

2N[®] Indoor Touch



User guide

Firmware 2.0.3.0.0 Version 1.9

www.2n.cz

The 2N TELEKOMUNIKACE a.s. is a Czech manufacturer and supplier of telecommunications equipment.













The product family developed by 2N TELEKOMUNIKACE a.s. includes GSM gateways, private branch exchanges (PBX), and door and lift communicators. 2N TELEKOMUNIKACE a.s. has been ranked among the Czech top companies for years and represented a symbol of stability and prosperity on the telecommunications market for almost two decades. At present, we export our products into over 120 countries worldwide and have exclusive distributors on all continents.



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2N TELEKOMUNIKACE a.s. administers the FAQ database to help you quickly find information and to answer your questions about 2N products and services. On www.faq.2n.cz you can find information regarding products adjustment and instructions for optimum use and procedures "What to do if...".



2N TELEKOMUNIKACE a.s. hereby declares that the 2N[®] Indoor Touch product complies with all basic requirements and other relevant provisions of the 1999/5/EC directive. For the full wording of the Declaration of Conformity see the CD-ROM (if enclosed) or our website at www.2n.cz.



The 2N TELEKOMUNIKACE a.s. is the holder of the ISO 9001:2009 certificate. All development, production and distribution processes of the company are managed by this standard and guarantee a high quality, technical level and professional aspect of all our products.

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1. Product Overview

In this section, we introduce the $2N^{\circledR}$ Indoor Touch product, outline its application options and highlight the advantages following from its use. The section also includes safety precautions.

Here is what you can find in this section:

- 1.1 Product Description1.2 Differences between Models
- 1.3 Terms and Symbols
- 1.4 Safety Precautions



1.1 Product Description

Based on the Android OS, **2N**[®] **Indoor Touch** helps load third party applications to a device (if enabled so in the device configuration), thus improving its flexibility. It contains a 7" colour LCD display with a capacitive touch layer, loudspeaker, microphone and Ethernet and WiFi interfaces (depending on the Part No.) for LAN connection. Optionally, **2N**[®] **Indoor Touch** is equipped with a wireless card reader (depending on the Part No.). Analogue inputs and outputs also part of the equipment.

2N[®] **Indoor Touch** has a factory pre-installed application - **2N**[®] **Helios IP Mobile**, which helps establish video calls with any other video call supporting devices (SIP + H.263/4). Primarily, the application is intended for the **2N**[®] **Helios IP** intercom family.

2N[®] **Indoor Touch** contains a specific user interface for an increased user comfort and safety.

2N® Indoor Touch basic features:

- 7" LCD colour display with capacitive touch layer
- Wall mounting option
- LAN interface with PoE supply option
- 802.11bgn WiFi interface (depending on the Part No.)
- Contactless card reader (depending on the Part No.)
- Status RGB LED at front
- Binary inputs and outputs for control of other devices
- Android operating system with pre-installed basic applications and own user interface
- Pre-installed **2N**[®] **Helios IP Mobile** application



1.2 Differences between Models

This manual is valid for all the $2N^{\circledR}$ Indoor Touch types. Therefore, please note that several features described in this document are only available in selected models or need to be activated with a licence key. If a feature is not available in all the models, a note is added to the respective subsection.



1.3 Terms and Symbols

The following symbols and pictograms are used in the manual:

- ① Safety
 - **Always abide** by this information to prevent persons from injury.
- (I) Warning
 - Always abide by this information to prevent damage to the device.
- **∧** Caution
 - **Important information** for system functionality.
- ▼ Tip
 - **Useful information** for quick and efficient functionality.
- (i) Note
 - Routines or advice for efficient use of the device.

Future Functions, New Features

The grey-marked text in this document designates the functions and features that are under preparation or development at present.



1.4 Safety Precautions

The manufacturer reserves the right to modify the product in order to improve its qualities. The manufacturer continuously responds to the clients' requirements by improving the software. Refer to the www.2n.cz company websites for the latest **2N**[®] **Indoor Touch** firmware and User Manual.

- It is prohibited to use any transmitters, including **2N**[®] **Indoor Touch** with an internal WiFi adapter, in areas where explosives are used, such as quarries.
- WiFi adapters may affect sensitive life-saving devices in medical centres. Therefore, it is prohibited to use 2N[®] Indoor Touch with an internal WiFi adapter in such facilities.
- In general, any RF energy radiation prohibition regarding WiFi antenna equipped devices applies to **2N**[®] **Indoor Touch** with an internal WiFi adapter.
- Where necessary, a **2N**[®] **Indoor Touch** unit can be installed at a safe distance from the prohibited area and an Ethernet cable can only be carried to the required site.
- Although 2N[®] Indoor Touch is not intended for cars or aeroplanes, all prohibitions and regulations relating to adapter equipped devices apply to 2N[®] Indoor Touch too.



2. Description and Installation

This section describes the **2N**[®] **Indoor Touch** installation and correct connection.

Here is what you can find in this section:

- 2.1 Before You Start
- 2.2 Brief Installation Guide
- 2.3 Installation Conditions
- 2.4 Status LED
- 2.5 First Startup

The device is designed solely for wall mounting. Install the device with the aid of a holder, which is included in the product and Installation Manual delivery.

Prepare the proper wall fittings (screws and wall plugs suitable for the given wall type and structure). Respect the local standards for installation of electronic devices onto flammable materials while mounting!

Use a cross-point screwdriver for tightening the fitting screws on the device sides to place $2N^{\circledR}$ Indoor Touch properly.



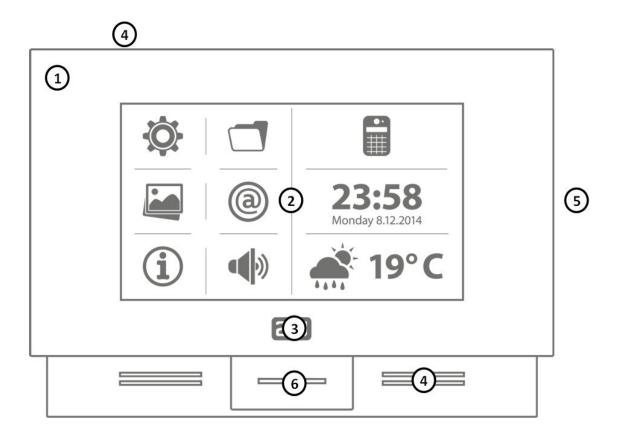
2.1 Before You Start

Product Completeness Check

Please check the $2N^{\circledR}$ Indoor Touch delivery before starting installation:

1 Indoor Touch		
1	Quick Start manual	
1	Wall holder (screwed to device)	
1	Installation fittings (2 screws, 2 plugs for flush mounting)	

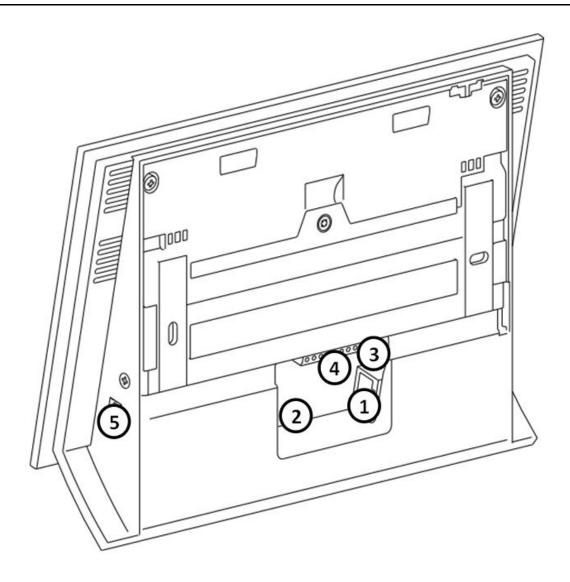
Front Layout



- 1. Glass frame
- 2. LCD display with capacitive touch layer
- 3. Status RGB LED
- 4. Loudspeaker
- 5. Microphone
- 6. micro SD card slot
- 7. Contactless card reader (depending on the Part No.)



Backside Connectors



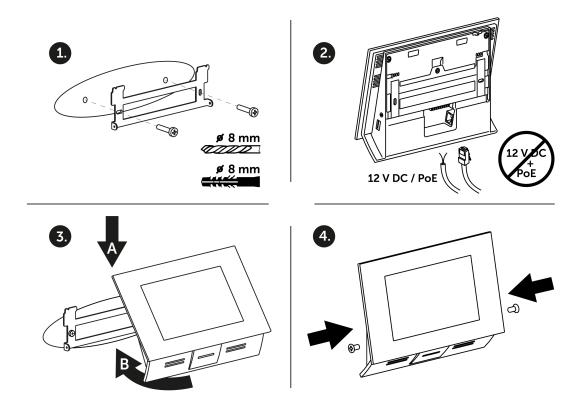
- 1. RJ-45 LAN 10/100BaseT connector
- 2. 12V/2A DC supply terminal board (only if PoE is not used)
- 3. Restart / Factory reset button
- 4. Binary input/output terminal board (for application control)
- 5. micro SD card slot

Caution

- Press the Restart button shortly to restart the device. The front panel LED starts shining blue to signal the resetting process.
- Press the Factory reset button for a rather long time (up to 10 s) to factory reset the device. The front panel LED starts shining yellow to signal the resetting process.



