

!D Hand 2

# Manual ASSY HH2

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# 1 Introduction

The Nedap !D Hand 2 (ASSY HH2) is an RFID handheld reader that is easy to use, lightweight and has a high performance. It can be connected with Bluetooth to a 3rd party device. Due to the 'Made for iPhone, iPod, iPad' certification it works with iOS devices.

The !D Hand 2 is able to read and write UHF RFID labels (RAIN RFID) and also includes a 2D barcode scanner. The !D Hand 2 can be charged wireless with a docking station, or by the Micro USB connector.

## Knowledge Base articles

This manual provides an overview of the products, the installation and configuration. To obtain more details on various topics or background information, several Knowledge Base articles are available, and are referred to in this manual. You can find the Knowledge Base articles on the Nedap Retail Partner Portal.

This manual covers the following products:

Article number	Article name	Technologies	FCC ID	IC
9215441	!D Hand 2 - ASSY HH2 RFID R1 WHITE	UHF RFID, 2D Barcode		
9565035	!D Hand 2 - ASSY HH2 RFID R2 WHITE	UHF RFID, 2D Barcode	CGDHH2RFID <i>Contains:</i> QOQWT12	1444A-HH2RFID <i>Contains:</i> 5123A-BGTWT12A

## RFID Regions

**Region 1:** Europe (ETSI EN 302 208), Armenia, Azerbaijan, Hong Kong, India, Jordan, Oman, Russia, Saudi Arabia, South Africa, Tunisia and United Arab Emirates

**Region 2:** United States (FCC Part 15.247), Brazil, Argentina, Canada, Chile, Colombia, Costa Rica, Dominican Republic, Israel, Mexico, Panama, Peru, Taiwan, Uruguay and Venezuela

**Region 3:** People's republic of China, New Zealand, Australia, Singapore, Hong Kong, Japan, Korea, Thailand and Vietnam

## CE WEEE

This European Standard specifies a marking:


- of electrical and electronic equipment in accordance with Article 11(2) of Directive 2002/96/EC (WEEE); This is in addition to the marking requirement in Article 10(3) of this Directive which requires producers to mark electrical and electronic equipment put on the market after 13 August 2005 with a 'crossed-out wheeled bin' symbol.
- that applies to electrical and electronic equipment falling under Annex IA of Directive 2002/96/EC, provided the equipment concerned is not part of another type of equipment that does not fall within the scope of this Directive. Annex IB of Directive 2002/96/EC contains an indicative list of the products, which fall under the categories set out in Annex IA of this Directive;
- that serves to clearly identify the producer of the equipment and that the equipment has been put on the market after 13 August 2005.



## 2 Product overview

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The !D Hand 2 is available in certain hardware editions depending on the region.

