

# System Manual SmartIntego

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# System Manual SmartIntego

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## 1 Important

SimonsVoss Technologies GmbH reserves the right to modify the product without prior notification. As a result, the descriptions and images in this manual may differ from the latest version of the product or software. The German version of this manual takes precedence in cases of doubt. Errors and spelling mistakes excepted.

You can find more information about SimonsVoss products at:  
[www.simons-voss.com](http://www.simons-voss.com)

Access through a door may be denied if components are installed or programmed incorrectly. SimonsVoss Technologies GmbH is not liable for the consequences of incorrect installation, such as denied access to injured persons or those at risk, physical damage or any other losses.

People who have electronic, medical implants such as pacemakers and hearing aids must maintain a minimum distance of 30 cm between the implant and network components and should be expressly informed of this requirement. In the interests of safety, people wearing electronic implants should seek medical advice regarding the potential hazards of radio components (868/915 MHz).

Read through all manuals for the individual SmartIntego components carefully.

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## 2 Introduction

You can use the SimonsVoss SmartIntego Manager to set up radio and/or cable networks on your own accord. You must have extensive knowledge of the SmartIntego Tool application software, WaveNet technology and the SV hardware components. Knowledge of IT administration ( TCP/IP, LAN / WAN and COM ports) is required.

SmartIntego Manager provides automatic addresses (hex address) for all network nodes in a SimonsVoss radio/cable network. A scan will detect any network nodes already installed. Each component sends a feedback signal with its chip ID to SmartIntego Manager. A network structure is then formed in SmartIntego Manager and the automatically generated hex addresses and chip IDs are displayed. This structure (= topology [hex address]) is available as an exported .csv file after SmartIntego Manager is closed. The radio frequency for Europe and Asia is 868 MHz. 9 different radio channels are available for use.

Note down the associated chip ID for the installation location, so that you can identify where the different network nodes are located.

Remember that precise documentation and a data backup need to be maintained on a continuous basis to ensure stable operation.

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## 3 System requirements

<b>General information</b>	Local administrator rights for the installation TCP/IP communication (with activated NetBios) LAN (recommended: 100 MBit/s) Windows domain Acrobat Reader (for the help function)
<b>Client/minimum hardware requirements</b>	Monitor, min. 19" with minimum resolution of 1,024 x 768 px. CPU: 2.66 GHz (or faster) 2 GB RAM (or more) Windows 7 Professional USB port/LAN connection

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## 4 Software installation and configuration

### 4.1 Installation and configuration of the TCP/IP settings

Installation instructions for SmartIntego GatewayNode for TCP/IP network settings using Digi Device Discovery

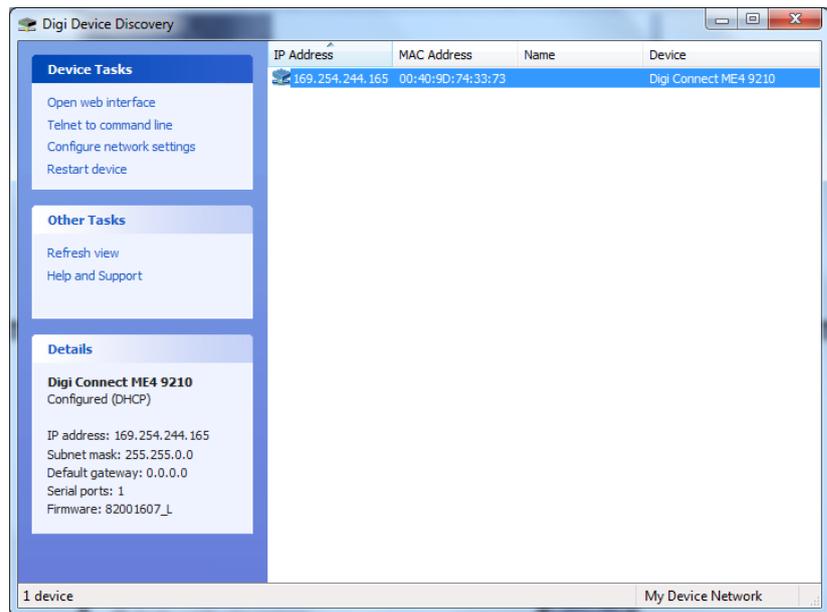
**Installation of Digi Device Discovery**

1. Insert the CD supplied with the GatewayNode into the CD drive.
2. Select the language that you require.
3. Open the 'Discovery Tool' folder.
4. Run the application as an administrator. (Right-click on 'Run as administrator')
5. Follow the installation steps.

⇒ After installation is complete, the system displays the message 'Digi Device Discovery has now been successfully installed'.

**Configuration of Digi Device Discovery**

1. Launch the Digi Device Discovery application that you have just installed.

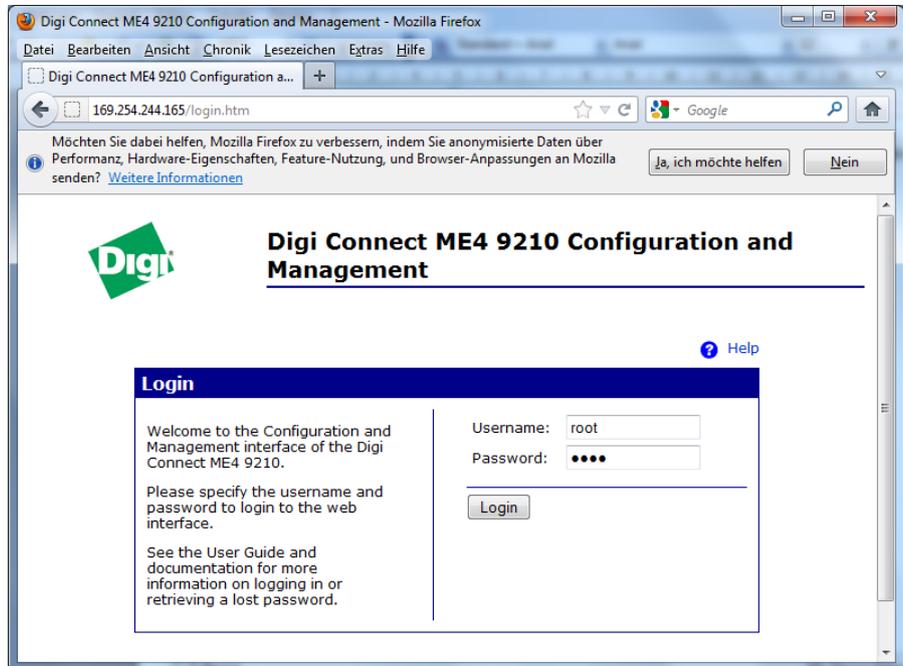


2. Select the corresponding IP address and click on 'Open web interface'.

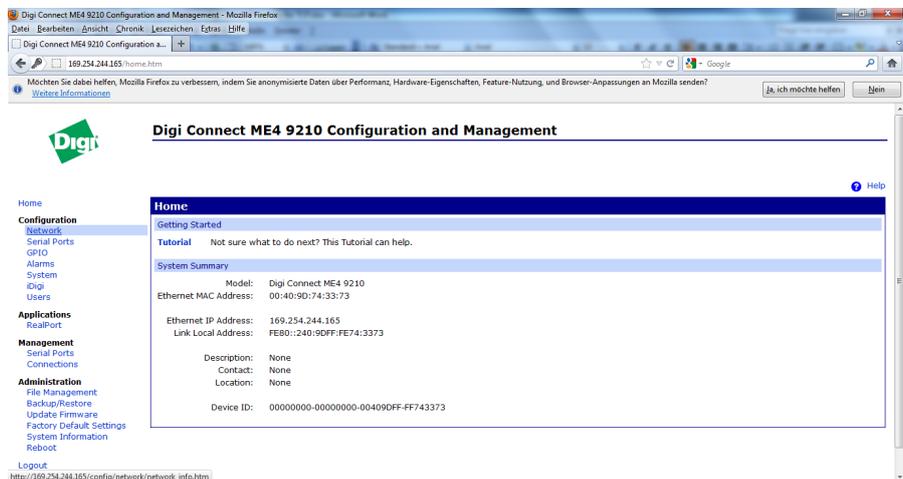
**NOTICE**

You must always start in the same subnet whenever you work with this application to ensure that you can establish a connection with the device and can change/configure TCP/IP network settings.

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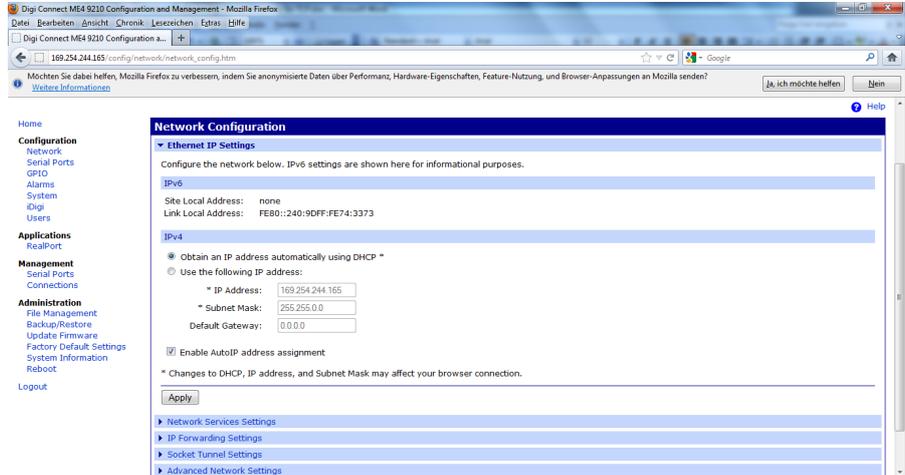