2.2 Brief Installation Guide



- 1. Install the device holder onto a vertical wall. The recommended installation height is 120 cm above the floor. The product package includes screws and plugs for mounting into classic bricks. Use appropriate installation fittings for a different type of wall material!
- 2. Feed the device via an Ethernet PoE adapter (or PoE supporting Ethernet switch/router) or a 12V DC 2A power adapter.
 - a. With PoE supply, just snap RJ-45 into the appropriate connector.
 - b. With 12V DC 2A supply, screw the power adapter plus and minus cables into the appropriate terminal board on the device.
 - c. Simultaneous PoE + 12V DC 2A supply is not recommended!
- 3. Put the device on the holder as follows:
 - a. Place the device carefully from top to bottom with its bottom part slightly away (up to 5 cm) from the wall.
 - b. When the device fits to the main holder supports, push the device bottom part onto the wall.
- 4. Tighten the safety screws on both the device sides.



2.3 Installation Conditions

Make sure that the following **2N**[®] **Indoor Touch** installation conditions are met:

- There must be enough space for **2N**[®] **Indoor Touch** installation.
- 2N® Indoor Touch is designed for vertical wall mounting (perpendicular to the floor) in the height of up to 120 cm above the floor. If necessary, operate 2N® Indoor Touch in a position other than as aforementioned for a short time only, for quick testing purposes in a servicing centre, for example.
- Exceeding the allowed operating temperature may not affect the device immediately but leads to premature ageing and lower reliability. Refer to <u>6.</u> Technical Parameters for the acceptable range of operating temperatures and relative humidity values.
- 2N[®] Indoor Touch is not designed for environments with increased vibrations such as means of transport, machine rooms and so on.
- 2N[®] Indoor Touch is not intended for dusty environments and places with unstable humidity and abrupt temperature changes.
- 2N[®] Indoor Touch may not be exposed to aggressive gas, acid vapours, solvents, etc.
- 2N[®] Indoor Touch is not intended for direct connection into the Ethernet/Internet.
- 2N® Indoor Touch must be connected to the Ethernet/Internet via a separating active network element (switch/router).
- 2N[®] Indoor Touch is designed for indoor use. It may not be exposed to rain, flowing water, condensing moisture, fog, etc.
- 2N[®] Indoor Touch cannot be operated on places exposed to direct sunshine and near heat sources.
- Keep some free space above and below 2N[®] Indoor Touch to allow air to flow and conduct heat away.
- No strong electromagnetic radiance is allowed on the installation site.
- The VoIP connection must be configured properly according to the SIP and other VoIP recommendations.
- It is recommended that the power adapter be connected to the mains via a UPS and reliable overvoltage protection.

Wall Mounting

2N® Indoor Touch is designed for wall mounting. Follow the steps below:

- 1. Unscrew the holder-fitting screws on the device sides.
- 2. Turn the metal holder slightly aside in the upper part of the device.
- 3. Move the holder downwards.
- 4. Fit the loose holder to the wall on the installation site.
- 5. Put the device on the holder and tighten the safety screws.

Follow the installation instructions printed on the device package.

Power Supply Connection

You can feed **2N® Indoor Touch** as follows:



- 1. Use any 12V/2A DC power adapter connected to the terminal board (see the
- 2. Use an Ethernet cable connected to a PoE supply or PoE supporting Ethernet switch/router.

A successful operation is indicated by a status RGB LED or LCD display.

PoE Supply Connection

Use a standard straight RJ-45 terminated cable to connect 2N® Indoor Touch to the Ethernet. The device supports the 10BaseT and 100BaseT protocols. The Ethernet connection state is indicated by the LEDs placed on the RJ-45 connector.

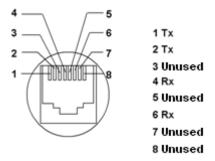
Refer to 3.3 Launcher Configuration for the factory settings of the 2N® Indoor Touch Ethernet interface.

Caution

- Factory reset results in a change of the Ethernet interface configuration!
- A defective Ethernet cable may lead to a high packet loss in the Ethernet and subsequent instability and poor video call quality!

① Warning

Connection of a defective or improper power adapter may lead to a temporary or permanent failure of the 2N® Indoor Touch unit!



Licence Limitations

2N® Indoor Touch can contain time-limited software licences. Refer to 3.3 Launcher Configuration for details.

Firmware Upgrade

We recommend you to upgrade the **2N® Indoor Touch** firmware during installation. Refer to www.2n.cz for the latest FW version. Refer to 3.4. Device Upgrade for the firmware upgrade procedure.



2.4 Status LED

Status LED indicates the device states when the LCD display is switched off or the device is in the service mode. See the table below for the LED colours and states:

Device Startup:

Colour	State
Blue is on	Device initialisation
Red is on	First boot phase
Green is on	Operating system start
Yelow is on	Factory setting initialisation
Blue is flashing	Factory reset
Purple is flashing	System upgrade process
No light	Device state is displayed

Standard Operation:

Colour	State
No light	Device state is displayed
Blue is on	Stand-by mode (display off)
Other states	Notification of other states of applications running in the system (2N® Helios IP Mobile, e.g.).



2.5 First Startup

When you start the device for the first time, the initial initialisation (longer start) is performed and indicated by the following LED notification sequence: Blue > Red > Green > Boot animation on the screen > Introductory system screen.

The introductory screen provides essential information for User Manual saving/reading. You can deactivate this screen for later startups.

The table below shows the factory values of relevant device parameters:

Parameter	Value
IP address	will be assigned by the DHCP server
IP mask	will be assigned by the DHCP server
IP gateway	will be assigned by the DHCP server
Access password to configuration	2n
Time/weather location	Prague, CZ
Stand-by switching time	1 minute
SW licence	Basic unlimited licence
	(or according to the Part No.)

Caution

Change the access password while configuring the device for the first time to avoid unauthorised access to configuration!

System Licence

2N® Indoor Touch has a factory licence key, which can be time-limited (depending on the Part No.). The licence expiry may cause a partial limitation of the device functionality! Refer to $\frac{3.3 \text{ Launcher Configuration}}{3.3 \text{ Launcher Configuration}}$ licence adding procedure if necessary.



3. 2N® Indoor Touch Configuration

This section describes the $2N^{\circledR}$ Indoor Touch configuration.

Here is what you can find in this section:

- 3.1 Factory Reset3.2 Introductory Screen
- 3.3 Launcher Configuration3.4. Device Upgrade



3.1 Factory Reset

Follow the steps below to reset the **2N**[®] **Indoor Touch** factory values:

- 1. Push the Factory reset button in the Launcher Configuration menu. Refer to 3.3 Launcher Configuration.
- 2. Press and hold the Reset button on the device backside:
 - a. Remove the device from the installation holder.
 - b. Press and hold the Reset button until the notification RGB LED lights up
 - c. Release the Reset button and follow the instructions displayed.

Caution

Factory reset results in a complete deletion of all user data.



3.2 Introductory Screen

The introductory screen provides a total of nine configurable tiles for you to launch specific, user defined applications. The About and Settings buttons are also available here.



Factory settings:

- **Gallery** launch the photo/image processing application.
- **File manager** launch a standard file system application.
- 2N[®] Helios IP mobile video call application; refer to 4. 2N[®] Helios Mobile IP Configuration for details.
- **Browser** launch an Internet browser application.
- 2N[®] IP Audio remote 2N[®] NetSpeaker server control application.
- Time/Date tiles
- Weather tile
- About button
- Settings access to configuration section

The lower graphic bar includes five graphic controls:



- **Back icon** helps you return one level higher or one step back (depending on the application type).
- **Home icon** helps you return to the introductory screen.
- **Squares icon** helps you switch the currently launched applications.
- Loudspeaker icons help you increase/decrease the system loudspeaker volume.



3.3 Launcher Configuration



Click the **Settings** button on the introductory page to access the configuration section. Complete the correct access password.



Caution

■ The factory access password is "2n". If you lose the access data, you will have to factory reset the device! Change the password in the Settings -Home screen menu.

The configuration section consists of the following screens and subsections:

- **System info** display information on the device state.
- Networks configure the device network adapters.
- Local settings set the installation site and input device language.
- Audio set the device audio parameters.
- Display set the device display parameters.
- **Home screen** modify and set the introductory screen buttons.
- **Software** set the application installation/uninstallation.
- Advanced restart and LOG.

System Info



Display the following information on the device:



- Device serial number, configuration and current state.
- **Local** local date and time.
- **Memory** current RAM state.
- Internal storage current internal storage state.
- **Licence** current licence state.
- Add licence licence adding option*.
- **Cache** current cache state.
- **SD card storage** external microSD card (SDHC) up to 16GB (if inserted) memory state.
- LAN, WiFi current Ethernet and WiFi adapter configuration.

Licence key types:

- **APP** third party application download
- LAUNCHER 2N® Indoor Touch launcher Android launcher switching
- **ROOT** option to use Superuser rights for the applications installed
- HTTP API 2N[®] Indoor Touch control via HTTP API

Caution

Remember that the original licence key will always be overwritten with the new one! Therefore, add only a valid licence key supplied by your distributor!