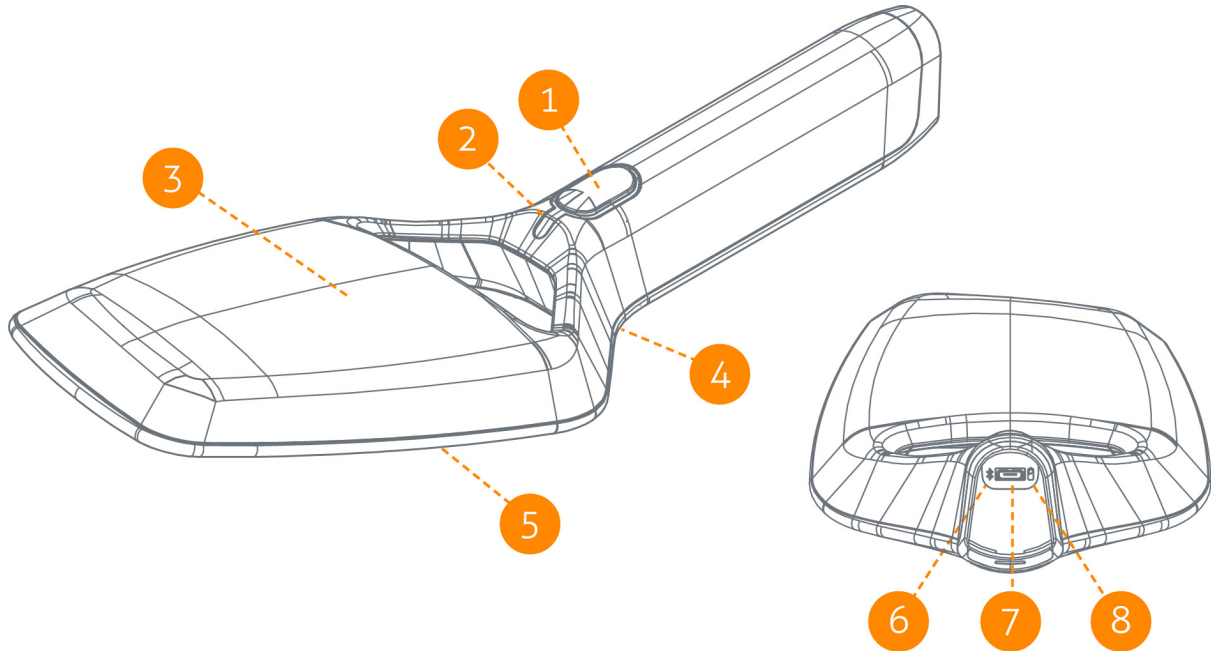
 In this document the following abbreviations will be used from here onwards:  
 'RFID technology' is an abbreviation for UHF RFID technology.

### Box contents

Article number	Article name	Box contents
9215441	ASSY HH2 RFID R1 WHITE	<ul style="list-style-type: none"> <li>!D Hand 2</li> <li>Micro USB charger</li> </ul>
9565035	ASSY HH2 RFID R2 WHITE	<ul style="list-style-type: none"> <li>Manual</li> </ul>

# Components and connections

In the following schematic drawing the components and connections of the !D Hand 2 are highlighted.



Number	Component	Description
1	Button	The button is used to control the !D Hand 2.
2	Status LED	Indicator that indicates whether the !D Hand 2 is on, off or operating.
3	RFID antenna	Antenna that is used to read the RFID labels.
4	2D barcode scanner	Barcode scanner to read all common 1D and 2D barcodes.
5	Serial number indication	Serial number indication that is useful during Bluetooth pairing.
6	Bluetooth LED	Indicator for the Bluetooth connection status.
7	Micro USB connector	The Micro USB connector can be used to charge the device.
8	Battery LED	Status of the battery is indicated with this LED.

## Add-ons

There are several add-ons available for the !D Hand 2. The add-ons have their own manual, however, we will discuss the function of those add-ons here.

## Docking station

The docking station is a wireless charging station for the !D Hand 2. When placing the !D Hand 2 in the docking station, it will automatically start charging. The docking station can be mounted on the wall or placed on a table or desk. The docking station has a Micro USB connector for a charger.

## Bumper

The bumper protects the !D Hand 2 in challenging environments. It is made out of rubber. You can slide it over the !D Hand 2.