3. Log on. The default log-on credentials are 'root' for the user name and 'dbps' for the password.



4. Navigate to Configuration/Network.

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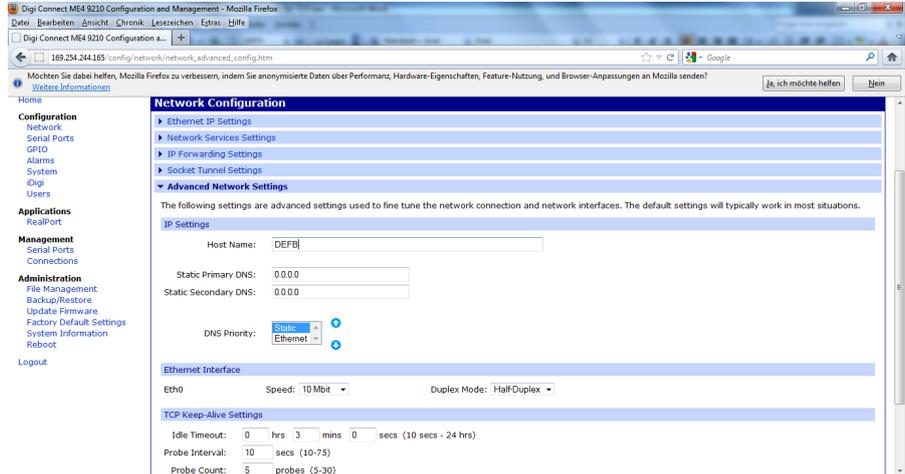


## NOTICE

Once there, you can configure your IP settings. The configuration is set to DHCP by default. Once you have implemented changes, click on 'Apply' to accept the changes that you have made. Log out when you have completed the configuration.

This application uses Port 2101 to communicate. Ensure that this port is also open during the browser session.

5. Click on the 'Advanced network settings' if you wish to edit them.



## NOTICE

This is where you can add the chip ID on the GatewayNode device as the host name, e.g. DEFB. Click on 'Apply'.

- 6. Close the web interface.
  - ⇒ You should now return to the Digi Device Discovery application.
  - ⇒ You will now be able to see the GatewayNode's TCP/IP settings and chip ID.
- 7. Use the same procedure to set up any other GatewayNodes.

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## 4.2 Programming device driver installation

### NOTICE

You must ensure that the card programming device remains connected to the SmartIntego software via the USB port during the entire configuration and programming process.

1. Connect the programming device to your computer.
2. Run the driver application, which you will find labelled as 'CardDriver' in the SmartIntego installation folder.  
⇒ The message 'Installation completed successfully' will be displayed once installation is complete.

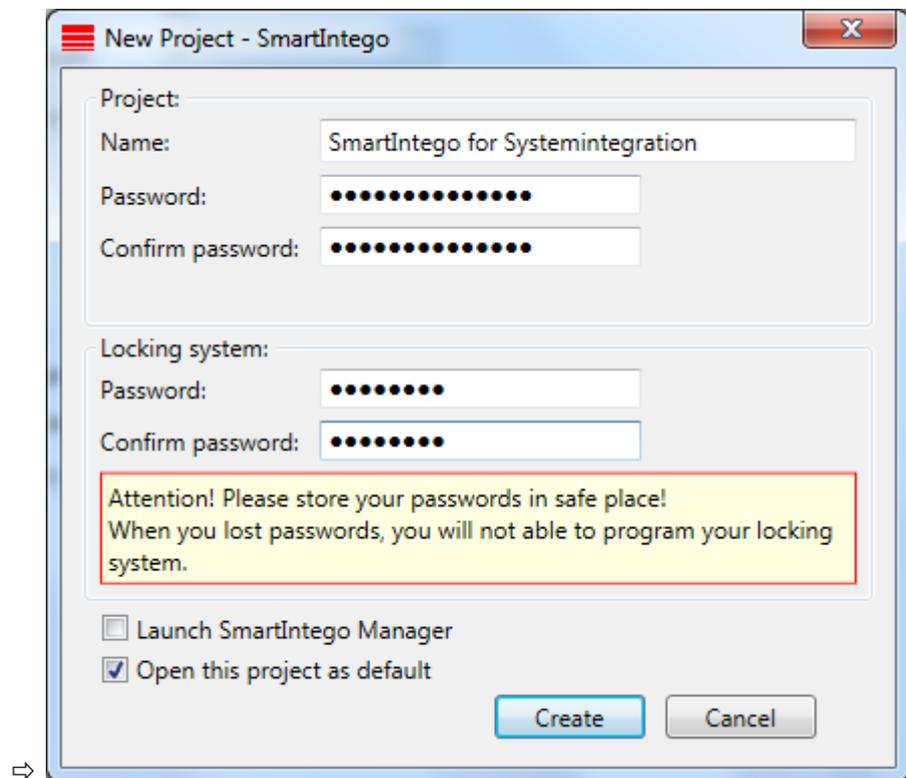
## 4.3 SmartIntego software installation and configuration

### 4.3.1 Installing the SmartIntego software

Install the latest version of the SmartIntego software.

### 4.3.2 Create new project

1. Run SmartIntego software as an administrator.  
⇒ A wizard to create a new project will launch automatically.



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2. 'Project - name': Enter project name (example: SmartIntego for system integration).
3. 'Project - password': enter the password that you want to use to protect the project.
4. 'Project - confirm password': re-enter the password to check.
5. 'Locking system - password': enter the password which will be programmed into all devices.
6. 'Locking system - confirm password': re-enter the password to check.

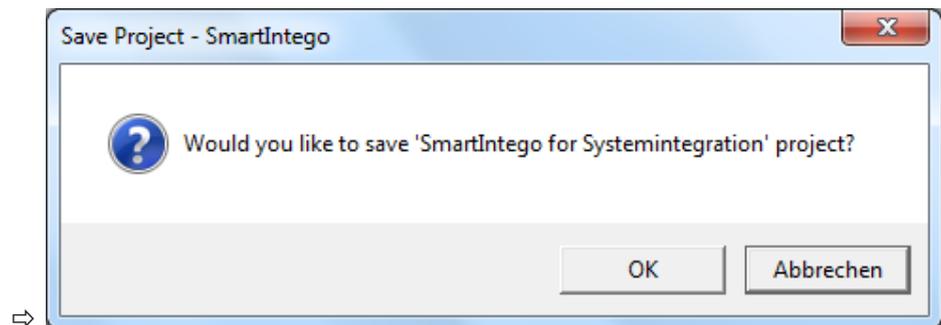
### NOTICE

The 'Project - password' and the 'Locking system - password' must be different from one another and must each consist of 8 characters.

### NOTICE

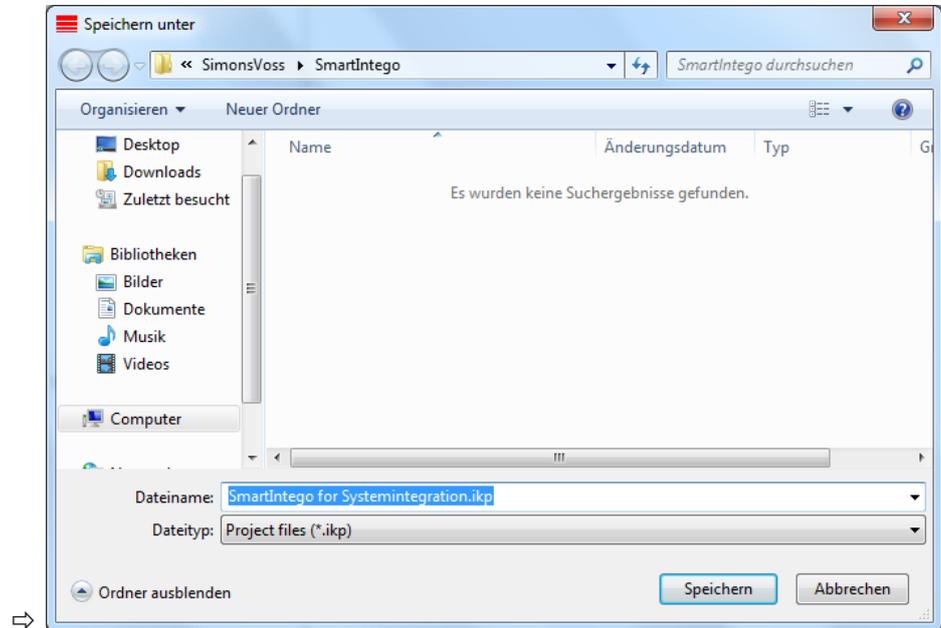
Activate 'Open this project as default' checkbox to open this project whenever you launch SmartIntego software.

7. Press 'OK' to continue.



8. Save .ikp file: we recommend saving the .ikp file in the SmartIntego installation directory.

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### 4.3.3 Card configuration: unique ID

Click on 'Card config (CardCfg\_0001)' to configure your cards (card configuration).