① Warning

- The APP licence unlocks 2N® Indoor Touch for uploading of custom applications from microSD card (SDHC) up to 16GB. 2N TELECOMMUNICATIONS does not guarantee functionality and stability of custom applications or 2N® Indoor Touch with its default pre-installed applications after installation of any custom application. If problems are experienced, please remove custom application, and/or do factory reset. Factory reset resets 2N® Indoor Touch to initial state, without custom applications and settings.
- The ROOT licence allows you to start third party applications with the Supersuser rights. Some third party applications, however, may compromise system stability and lead to 2N® Indoor Touch hardware damage in extreme cases if the Superuser rights are used. Therefore, use the ROOT licence at your own risk. Using the ROOT licence makes the 2N® Indoor Touch guarantee null and void.



Networks



- **LAN** set the fixed Ethernet interface:
 - Enable Ethernet activate/deactivate the adapter.
 - **DHCP** enable/disable the DHCP client.
 - IP address IPv4 address if the DHCP client is off.
 - **IP mask** IPv4 mask if the DHCP client is off.
 - **IP gateway** gateway IPv4 address if the DHCP client is off.
 - IP DNS DNS server IPv4 address if the DHCP client is off.
- **Wi-Fi** (according to the device type):
 - **Enable Wi-Fi** activate/deactivate the adapter.
 - **DHCP** enable/disable the DHCP client.
 - IP address IPv4 address if the DHCP client is off.
 - IP mask IPv4 mask if the DHCP client is off.
 - IP gateway gateway IPv4 address if the DHCP client is off.
 - IP DNS DNS server IPv4 address if the DHCP client is off.

Click Apply settings to save the current adapter settings.

Click Select network to select the WiFi AP network to which the device shall be connected.

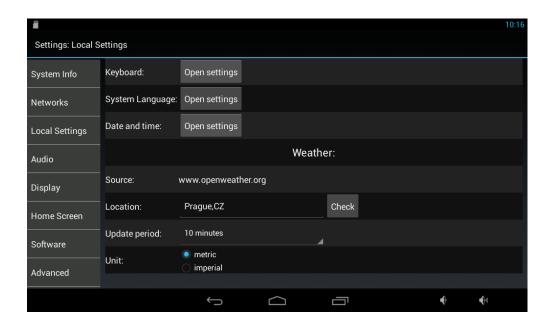


Caution

- Where WiFi and Ethernet connections are available, we recommend you to choose Ethernet.
- With WiFi connection, please make sure that your **2N**® **Indoor Touch** signal is strong enough and connectivity meets the transmission requirements.
- If you are not certain of your WiFi connection parameters and quality, we recommend you to use up to 3 2N® Indoor Touch units per installation site covered with the access point WiFi signal.
- Make sure that your **2N**[®] **Indoor Touch** is connected to one and the same LAN with the 2N Helios IP intercom or the third party unit engaged in the communication.

Refer to https://faq.2n.cz/ for more details.

Local Settings



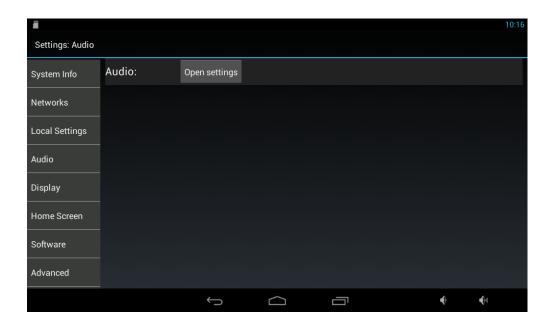
- Open keyboard settings set the system keypad.
- Open language settings set the system language.
- Launcher language set the introductory and setting screen language.
- Open data and time settings set the system date/time.
- Weather set the installation site for weather forecast.



The weather forecast location includes the local place (town) and country (abbreviated). If you enter an incorrect format, no weather forecast will be displayed. Make sure while setting the location that the device is connected to the Internet. Refer to http://openweathermap.org/ for more details.

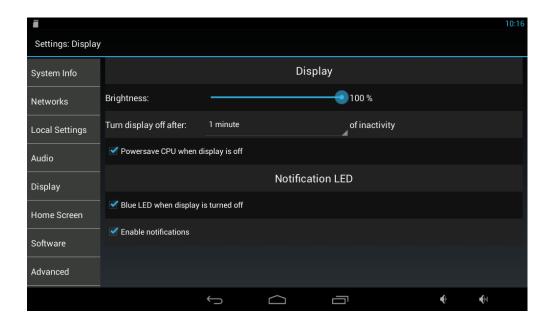


Audio



Set the device volume level.

Display

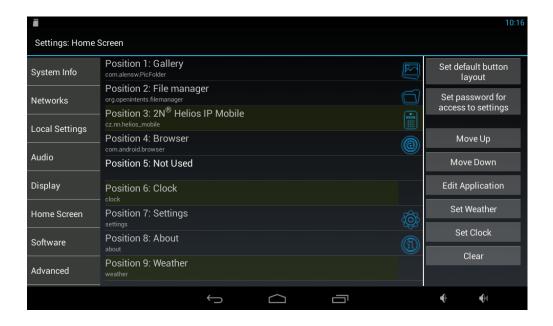


- Brightness set the display brightness level.
- Turn display off after set the timeout for automatic turn-off in case of inactivity.
- Notification LED
 - White LED when display is turned off the white LED lights up automatically after the LCD display turn-off to indicate the stand-by mode.
 - Enable notifications enable LED notifications of selected events (missed



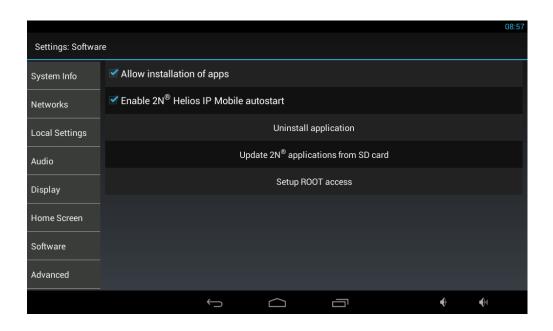
calls, e.g.) in the stand-by mode.

Home Screen



This section helps you change the position and content of the introductory screen tiles and the configuration access password (click Set password for access to settings).

Software



• Allow installation of apps from unknown sources – enable/disable installation of other applications from an microSD card (SDHC) up to 16GB or the Internet.



Caution

- The application installation depends on product licensing. You can only install the applications that are equipped with an active APP licence key. Refer to **System info/Licence/Keys** for the current licence state.
- Use **Update 2N**® **applications from SD card** for updating the applications that are already installed.
- Update 2N® applications from SD card search the microSD card (SDHC) up to 16GB for applications with signatures matching the applications installed. Then select the required application from a list.
- Uninstall application uninstall the user installed applications.

Caution

- By allowing other application installations you may cause system instability due to an application error! Click Factory reset to delete such applications if necessary!
- Setup ROOT access select the applications to be started with the Superuser rights.

Caution

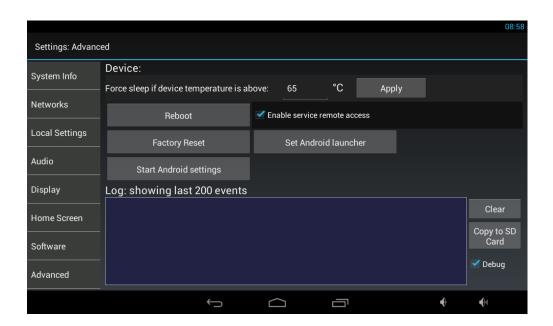
The Superuser service depends on product licensing. You can only install the applications that are equipped with an active APP licence key. Refer to **System info/Licence/Keys** for the current licence state.

Warning

■ The **ROOT** licence allows you to start third party applications with the Supersuser rights. Some third party applications, however, may compromise system stability and lead to 2N® Indoor Touch hardware damage in extreme cases if the Superuser rights are used. Therefore, use the ROOT licence at your own risk. Using the ROOT licence makes the 2N ® Indoor Touch guarantee null and void.



Advanced



- Force sleep if device temperature is above enable the stand-by mode whenever the device temperature exceeds the defined internal temperature limit.*
- Reboot restart the device.
- Factory reset reset the device factory values.
- **Enable service remote access** enables remote Telnet access. This function should be always enabled and its intended for 2N service purposes only.

Caution

- We do not recommend you to change the preset device temperature limit to avoid device life impairment or system instability! In case the device keeps exceeding the temperature limit, please check the installation conditions!
- Set Android launcher delete the 2N[®] Indoor Touch launcher from 2N[®] Indoor Touch to use the Android 4.2.2 launcher. Set the Superuser rights for the selected applications in Software -> Setup ROOT access and then Set Android launcher.

Caution

- By enabling the Set Android launcher function you delete the 2N[®] Indoor Touch launcher. Press the Factory reset button on the device backside (Subs. 2.1) to reload the 2N[®] Indoor Touch launcher.
- The Android launcher service depends on product licensing. You can only install the applications that are equipped with an active APP licence key. Refer to **System info/Licence/Keys** for the current licence state.