### **Combining the bumper and docking station**

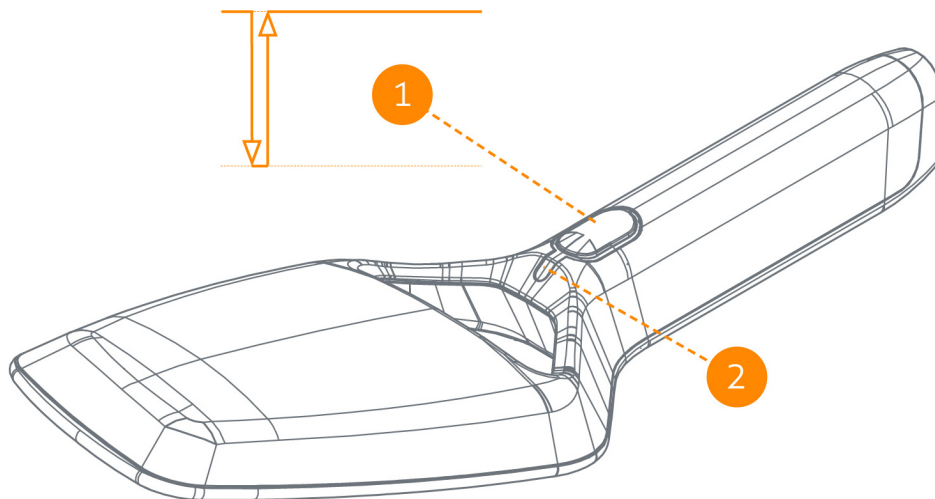
When the bumper is being used on the !D Hand 2, the device cannot be placed in the docking station. The Micro USB charger can be used to charge it.

## 3 Using the device

The !D Hand 2 has just one button which makes it extremely easy to operate. Feedback is provided by means of the three LEDs, sounds and a vibration motor.

### Turning it on

To turn the !D Hand 2 on, press and immediately release the button. You should feel a short buzz as you press the button and the Status LED will turn on.



Step	Action and/or result
1	Press and immediately release the button.
2	The Status LED will turn on.

#### **When nothing happens**

When nothing happens when you press the button, the battery might be empty. Please first charge the !D Hand 2 before you try to use it.

### Charging it

Charging the !D Hand 2 can be done in two ways:



1. Using the included Micro USB charger.
2. Using the optional docking station.

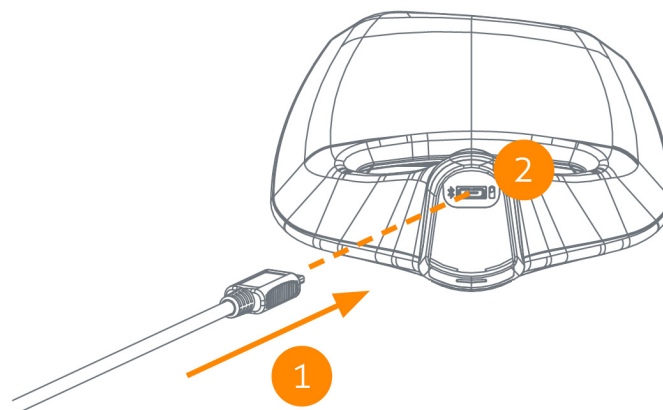
**i Docking station**

For instructions how to operate the !D Hand docking station, please refer to the manual of the docking station.

To charge the !D Hand 2 using the Micro USB charger, connect the Micro USB charger to the Micro USB port at the handle of the device.

When connected, the Battery LED should turn one of two colors:

- When the Battery LED turns green, the device is already fully charged.
- When the Battery LED turns orange, the device starts charging.



Step	Action and/or result
1	Connect a Micro USB charger.
2	The Battery LED will turn on. It will indicate whether the device has started charging (orange) or is already fully charged (green).

### **Charging with other chargers**

You can also charge the !D Hand 2 by using a Micro USB cable and connect the device to a computer. Note that the !D Hand 2 charges faster when using the supplied Micro USB charger instead of being connected to a computer.

## Linking it to an accessory device

To use the !D Hand, it should be linked to an accessory device. Please follow the instructions on how to link it in the manual of the accessory device.

You can find the Bluetooth name of the device at the bottom of the !D Hand 2. It is listed as '!D Hand XXX', where XXX are part of the serial number of the device. This should make it easy to recognize with !D Hand 2 you are pairing with.

