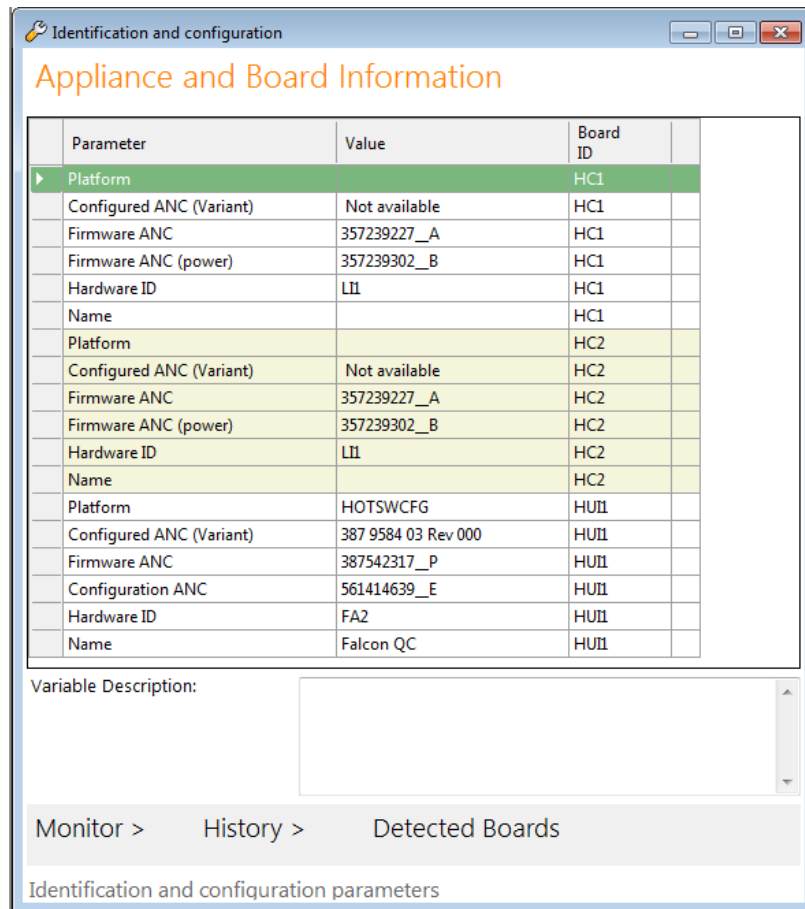


Fig. 55. Cooking: Configuration Retrieving step

The software continues then with monitoring.

Identification and Monitor form shows, for each item, a new “Board Name” column that contains the Board Identifier of the unit from which that information comes. To highlight the parameters coming from different boards, the rows color is alternating in all grids.



The screenshot shows a software window titled 'Identification and configuration' with a sub-header 'Appliance and Board Information'. It contains a table with columns 'Parameter', 'Value', and 'Board ID'. The table lists parameters for three different platforms: Platform (highlighted in green), Platform (highlighted in yellow), and Platform (highlighted in white). Each platform has associated parameters for Configured ANC (Variant), Firmware ANC, Firmware ANC (power), Hardware ID, and Name. Below the table is a 'Variable Description:' field. At the bottom, there are navigation tabs: 'Monitor >', 'History >', and 'Detected Boards'. The status bar at the bottom reads 'Identification and configuration parameters'.

Parameter	Value	Board ID
Platform		HC1
Configured ANC (Variant)	Not available	HC1
Firmware ANC	357239227_A	HC1
Firmware ANC (power)	357239302_B	HC1
Hardware ID	LI1	HC1
Name		HC1
Platform		HC2
Configured ANC (Variant)	Not available	HC2
Firmware ANC	357239227_A	HC2
Firmware ANC (power)	357239302_B	HC2
Hardware ID	LI1	HC2
Name		HC2
Platform	HOTSWCFG	HUI1
Configured ANC (Variant)	387 9584 03 Rev 000	HUI1
Firmware ANC	387542317_P	HUI1
Configuration ANC	561414639_E	HUI1
Hardware ID	FA2	HUI1
Name	Falcon QC	HUI1

Variable Description:

Monitor > History > Detected Boards

Identification and configuration parameters

Fig. 56. Cooking: Identification form

Regarding cooking appliances, for each PNC/ELC, it is defined a Board ANC code of all configurable boards.

The form Identification will show a summary of the board identification with corresponding Board ANC code (code that identifies the configurable board) and Platform.

Boards detected icon click opens a new dialog box containing, for each detected board, the following details:

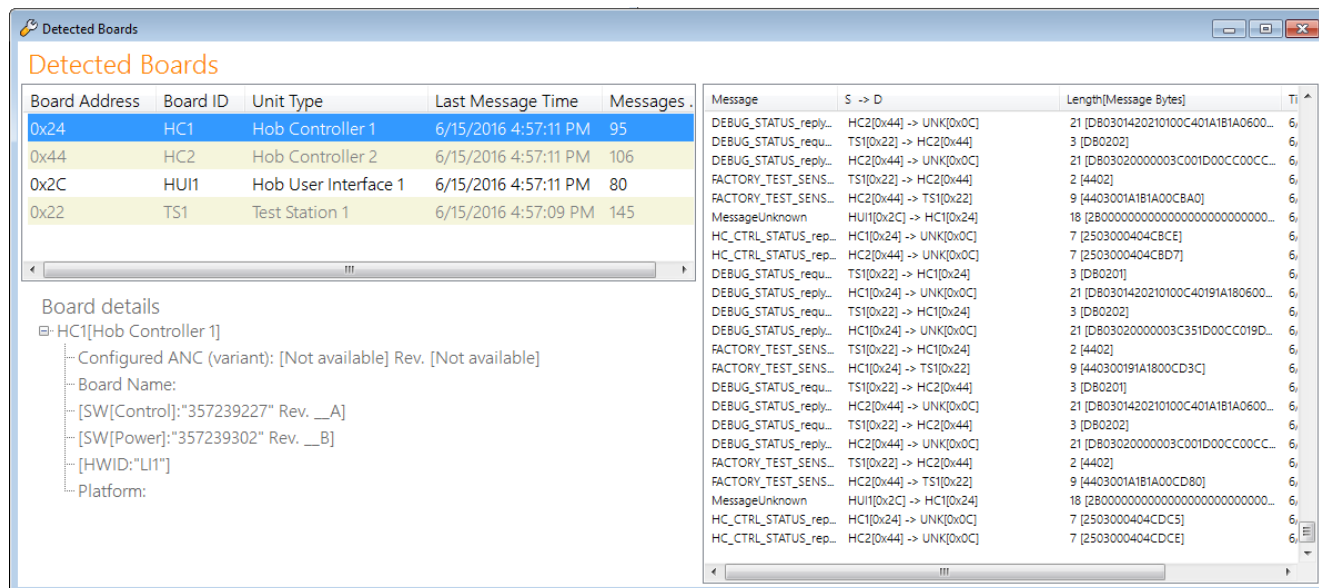


Fig. 57. Cooking: Bus Unit form

- **Board Id /Unit Type:** e.g., HC1 - Hob Controller 1, OC2 - Oven Controller 2 ...
- **Board Name:** name of the board retrieved from SidekickPC database
- **Configuration ANC/REV:** SW_ANC code that identifies the board configuration recipe
- **Internal communication details (reserved to PD):**
- **Unit Address:** the MACS address assigned to each board in hexadecimal representation (the boards or units are identified on the MACS communication bus by an address)
- **Last Message Timestamp:** date/time of the last message received from that unit
- **Total Messages:** total number of messages received from that unit

The PC station (SidekickPC) to retrieve and monitoring the information has the same behavior as a unit on the communication bus. TS1 is the identifier reserved to the PC station running SidekickPC application.

On the right the panel displaying the MACS protocol messages coming from the bus.

The **History** option click opens dialog box below and the alarms retrieving operation is executed. The software communicating with the designated UI board by means of specific message retrieves information about the latest 5 alarms of the appliance (stored on the OUI1 or HUI1 of the appliance).

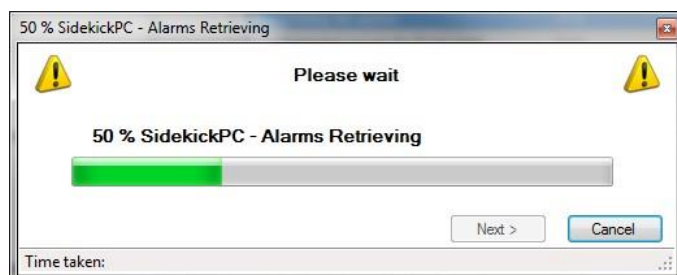


Fig. 58. Cooking: Alarms Retrieving Form

When the operation is completed, clicking on the Next button the following information about each alarm are shown:

- Description of the alarm
- Alarm Code (hexadecimal format)
- Board name from which alarm is received. (If the alarm occurs from another unit and this is an own error, the corresponding BoardId is specified otherwise if the alarm is a “system alarm” in Board Name column is placed **ALL**)

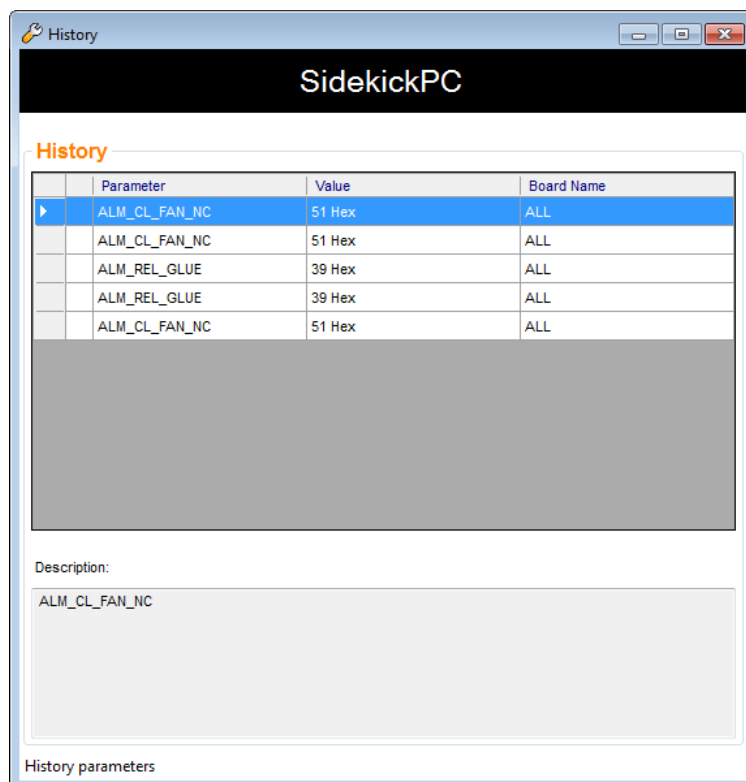
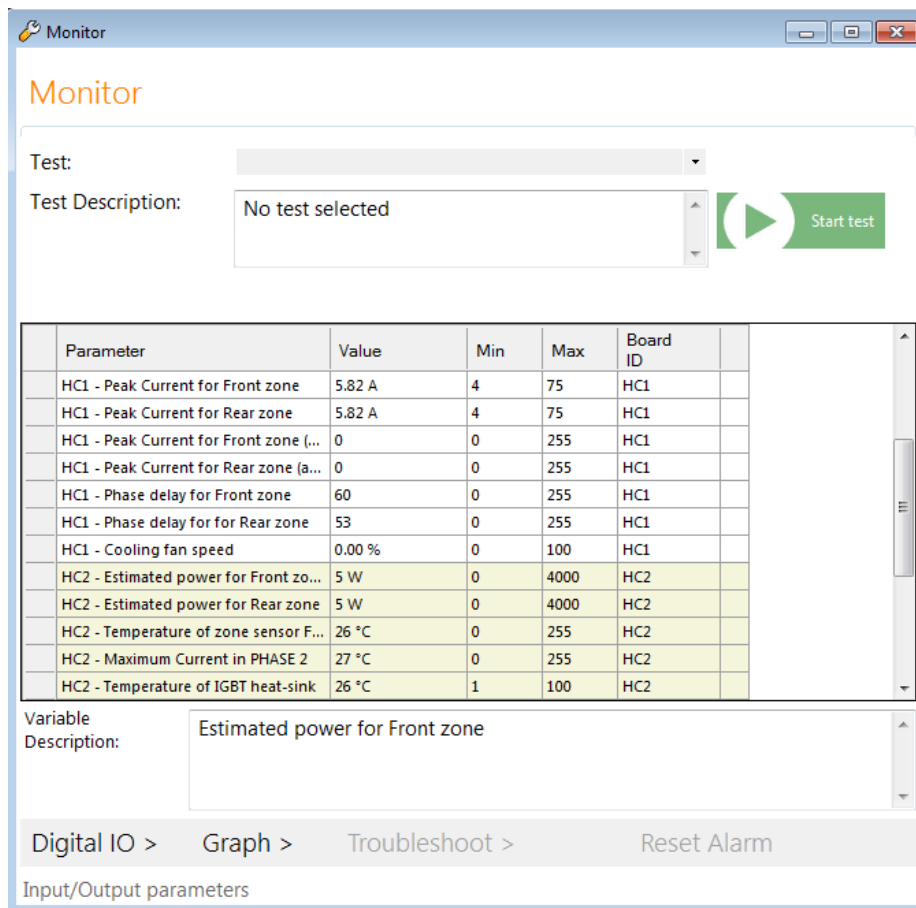


Fig. 59. Cooking: History Form

3.9.1 Monitor

The Monitor form allows you watching monitored parameters and testing of loads detected on the connected appliance.



Parameter	Value	Min	Max	Board ID
HC1 - Peak Current for Front zone	5.82 A	4	75	HC1
HC1 - Peak Current for Rear zone	5.82 A	4	75	HC1
HC1 - Peak Current for Front zone (...)	0	0	255	HC1
HC1 - Peak Current for Rear zone (a...)	0	0	255	HC1
HC1 - Phase delay for Front zone	60	0	255	HC1
HC1 - Phase delay for for Rear zone	53	0	255	HC1
HC1 - Cooling fan speed	0.00 %	0	100	HC1
HC2 - Estimated power for Front zo...	5 W	0	4000	HC2
HC2 - Estimated power for Rear zone	5 W	0	4000	HC2
HC2 - Temperature of zone sensor F...	26 °C	0	255	HC2
HC2 - Maximum Current in PHASE 2	27 °C	0	255	HC2
HC2 - Temperature of IGBT heat-sink	26 °C	1	100	HC2

Fig. 60. Cooking: Monitor form

At the top there is the **Test** selection list with all available loads for the connected appliance.



In order to activate a load, just select the desired load from the list and click the **Start test** icon. When a test is in progress, the same icon becomes red.



Stop test you can click the icon to switch OFF the load.

WARNING: The test can be limited to individual loads. It is important to know that there are no time activation constraints in which a load can be active; this means that, as an example, there's no need to explicitly activate the cooling fan in order to activate an heating zone, so keep in mind that there is no safety control in case of over-temperature or overflow of the maximum allowed power.