ID: not configurable

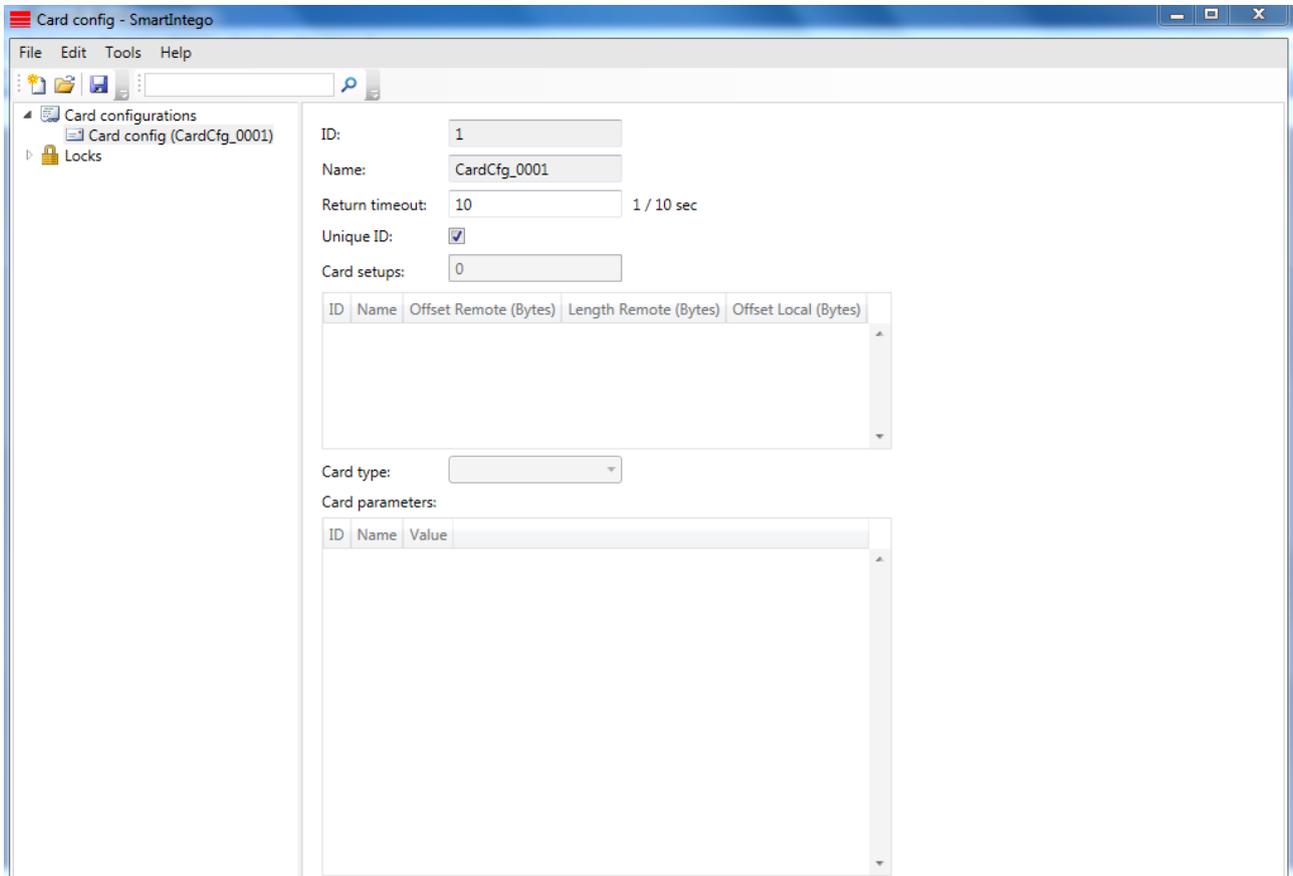
Name: not configurable

Return timeout: e.g. 10 -->  $1/10 = 1$  sec.

Unique ID: activate the checkbox if a unique ID is being used. If you deactivate the checkbox, the configuration for MIFARE/MIFARE DESFire will appear.

Card setups: if a UID (unique ID) is selected, the checkboxes for the card settings are greyed out.

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### 4.3.4 Card configuration: Mifare Classic

Click on 'Card config (CardCfg\_0001)' to configure your cards (card configuration).

ID: not configurable

Name: not configurable

Return timeout: e.g. 10 --> 1 / 10 = 1 sec.

Unique ID: If you deactivate the checkbox --> the configuration for MIFARE/ MIFARE DESFire will appear.

Card setups: you can configure up to five different MC/MD card settings.

ID: not configurable

Name: configurable

Delay: via radio (bytes): configurable

Length remote (bytes): configurable

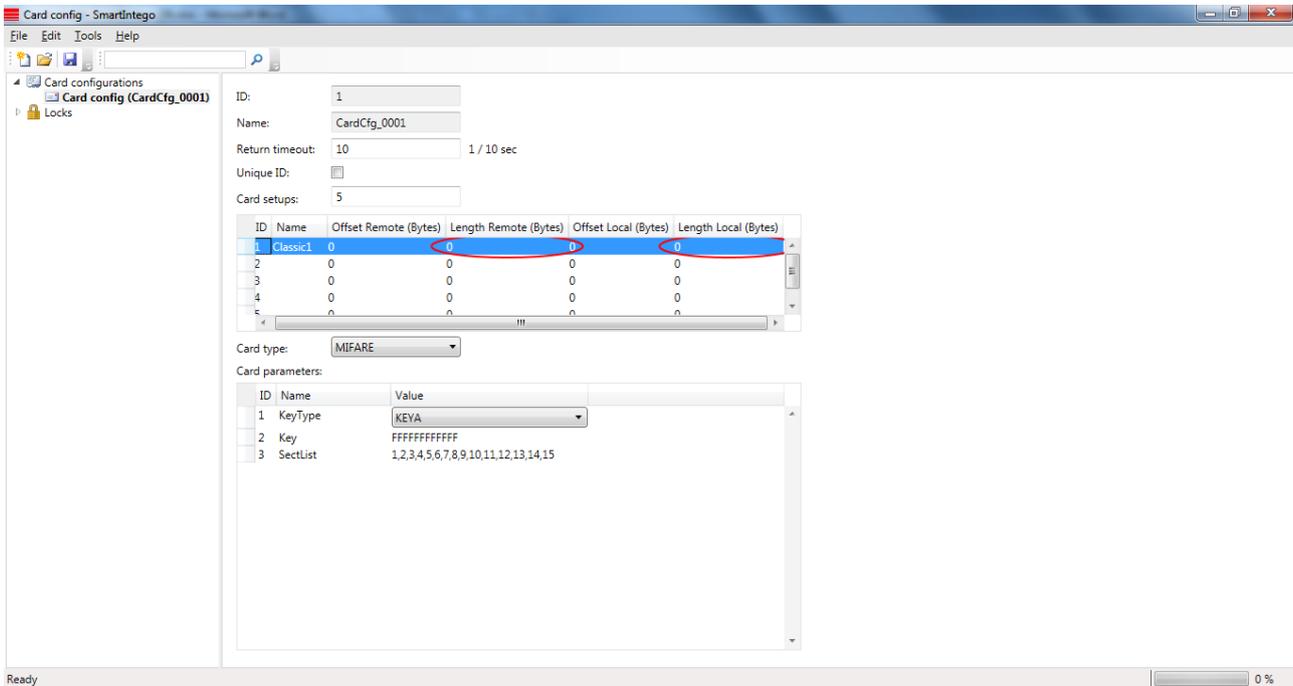
Delay: local operation (bytes): configurable

Length local (bytes): configurable

Red-highlighted areas indicate missing or incorrect information.

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Please note: the system integrator must enter the card parameters.



### 4.3.5 Card configuration: Mifare DESfire

Click on 'Card config (CardCfg\_0001)' to configure your cards (card configuration).

ID: not configurable

Name: not configurable

Return timeout: e. g. 10 --> 1 / 10 = 1 sec.

Unique ID: If you deactivate the checkbox --> the configuration for MIFARE/ MIFARE DESFire will appear.

Card setups: you can configure up to five different MC or MD card settings.

ID: not configurable

Name: configurable

Delay: via radio (bytes): configurable

Length remote (bytes): configurable

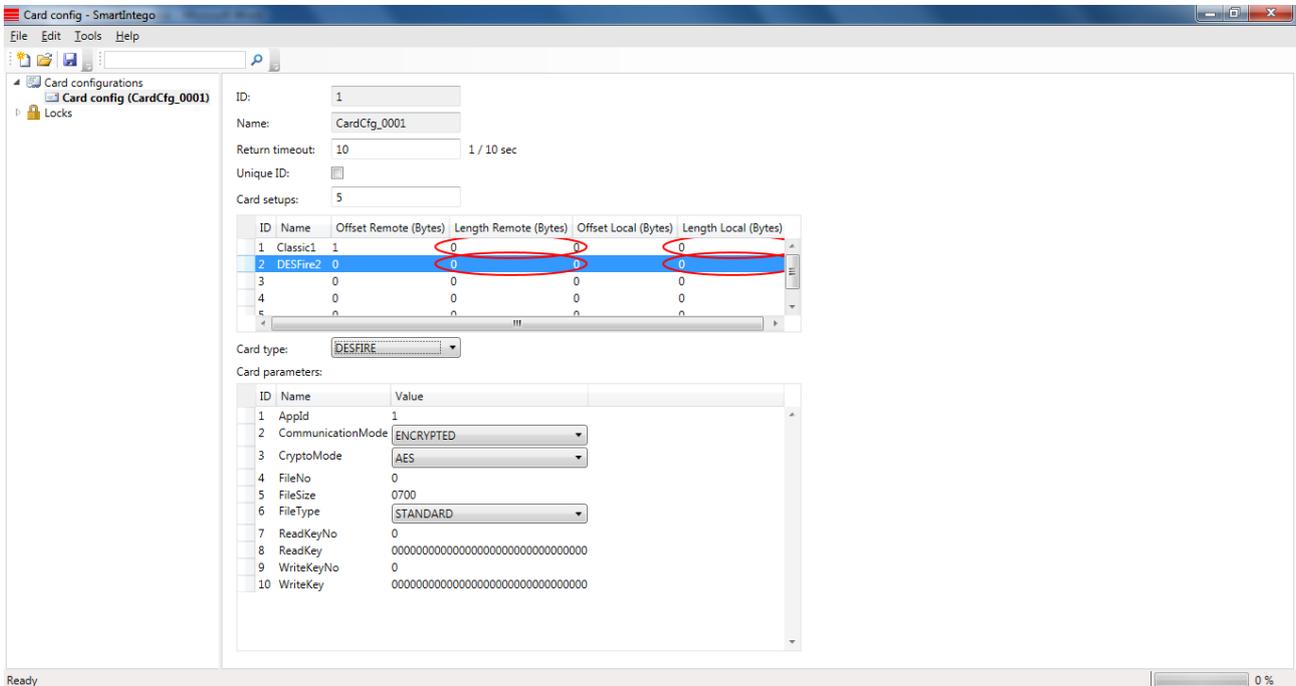
Delay: local operation (bytes): configurable

Length local (bytes): configurable

Red-highlighted areas indicate missing or incorrect information.