3.4. Device Upgrade

2N® Indoor Touch can be upgraded via an SD card only. The firmware packet always includes the latest OS version, a Launcher and **2N**[®] **Helios IP Mobile** application*. See below for how to upgrade:

- 1. Download the latest **2N**[®] **Indoor Touch** firmware version from www.2n.cz.
- 2. Get a microSD card of the maximum capacity of 16 GB and with the FAT32 file system.
- 3. Unpack and save the *.ZIP download into the SD card root directory.
- 4. Insert the SD card in the SD card slot on the left side of 2N® Indoor Touch (refer to 2.1 Before You Start).
- 5. Reset the device as follows:
 - a. Press the backside Reset button shortly (refer to 2.1 Before You Start), or
 - b. Click the Reboot button in the configuration section of the introductory screen (refer to 3.3 Launcher Configuration).
- 6. Having detected correct firmware files, **2N**[®] **Indoor Touch** invites you to confirm upgrade via a touch screen. The upgrade process is also indicated by an RGB LED on the device front (refer to 2.4 Status LED).
- 7. Having completed upgrade, remove the SD card and click on the display to restart the system.

Caution

- The device upgrade takes approximately 10 minutes or more.
- The first startup after successful upgrade may take a few minutes.
- The factory values can be reset automatically in some upgrade types.



4. 2N® Helios IP Mobile Configuration

This section describes configuration of the pre-installed ${\bf 2N}^{\it (B)}$ Helios IP Mobile application.

Here is what you can find in this section:

- 4.1 Application Description
- 4.2 Application Environment
- 4.3 Notification in 2N® Indoor Touch Environment
- 4.4 Connection to 2N® Helios IP



4.1 Application Description

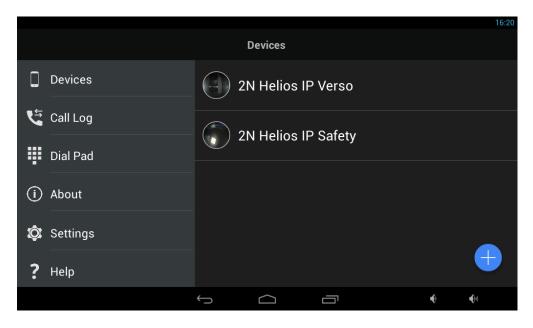
 $2N^{\circledR}$ Helios IP Mobile is an application designed for making video calls between devices based on the Android OS or iOS and intercoms of the $2N^{\circledR}$ Helios IP family. Get the application via the Google Play store (Android OS) or Apple store (iOS). This application is pre-installed in $2N^{\circledR}$ Indoor Touch and launched automatically upon every startup (depending on the Part No.).

 $2N^{\circledR}$ Helios IP Mobile helps you make calls between the $2N^{\circledR}$ Indoor Touch units and, with the SIP Proxy, other SIP supporting devices.



4.2 Application Environment

The **2N**[®] **Helios IP Mobile** main screen looks as follows:



- **Devices** list of available **2N**[®] **Helios IP** or **2N**[®] **Indoor Touch** devices or any SIP supporting devices where SIP Proxy is used.
- Call Log listing of all successful incoming/outgoing calls of the application.
- **Dial Pad** this function is available if the application is registered with the SIP Proxy server.
- About information on 2N Telekomunikace a.s. and 2N[®] Helios IP Mobile version.
- Settings 2N[®] Helios IP Mobile configuration.
- Help basic information on the 2N[®] Helios IP Mobile application.



Press the Home system button to minimise the application. The application will be restored automatically by an incoming call.

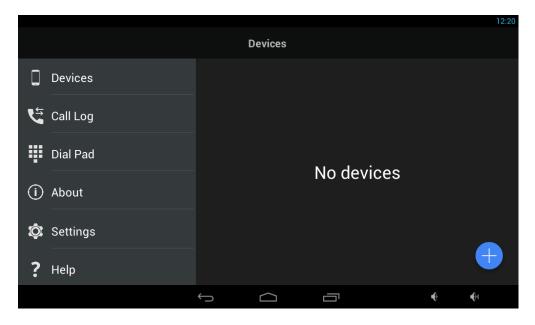


4.2.1 Devices

The Devices section helps you add $2N^{\otimes}$ Helios IP or $2N^{\otimes}$ Indoor Touch devices and devices sharing one and the same SIP Proxy server. The $2N^{\otimes}$ Helios IP and $2N^{\otimes}$ Indoor Touch devices are retrieved in the LAN automatically by the $2N^{\otimes}$ Helios IP Mobile application. The devices that are connected to another LAN must use the SIP Proxy server and be added manually to Devices.

Editing

Click the Add icon in the right-hand bottom corner of the Devices main window to enter the editing menu.



LAN Devices

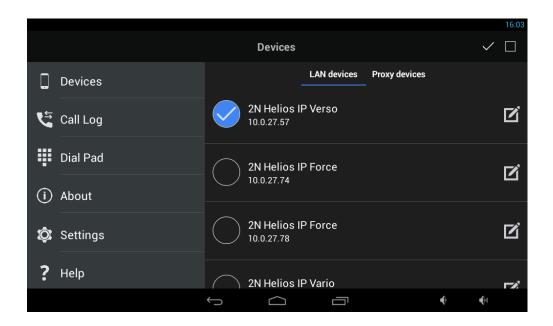
The Devices / LAN devices window displays the automatically added $2N^{\otimes}$ Helios IP and $2N^{\otimes}$ Indoor Touch devices. Click the required row to select a device. Each device

has a unique name and IP address. The selected device is marked with . Press the

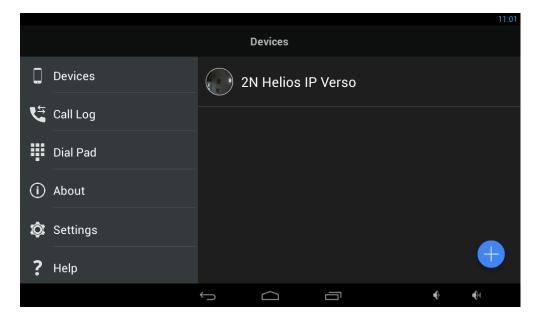
button in the right-hand upper corner to select all the devices listed. Press the

Edit icon to edit the device name.





Click the Save icon to save the selected LAN devices.



Proxy Devices

Registration with Proxy

To communicate successfully, the $2N^{\otimes}$ Helios IP Mobile and SIP supporting devices have to be registered with a common SIP Proxy server.





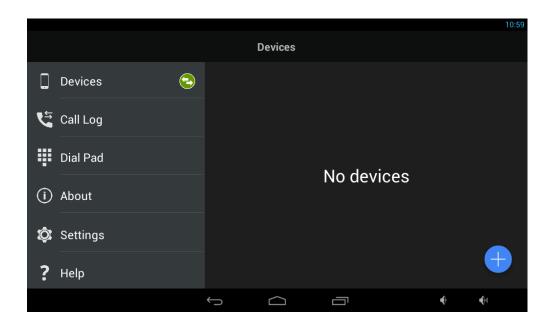
Click the row to switch the application into the Settings menu. Here switch the SIP Proxy ON and then go to the SIP Proxy Settings editing menu to set the following parameters.

- Display name connection name. For 2N[®] Helios IP Mobile only.
- **Username** mandatory data for SIP Proxy server registration.
- **Password** mandatory data if the SIP Proxy server requires authorisation via the Authorisation name and Password.
- **SIP proxy** SIP Proxy server IP address or domain name.
- **Port** transport port number for SIP communication.
- **Authorisation name** mandatory data if the SIP Proxy server requires authorisation via the Authorisation name and Password.
- **Proxy address** mandatory data if the SIP Proxy server requires authentication. Mostly identical with the SIP Proxy parameter.
- Transport transport protocol used for SIP communication: UDP or TCP.

Complete the parameters correctly to register $2N^{\otimes}$ Helios IP Mobile with the SIP Proxy server. View the notification icon to check the registration states:

- the application is successfully registered with the SIP Proxy server.
- the application is trying to register with the SIP Proxy server. The SIP Proxy registration has not been successfully completed yet.
- The SIP Proxy server registration is inactive due to SIP Proxy server rejection or unavailability.





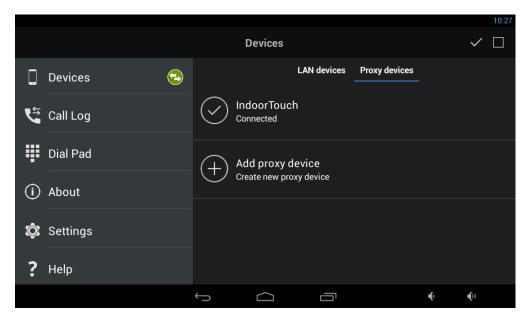
Caution

■ The **2N**[®] **Helios IP Mobile** application requires the minimum registration expiration time of 60 s to avoid disconnection from the SIP proxy server.