Depending on the type of cooking appliance connected there are different naming conventions regarding test description:

Test Description for Induction Hobs : due to different interpretation of hob configuration, the software cannot show description such a “Front zone” or “Rear zone”, but SidekickPC shows only “**Zone 0**” or “**Zone 1**” and let the user check the wirings inside the hob and understand which zone is being used. All zones are preceded by the Board Identifier of the corresponding unit.

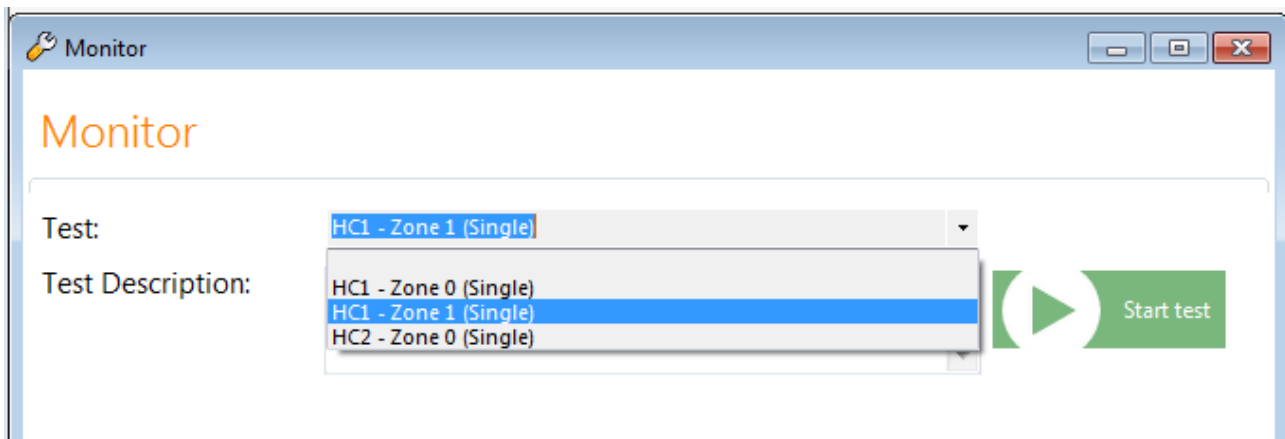


Fig. 61. Cooking: Monitor form

Test Description for Radiant Hobs: for the same different interpretation of radiant hob configuration, the software shows the test description in the following way:

REL_Zx_y :

- **x** can be a value in the range [1,6] and represent zone x
- **y** can be S, D or T (Single, Double or Triple) and represent the type of configuration

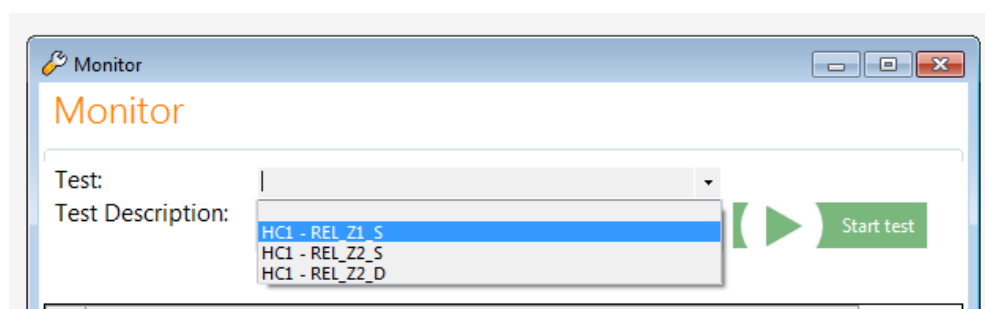


Fig. 62. Cooking: Monitor form

Test Description for Ovens: in this case the test naming convention is the following:

Board Id - CAVITY Load_ACT_POS where:

- Board Id
- CAVITY can be FIRST or SECOND and represent the cavity to which the load is connected (depending on current oven system- single or double cavity system)
- Load_ACT_POS

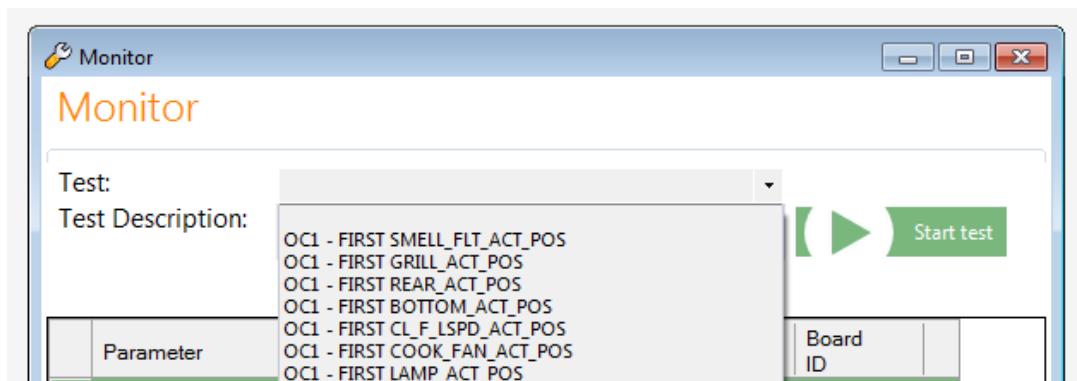


Fig. 63. Cooking: Monitor form

In the middle of the Monitor form there is a list of input/output parameters that provide meaningful information during the tests. In this list you can see the current values of the parameters. Please note that SidekickPC displays all items whose values are outside the minimum/maximum limits in red. The monitoring is achieved by sending or sniffing messages in the communication bus. To see the detailed description of the variable in the **Variable Description** field, just select it by clicking the corresponding item.

The **Graph** button allows you to enter the Graph form that shows you some parameters in graphical form.

The **Reset Alarm** button is disabled because this functionality is not being implemented.

The **Troubleshoot** button shows the list of troubleshooting procedures defined by the local database for the appliance under test (if any).

The **Digital I/O** button allows you to enter the Digital I/O form that displays the current state of the digital inputs and outputs in the appliance.

Digital I/O

Digital I/O

	Parameter	Value	Min	Max	Board ID	
▶	HC1 - Cooling fan error	0	0	0	HC1	
	HC1 - Demo Mode	0	0	0	HC1	
	HC1 - Cooling fan error	0	0	0	HC1	
	HC2 - Cooling fan error	1	0	0	HC2	
	HC2 - Demo Mode	0	0	0	HC2	
	HC2 - Cooling fan error	1	0	0	HC2	

Description

Digital I/O parameters

Fig. 64. Cooking: Digital I/O Form

SidekickPC

Technical Notes

Please insert the Product Number Code and the Serial Number that you can read from the product label and enter

Electrolux Made in EEC CZ IPX4 10 A
Mod. EWF12040W Type HI942661
Prod.No. 914520402 05
220-230V~50Hz 2200W
Ser.No. 10 A

Prod.No.

Ser.No. :


Enter your comments here.

OK

Fig. 65. Technical Notes Form

3.10 Appliance Information

If in the Start page you select the **Appliance Information** command, a dialog box asks you to insert the PNC/ELC of the appliance.

By clicking the  icon, a list containing all the PNC/ELC Codes stored in the local database appears.

After you have inserted the code and pressed enter, the software shows you a grid that provides some information about the appliance:

The screenshot shows a software window titled 'SidekickPC'. The main content area displays 'Results for '914791101 00''. Below this is a section titled 'Appliance Information' with a search bar containing '91479110100'. A table lists the following details:

PNC	914791101
ELC	00
Prog	11
Factory	ZP
Production Date	20020402
Brand Name	Zanussi
Model	FS1155W

Below the table is a section titled 'MAIN [] - EWM1000*' containing the following information:

Insert date	Monday, September 18, 2006
Modified date	Monday, September 18, 2006
Service Kit Code	973 914791101-00/4
Spare Part Code	132 40 17-20 / 9
Firmware	W1E00253.000
Base Model Parameter	132120416.018
PNC Parameter	132133130.001

At the bottom right of the window is a button labeled 'Tests and Alarms'.

Fig. 66. Identification Form

This form provides a first group of information:

PNC/ELC: the PNC/ELC in the database record selected;

Prog: the progressive insertion number that identifies the database record selected (it is selected the maximum Prog value);

Factory Code: the code of the factory where the appliance is been produced

Production Date: the date of production of the appliance

Brand: brand of the corresponding appliance

Model: model of the corresponding appliance

The remaining groups of the grid define the list of board associated to the specified appliance. The name of the group is the name of the electronic board. For each board the following information is shown:

Service Kit Code: spare part number of the configured board;

Spare Board Code: spare part number of the not configured board (the code of the generic board that the Sidekick user should use for creating the spare board for the specified PNC\ELC);

Firmware Code: a code that identifies the firmware with revision;

PNC Parameters Code: a code that identifies the configuration parameters with revision;

Base Model Parameters Code: a code that identifies the basic configuration parameters with revision;

Platform: name of the electronic platform;

In case of cooking appliance, the following board information is shown:

Service Kit Code: spare part number of the configured board;

Spare Board Code: spare part number of the not configured board (the code of the generic board that the Sidekick user should use for creating the spare board for the specified PNC\ELC);

Configured Board Code: the Article Number Code (ANC) that identifies the configured electronic board;

Product: the product identification code;

CONFIGURATION ANC [Hardware Id]: the ANC that identifies the configuration of the configured electronic board. The Hardware Id is the identification code that it is used for hardware compatibility check. In certain case the Hardware Id code can be set to '***', to override compatibility check;

CONFIGURATION File Description: description of the configuration file;

FIRMWARE ANC [Hardware Id]: the ANC that identifies the firmware of the configured electronic board. The Hardware Id is the identification code that it is used for hardware compatibility check;

FIRMWARE File Description: description of the firmware file.

The screenshot shows the SidekickPC application window. At the top, it displays 'Results for '949596026 00''. Below this is a section titled 'Appliance Information' with a search bar containing '94959602600'. The main content area is divided into two sections: 'CrystalL [HUI] - HOTSWCFG' and 'CrystalR [HUI] - HOTSWCFG'. Each section contains a table of appliance details.

CrystalL [HUI] - HOTSWCFG	
PNC	949596026
ELC	00
Prog	1
Factory	DGT
Production Date	20120419
Brand Name	Electrolux
Model	EHH9967FOG EK8

CrystalR [HUI] - HOTSWCFG	
Insert date	Tuesday, April 15, 2014
Modified date	Tuesday, April 21, 2015
Service Kit Code	973 949596026-00/6
Spare Part Code	561 21 58-09 / 6
Configured Board Firmware	561 2165-25 [001]
SW ANC	561 2163-03 Rev E [CY1] Ind Cheetah 6 zone, Stdby
Data ANC	561 2164-23 Rev E [***] Ind Cheetah 6 zone, Stdby

At the bottom of the window, there is a button labeled 'Tests and Alarms'.

Fig. 67. Identification Form for Oven/Hob appliance

If you click on the spare board code, the **Spare Board Information** form appears (please refer to the corresponding paragraph in this manual for more information about this form).

If you click the **Test And Alarms** button the following form appears:

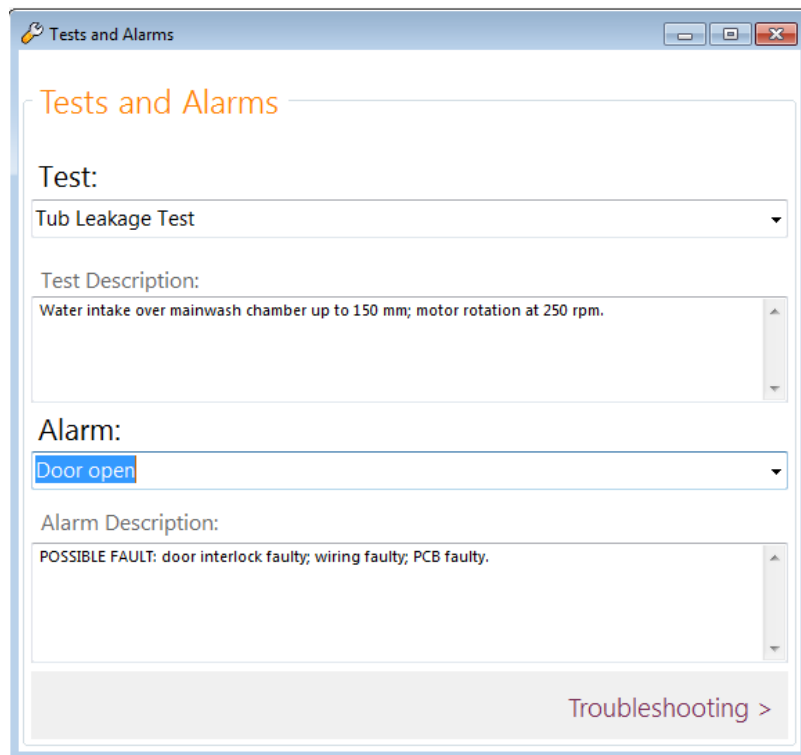


Fig. 68. Test And Alarm Form

This form shows a drop-down control named **Test** containing a test selection list, by selecting a test you can see the corresponding description into the **Test Description** textbox.

Below there is another drop-down control named **Alarm** containing a list of all alarm codes, by selecting one alarm code the corresponding description is shown in the **Alarm Description** textbox.

The **Troubleshooting** button allows you to select and execute troubleshooting procedures in off-line mode. The troubleshooting button is enabled only if there is at least one procedure available. If you press this button you can see the **Troubleshooting List** dialog:

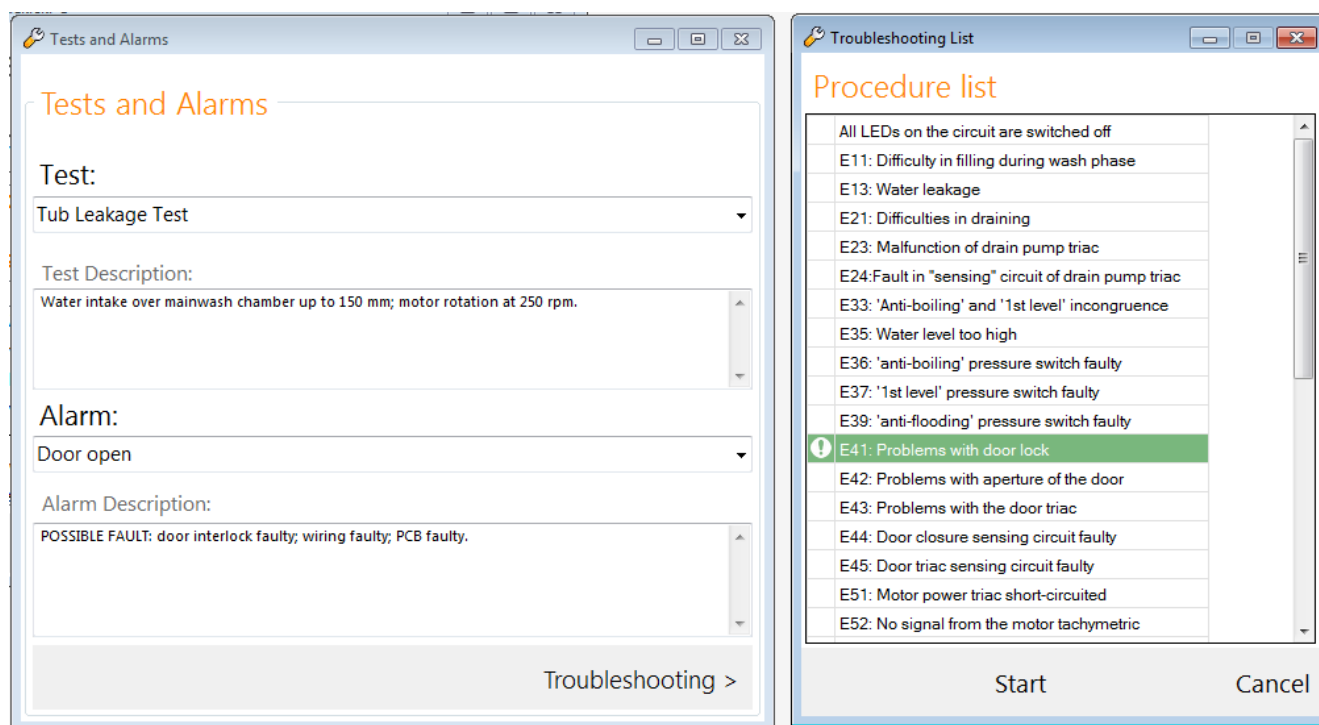


Fig. 69. Troubleshooting List

This dialog shows the list of all available troubleshooting procedures in the database.