Please note: the system integrator must enter the card parameters.

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### 4.3.6 Radio network configuration

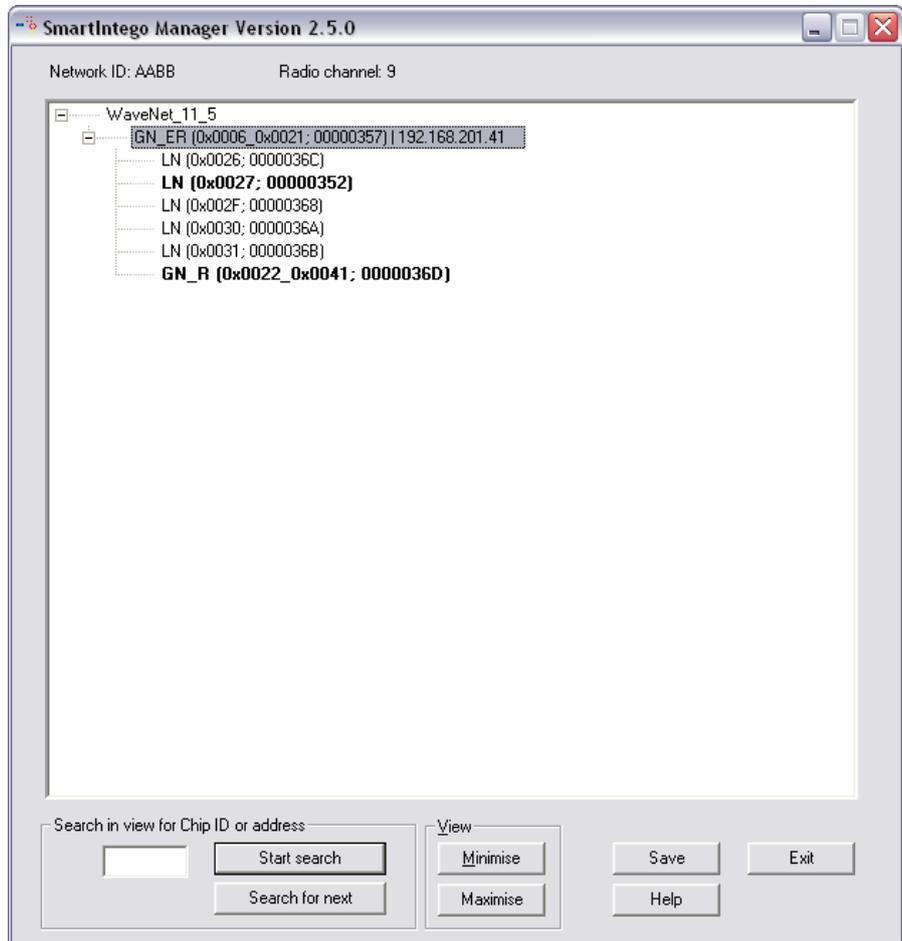
1. Click on Tools/SmartIntego Manager to launch SmartIntego Manager and configure the radio network settings.
2. Enter the password for network components.

## NOTICE

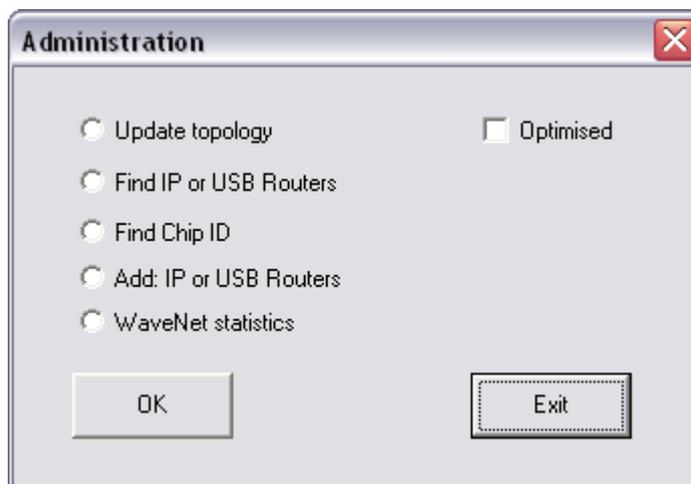
Keep this password in a secure place. SimonsVoss Technologies GmbH is unable to restore the password if it is lost.

3. Right-click on 'WaveNet\_11\_5'.

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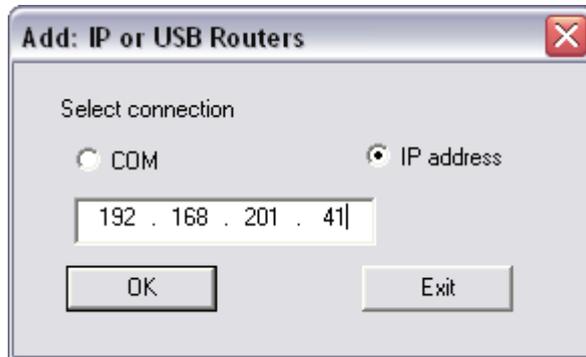


4. Select 'Add: CN\_U(X), CN\_S(X), RN\_E(X) or RN\_W(X)' to add a GatewayNode to SmartIntego Manager and then click on 'OK'.



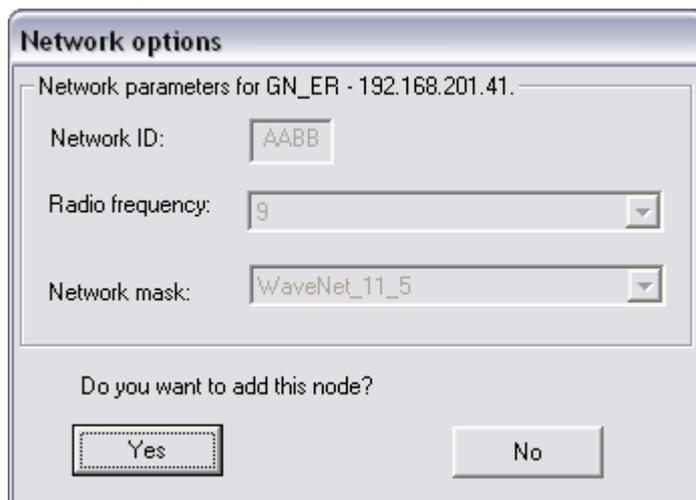
5. Click on 'Add IP or USB routers' and 'IP address' and enter the address for the GatewayNode.

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⇒

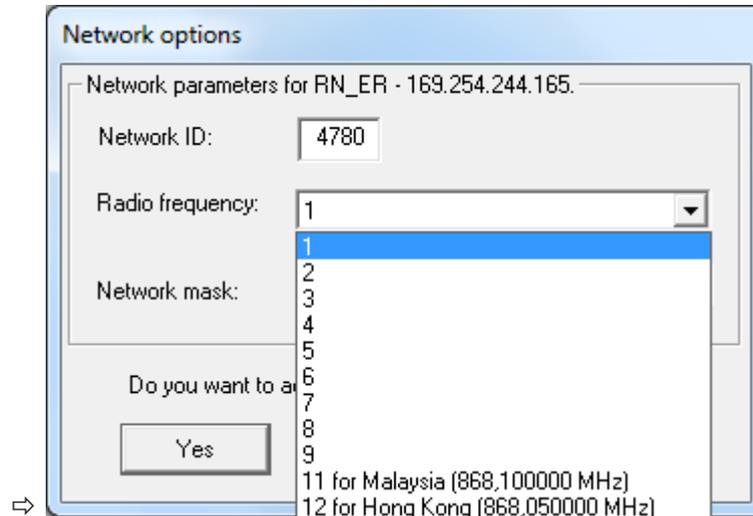
6. Network ID: e.g. the software randomly selects 4780 as the network ID. Used in conjunction with the password, this network ID provides a unique designation for your radio network.



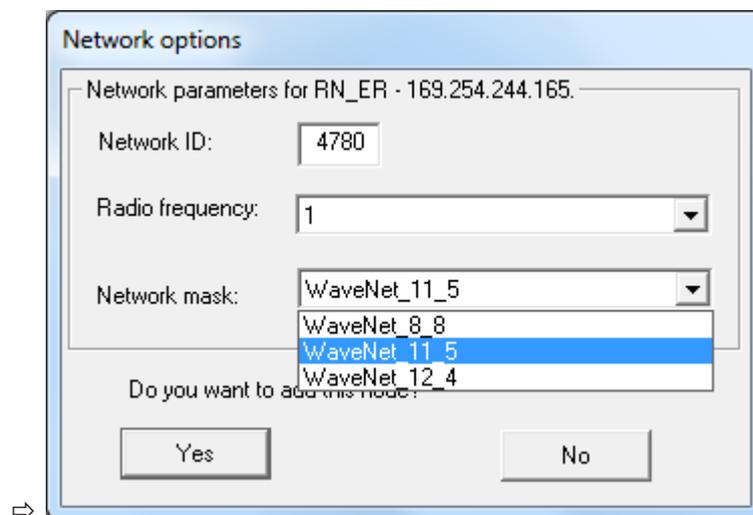
⇒

7. This is where you can select the frequency of your radio network. Ensure that no other devices use the same frequency since this can affect the performance of all associated networks. Calculating the frequency:  $868.1 \text{ MHz} + n * 0.2$  ( $n=1,2,\dots,9$ )