Proxy Device Adding

If $2N^{\otimes}$ Indoor Touch with $2N^{\otimes}$ Helios IP Mobile is successfully registered with the SIP Proxy server, SIP Proxy devices can be added to the Devices list manually. Click

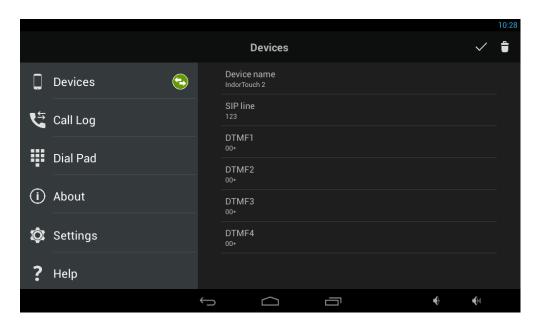
the Add icon in the right-hand bottom corner of the Devices main window to enter the editing menu. Then switch the editing menu to the Proxy devices section.



Select a row with the Add proxy device button to add a SIP Proxy device.

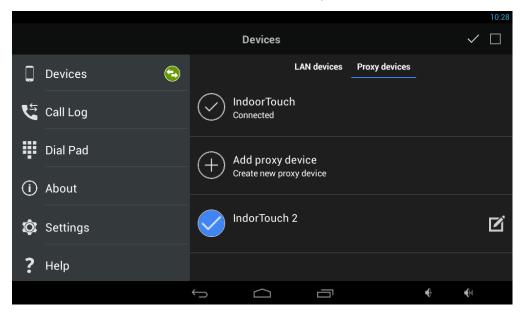
35





Complete the following parameters:

- **Device name** device name. For **2N**[®] **Helios IP Mobile** only.
- SIP line line to be dialled by 2N[®] Helios IP Mobile for outgoing calls.
- **DTMF1-4** DTMF to be sent when lock 1-4 is pressed.



The selected device is marked with . Press the button in the right-hand upper corner to select all the devices listed. Press the Edit icon to edit the device name. Click the Save icon to save the selected Proxy devices.



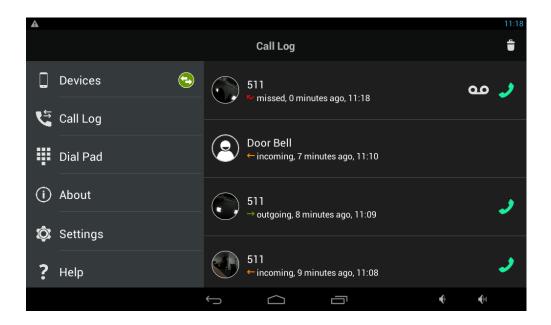




4.2.2 Call Log

The **2N**[®] **Helios IP Mobile** Call Log section displays the outgoing/incoming call logs. The following values are available:

- outgoing outgoing call.
- incoming incoming call.
- missed missed call.



The call log icon contains either a snapshot from the device or an avatar. The avatar is displayed whenever the snapshot parameter is inactive, the device is not equipped with a camera or no snapshot was created due to a short video display. Moreover, you can

use the CallBack function via



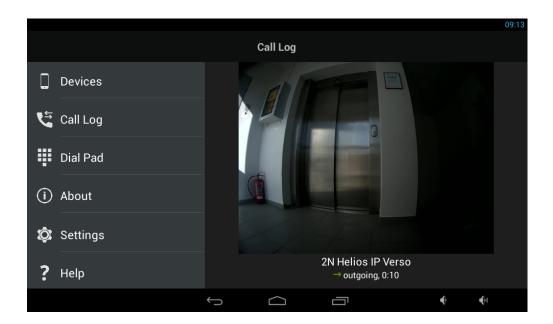
call has been recorded, press to play the record.



- A snapshot is created when the active video stream view takes about 3-5s.
- The maximum Call Log count is 30.

Select a log to be displayed. The logs also include call duration and a magnified snapshot.





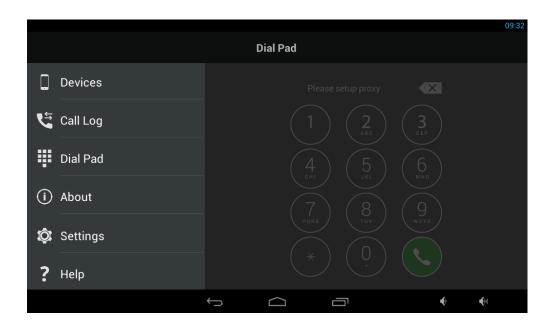
Caution

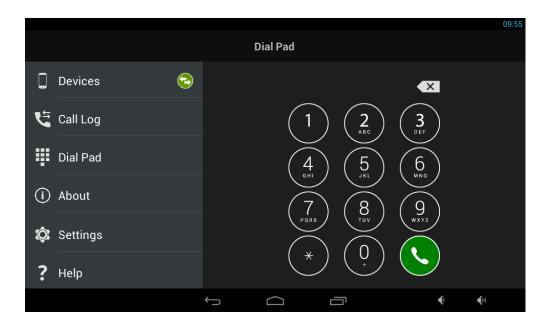
■ The duration of unanswered outgoing/incoming calls is 0:00.



4.2.3 Dial Pad

The Dial Pad menu helps you call SIP devices via the SIP Proxy server if you know the called line number. When **2N**[®] **Helios IP Mobile** is not registered with the SIP Proxy server, the Dial Pad function is inactive and remains so until the application gets registered with the SIP Proxy server.





An avatar is displayed during Dial Pad call ringing in case the called device does not support video stream transmission. If the called device supports video transmission, the video stream is displayed like a call from a device added to Devices.





⚠ Caution

■ Dial Pad disables sending tone signalling (DTMF) during calls.



4.2.4 About

The About section provides information on the $2N^{\circledR}$ Helios IP Mobile version and 2N Telekomunikace a.s. company.





4.2.5 Settings - Settings

The Settings section helps you set the $2N^{\textcircled{8}}$ Helios IP Mobile parameters. The following options are available:

- **Device name** device name under which **2N**[®] **Indoor Touch** identifies itself to other LAN devices via **2N**[®] **Helios IP Mobile**.
- **Auto snapshot** Auto snapshot activation/deactivation.
- **Settings password** no user has access to the Settings and Add Devices sections without knowing this password.
- 2N[®] Helios IP Group Authentication authentication password for 2N[®] Helios IP devices. If the password is defined, the Devices / Add Devices / Local devices scanner only searches the 2N[®] Helios IP and 2N[®] Indoor Touch devices with the same password.
- Volume level 2N[®] Indoor Touch speaker volume level.
- Mic sensitivity 2N[®] Indoor Touch microphone sensitivity.

Caution

- The **Volume level** and **Mic sensitivity** settings only adjust the active call volume. The ringing volume is affected by the system launcher configuration and cannot be controlled by the application. Set the ringing volume here: 3.3 Launcher Configuration -> Audio.
- Ringing tone select the **2N**[®] **Helios IP Mobile** ringing tone.
- SIP Proxy
 - **SIP Proxy** SIP Proxy activation/deactivation.
 - SIP Proxy settings SIP Proxy setting menu.
- Video
 - Multicast/Unicast 2N[®] Helios IP video stream transmission type.
 - Video deactivation video stream display time for a 2N[®] Helios IP device selected from the Devices list.
 - **Earlymedia** video stream transmission activation/deactivation during incoming ringing from the SIP Proxy registered devices.
- Recorder
 - **Recorder ON/OFF** activate/deactivate the recorder.
 - Recorder activation timeout (s) make the recorder service be activated after the set timeout during an incoming call ringing.
 - **Record announcement** set the announcement type to be played.
 - **Default tone** default announcement included in the **2N**[®] **Helios IP Mobile** application.
 - **Tone from file** select an announcement from a file.
 - **Recorded tone** announcement recorded in the Record custom announcement section of **2N**[®] **Helios IP Mobile**.
 - **Record custom announcement** record a user announcement for the recorder service. The maximum message length is 15 s.
 - Play actual announcement play the currently set announcement active in the system.



Caution

If Recorder is ON, the call is answered and recorded on 1 device only. If Recorder is ON for more devices in one LAN or called group, the call is answered and recorded on the device that was the first to receive the call (provided all the devices have an identical Recorder activation timeout value) or whose Recorder activation timeout is the lowest. If there is high LAN traffic and some call setup delays may occur, it cannot be guaranteed that the call will be answered and recorded on one device all the time.

Door button

- **Door button ON/OFF** activate/deactivate the Door button function controlled via GPI 1/2.
- Inverted input mode ON/OFF change the door button behaviour by software. GPI 1/2 is logical 1 by default. An impulse turns the input to logical 0. The door button can be either normally closed (N/C) or normally open (N/O). Set the N/O door button as follows (and N/C vice versa analogously):
 - **ON** when the door button is pressed, the input turns into logical 0, i.e. the application is not ringing while the door button is pressed. When the door button is released, GPI 1/2 returns to logical 1 and the application starts ringing. Ringing is terminated as set in the Minimum ringing time or Maximum ringing time.
 - **OFF** when the door button is pressed, the input turns into logical 0, i.e. the application keeps ringing while the door button is pressed. Ringing is terminated as set in the Minimum ringing time or when the door button is released.
- **Used input GPI 1/2** set the input to control the door button. GPI 1 and GPI 2 are logical 1 by default. You can control only one of the digital inputs via APK.
- Minimum ringing time set the lower ringing limit, i.e. make the application ring for the time set in this parameter at least whenever the door button is pressed.
- Maximum ringing time set the upper ringing limit, i.e. make the application ring for the time set in this parameter at most whenever the door button is pressed.
- Bypass DND mode ON/OFF- set a DND bypass.
 - **ON** the Door button service is active when DND is active.
 - **OFF** the Door button service is inactive when DND is active.