By changing the Alarm in the alarm selection list, the corresponding procedure in Troubleshooting List is highlighted. In order to start the Troubleshooting Wizard for a certain procedure just select it from the list and press Start button.

The function is very similar to the troubleshooting procedure executed while you are diagnosing an appliance that is really connected. The only difference is that in this case SidekickPC does not send any commands to the appliance.

3.11 Network Units

The new **Network Unit** command in SidekickPC provides the functions for preparing spare network boards before the installation in the appliance. This function has been added to SidekickPC in order to support appliances that you can connect to a Wi-Fi network.

If you select this command, a dialog box will appear and you will be able to manage the Network Units:

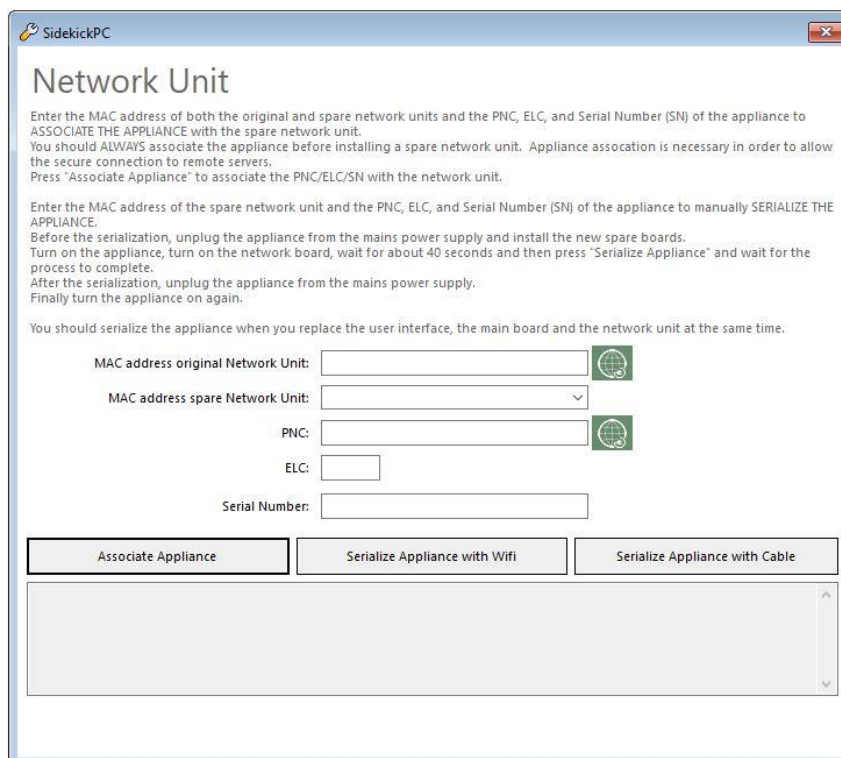


Fig. 70. Network Unit dialog box

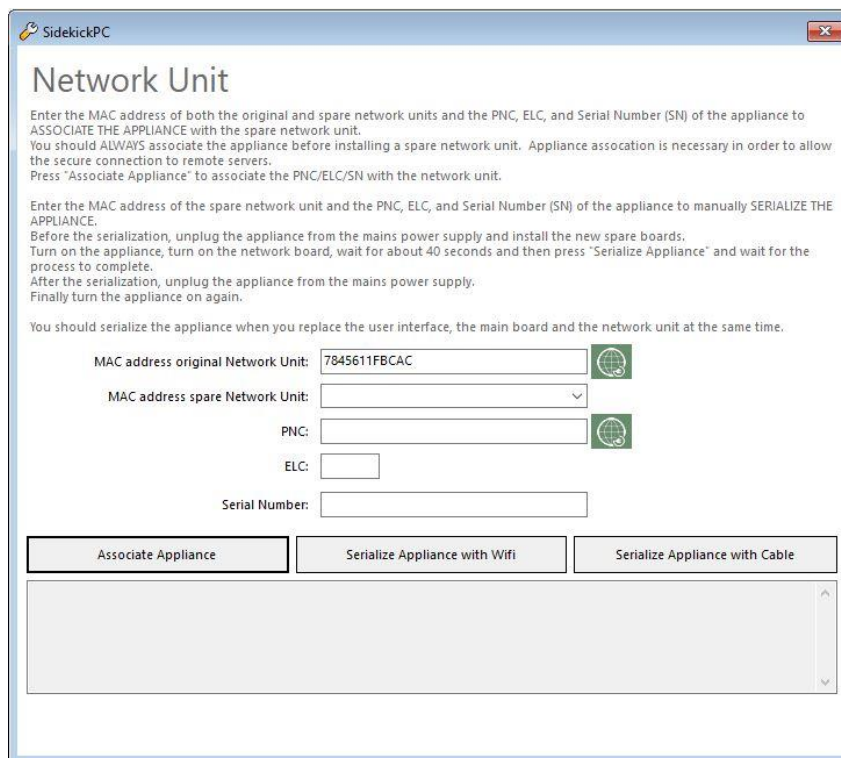
This dialog allows user to perform the following operations on Network Units:

- Get the PNC, ELC and Serial Number of the appliance by providing the MAC address of its Network Unit.
- Get the MAC address of a Network Unit by providing the PNC, ELC and Serial Number of the appliance that mounts the Network Unit.
- **Associate** an appliance with a spare Network Unit.
- **Serialize** a board of an appliance using a Wifi or a cable connection.

3.11.1 Get PNC, ELC and Serial Number from MAC address

This functionality allows you to retrieve the PNC, ELC and Serial Number of the appliance that mounts a specific Network Unit (identified by its MAC address).

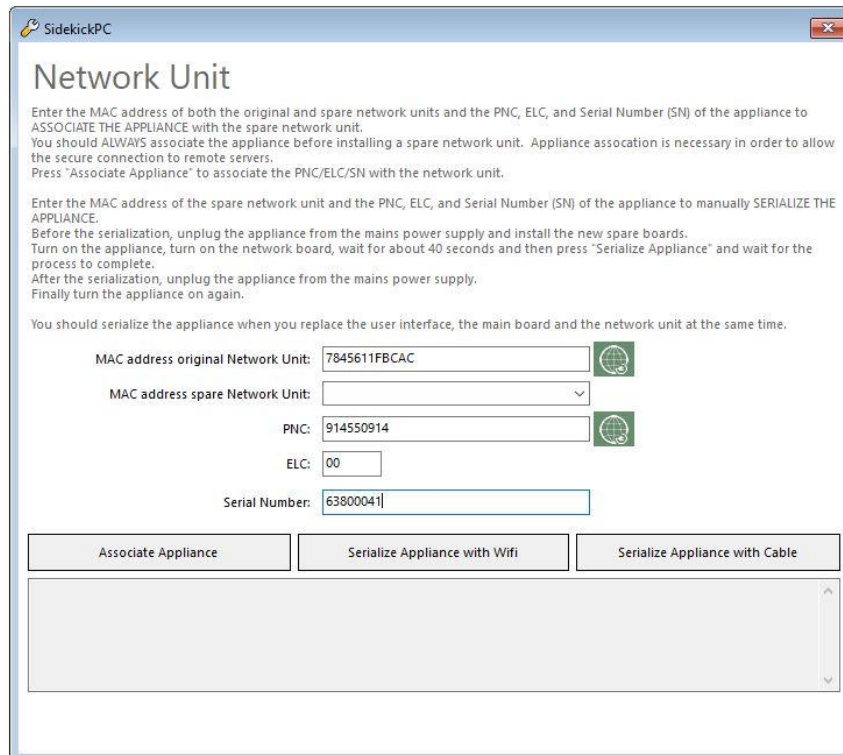
You have to type the MAC address of the Network Unit in the first text field and then press the green button that lies on its left side:



The screenshot shows a window titled "SidekickPC" with a "Network Unit" section. It contains instructions for associating and serializing the appliance. The form includes fields for "MAC address original Network Unit" (with value 7845611FBCAC), "MAC address spare Network Unit" (a dropdown), "PNC", "ELC", and "Serial Number". There are three buttons: "Associate Appliance", "Serialize Appliance with Wifi", and "Serialize Appliance with Cable". A green globe icon is next to the first MAC field and the PNC field.

Fig. 71. Get PNC, ELC and Serial Number from MAC Address

If the provided MAC address exists, the dialog box shows you the correspondent PNC, ELC and Serial Number of the appliance:



The screenshot shows a software window titled "SidekickPC" with a "Network Unit" section. It contains instructions for associating and serializing an appliance. Below the instructions are input fields for MAC address (original and spare), PNC, ELC, and Serial Number. The "Associate Appliance" button is highlighted. Below the buttons is a large empty text area.

Network Unit

Enter the MAC address of both the original and spare network units and the PNC, ELC, and Serial Number (SN) of the appliance to ASSOCIATE THE APPLIANCE with the spare network unit. You should ALWAYS associate the appliance before installing a spare network unit. Appliance association is necessary in order to allow the secure connection to remote servers. Press 'Associate Appliance' to associate the PNC/ELC/SN with the network unit.

Enter the MAC address of the spare network unit and the PNC, ELC, and Serial Number (SN) of the appliance to manually SERIALIZE THE APPLIANCE. Before the serialization, unplug the appliance from the mains power supply and install the new spare boards. Turn on the appliance, turn on the network board, wait for about 40 seconds and then press 'Serialize Appliance' and wait for the process to complete. After the serialization, unplug the appliance from the mains power supply. Finally turn the appliance on again.

You should serialize the appliance when you replace the user interface, the main board and the network unit at the same time.

MAC address original Network Unit: 7845611FBCAC

MAC address spare Network Unit:

PNC: 914550914

ELC: 00

Serial Number: 63800041

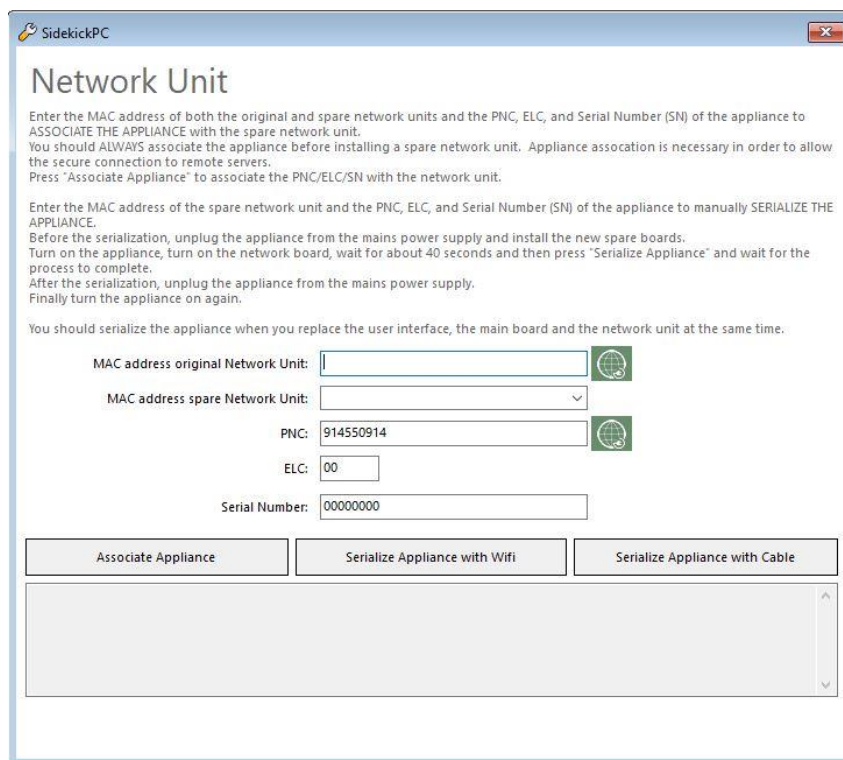
Associate Appliance Serialize Appliance with Wifi Serialize Appliance with Cable

Fig. 72. Result of PNC, ELC and Serial Number lookup by MAC Address

3.11.2 Get MAC address from PNC, ELC and Serial Number

This functionality allows you to retrieve the MAC address of the Network Unit mounted on an appliance (identified by its PNC, ELC and Serial Number).

First you have to type the PNC, ELC and Serial Number of the appliance in the correspondent text fields; then you have to press the green button that lies on the left side of the PNC text field:




The screenshot shows a web application window titled "SidekickPC" with a "Network Unit" section. The section contains instructions for associating and serializing the appliance. Below the instructions are input fields for "MAC address original Network Unit", "MAC address spare Network Unit", "PNC" (with a green button), "ELC", and "Serial Number". At the bottom, there are three buttons: "Associate Appliance", "Serialize Appliance with Wifi", and "Serialize Appliance with Cable".

Network Unit


Enter the MAC address of both the original and spare network units and the PNC, ELC, and Serial Number (SN) of the appliance to ASSOCIATE THE APPLIANCE with the spare network unit.
You should ALWAYS associate the appliance before installing a spare network unit. Appliance association is necessary in order to allow the secure connection to remote servers.
Press 'Associate Appliance' to associate the PNC/ELC/SN with the network unit.

Enter the MAC address of the spare network unit and the PNC, ELC, and Serial Number (SN) of the appliance to manually SERIALIZE THE APPLIANCE.
Before the serialization, unplug the appliance from the mains power supply and install the new spare boards.
Turn on the appliance, turn on the network board, wait for about 40 seconds and then press 'Serialize Appliance' and wait for the process to complete.
After the serialization, unplug the appliance from the mains power supply.
Finally turn the appliance on again.

You should serialize the appliance when you replace the user interface, the main board and the network unit at the same time.