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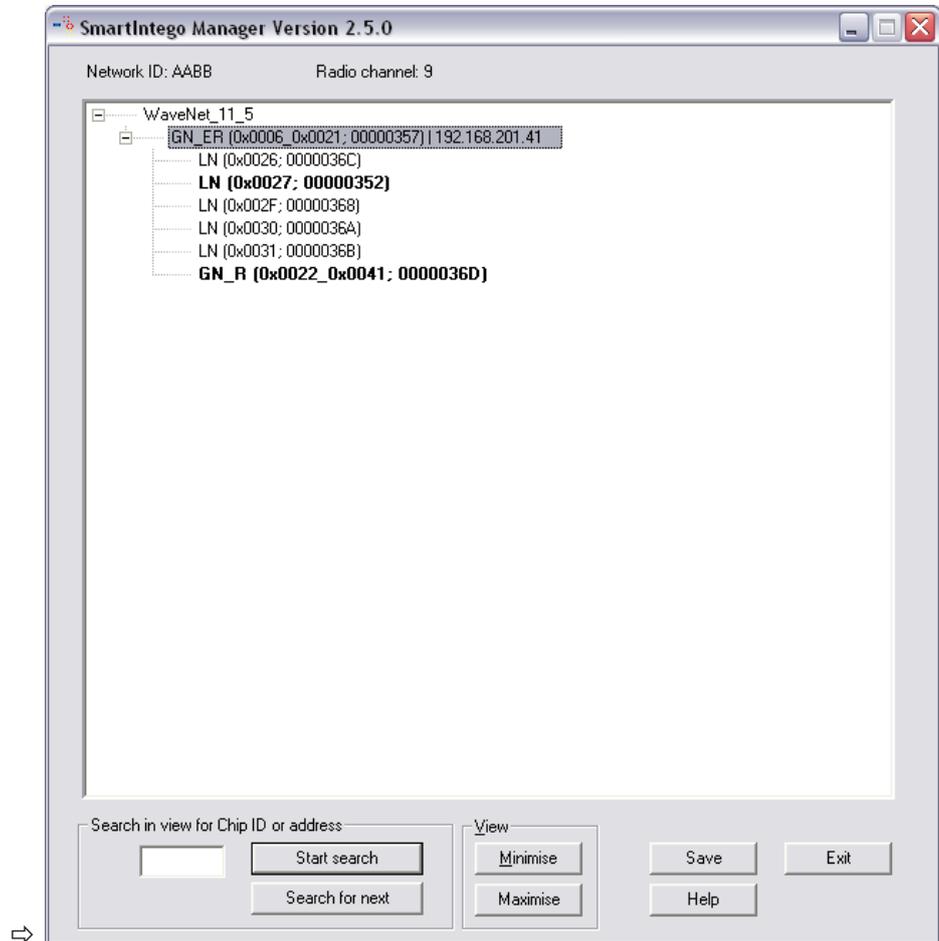


8. Network mask: you must select the 11\_5 network mask for SmartIntego. Click on 'Yes' to add this node. This option is no longer available once the settings have been made. It will not appear again until you reset or delete all devices and set up a new radio network.



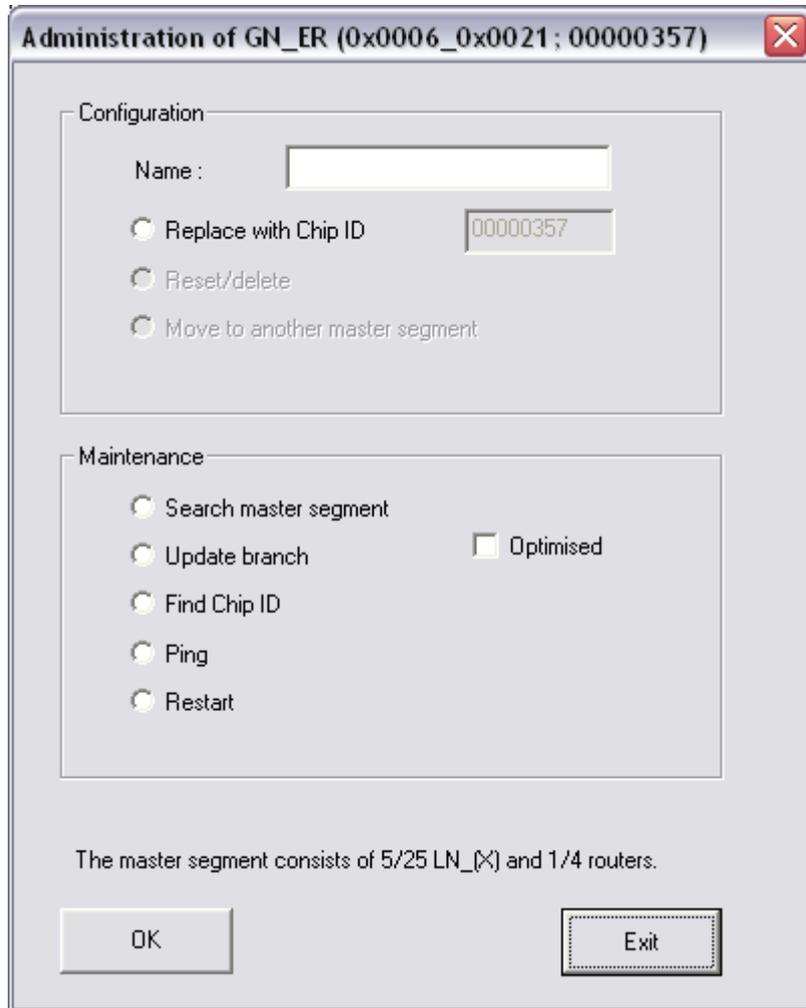
9. The window displays the successfully configured GatewayNode. Right-click to select the GatewayNode (GN).

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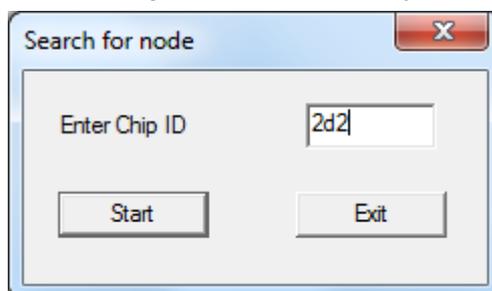
10. Enter the name to describe the door (e.g. main entrance). Select 'Find chip ID' and click on 'OK'.

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⇒

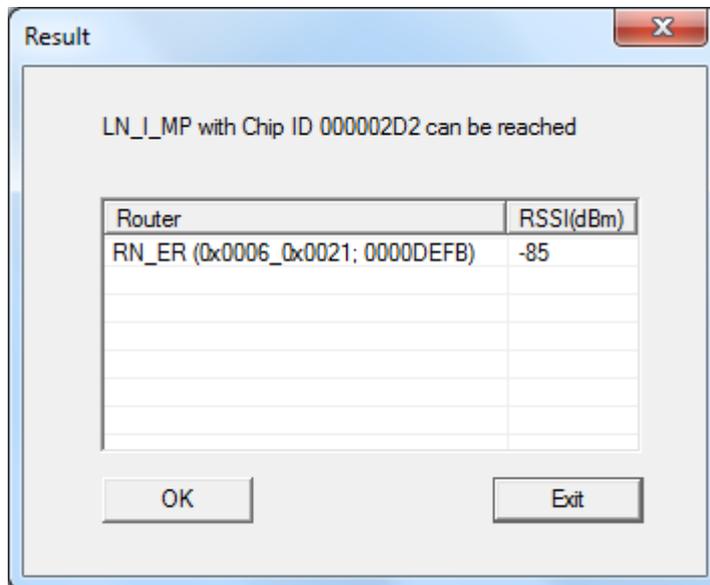
11. Enter the chip ID featured on the label on the locking cylinder packaging or inside the SmartHandle packaging --> e.g. 2d2 and the ID to be assigned to the GatewayNode and click on 'Start'.



⇒

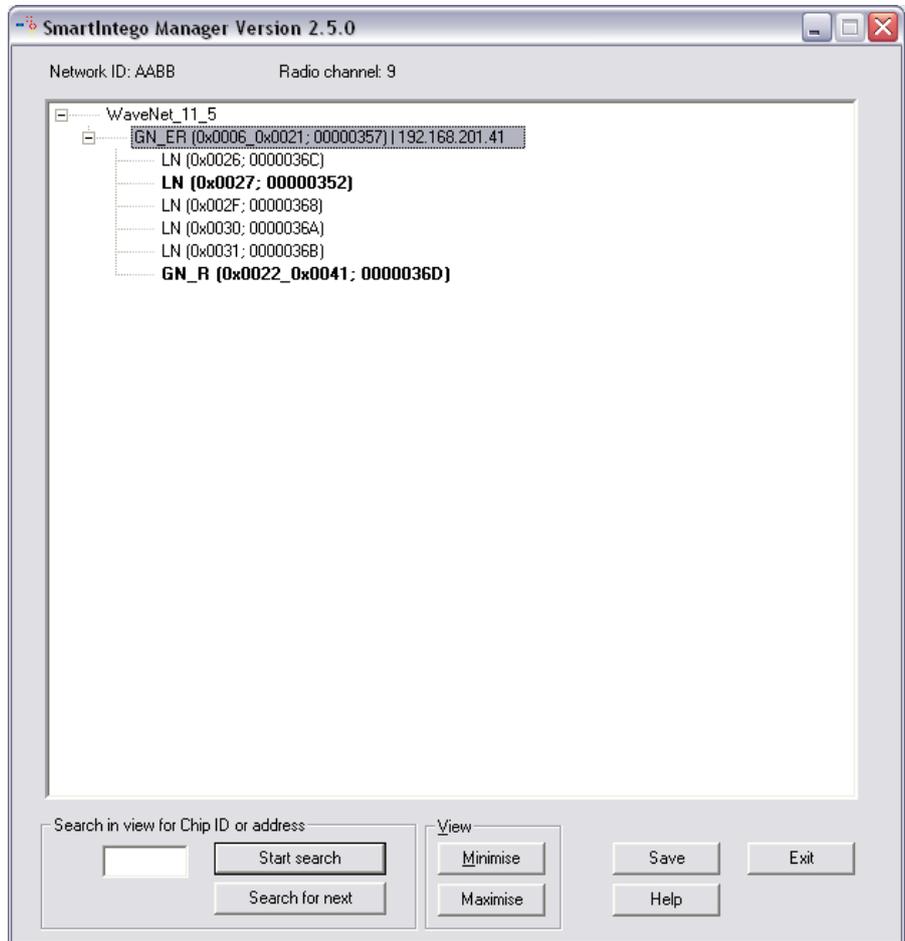
12. Select the input and click on 'OK'.