External ringing notification

- External ringing notification ON/OFF activate/deactivate the External notification service controlled via Relay 1/2. External notification is activated by an incoming call or door button press if the Door button service is inactive.
- Inverted relay output ON/OFF change the External notification behaviour by setting Relay 1/2 to N/C or N/O.
 - **ON** External notification is active when Relay 1/2 is N/O.
 - **OFF** External notification is active when Relay 1/2 is N/C.
- Used input Relay 1/2 set Relay 1/2 for External notification control. Always use just one relay.
- Minimal ringing time set the lower External notification limit, i.e. activate External notification for the time set in this parameter at least.
- Maximal ringing time set the upper External notification limit, i.e. activate External notification for the time set in this parameter at most.
- Bypass DND mode ON/OFF- set a DND bypass.
 - **ON** External ringing notification is active when DND is active.



- **OFF** External ringing notification is inactive when DND is active.
- Configuration Import/Export
 - Import configuration import the 2N[®] Helios IP Mobile configuration from a configuration file except for the devices added to Devices.
 - Export configuration export the 2N[®] Helios IP Mobile configuration into a system configuration file or SD card.

① Warning

- Unicast video transmission is only suitable for installations with up to 3 devices with the **2N**[®] **Helios IP Mobile** application. A higher count of devices in the network may cause video and call transmission problems. Therefore, you are advised to use Multicast video transmission with the Multicast supporting network elements for more extensive installations.
- If 2N[®] Helios IP Group Authentication is enabled, all local devices will be removed from **Devices** due to an invalid password. The devices with a password identical with that in 2N[®] Helios IP Group Authentication will only be detected in the LAN.



4.2.6 Settings - Do Not Disturb (DND)

Configure the Do Not Disturb function to prevent **2N**[®] **Helios IP Mobile** from ringing within a selected time interval. When a call is coming in the active time interval, the **2N**[®] **Indoor Touch** display comes on and the incoming call is displayed via **2N**[®] **Helios IP Mobile**. The call can be processed in a usual manner.



Che

notification icon indicates the Do Not Disturb function activation.

Do Not Disturb (DND) – set an unrepeatable time interval to 15 minutes - 24 hours. When this time expires, the DND function will become inactive.

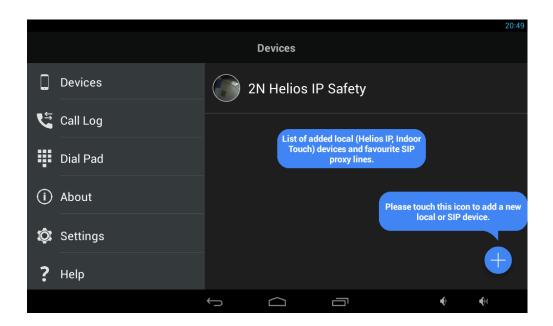
Do Not Disturb (DND) Night mode – set an unrepeatable time interval to Start time - Stop time.

- **Start time** Do Not Disturb activation time.
- **Stop time** Do Not Disturb deactivation time.
- **Days** Do Not Disturb is only activated at Start time on active days and deactivated at Stop time. The Stop time parameter may be on inactive days too.



4.2.7 Help

Click Help to display basic information on selected elements of the ${\bf 2N}^{\it (B)}$ Helios IP Mobile application.





4.3 Notification in 2N® Indoor Touch Environment

The $2N^{\circledR}$ Helios IP Mobile application uses LED notification. The $2N^{\circledR}$ Indoor Touch LED starts flashing red in case:

- There is an unread incoming call in the application, or
- 2N[®] Indoor Touch is in the stand-by mode.



4.4 Connection to 2N® Helios IP

Change some settings in the **2N**[®] **Helios IP** intercom to be connected to make the **2N** [®] **Helios IP** Mobile - **2N**[®] **Helios IP** connection effective. Refer to the **2N**[®] **Helios IP** User Manual at http://wiki.2n.cz/display/HIP for details or FAQ:

2N® Helios IP Mobile v.4 - How to setup calling between 2N® Indoor Touch/Helios IP Mobile and 2N® Helios IP?

Refer to https://faq.2n.cz/ for more FAQ.





5. Web Interface Configuration

 $2N^{\circledR}$ Indoor Touch allows the user to configure a majority of launcher and $2N^{\circledR}$ **Helios IP Mobile** parameters via the web interface.

Here is what you can find in this section:

- 5.1 Login5.2 System Info
- 5.3 Device
- 5.4 Application
- 5.5 Limitation



5.1 Login

Enter the $\mathbf{2N}^{\otimes}$ Indoor Touch IP address into the web browser address row to connect to the web interface. The currently supported browsers are Internet Explorer, Google Chrome, Firefox and Opera.

Then enter the user name and password to access the configuration section. The default values are as follows:

- User Name: Admin
- Password: 2n (or a valid configuration password in 2N® Indoor Touch)



5.2 System Info

This subsection includes relevant system information.

Contents:

- 5.2.1 Status5.2.2 Logs



5.2.1 Status

Device status screen:

- Licence licence state
 - State Limited/Unlimited
 - Remaining remaining time for a time-limited licence; unlimited licence reports No Limit
 - Licensed Features refer to the licence key types below
 - Licence Key currently used licence key
 - Upload Licence display a licence key adding dialogue
- **Device** current information on the device
 - System device name
 - **Serial Numbe**r device serial number
 - **Total Uptime** total operation time since the first start
 - Uptime from restart time since the last restart
 - **OS Version** operating system version and type
 - Firmware Version firmware version
 - Hardware Version hardware version
 - Wi-Fi Capable WiFi module availability info
 - NFC Capable NFC reader availability info
 - Wi-Fi MAC WiFi module MAC address
 - LAN MAC Ethernet module MAC address
 - **Temperature** current device temperature
- **Time** current data and time
- **Memory** RAM current state
 - RAM information on installed, available and used RAM
 - Internal Storage information on total and free internal memory capacity
 - Cache information on total and free cache memory capacity

Licence key types:

- APP third party application download
- LAUNCHER 2N® Indoor Touch launcher Android launcher switching
- **ROOT** option to use Superuser rights on installed applications
- HTTPAPI 2N® Indoor Touch control via API

Caution

■ The original licence key will be overwritten! Be sure to enter the valid licence key obtained from your supplier!



(!) Warning

- The APP licence unlocks 2N® Indoor Touch for recording of user applications from a microSD (SDHC) card (up to 16 GB). 2N TELEKOMUNIKACE a.s. does not guarantee functionality and stability of user applications or correct function of pre-installed applications in 2N® Indoor Touch after user applications are installed. Should there be problems, remove your own applications or reset the device to factory values. Factory reset restores the original state of 2N® Indoor Touch, i.e. the state without user applications and settings.
- The **ROOT** licence helps you run third party applications with Superuser rights. Some third party applications with Superuser rights, however, may cause system instability and, in extreme cases, damage the device hardware. Therefore, using the **ROOT** licence is always at the user's own risk and leads to a loss of **2N**[®] **IndoorTouch** warranty.



5.2.2 Logs

This subsection helps you browse through the $2N^{\circledR}$ Indoor Touch logs and debug logs.

Activate debug logs – switch basic information logs to advanced debug logs.

Up to 200 logs can be displayed starting from the latest one.

Log types:

- SEVERE (most serious)
- WARNING
- INFO
- CONFIG
- FINE
- FINER
- FINEST (least serious)

The **debug** mode displays all the log types. The basic mode only displays the INFO and WARNING logs.

Details on log types:

- **SEVERE** this log indicates a severe failure. In general, this log type is displayed in case the launch of a program part fails. It should be sufficiently clear to both the end user and system administrator.
- WARNING this log indicates a potential problem. It describes events that the user or administrator should take care of to avoid failure.
- **INFO** this log informs of the states of all system parts. As a rule, these logs do not announce a problem or failure but notify the user/administrator of what is going on in the system.
- **CONFIG** this log announces system configuration changes. It should provide enough information on hardware configuration and settings. Typically, it includes CPU, GPU, GUI and similar information. Some announcements can be found in the INFO logs too.
- **FINE** this log provides essential information on system operation. These logs include general information that is relevant for the administrators who are not concerned with specific subsystems. Typically, these logs include minor failures that do not affect the system function and potential risks associated with the hardware performance.
- **FINER** this log provides system operation details. It is more detailed than a FINE log and includes mostly function inputs and returns in the system or exceptions.
- **FINEST** this log provides the finest system operation details. It includes more information than FINE a FINER.



5.3 Device

This subsection describes how to configure the 2N® Indoor Touch launcher via the web interface.

Contents:

- 5.3.1 Network5.3.2 Home Screen
- 5.3.3 Local Settings
- 5.3.4 Display
- 5.3.5 Audio
- 5.3.6 Maintenance



5.3.1 Network

This tab includes the Ethernet adapter settings in $2N^{\otimes}$ Indoor Touch.