MAC address original Network Unit: 

MAC address spare Network Unit:

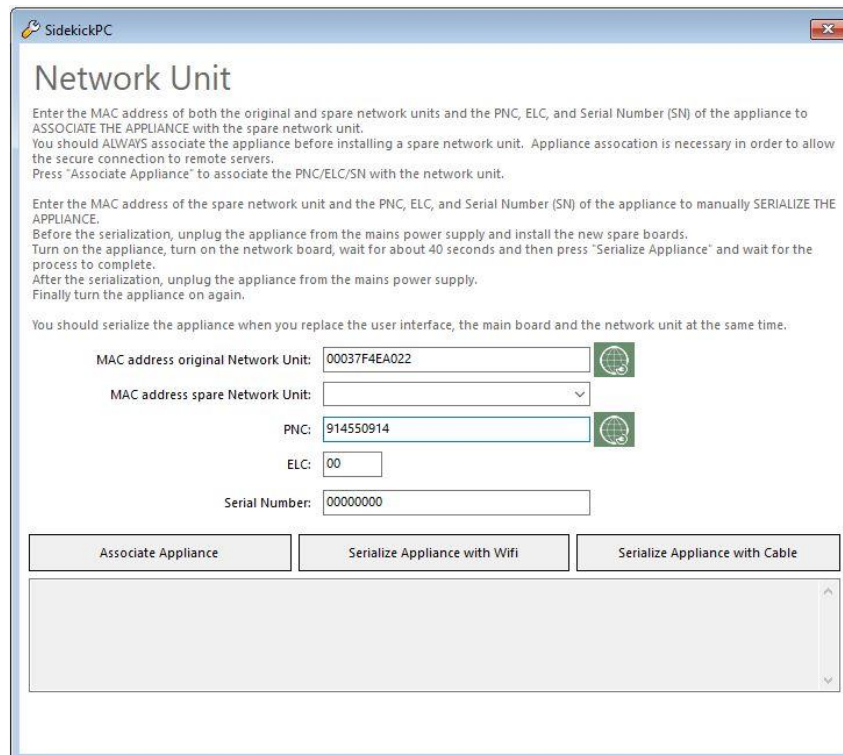
PNC: 

ELC:

Serial Number:

Fig. 73. Get MAC Address from PNC, ELC and Serial Number

If PNC, ELC and Serial Number refer to a connectable appliance that really exist, the dialog box shows you the correspondent MAC address of the Network Unit:



The screenshot shows a software window titled "SidekickPC" with a sub-header "Network Unit". Below the header, there are two paragraphs of instructional text. The first paragraph explains how to associate an appliance with a spare network unit by entering the MAC address, PNC, ELC, and Serial Number. The second paragraph explains how to manually serialize the appliance, including steps like unplugging the appliance and waiting for 40 seconds. Below the text, there are input fields for "MAC address original Network Unit" (containing "00037F4EA022"), "MAC address spare Network Unit" (a dropdown menu), "PNC" (containing "914550914"), "ELC" (containing "00"), and "Serial Number" (containing "00000000"). To the right of the "PNC" and "MAC address original Network Unit" fields are small globe icons. At the bottom, there are three buttons: "Associate Appliance", "Serialize Appliance with Wifi", and "Serialize Appliance with Cable". Below the buttons is a large, empty rectangular area with a vertical scrollbar on the right side.

Fig. 74. Result of MAC Address lookup by PNC, ELC and Serial Number

3.11.3 Appliance Association

Before installing a spare network unit you must always associate it to the appliance where you will install it.

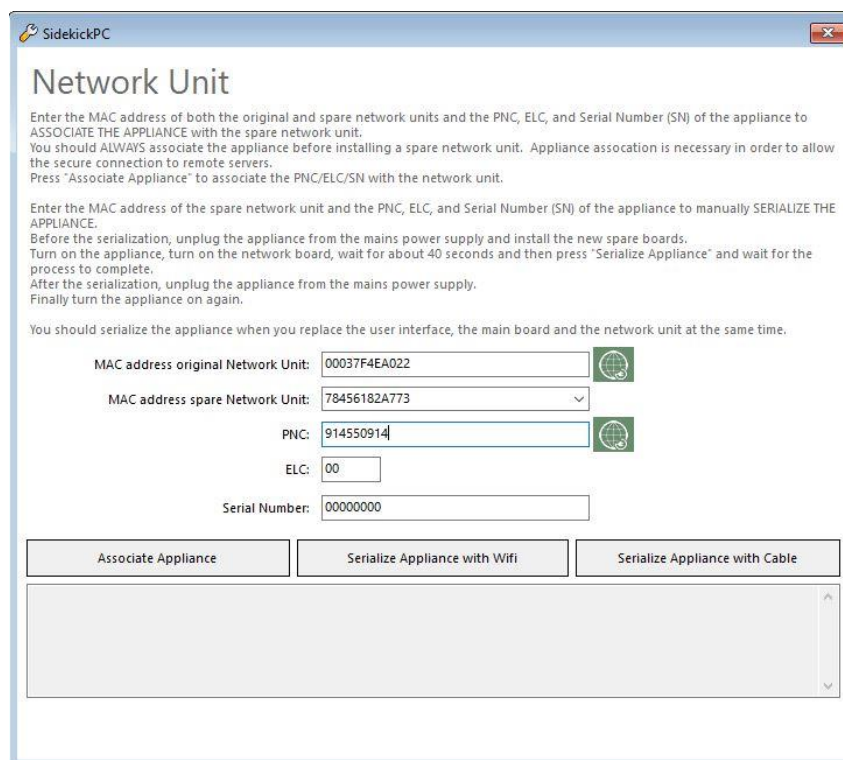
APPLIANCE ASSOCIATION lets you associate a spare network unit, identified by means of the MAC address, to the appliance where you are going to install it.

You identify the appliance by means of the PNC, ELC and Serial Number. The MAC address of the original spare network unit is requested in order to prevent manual errors.

When you execute this operation the computer must be connected to the internet, since you are updating information in the remote Sidekick servers.

Appliance association is required for security reasons: this operation allows the appliance to securely connect to remote servers

To associate an appliance with a new Network Unit, you should provide all the input parameters: MAC address of original and spare Network Unit, PNC, ELC and Serial Number of the appliance. After providing the required parameters, you should press the Associate Appliance button:



Network Unit

Enter the MAC address of both the original and spare network units and the PNC, ELC, and Serial Number (SN) of the appliance to ASSOCIATE THE APPLIANCE with the spare network unit.
You should ALWAYS associate the appliance before installing a spare network unit. Appliance association is necessary in order to allow the secure connection to remote servers.
Press "Associate Appliance" to associate the PNC/ELC/SN with the network unit.

Enter the MAC address of the spare network unit and the PNC, ELC, and Serial Number (SN) of the appliance to manually SERIALIZE THE APPLIANCE.
Before the serialization, unplug the appliance from the mains power supply and install the new spare boards.
Turn on the appliance, turn on the network board, wait for about 40 seconds and then press "Serialize Appliance" and wait for the process to complete.
After the serialization, unplug the appliance from the mains power supply.
Finally turn the appliance on again.

You should serialize the appliance when you replace the user interface, the main board and the network unit at the same time.

MAC address original Network Unit:

MAC address spare Network Unit:

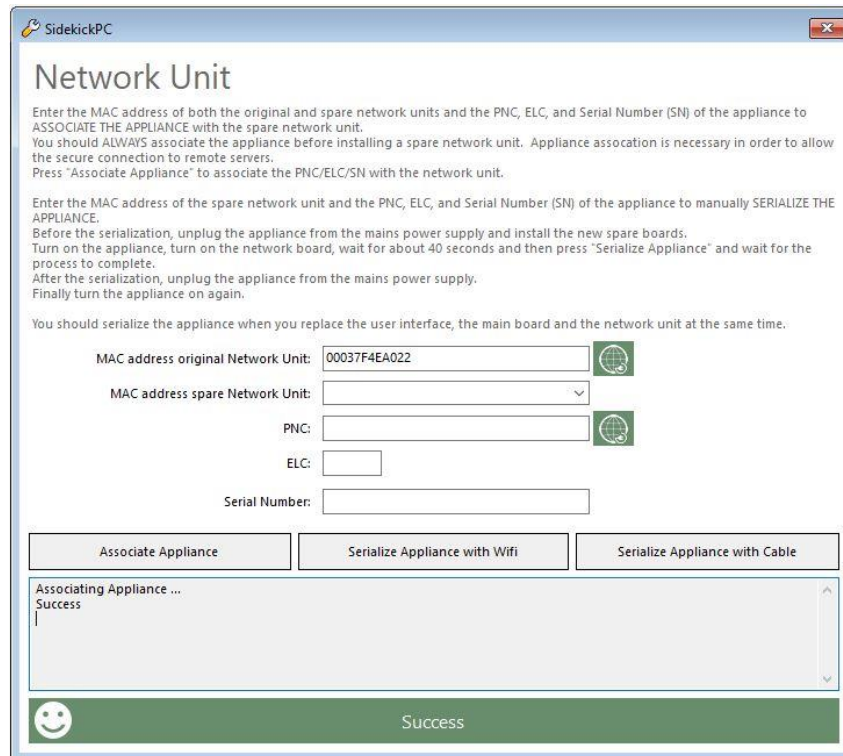
PNC:

ELC:

Serial Number:

Fig. 75. Associate Appliance

The result of a successful association is shown in Figure:



The screenshot shows the 'SidekickPC' application window with the 'Network Unit' tab selected. The window contains instructions for associating and serializing the appliance. Below the instructions, there are input fields for 'MAC address original Network Unit' (containing '00037F4EA022'), 'MAC address spare Network Unit' (a dropdown menu), 'PNC', 'ELC', and 'Serial Number'. At the bottom, there are three buttons: 'Associate Appliance', 'Serialize Appliance with Wifi', and 'Serialize Appliance with Cable'. A status bar at the bottom of the window shows a green bar with a smiley face icon and the word 'Success'.

SidekickPC

Network Unit

Enter the MAC address of both the original and spare network units and the PNC, ELC, and Serial Number (SN) of the appliance to ASSOCIATE THE APPLIANCE with the spare network unit.
You should ALWAYS associate the appliance before installing a spare network unit. Appliance association is necessary in order to allow the secure connection to remote servers.
Press 'Associate Appliance' to associate the PNC/ELC/SN with the network unit.

Enter the MAC address of the spare network unit and the PNC, ELC, and Serial Number (SN) of the appliance to manually SERIALIZE THE APPLIANCE.
Before the serialization, unplug the appliance from the mains power supply and install the new spare boards.
Turn on the appliance, turn on the network board, wait for about 40 seconds and then press 'Serialize Appliance' and wait for the process to complete.
After the serialization, unplug the appliance from the mains power supply.
Finally turn the appliance on again.

You should serialize the appliance when you replace the user interface, the main board and the network unit at the same time.

MAC address original Network Unit:

MAC address spare Network Unit:

PNC:

ELC:

Serial Number:

Associating Appliance ...
Success

Success

Fig. 76. Appliance association completed with success

3.11.4 Appliance Serialization

The “Appliance Serialization” functionality should be performed only if ALL electronic boards mounted on the appliance that store the identity (PNC, ELC, serial number) of the appliance have been replaced at the same time.

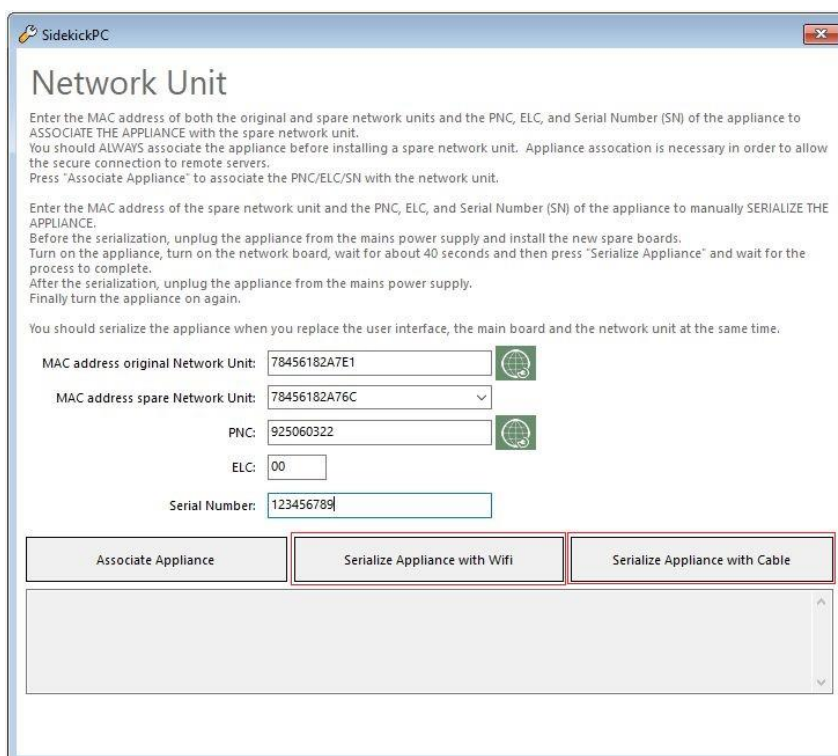
The appliance serialization can be performed using a Wi-Fi or a cable connection; the serialization procedure is almost the same in both cases.

Before serializing the appliance, turn off the appliance power supply and install the spare boards.

After installing the spare boards, turn on the appliance and the network unit; wait for almost 40 seconds.

To serialize an appliance you should provide the PNC, ELC and Serial Number of the appliance and the MAC address of the spare Network Unit.

After providing the required parameters, you should press one of the Serialize Appliance buttons, depending of the chosen connection type:



The screenshot shows the 'Network Unit' configuration window in the SidekickPC application. The window contains instructions for associating and serializing the appliance. It includes input fields for the following parameters:

- MAC address original Network Unit: 78456182A7E1
- MAC address spare Network Unit: 78456182A76C (selected from a dropdown)
- PNC: 925060322
- ELC: 00
- Serial Number: 123456789

At the bottom, there are three buttons: 'Associate Appliance', 'Serialize Appliance with Wifi', and 'Serialize Appliance with Cable'. The 'Serialize Appliance with Wifi' button is highlighted with a red border.