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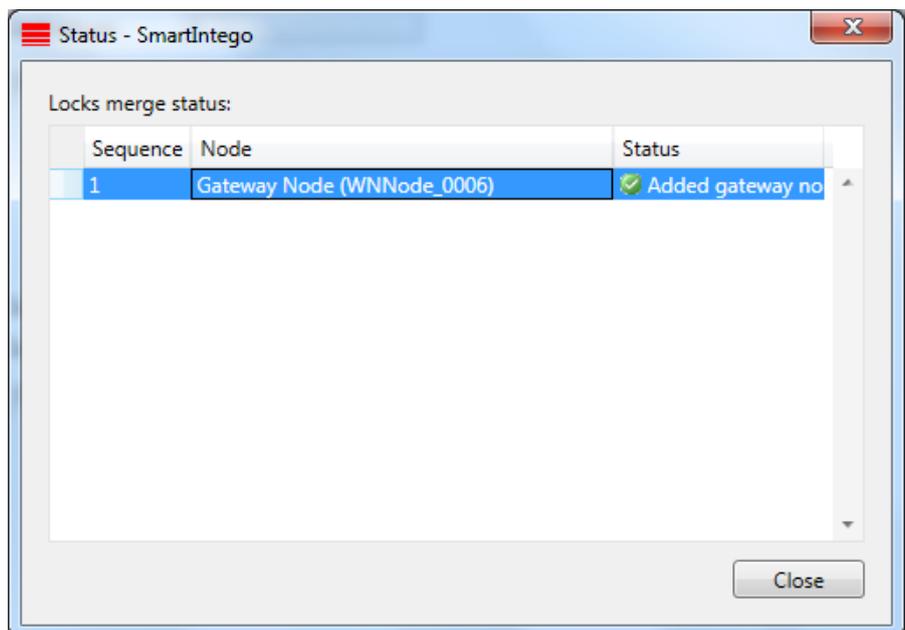


- ⇒
13. The image shows a successfully configured segment. Use the same procedure for any other devices. Click on 'Save' to continue once all nodes have been configured successfully.

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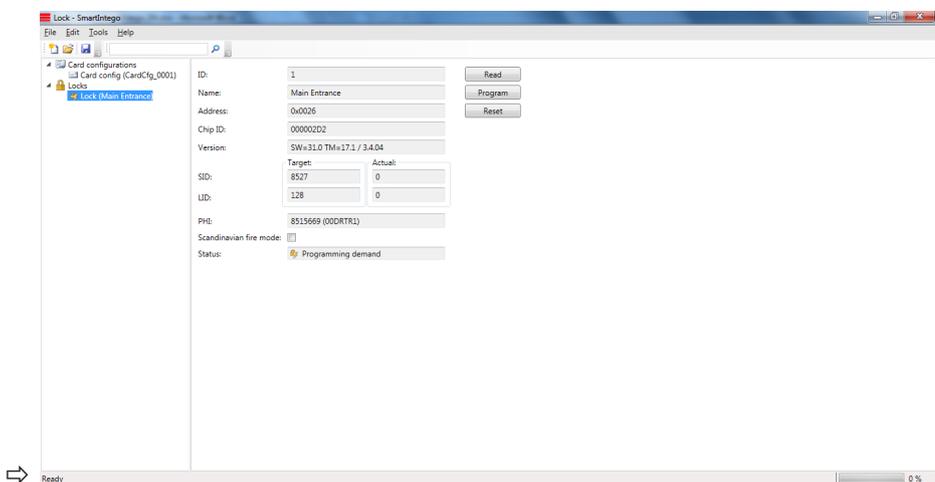


14. After you click on 'Exit', another screen is shown.

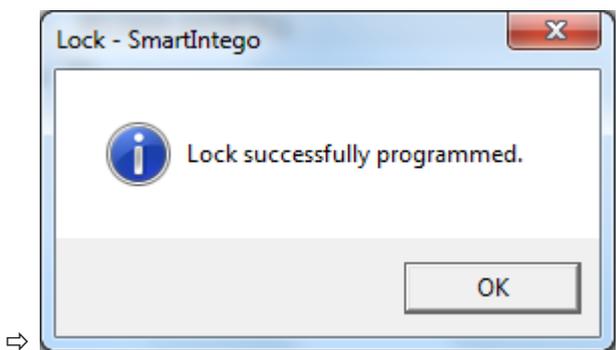


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- 15. Click on Locks --> Lock (Main Entrance) | ID: not configurable | Name: configurable | Address: not configurable | Chip ID: not configurable | Version: not configurable | SID (System ID)/LID (Lock ID): not configurable | PHI (Physical Hardware Identifier): not configurable | Time-controlled return function (Scandinavian FireMode): if you activate the checkbox, the lock remains engaged ready for use for a specific period of time --> disengages after a pre-set interval or double batch processing with an authorised card. | Status: programming prompt --> locking device/locking devices need programming | Status: OK --> no further measures required | Read: read lock using wireless connection | Programme: programme lock via wireless connection | Reset: reset lock to default settings via wireless connection



- 16. You need to click on 'Read' first if you would like to programme an unprogrammed lock. Then run 'Program' (top, right-hand corner). The unique chip ID is also printed on the SI product.



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### 5 SmartIntego Manager

#### 5.1 Network ID

The default network ID is: DDDD (standard). All unprogrammed SmartIntego Manager components have this network ID. A new network ID must be assigned manually at a later stage. The flash icon (shown below) indicates that it was not possible to complete the configuration for the components concerned in this segment.



#### 5.2 Save button

Click on the 'Save' button if you have made any changes. All GatewayNodes and LockNodes will receive their configuration once you do so.

#### 5.3 Radio channel

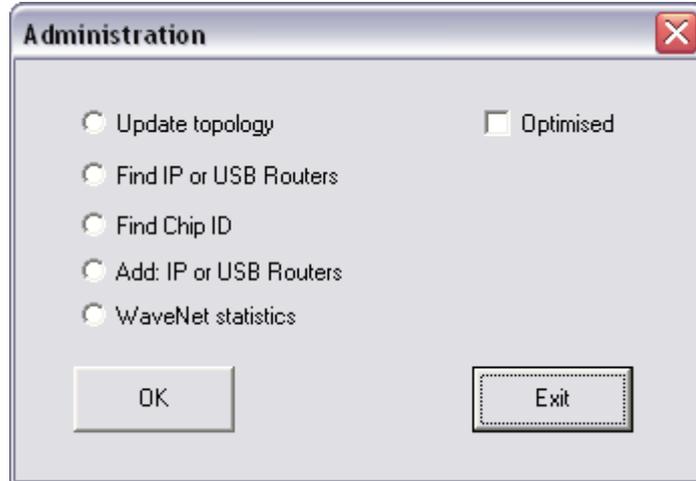
All unprogrammed SmartIntego Manager components have a default frequency (default radio channel). A different radio channel must be assigned manually at a later stage. The default radio channel is always used in addition to the radio channel selected manually. This enables new components to be added to existing WLAN networks. As a result, signals can be sometimes transmitted on two different frequencies. Only one frequency is used during normal operations.



#### 5.4 SmartIntego Manager

You can open administration by double-clicking or right-clicking on WaveNet in SmartIntego Manager.

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**Update topology:** automatic configuration of the whole network followed by messages in SmartIntego Manager with an hexadecimal address and chip ID for all network nodes/components reached. This can take several minutes, depending on the size.

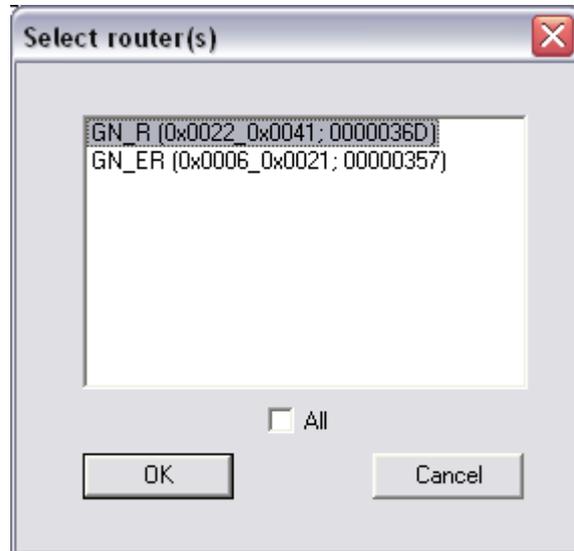
**Optimised:** if the 'Optimised' setting is used, a search is initiated for both new nodes and previously configured nodes. You can move configured nodes (from other segments) to other segments to improve availability. The system will search for new nodes if this setting is not used.

**Find GN\_U(X), GN\_ER:** the search is for these components only. Search for chip ID: You can use the chip ID to look for a specific component anywhere in the network/topology.