- **DHCP is enabled** Yes/No displays whether it is allowed/disallowed to get setting from DHCP
- **IP Address** current IP address
- IP Mask current mask
- **IP Gateway** current gateway
- **IP DNS** DNS server used
- Change Settings display a setting changing dialogue
 - **Enable DHCP** enable/disable getting of settings from DHCP; when disabled, the remaining IOP addresses will be displayed
 - IP Address device IP address setting
 - IP Mask mask setting
 - IP Gateway network gateway setting
 - **IP DNS** DNS server setting



5.3.2 Home Screen

This tab helps you set application positions and icons.



Click a selected position to display a position setting window:



- **Label** application name to be displayed on a position.
- **Application** click to display the list of applications installed in the device. Select an application to set its position in the launcher for launching.
- **Icon** selected application icon.
- **Change Icon** change an icon to another or the default one.



Caution

It is impossible to remove the **Settings** and **About** applications from the Home Screen to avoid device blocking. All you can do is duplicate them to other positions and then remove them from the original positions.



5.3.3 Local Settings

The tab helps you change the language, time zone and weather.

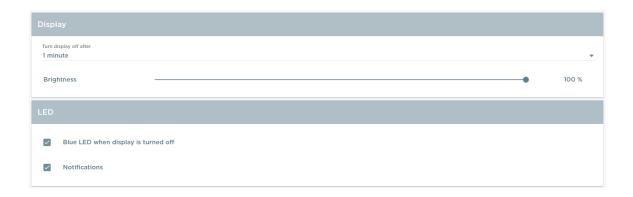


- **System Language** change the language of most applications (Gallery, etc.) excluding the launcher, which is in English by default and cannot be changed.
- **Time** select the time zone. The default zone is GMT + 00:00.
- **Weather** change the weather settings:
 - Location weather forecast location in the format used at OpenWeatherMap.org
 - **Save** save the set location.
 - **Update period** weather data update rate: 1 hour or 2 hours.
 - Unit temperature units: Metric (°C) or Imperial (°F).
- **Source** open the data source: OpenWeatherMap.org



5.3.4 Display

The tab helps you control the display and LED notification settings.

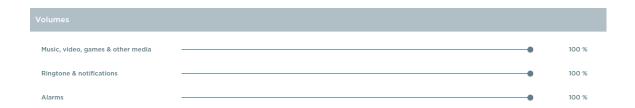


- Display display settings:
 - **Turn display off after** turn the display off after a pre-set time value: from 15 seconds to 30 minutes.
 - **Brightness** set the display brightness: 10-100%.
- **LED** set the LED notifications:
 - Blue LED when display is turned off the blue LED goes on when the display turns off. This setting helps you distinguish whether it is the device or the display that is off.
 - **Notifications** enable a red flashing LED to indicate an active notification from an application, typically a missed call from **2N**[®] **Helios IP Mobile**.



5.3.5 Audio

This tab helps you set the ringing, notification, application and other volumes.

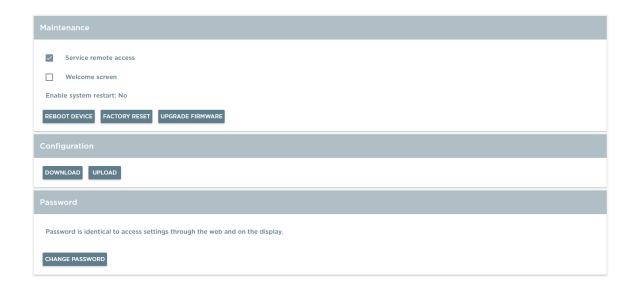


- Music, video, games and other media set volume for music, video, games and audio from other similar sources: 7-100%.
- **Ringtone and notifications** set volume for ringing and notifications: 14-100%.
- **Alarms** set the alarm clock volume: 14-100%.



5.3.6 Maintenance

This tab helps you upgrade firmware, back up/download configuration and change passwords.



- Maintenance
 - **Service remote access** enable access to the device via a web interface.
 - **Welcome Screen** display the welcome screen upon every start.
 - **Enable system restart** set the automatic restart time for the device.
 - **Reboot device** click to confirm reboot and initiate the device restart.
 - **Factory reset** click to confirm reboot and initiate the device factory reset.
 - **Upgrade Firmware** display the firmware uploading dialogue and initiate restart+upgrade.



- Select File-Choose select the firmware file (.img).
- Firmware state firmware upload status.
- Running Version current firmware version.
- Configuration
 - Download download the current configuration to a PC.



■ **Upload** – upload configuration from a PC file to the device. Click to display a dialogue to select whether to upload whole configuration or omit the IP address containing part.

Password

■ **Change Password** – change the web interface and launcher configuration access password.



5.4 Application

This subsection describes how to change the 2N[®] Helios IP Mobile configuration via a web interface.

Contents:

- 5.4.1 2N® Helios IP Mobile5.4.2 Settings



5.4.1 2N® Helios IP Mobile

2N[®] Helios IP Mobile settings.

- 5.4.1.1 Devices
 5.4.1.2 Settings
 5.4.1.3 Info



5.4.1.1 Devices

This tab helps you display all devices added to ${\bf 2N}^{\it \$}$ Helios IP Mobile and LAN and SIP Proxy devices added.



■ **Actual** – display the devices added and information on them.

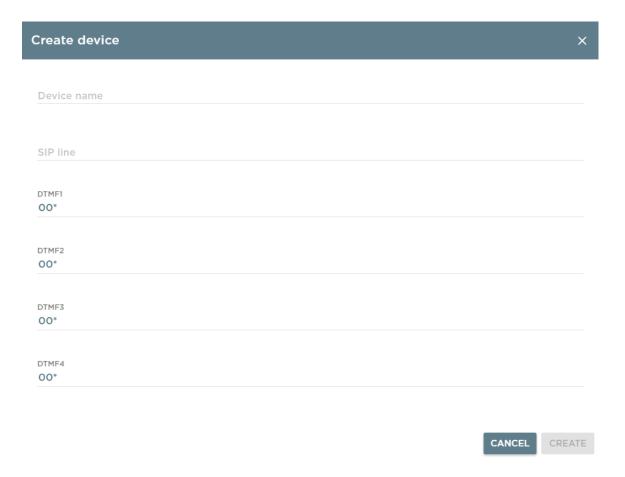


■ LAN – display the devices detected in the LAN. Click to add a selected device to Actual. Click to edit the device name.



■ **SIP** – display the list of SIP Proxy devices added. Click and complete the dialogue below:





- **Device Name** display the SIP Proxy name.
- **SIP line** display the SIP Proxy SIP line number.
- **DTMF1-4** define the DTMF code to be sent to the called device during a call.



5.4.1.2 Settings

Other **2N® Helios IP Mobile** settings.

5.4.1.2.1 Common

5.4.1.2.2 Password

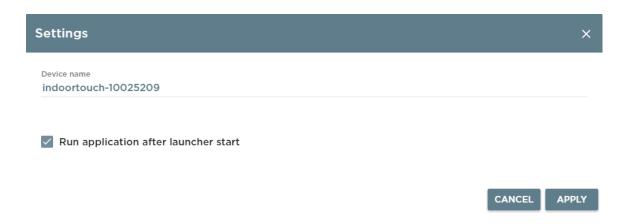
5.4.1.2.3 SIP Proxy

5.4.1.2.4 Video



5.4.1.2.1 Common

This tab helps you edit the $2N^{\otimes}$ Indoor Touch name to be displayed in $2N^{\otimes}$ Helios IP Mobile and set the application start immediately after the launcher start.

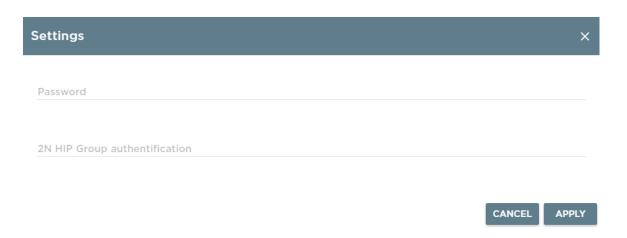


- Device Name device name in 2N[®] Helios IP Mobile.
- Run application after launcher start enable the 2N® Helios IP Mobile start immediately after the launcher start.



5.4.1.2.2 Password

This tab helps you set the $2N^{\otimes}$ Helios IP Mobile access password and the HIP Authentication Group password.

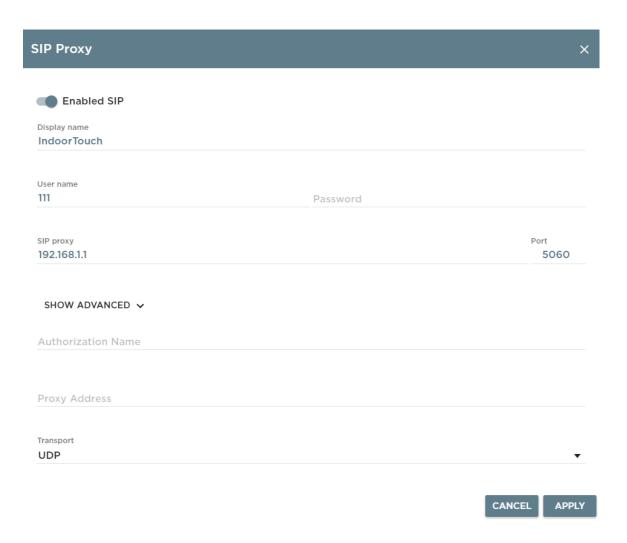


- Password edit the 2N[®] Helios IP Mobile access password.
- 2N HIP Group Authentication edit the HIP Authentication Group password. Remember to set this password in 2N® Helios IP too.