The result of a successful serialization is shown in Figure:

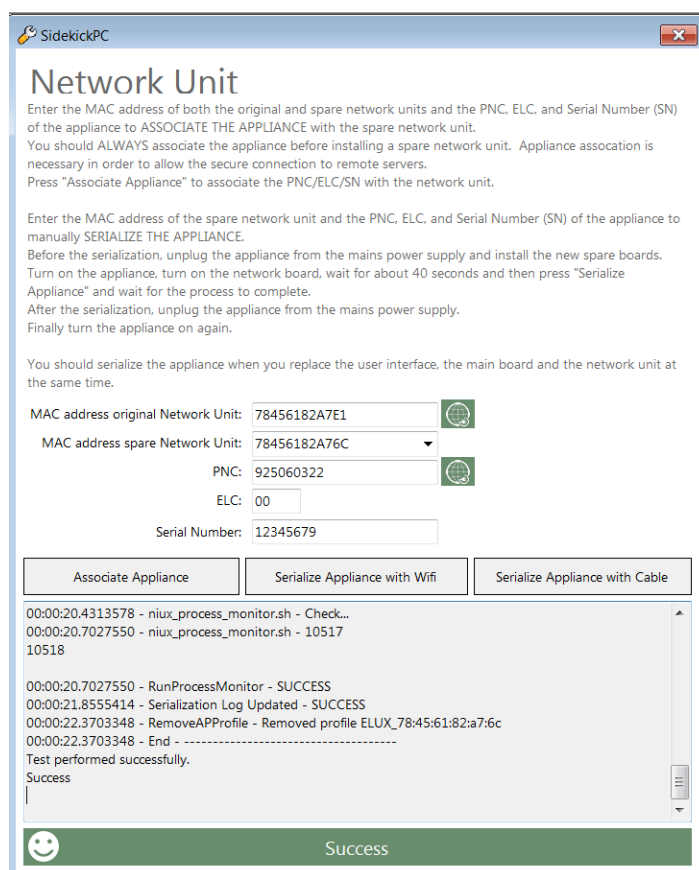


Fig. 77. Appliance serialization completed with success

In **Fabric Care** appliances manual serialization is required when you replace the NIUX module, the Main Board and the User Interface at the same time.

Currently manual serialization of Fabric Care appliances occurs with the DAAS interface. You must therefore use the “Serialize Appliance with Cable” command.

In future Fabric Care appliances may support the serialization through the Wi-Fi interface.

In **Food Preparation** appliances manual serialization is required when you replace the NIUX module and the User Interface at the same time.

Manual serialization of Food Preparation appliances occurs with the Wi-Fi interface. You must therefore use the “Serialize Appliance with Wi-Fi” command.

In **Food Preservation** appliances manual serialization is required when you replace the NIUX module and the Power Board at the same time.

Manual serialization of Food Preservation appliances occurs with the Wi-Fi interface. You must therefore use the “Serialize Appliance with Wi-Fi” command.

Manual serialization of an appliance is only possible after that you have already executed the Appliance Association for the same appliance.

4 APPENDIX

This appendix describes the manual software installation. Sometimes you may need to execute a manual installation, for example in order to override default setup options or for investigating setup problems using the automatic software installation.

4.1 MANUAL SOFTWARE INSTALLATION

This paragraph describes the sequence of steps in a typical setup procedure on a PC without any additional installed software; we assume that the SidekickPC installation CD is on the **D:** unit. Setup steps may vary depending on the actual operating system and software configuration of the PC.

You must log on as full Administrator in order to make the installation of the software.

4.1.1 SidekickPC Setup

Install Only Requirements

1. Go to directory `D:\Prerequisites`, right click on `Install.OnlyRequirementsAndPause.cmd`, select “Run as Administrator”
2. A reboot will be forced at the end of batch. Once your PC has rebooted, please re-launch `Install.OnlyRequirementsAndPause.cmd`. At the end the installation of the requirements will complete.
3. Go to step 7.

Install one requirement at time

1. If installing on Windows 8, execute the step documented in chapter 1.3.1
2. Go to directory `D:\Prerequisites\Microsoft.MSXML`, right click on `msxml6_x86.msi`, select “Run as Administrator” and follow the instruction accepting all defaults.
3. Go to directory `D:\Prerequisites\Microsoft.WSE`, right click on `Microsoft WSE 3.0 Runtime`, select “Run as Administrator” and follow the instruction accepting all defaults
4. Reboot your PC
5. Open a command prompt as administrator, change directory to `D:\Prerequisites\Microsoft.SQLEXPRESS\`, write the following command and hit enter:
`SQLEXPRESS_x86_ENU.exe /CONFIGURATIONFILE=D:\Prerequisites\Microsoft.SQLEXPRESS\SQLSetupPar.ini`
6. Go to directory `D:\`, right click on `SidekickPCSetup.msi`, select “Run as Administrator”
7. Click “Next”
8. You are now prompted to choose the installation folder. Keep the default settings unless strictly necessary. Please remember that you cannot specify special folders like “**C:\Program Files**”, “**C:\Documents and Settings\All Users\Application Data**”, or “**C:\Windows\System32**”. If you do it, the setup will show you an error message and rollback the entire process.

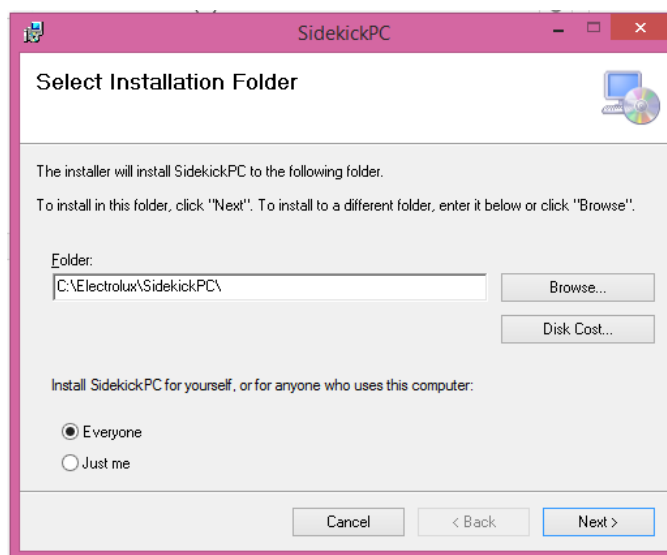


Fig. 78. Select Installation Folder

9. You will be asked to choose the settings of the Database that it is going to automatically create. It is possible to specify a database and login created with a previous installation of the software. Keep the default settings unless strictly necessary. **Data Source** identifies the SQL Server instance that will hold the local database. **Database** is the name of the local database. **User ID** and **Password** are the credential of the login to the local database. Please remember that, by default, SidekickPC uses “Mixed Authentication” to connect to the local database:

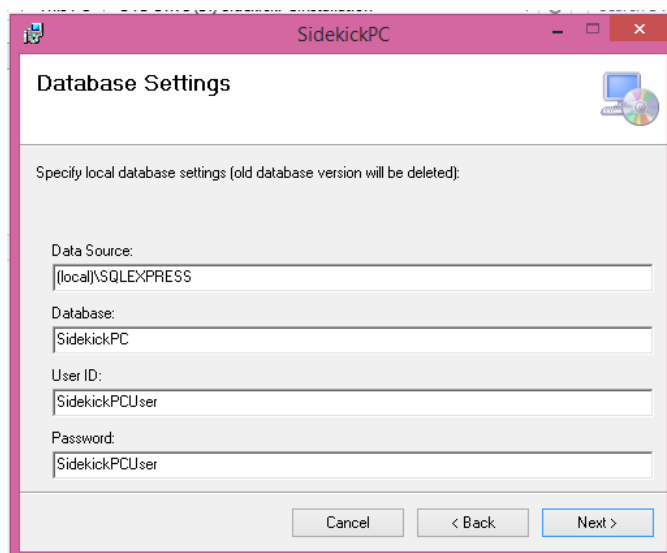


Fig. 79. Database Settings

10. Specify the URL and credentials for the Web Services Settings that the application will use to download data updates, if you already know them. For **Username** and **Password** you should use the login information you have been given with an automatic e-mail notification when your account was created. These are the same credentials that you use to access to the reserved area in the Sidekick Portal:

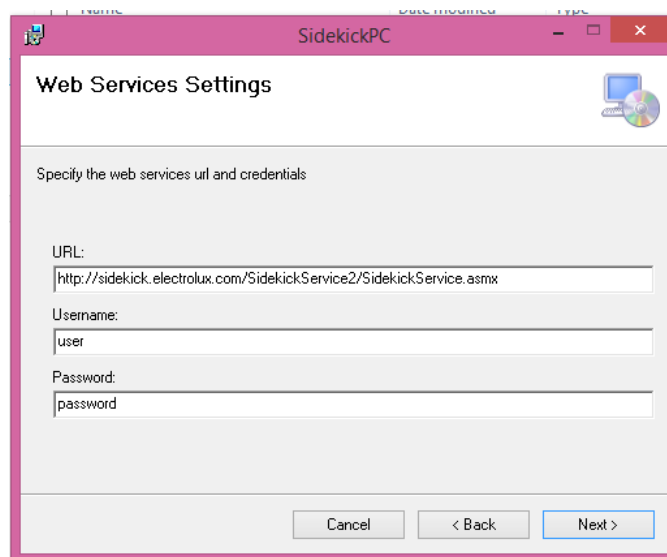


Fig. 80. Web Service Settings

11. Enter your license number in the Activation Settings window, if you already know it. You should use the license number you have been given with an automatic e-mail notification when your account was created:

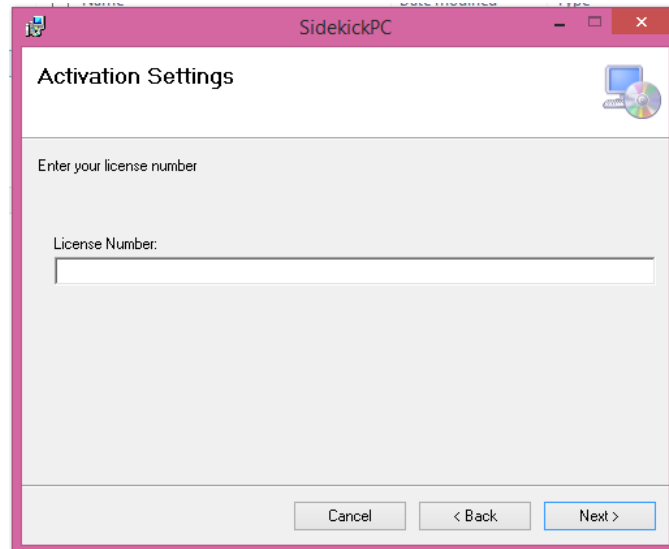


Fig. 81. Activation Settings

12. Confirm the installation and wait for the completion of the process. If any errors occur during the setup, an installation log appears. Otherwise no other dialog appears, except the final one.
13. SETUP finally completes. Just press Close to end the process:

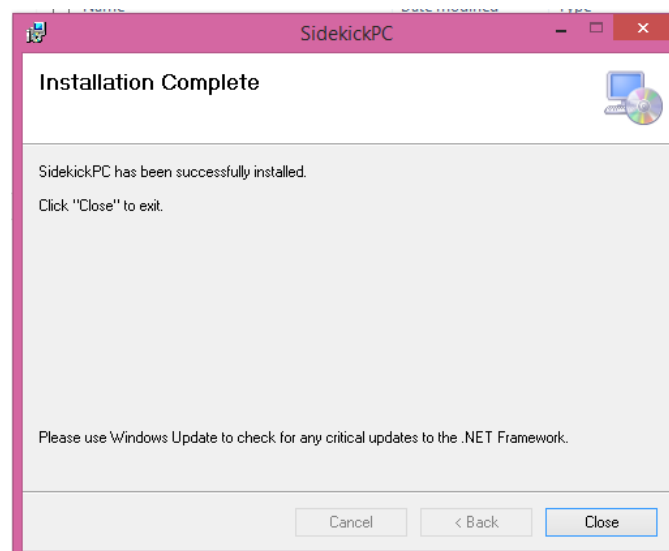


Fig. 82. Installation Complete

4.1.2 SQL Server 2008 R2 Express Setup

1. Run the **SQLEXPR_x86_ENU.exe** installer located in the `Prerequisites\Microsoft\SQLServer` folder in the distribution CD. In the welcome dialog click New installation or add features to an existing installation option:

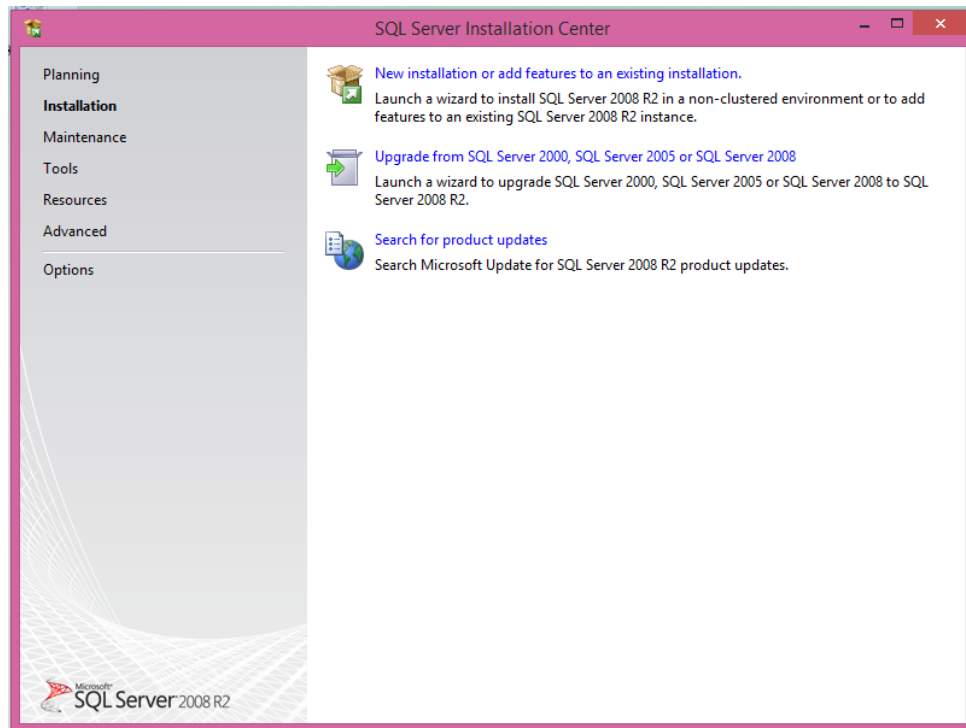
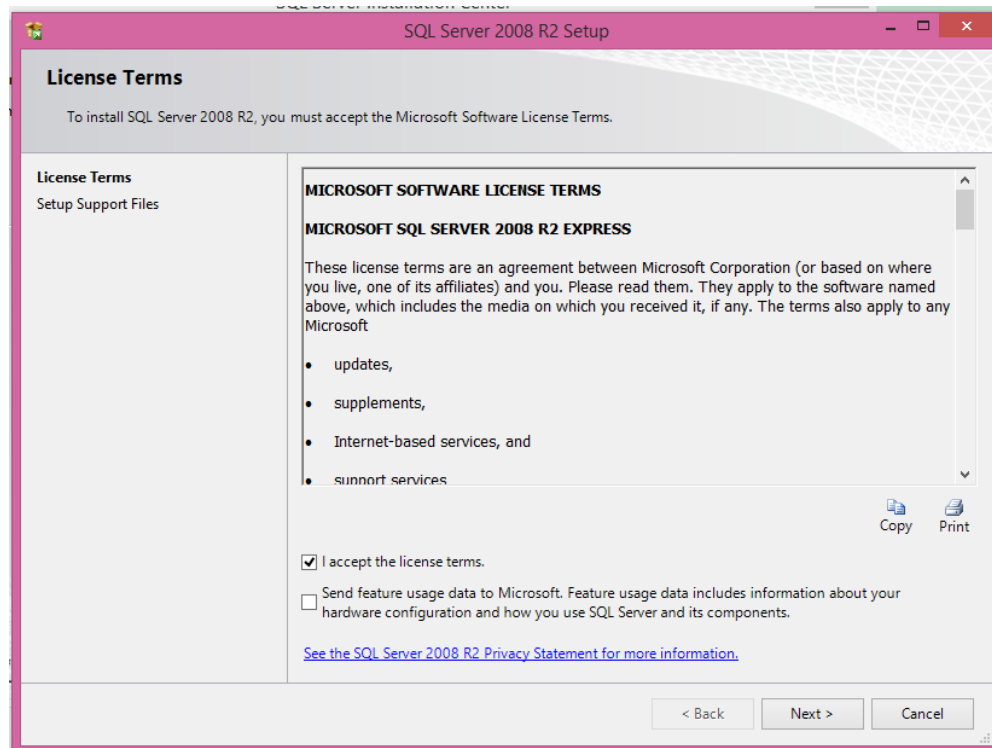


Fig. 83. SQL Server 2008 Express Setup - Welcome

Fig. 84.