## 5.5 Select GatewayNode

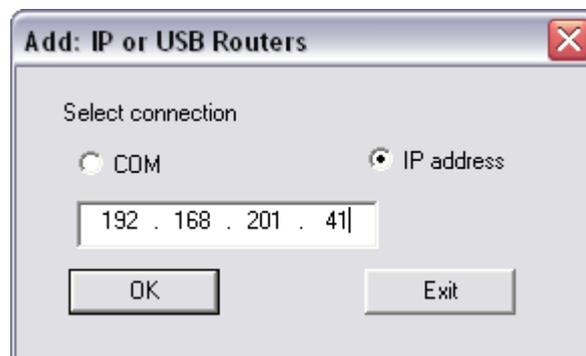
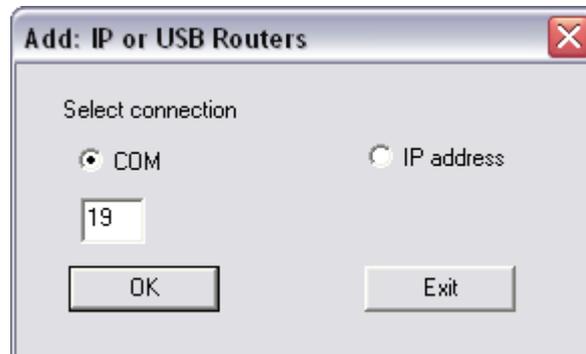
If you select 'Update topology' or 'Search for chip ID', you can implement the function in the selected master segment concerned.

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## 5.6 Add GatewayNode

Add GN\_U(X), GN\_ER: these components are directly added to the topology via a COM port or using the IP address.



## 5.7 WaveNet statistics

Displays all configured SmartIntego Manager components.

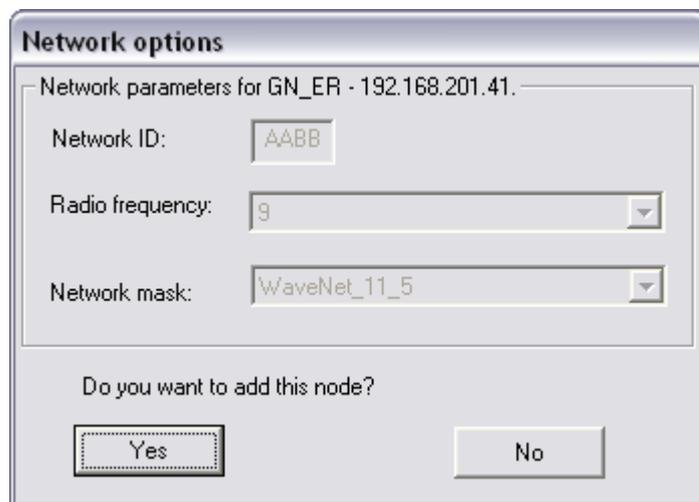
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A network ID must be entered if a new network needs to be identified or generated. The characters 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E and F are permitted with a maximum length of four characters. The addresses 0000, 0001, DDDD and FFFF are not permitted as a network ID. You also need to select a radio frequency. Channels 1-9 and 11-15 are available for this purposes. Channels 11 and 12 are special frequencies which are used in Hong Kong and Malaysia, but they can also be used in Europe.

### 5.8 Network mask

- 8\_8 --> max. 249 GatewayNodes and max. 249 doors (per GatewayNode)
- 11\_5 --> max. 1,700 GatewayNodes and max. 25 doors (per GatewayNode)
- 12\_4 --> max. 3,200 GatewayNodes and max. 9 doors (per GatewayNode)

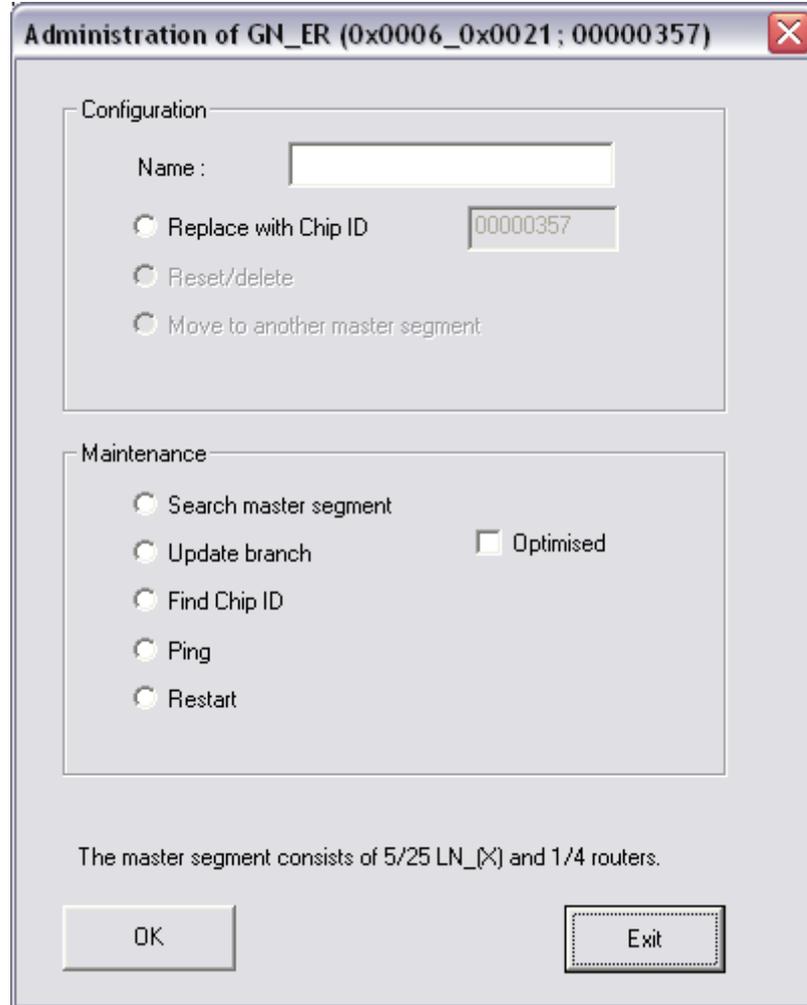
If you click on 'Yes' to close the dialogue, the network ID and the radio frequency are programmed into the new components. This dialogue window is not displayed for existing networks.



### 5.9 GN\_U(X), GN\_ER – Administration

You can open administration by double-clicking or right-clicking on a GatewayNode in SmartIntego Manager.

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- Name:  
this is where you can enter the name of the GatewayNode.
- Replace with chip ID:  
If you wish to replace a component, you can enter the chip ID to add the new component to the selected segment. The configuration is then transmitted to the new network nodes. Please note: if a programming flash icon is displayed for a component, you can try to programme a new configuration which will be added to the selected master segment without changing the chip ID.
- Reset/delete:  
the selected components are reset and then deleted from the SmartIntego Manager screen. The components then feature the default configuration (default network ID: DDDD/Radio channel: default). A LockNode may not be reset until all locking devices have been reset.
- Move to another master segment:  
not possible for GNs.

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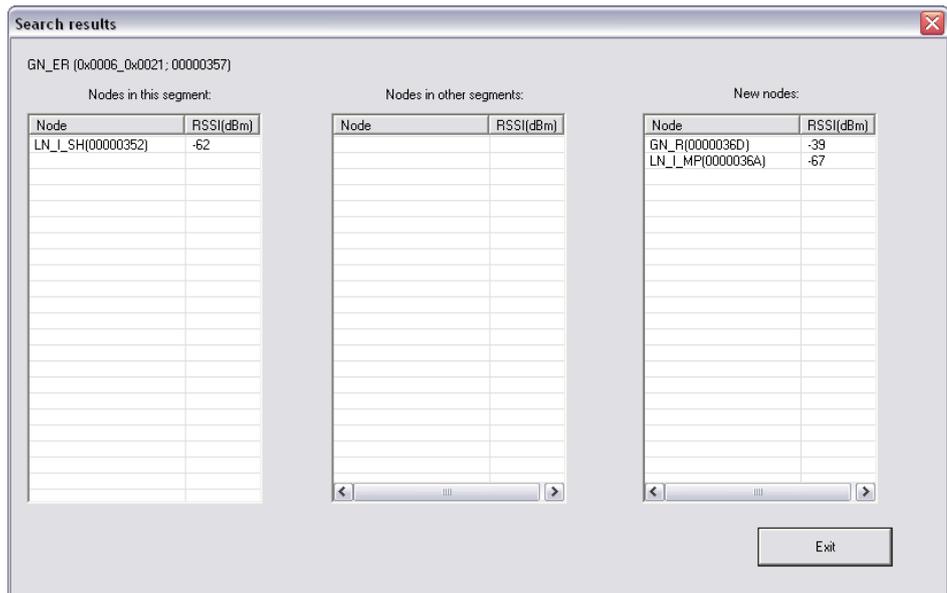
## 5.10 GN\_U(X), GN\_ER – Maintenance

- Search master segment:



- Search results:

creates an overview + possible configuration in this master segment.



The three columns describe and evaluate the nodes using RSSI which are available in the selected master segment. The RSSI value for wired segments is always 0 (zero).

- Nodes in this Segment:

this column displays all nodes which the previously selected master segment manages.

- Nodes in other segments:

this column displays all nodes from which the master segment detects radio signals which, however, do not belong to the master segment. The nodes in this master segment can be assigned by

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highlighting them and dragging them to this first column (Nodes in this segment). It may take a few seconds or minutes to assign them as the routing table needs to be updated.

– New nodes:

this column displays all nodes which have not yet been assigned to a master segment. The nodes in this master segment can be assigned by double-clicking or highlighting them and dragging them to this first column (Nodes in this segment). It may take a few seconds or minutes to assign them as the routing table needs to be updated.

– RSSI (dBm):

Received Signal Strength Indication = strength of the received signal --> an indicator of the received field strength. The more negative the displayed dBm value is, the poorer the quality that you can expect from the connection.

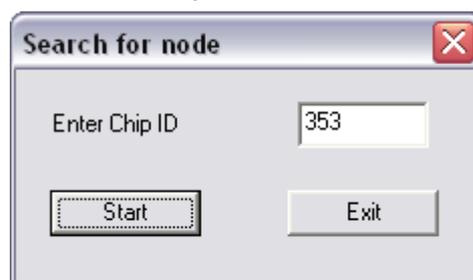
– Update branch:

unprogrammed components are automatically integrated into the branch based on their RSSI value.