### **!D Hand 2 should be turned on before you can link it**

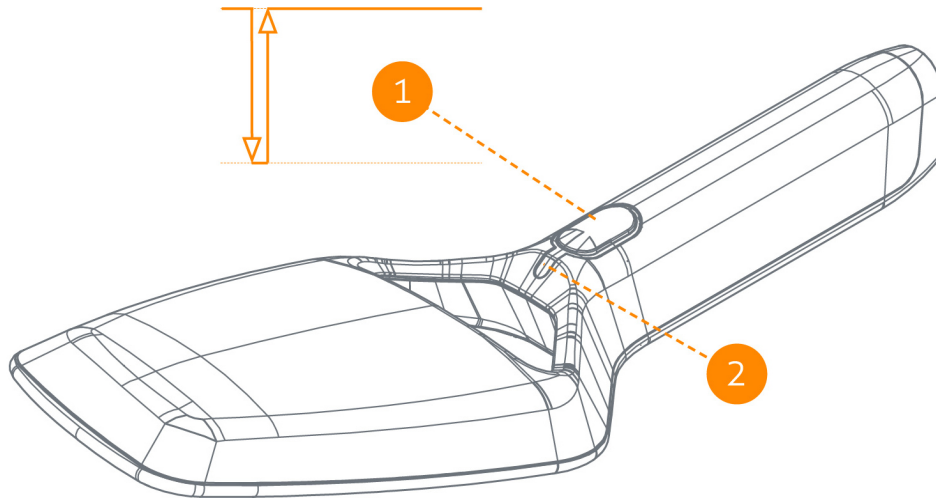
Please note that the !D Hand 2 should be turned on before you can link it up with the accessory device.

## Reading RFID labels

To read RFID labels, navigate in the app on the accessory device to a page where it can read RFID labels.

Press and immediately release the button of the !D Hand 2. It should start reading RFID labels. This is indicated by the blinking Status LED.

When the button is pressed and immediately released again, the !D Hand 2 should stop reading.



Step	Action and/or result
1	Press and immediately release the button.
2	The Status LED will start blinking. The !D Hand 2 will start reading RFID labels.

### **i** Linking to accessory device

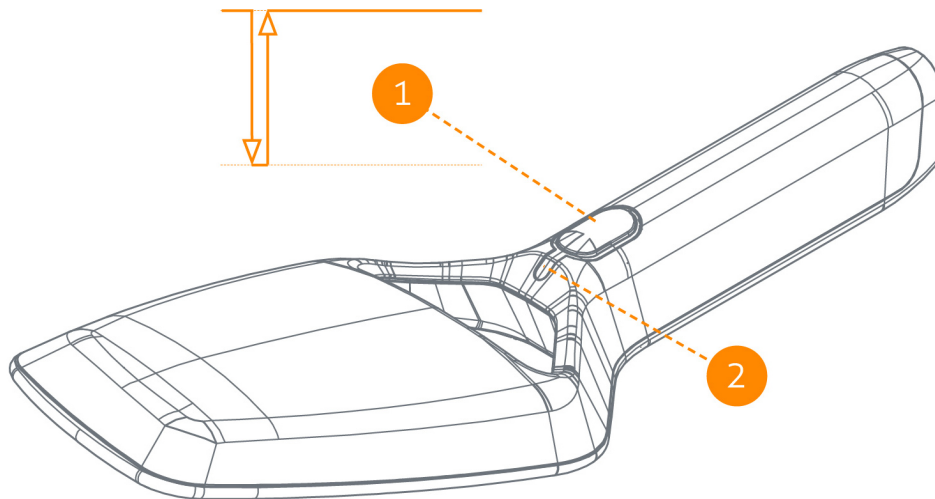
Before the !D Hand 2 can be used, it need to be linked to an accessory device.

## Reading a barcode

To read a barcode, navigate in the app on the accessory device to a page where it can read a barcode.

Press and immediately release the button of the !D Hand 2. It should start reading a barcode. This is indicated by the blinking Status LED.

When the button is pressed and immediately released again, the !D Hand 2 should stop reading.