2. Accept the license agreement, then press Next:

*Fig. 85. SQL Server 2008 Express Setup – License Agreement*

3. You can select the features below. Then press Next:

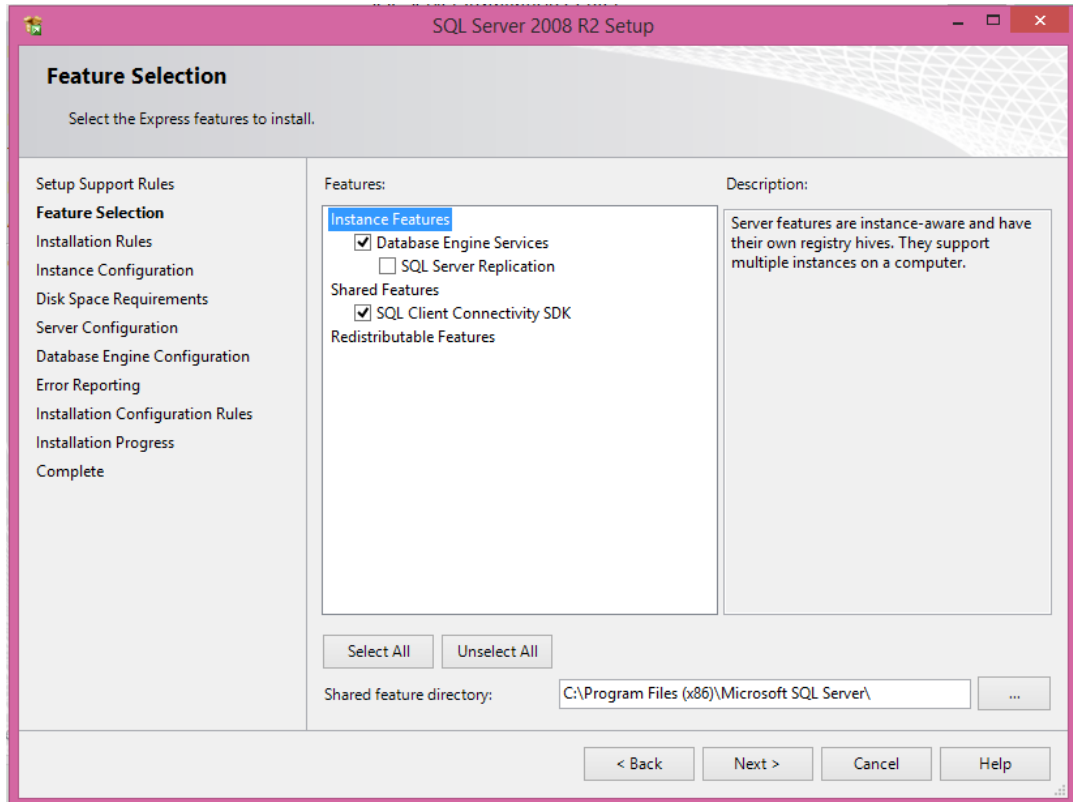


Fig. 86. SQL Server 2008 Express Setup – Feature Selection

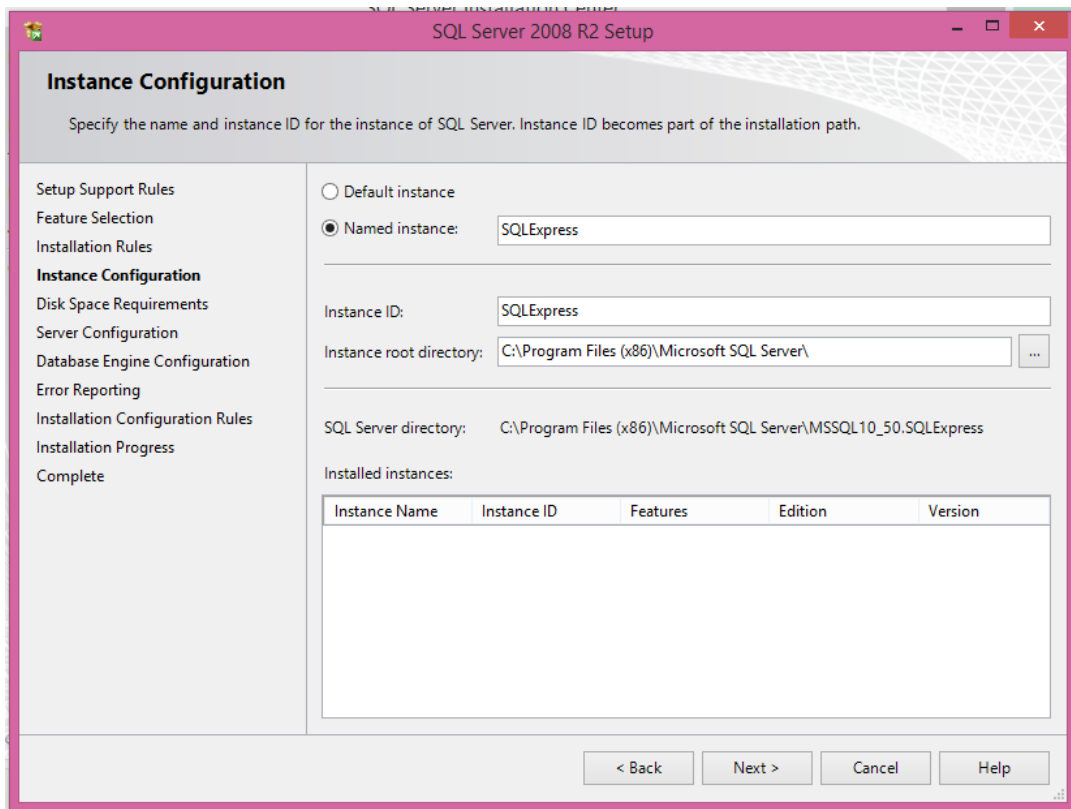


Fig. 87. SQL Server 2008 Express Setup – Instance Configuration

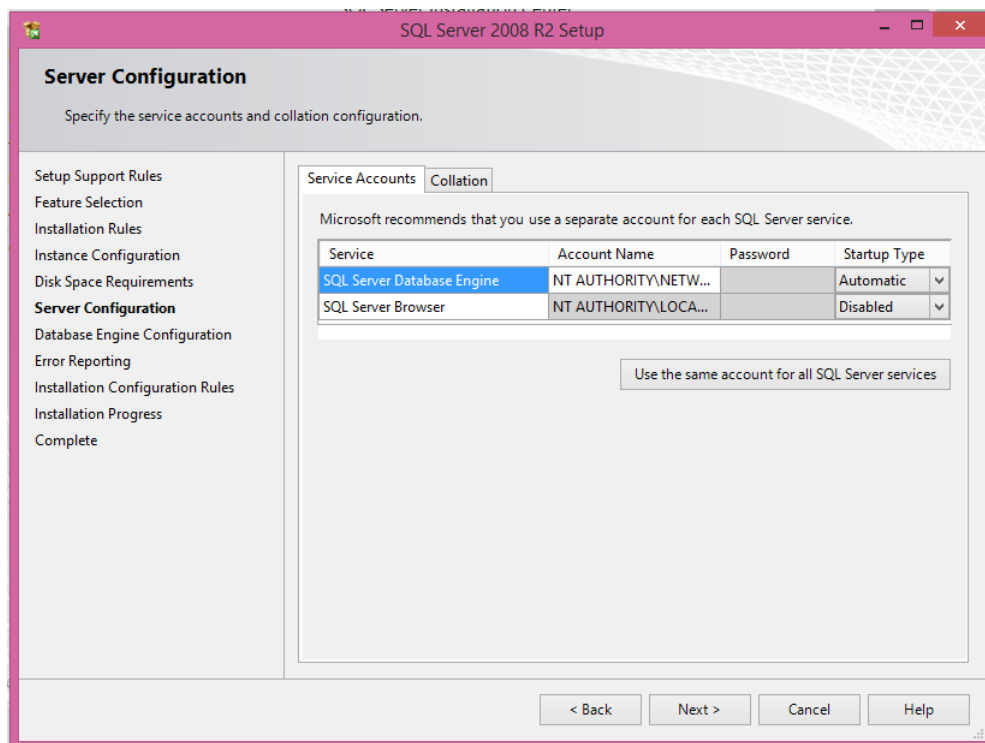


Fig. 88. SQL Server 2008 Express Setup – Server Configuration

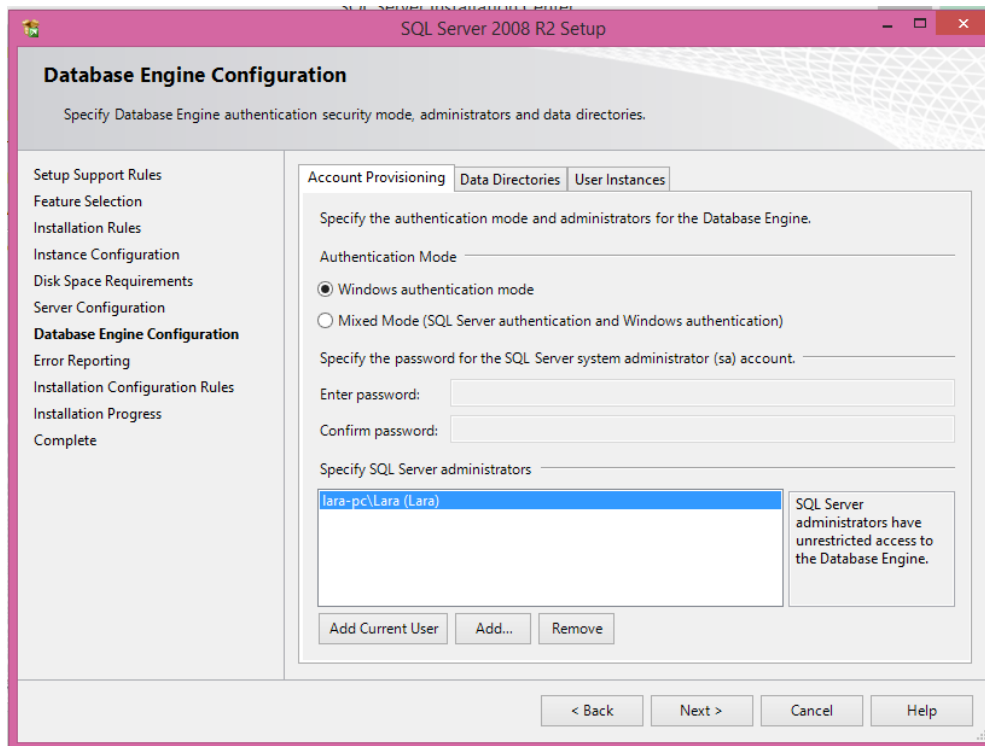


Fig. 89. SQL Server 2008 Express Setup – Database Engine Configuration

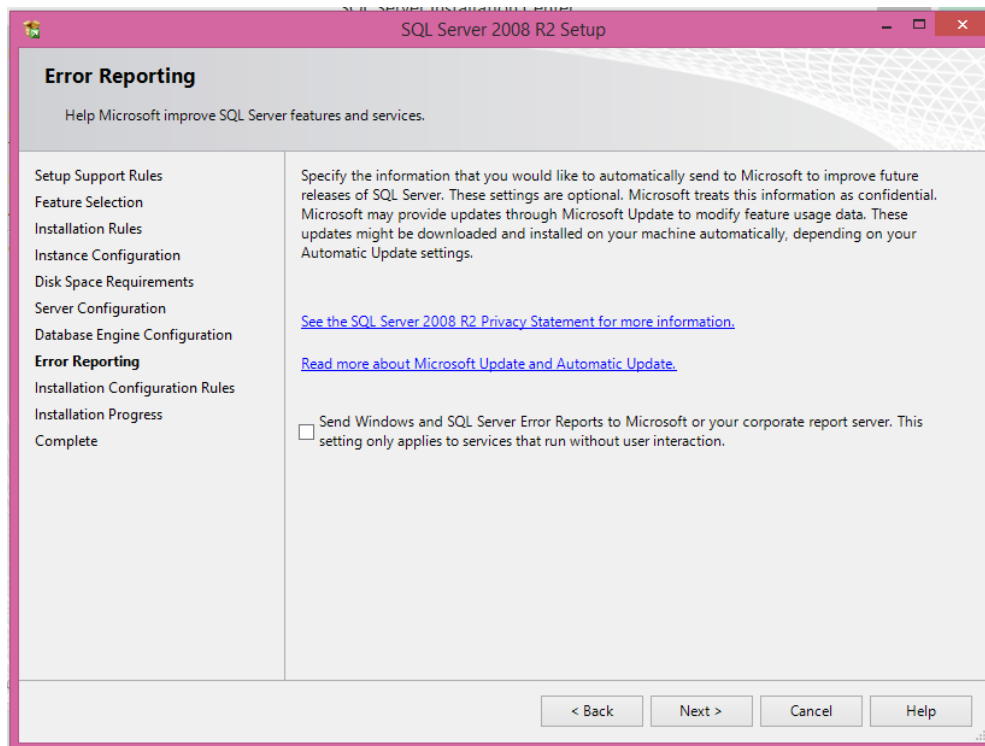


Fig. 90. SQL Server 2008 Express Setup – Error Reporting

5. SQL Server Express is ready to install. Press Next:

6. Wait until the end of setup, then press Finish:

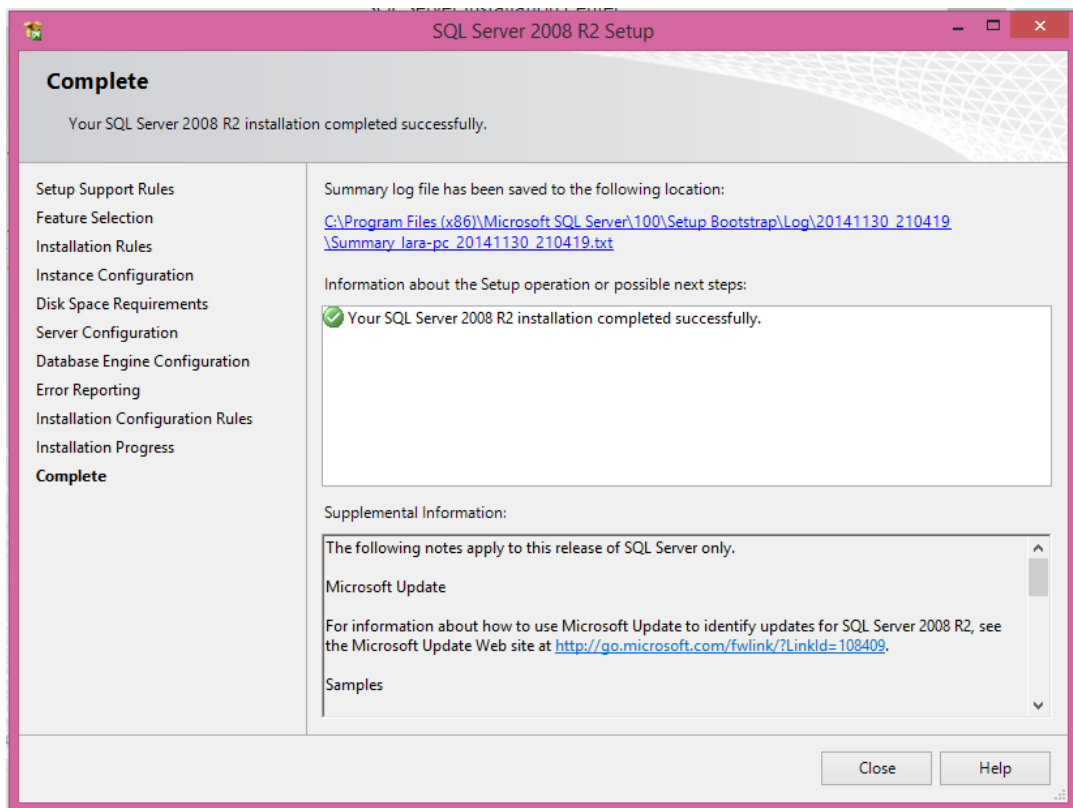


Fig. 91. SQL Server 2008 Express Setup – End

4.1.3 SQL Server 2008 Management Studio Express Setup