– Optimised:

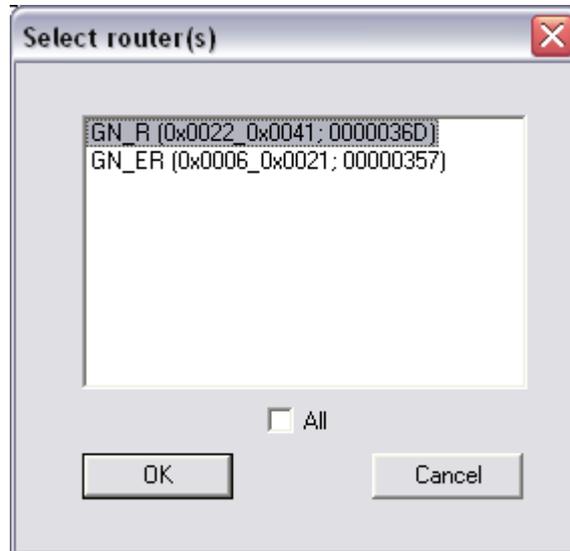
if the 'Optimised' setting is used, a search is initiated for both new nodes and previously configured nodes. You can move configured nodes (from other segments) to other segments to improve availability. The system will look for new nodes if this setting is not used.

Search for chip ID:



This is where you can look for a chip ID. A new window will open as soon as you have entered the chip ID.

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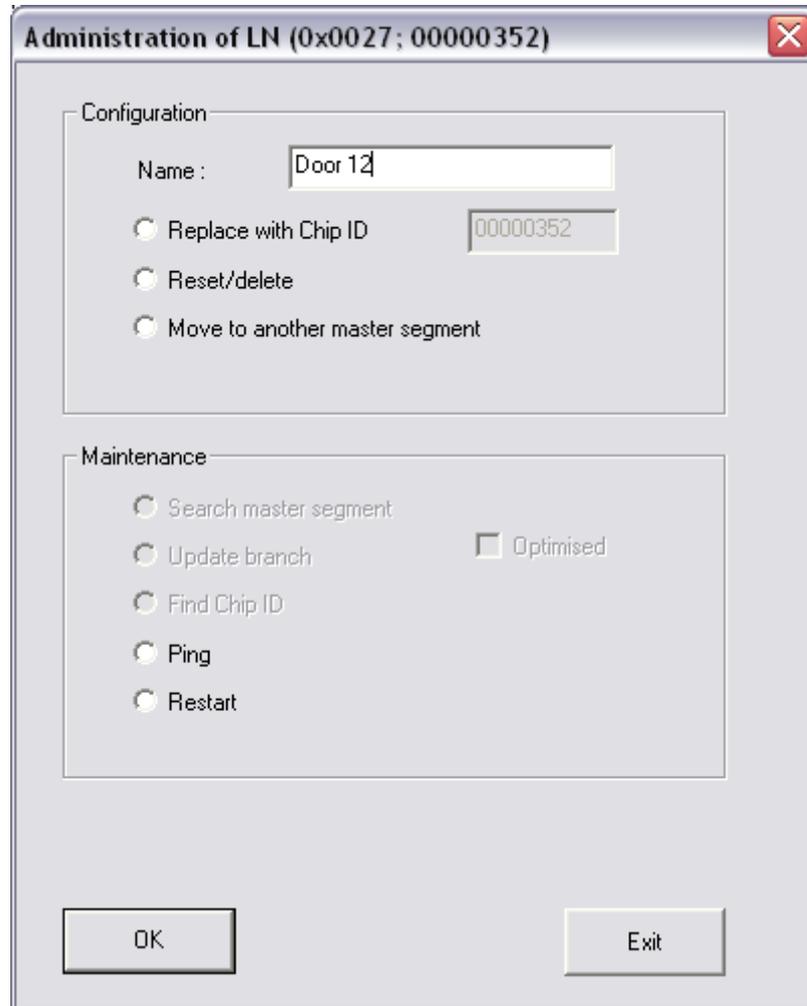
You can select which master segment is to be searched. You can select more than one segment. The entire network is searched if you select 'All'.

- Ping:  
an availability test is carried out for selected components.
- Reboot:  
the selected components are rebooted.

### 5.11 LockNode administration

You can open administration by double-clicking or right-clicking on a 'LockNode' in SmartIntego Manager.

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- Name:  
this is where you can enter the name of the door.
- Replace with chip ID:  
if you wish to replace a component, you can enter the chip ID to add the new component to the selected segment. The configuration is then transmitted to the new network nodes. If a programming flash icon is displayed for a component, you can try to programme a new configuration which will be added to the selected master segment without changing the chip ID.
- Reset/delete:  
the selected components are reset and then deleted from the SmartIntego Manager screen. The components then feature the default configuration (default network ID: DDDD/Radio channel: default)
- Move to another master segment:

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As a general rule: the more negative the RSSI value, the worse the connection quality is. You can click on the LN\_(X) to move it to another segment. The routing table is updated automatically if routers are added.

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## SmartIntego

## 6 Resetting GatewayNodes

### 6.1 SmartIntego Manager configurations of GatewayNodes only

1. Pull out the power plug.
2. Wait about 20 seconds.
3. Remove the cover (4 screws).
4. Press on the button on the circuit board, near the power supply socket, and keep it pressed down.
5. Re-insert the power plug.
6. Release the button when the red LED lights up (after about two seconds).
7. The SmartIntego Manager configuration has been reset (default setting).

### 6.2 SmartIntego Manager configuration of GatewayNodes

All SmartIntego Manager settings are reset to their default values if a previously configured LockNode is linked to another locking component in a locking system with a different locking system ID. The locking device which needs resetting needs to be reprogrammed and become part of a different locking system. You cannot use an unprogrammed locking device (locking system ID = 0 [zero]).

### 6.3 Resetting the TCP/IP configuration GN.ER

1. Pull out the power plug.
2. Wait about 20 seconds.
3. Remove the cover (4 screws).
4. Press on the button on the circuit board, near the power supply socket, and keep it pressed down.
5. Re-insert the power plug.
6. Hold the button down until the red and green LEDs flash alternately.
7. Then release the button.
8. The TCP/IP configuration has been deleted.

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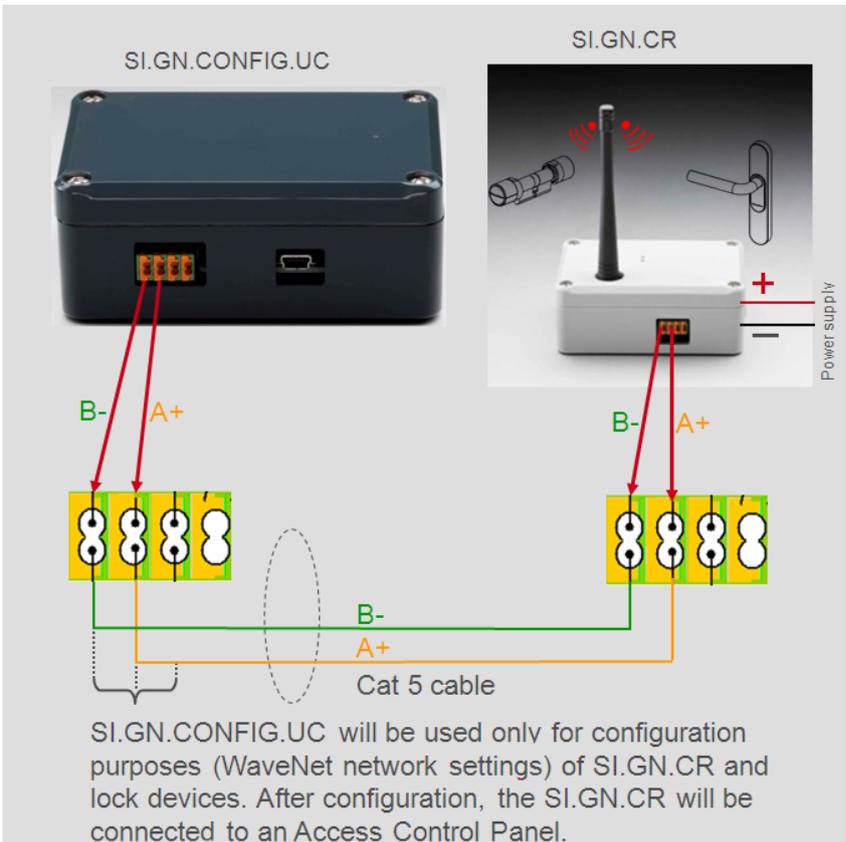
## 7 Connecting RS485, SI.GN.CONFIG.UC & SI.GN.CR

**RADIO NETWORK.**

SI.GN.CONFIG.UC  
+  
SI.GN.CR

Connection

SI.GN.CR.  
SI → SmartIntego  
GN → GatewayNode  
C → Cable (RS485) (Slave)  
R → Radio (Master)



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### 8 Resetting locking devices

1. Select the locking device concerned in the SmartIntego configuration software.
2. Click on the 'Reset' button. A yellow programming prompt is displayed if the reset was successfully completed.
3. Launch SmartIntego Manager to reset or delete the LockNode (Reset/Delete).

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## 9 Additional information

- Chip ID:  
indicated on the packaging label --> locking device/GatewayNode  
The packaging also contains an extra sticker for your documentation.
- PHI:  
indicated on the packaging label --> locking device + locking cylinder housing

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### **10 Declaration of Conformity**

You can access documents such as declarations of conformity and other certificates online at [www.smartintego.com](http://www.smartintego.com).

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## 11 Help & contact for SmartIntego

### Instruction manuals

You will find detailed information on operation and configuration online on our homepage at [www.smartintego.com](http://www.smartintego.com) at INFOCENTRE > PARTNER AREA > DOCUMENTATION

SimonsVoss Technologies GmbH  
Feringastrasse 4  
85774 Unterföhring  
Germany