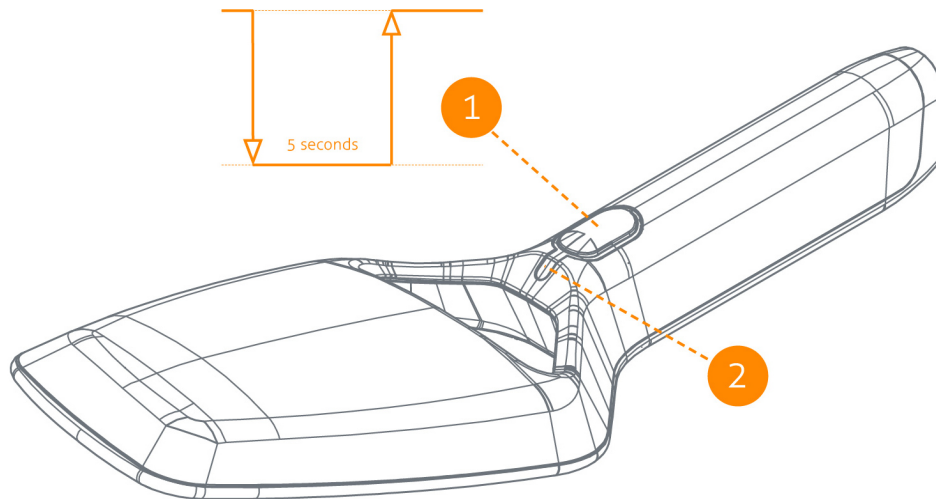
Step	Action and/or result
1	Press and immediately release the button.
2	The Status LED will start blinking. The !D Hand 2 will start reading a barcode.

### **i** Linking to accessory device

Before the !D Hand 2 can be used, it need to be linked to an accessory device.

## Turning it off

The !D Hand 2 can be turned off by holding the button for five seconds. This will immediately disconnect all linked accessory devices and stop all operations.



Step	Action and/or result
1	Hold the button for five seconds.
2	The white status LED will turn off.

# 4 LEDs

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## Status LED

Color	Status	Explanation
White	On	The !D Hand 2 is on.
	Off	The !D Hand 2 is off.
	Blinking	The !D Hand 2 is busy with reading RFID labels, writing RFID labels or reading a barcode.
	Fading	The !D Hand 2 is charging in the docking station.

## Bluetooth LED

Color	Status	Explanation
Blue	On	There is an active Bluetooth connection.
	Off	There is no active Bluetooth connection.
	Blinking	A Bluetooth connection is being established.

# Battery LED

Color	Status	Explanation
Orange	On	The !D Hand 2 is charging.
Green	On	Charging is completed.
Red	On	The battery is almost empty.
	Blinking	The battery is empty.

 **Wireless charging in docking station**

When the !D Hand 2 is charged in the docking station and the charging is completed, the Battery LED will turn OFF.

## 5 App development

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To use the !D Hand 2, it needs to be linked to an accessory device with an app running on it that controls the !D Hand 2. Nedap Retail provides two free apps in the Apple App Store that can demonstrate the use of the !D Hand 2. Those apps are:

- !D Hand 2; an app that exposes functionality of the !D Hand 2 for people that are evaluating the device.
- !D Cloud; an app that provides RFID functionality for retail stores.

We welcome you to develop your own app! Nedap Retail provides Software Development Kits for three operating systems and programming languages:

- iOS (Objective C/ Swift)
- Android (Java)
- Windows (C#)

Please contact our support via [support-retail@nedap.com](mailto:support-retail@nedap.com) (<mailto:support-retail@nedap.com>) for more information.



# 6 Troubleshooting

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If the device is not working correctly, please check the troubleshooting options below. If it is not possible to solve your issue, you can find support options in the next chapter.