This section describes the optional installation of SQL Server Management Studio Express. The installation of this software is only necessary for software troubleshooting purposes. This is a tool for the administration of the local database, only necessary for software support activities. In most cases you can simply skip this section.

Run the **SQLManagementStudio_x64_ENU.exe** installer located in the `Prerequisites\Microsoft.SQLServer.ManagementStudio` folder in the distribution CD. In the welcome dialog click New SQL Server stand-alone installation or add features to an existing installation option:



Fig. 92. SQL Server MS Express Setup - Welcome

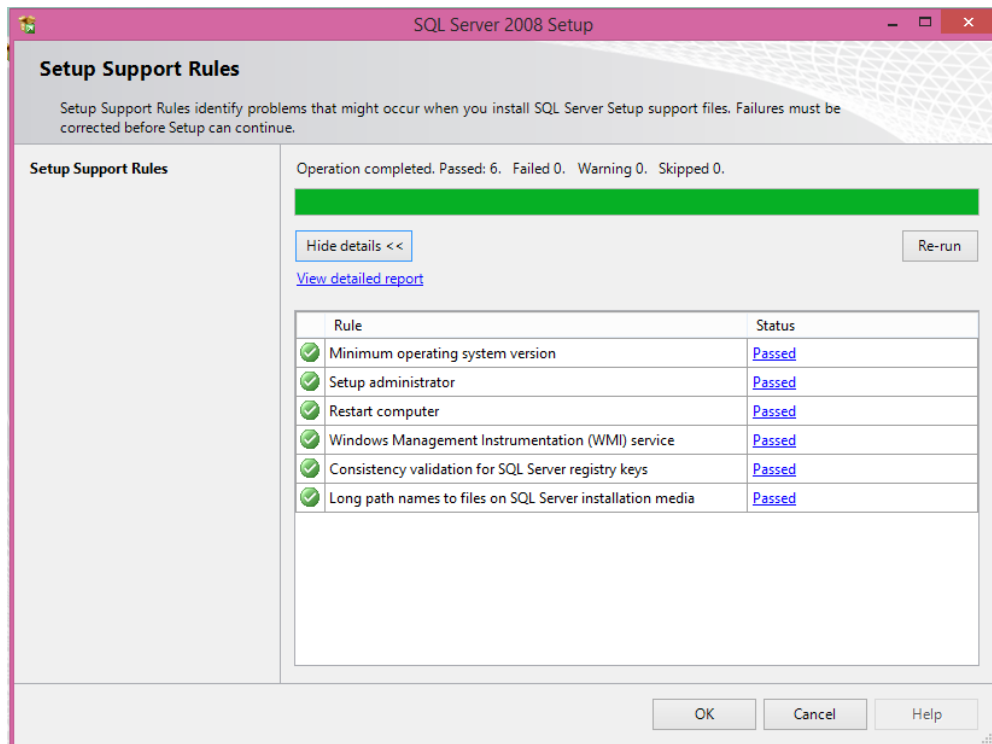


Fig. 93. SQL Server MS Express Setup – Setup Support Rules

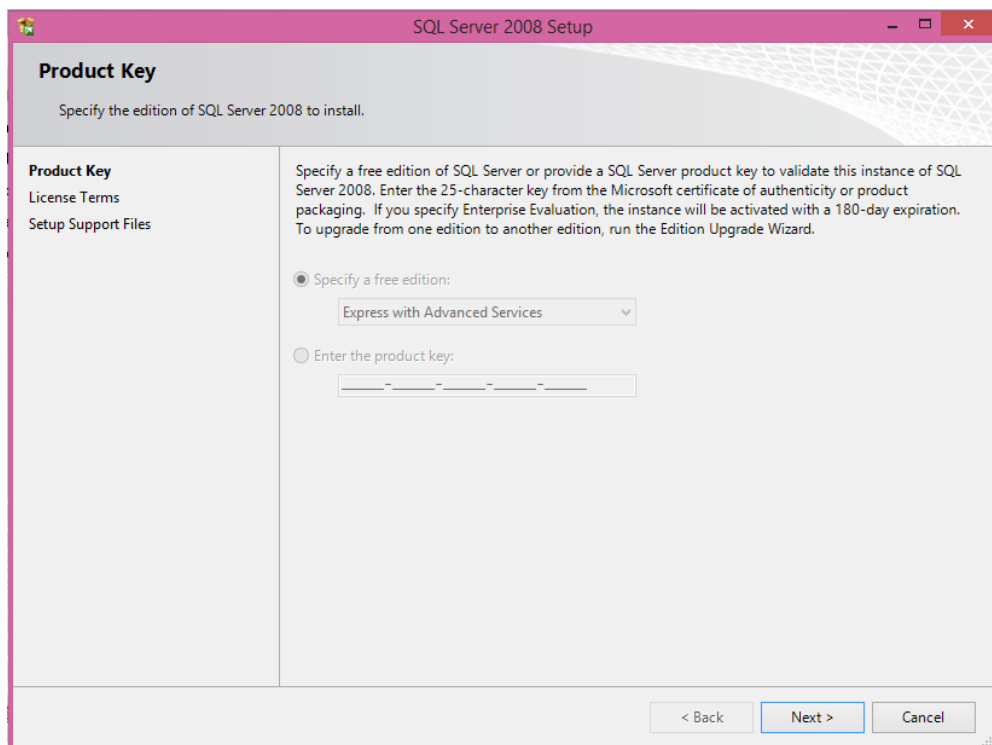


Fig. 94. SQL Server MS Express Setup

Accept the license agreement, then press Next:

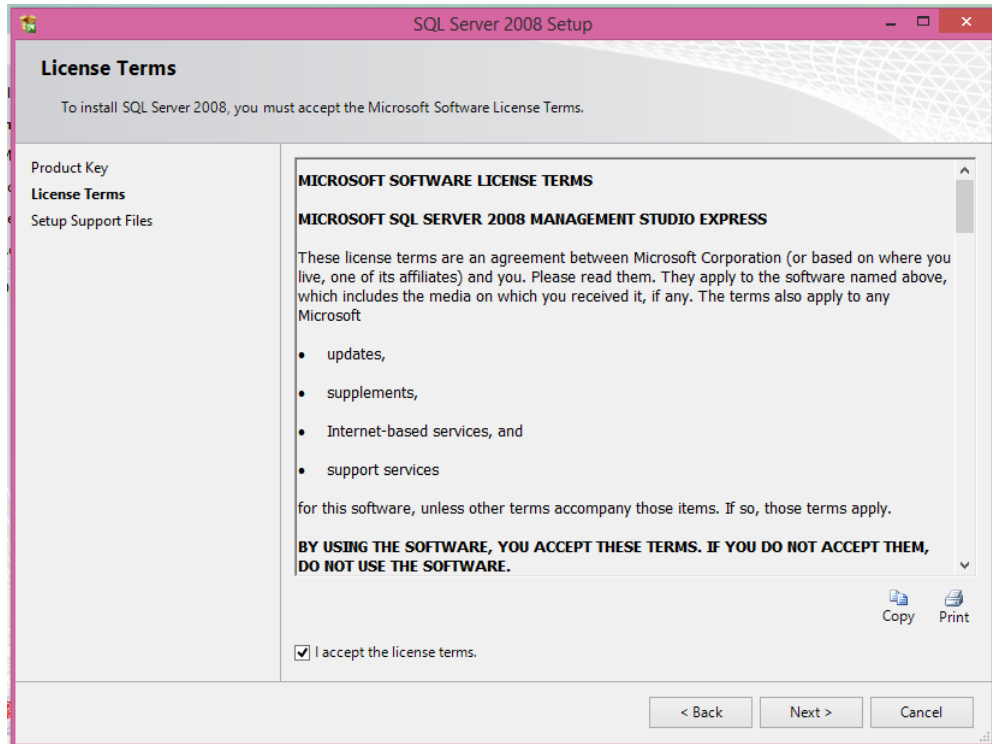


Fig. 95. SQL Server MS Express Setup License Terms

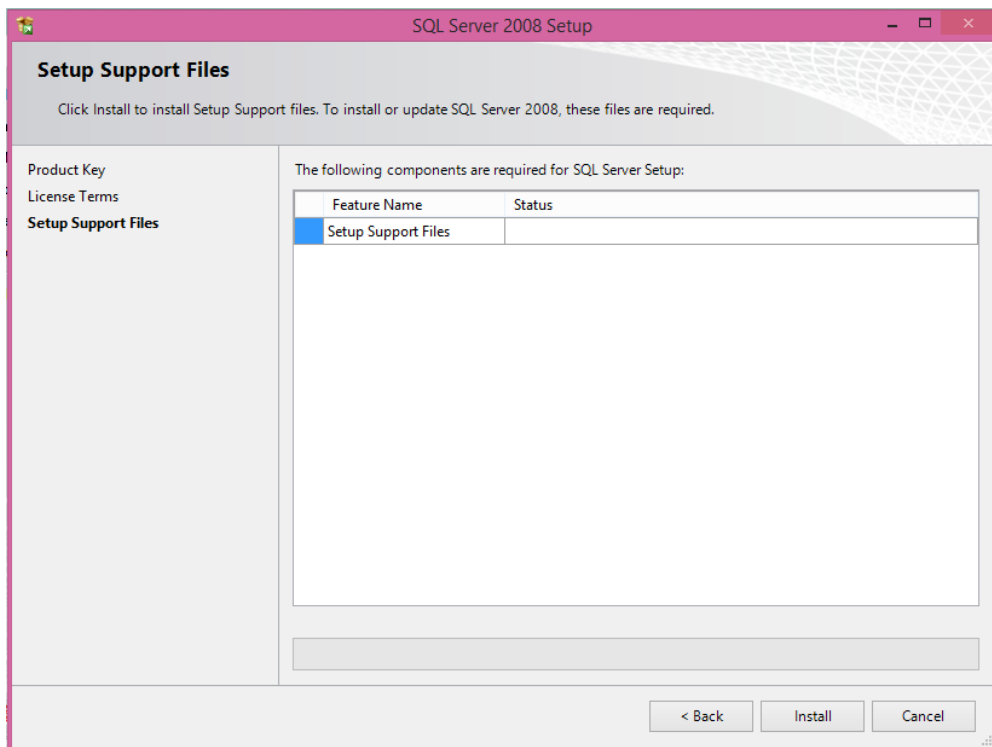


Fig. 96. SQL Server MS Express Setup Support Files

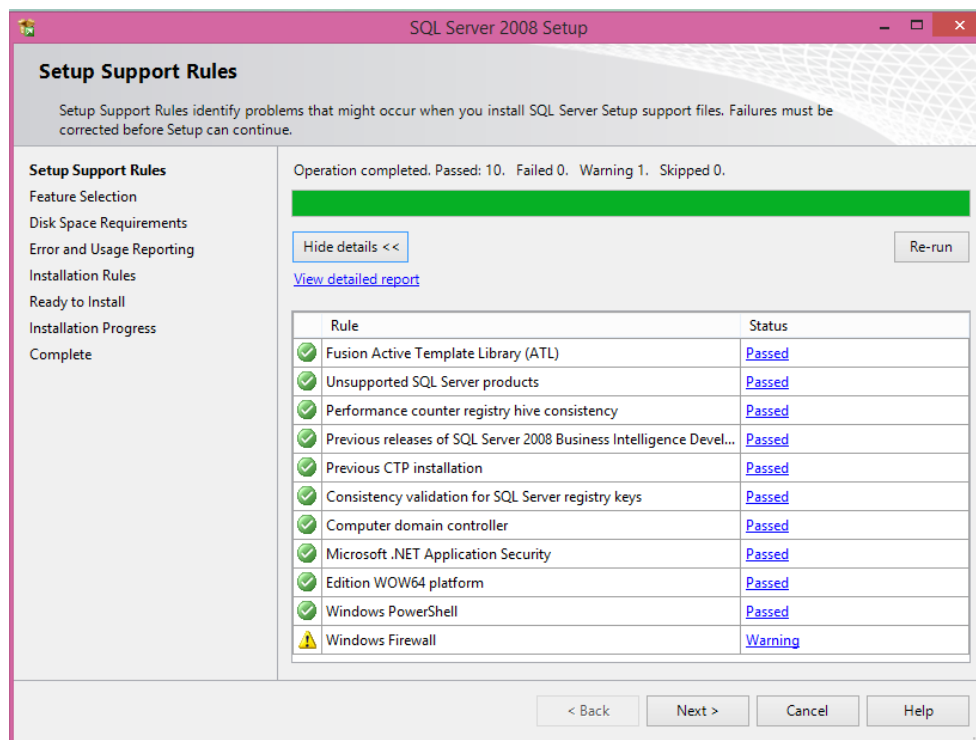


Fig. 97. SQL Server MS Express Setup Support Rules

You can select the feature below. Then press Next:

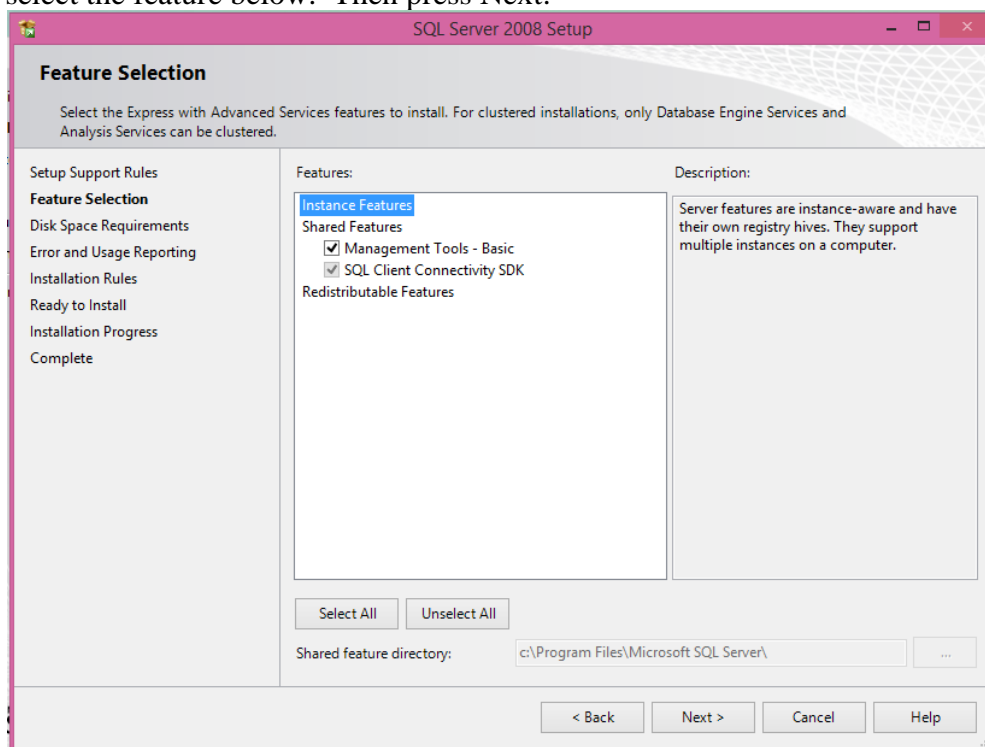


Fig. 98. SQL Server MS Express Feature Selection

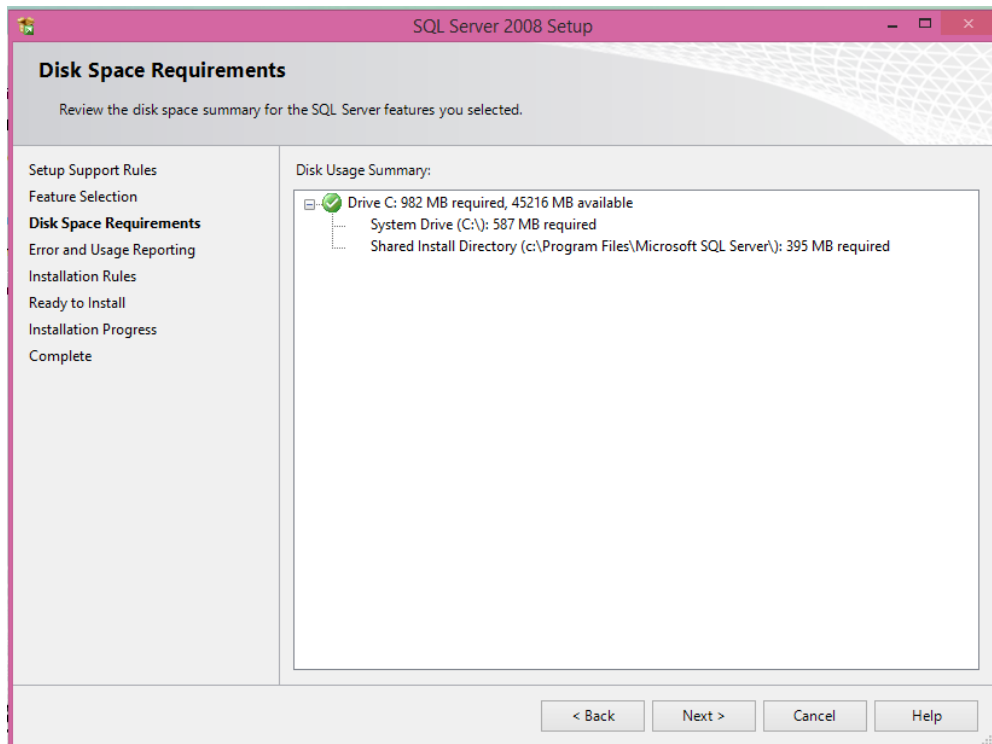


Fig. 99. SQL Server MS Express Disk Space Requirements

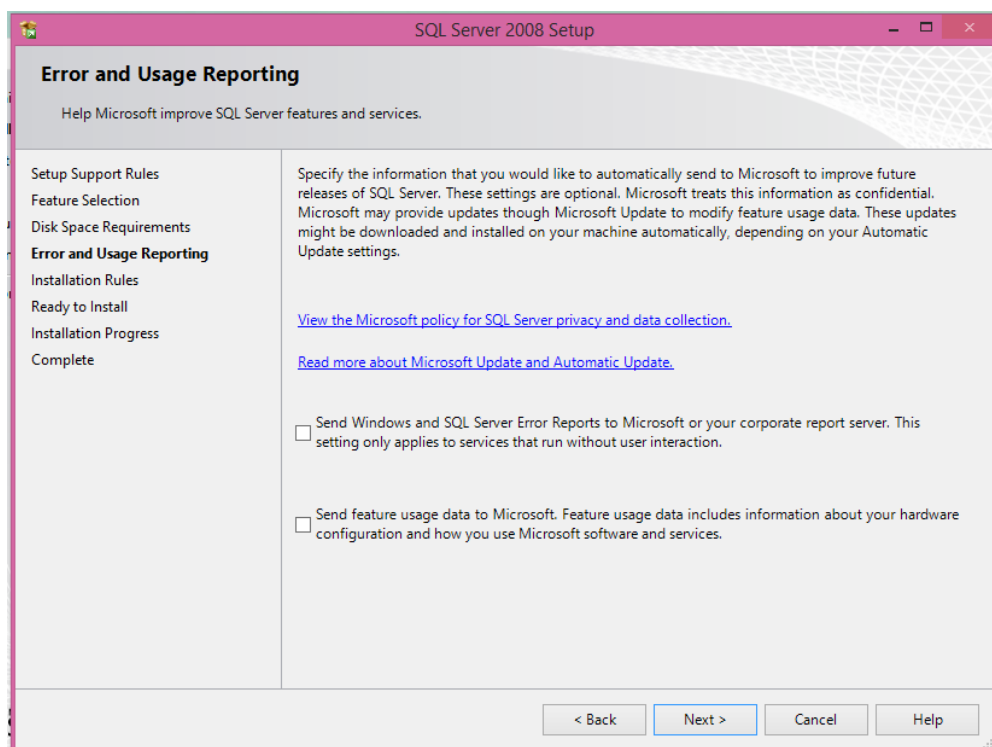


Fig. 100. SQL Server MS Express Error Reporting

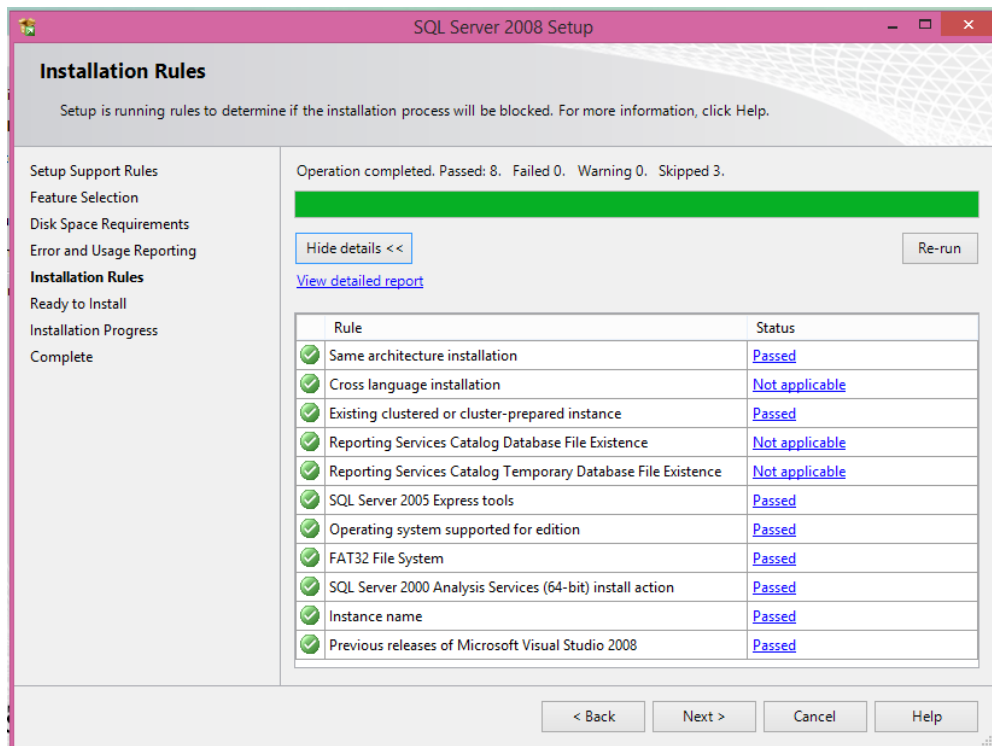


Fig. 101. SQL Server MS Express Installation Rules

SQL Server Management Studio Express is ready to install. Press Install:

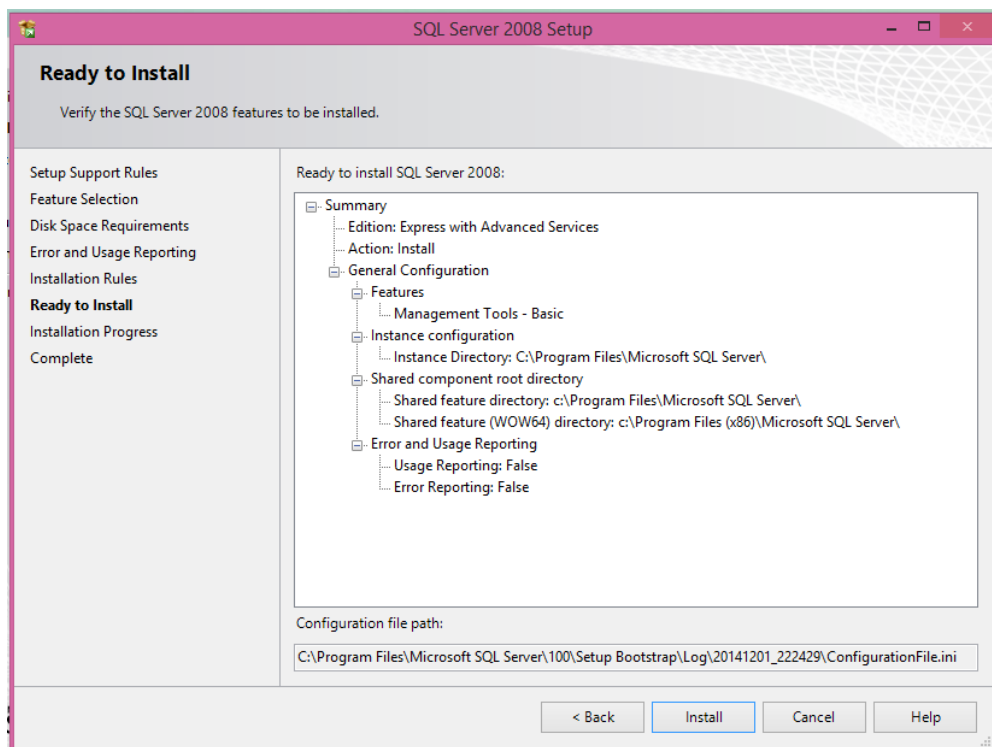


Fig. 102. SQL Server MS Express Ready to Install

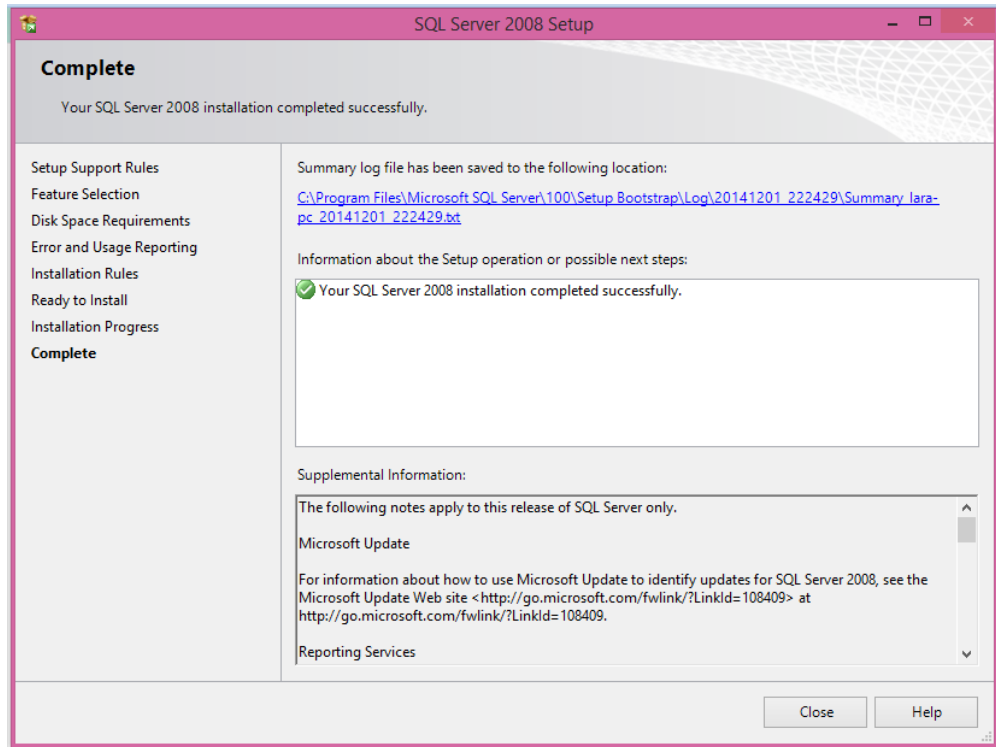


Fig. 103. SQL Server MS Express Complete

TROUBLESHOOTING SETUP PROBLEMS

In this section you can find additional information that you may need in order to solve installation problems.

4.1.4 SQL Server installation problems

Under certain circumstances, the SQL Server program may encounter problems depending on the actual configuration of the PC and of the network. These problems are outside the control of Electrolux.

In case of problems you can find in the internet plenty of information regarding tips and workarounds related to setup issues. You should in particular refer to Microsoft forums dealing with the matter.

Experience collected so far by GTC has revealed a few problems regarding the setup of SQL Server 2008 Express Edition. You can find the solution for these problems here:

<http://sidekick.electrolux.com/SidekickPortal/UsersReservedArea/DownloadDetails.aspx?ContentID=ApplicationNote3>