5.4.1.2.3 SIP Proxy

This tab helps you set the parameters necessary for SIP Proxy server connection.

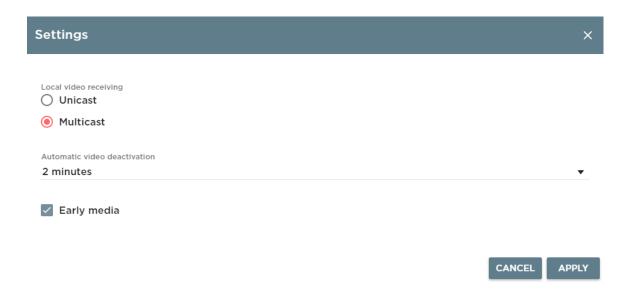


- **Enabled SIP** enable/disable connection to SIP Proxy and set details.
- **Display Name** display the **2N**[®] **Helios IP Mobile** device/application name for SIP Proxy needs.
- **User Name** user name/number registered with the SIP Proxy server.
- **Password** user password registered with the SIP Proxy server.
- **SIP Proxy** SIP Proxy server IP address.
- Port select the communication port. Default: 5060. Range: 1-65535.
 Show Advanced
- Authorization Name user name registered with the SIP Proxy server for authentication. Typically, it is identical with User Name.
- Proxy Address IP address of the authentication SIP Proxy server. Typically, it is identical with SIP Proxy.
- Transport select the protocol to be used: TCP or UDP.



5.4.1.2.4 Video

This tab helps you set the video stream parameters.



- **Local video receiving** set the Unicast/Multicast video receiving mode.
- **Automatic video deactivation** set the time at which video transmission is to be deactivated: 1-30 minutes.
- **EarlyMedia** enable/disable media transmission before call setup.



5.4.1.3 Info

This tab helps you restart $\mathbf{2N}^{\otimes}$ Helios IP Mobile and display information on the application state.

Info

Application is running: Yes

RESTART

- **Application is running** Yes/No application state.
- **Restart** restart the application.



5.4.2 Settings

Set the functions necessary for other applications.



- Allow installation of 3rd party applications enable installation of third party applications. This function is licensed.
- Allow return to application on call end when a call comes while 2N[®] Helios IP Mobile is running on the background and another application on the foreground, 2N[®] Helios IP Mobile will return to the background after the call ends.
- Package to run at start complete the package name of the application (com.android.browser, e.g.) to be started after the launcher start.
- URL to run at start complete the URL to start the web browser and go to the specified address after the launcher start.
- Change Settings change the settings in Package to run at start and URL to run at start.



5.5 Limitation

The web interface is always available to 1 user at a time. This applies to more tabs on 1 PC too. Therefore, remember to log in to each tab every time.



6. Technical Parameters

Power Supply

■ **Type:** external power adapter (SELV type with LPS) 90-230 V, 50-60 Hz to 12 V DC 2 A Power over Ethernet (PoE 802.3af)

■ Power input: up to 10W

User Interface

Control: capacitive touch panel

■ Display size: 7"

■ Resolution: 1024x600 px

Backlight: LED

Status indicator: 1 RGB LED

Audio

Microphone: integratedLoudspeaker: 2W integrated

OS

Android 4.2

Interface

■ LAN: 10/100BaseT, RJ-45; Ca5e or higher (recommended)

■ Memory card: microSD card (SDHC) up to 16GB

■ WiFi: 802.11b/g/n, integrated antenna

Card reader: integrated



Mechanical Parameters

■ **Dimensions (w x h x d):** 235x165x40 mm

■ **Weight:** 850g

■ Operating temperature: 0°C - 60°C

■ **Relative humidity:** 10%–90% (non-condensing)

Storing temperature: -20°C - 70°C
 Recommended altitude: 0-2000m

I/O Description

HW v2

Signification	Name	Restriction
REL1/2	Relay	contact data: max 30VDC 1A DC12V+/- IN = power input: Vinmax = 12VDC Imax=1A DC12V+OUT = power output: Vout = 12VDC Imax=100mA
DC12V+	+ 12V input	Imin=1000mA
DC12V-	- 12V input	Imin=1000mA
GND	Ground	

HW v4

Signification	Name	Restriction
ANALOG IN 1/2	Analog Input	0-5VDC 1.5MΩ
OUTPUT 1/2	Digital Output	Voh = 3.3VDC 0.33mA
INPUT 1/2	Digital Input	Vihmax = 5 VDC 100 kΩ
IN (OUT) 1/2	Digital Input/Output	Vihmax = 3.3 VDC (100Ω serial resistor), Voh = 3.3 VDC 4mA (100Ω serial resistor)
REL1/2	Relay	contact data: max 30VDC 1A. DC12V+/- IN = power input: Vinmax = 12VDC Imax=1A . DC12V+OUT = power output: Vout = 12VDC Imax=100mA
DC12V+ OUT	+ 12V output	Imax=100mA
DC12V+ IN	+ 12V input	Imin=1000mA
GND	Ground (- 12V input)	



7. Supplementary Information

This section provides supplementary information on the **2N**[®] **Indoor Touch** product. Here is what you can find in this section:

- 7.1 Troubleshooting
 7.2 Directives, Laws and Regulation General Instructions and Cautions



7.1 Troubleshooting

Trouble: The device always switches off the display before timeout.

■ Advice: Check the device temperature. If improperly installed, 2N[®] Indoor Touch automatically turns into the stand-by mode to reduce the device temperature if critical to avoid forced turn-off / reset in extreme cases. The user is notified of this problem by a short display of the notification window. Display the current device temperature in the Setting section.

Trouble: The device does not start and remains in one of the LED states or gets restarted round and round.

Advice: Press and hold the Reset button on the device backside during the startup to restore the factory values automatically. If the trouble persists, upgrade the system via an SD card. If the trouble still persists, contact the Servicing centre.

Trouble: The device fails to emit sounds, even the incoming call ringing.

■ **Advice:** Check the volume setting and adjust the loudspeaker volume level if necessary with the Volume up/down buttons on the lower status bar.



For the most frequently asked questions refer to faq.2n.cz.



7.2 Directives, Laws and Regulation – General Instructions and Cautions

Please read this User Manual carefully before using the product. Follow all instructions and recommendations included herein.

Any use of the product that is in contradiction with the instructions provided herein may result in malfunction, damage or destruction of the product.

The manufacturer shall not be liable and responsible for any damage incurred as a result of a use of the product other than that included herein, namely undue application and disobedience of the recommendations and warnings in contradiction herewith.

Any use or connection of the product other than those included herein shall be considered undue and the manufacturer shall not be liable for any consequences arisen as a result of such misconduct.

Moreover, the manufacturer shall not be liable for any damage or destruction of the product incurred as a result of misplacement, incompetent installation and/or undue operation and use of the product in contradiction herewith.

The manufacturer assumes no responsibility for any malfunction, damage or destruction of the product caused by incompetent replacement of parts or due to the use of reproduction parts or components.

The manufacturer shall not be liable and responsible for any loss or damage incurred as a result of a natural disaster or any other unfavourable natural condition.

The manufacturer shall not be held liable for any damage of the product arising during the shipping thereof.

The manufacturer shall not make any warrant with regard to data loss or damage.

The manufacturer shall not be liable and responsible for any direct or indirect damage incurred as a result of a use of the product in contradiction herewith or a failure of the product due to a use in contradiction herewith.

All applicable legal regulations concerning the product installation and use as well as provisions of technical standards on electric installations have to be obeyed. The manufacturer shall not be liable and responsible for damage or destruction of the product or damage incurred by the consumer in case the product is used and handled contrary to the said regulations and provisions.

The consumer shall, at its own expense, obtain software protection of the product. The manufacturer shall not be held liable and responsible for any damage incurred as a result of the use of deficient or substandard security software.

The consumer shall, without delay, change the access password for the product after installation. The manufacturer shall not be held liable or responsible for any damage incurred by the consumer in connection with the use of the original password.

The manufacturer also assumes no responsibility for additional costs incurred by the consumer as a result of making calls using a line with an increased tariff.



Electric Waste and Used Battery Pack Handling



Do not place used electric devices and battery packs into municipal waste containers. An undue disposal thereof might impair the environment!

Deliver your expired electric appliances and battery packs removed from them to dedicated dumpsites or containers or give them back to the dealer or manufacturer for environmental-friendly disposal. The dealer or manufacturer shall take the product back free of charge and without requiring another purchase. Make sure that the devices to be disposed of are complete.

Do not throw battery packs into fire. Battery packs may not be taken into parts or short-circuited either.





2N TELEKOMUNIKACE a.s.

Modřanská 621, 143 01 Prague 4, Czech Republic Phone: +420 261 301 500, Fax: +420 261 301 599

E-mail: sales@2n.cz
Web: www.2n.cz

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