Symptom	Cause	Solution
Nothing happens when the button is pressed.	If the Status LED is not on, and doesn't turn on when you press the button, the battery is empty.	Charge the handheld with a Micro USB charger or the docking station.
	If the Status LED is on, and nothing happens when you press a button, there is no app actively controlling the device.	Pair with a 3rd party device and start a controlling app.
When I press the button, the Status LED doesn't go on, but I hear a beep.	The battery is empty.	Charge the handheld with a Micro USB charger or the docking station.
My 3rd party device doesn't discover the !D Hand 2 over Bluetooth	The !D Hand 2 is turned off (Status LED is off).	Press the button to turn it on.
	The !D Hand 2 is already paired to another device.	Disconnect the !D Hand 2 from the other device.

# 7 Regulatory information

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## FCC and IC Compliance statement

This device complies with part 15 of the FCC Rules and to RSS210 of Industry Canada. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Cet appareil se conforme aux normes CNR210 exemptés de license du Industry Canada. L'opération est soumis aux deux conditions suivantes:

- (1) cet appareil ne doit causer aucune interférence, et
- (2) cet appareil doit accepter n'importe quelle interférence, y inclus interférence qui peut causer une opération non pas voulu de cet appareil.

Les changements ou modifications n'ayant pas été expressément approuvés par la partie responsable de la conformité peuvent faire perdre à l'utilisateur l'autorisation de faire fonctionner le matériel.

## FCC and IC Radiation Exposure Statement

This equipment complies with FCC and Canadian radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme a CNR102 limites énoncées pour un environne- ment non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre le radiateur et votre corps.


This Class B digital apparatus complies with Canadian ICES-3. Cet appareil numérique de Classe B est conforme à la norme Canadienne NMB-3.

## FCC Information to the user

Note: This equipment has been tested and found to comply with the limits for a class B digital devices, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequent energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does not cause harmful interference to radio or television reception, which can be determine by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver.

 Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. To ensure compliance with FCC regulations, use only the shielded interface cables provided with the product, or additional specified components or accessories that can be used with the installation of the product.

## Information for Taiwan

第十二條 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

## Trademarks

iPad, iPhone, iPod, iPod classic, iPod nano, iPod shuffle, and iPod touch are trademarks of Apple Inc., registered in the U.S. and other countries. iOS is a registered trademark of Apple Inc.

"Made for iPod," "Made for iPhone," and "Made for iPad" mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.

## Licenses

The !D Hand 2 uses FreeRTOS ([www.freertos.org](http://www.freertos.org)) (<http://www.freertos.org>), a real-time operating system. This software is provided to Nedap under the GPL license, with two exceptions. If requested, the source code of FreeRTOS will be provided by Nedap.

The full license for FreeRTOS can be found here: <http://www.freertos.org/license.txt>

## 8 About Nedap

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### About

At Nedap Retail, we work around the globe to deliver industry-leading products, services and solutions for our customers' diverse needs in loss prevention, stock management and store monitoring. Our inventive thinking and collaborative spirit allows us to deliver tailor-made solutions for the fast paced retail sector.

We simplify retail management while improving your customers' shopping experience. By taking most recurring tasks off your hands, we create time for you to devote to your customers. And that is what retail is all about. Whether you run a small local store or a large international chain, you will benefit from our broad range of products, ideas and services. Nedap solutions are built upon 40 years of global experience, market expertise and close cooperation with leading retailers. Our worldwide operations are supported by a flexible network of certified partners across the globe. Nedap systems are future-proof (RFID-ready), cost-efficient and eco-friendly. Our mission is simply to make sure your customers maintain the best shopping experience whilst we help you protect your profits. Our philosophy: "your store - our store."

### Contact

If you need any further details or require help in preparing an installation, executing an installation or servicing an installation you are always welcome to contact our support team at: [support-retail@nedap.com](mailto:support-retail@nedap.com).

Suggestions for improving our products and documentation are of course always welcome.

Last modification: 03 August 2015 13:45