

2N[®] Indoor Talk User Manual



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1. Product Overview

In this section, we introduce the **2N® Indoor Talk** product, outline its application options and highlight the advantages following from its use. The section also includes safety precautions.

- [1.1 Product Description](#)
- [1.2 Differences between Models and Associated Products](#)
- [1.3 Terms and Symbols](#)
- [1.4 Safety Precautions](#)

1.1 Product Description

2N® Indoor Talk is an indoor IP/SIP audio unit allowing for voice communication with the 2N IP intercoms. The device includes a panel with a touch layer on 3 mm thick hardened glass, speakerphone, microphone, Ethernet interface for LAN connection and connectors for induction loop and doorbell external supply. **2N® Indoor Talk** is a high-quality, cost efficient and easy-to-install and configure answering unit. One installation can combine variable answering units manufactured by 2N Telekomunikace a.s.

2N® Indoor Talk is equipped a specific user interface for an increased user comfort and safety.

2N® Indoor Talk basic features:

- display with capacitive touch layer
- full duplex handsfree audio communication
- LAN interface with PoE supply option
- easy flush mounting
- combination with **2N® Indoor Touch** answering units
- DND mode
- remote door lock control
- ambient lighting at relax
- light signalling of activation by call
- integrated user web interface
- external doorbell button input
- external power supply input
- induction loop input.

1.2 Differences between Models and Associated Products

2N® Indoor Talk Units

**2N Part
No. 91378401**

**Axis Part No.
01698-001**



- **2N® Indoor Talk** – black
- Indoor answering audio unit with touchscreen designed for all **2N IP intercoms**

**2N Part
No.
91378401WH**

**Axis Part No.
01699-001**



- **2N® Indoor Talk** – white
- Indoor answering audio unit with touchscreen designed for all **2N IP intercoms**

Other Indoor Units and Accessories

Part Numbers: 2N Part No. 91378375 Axis Part No. 01668-001 2N Part No. 91378376 Axis Part No. 01670-001 	• 2N® Indoor Touch 2.0 – black • WiFi version (third and fourth Part Nos.) • 2N® Indoor Touch 2.0, an elegant indoor touch panel, is designed for all of the 2N IP intercoms. The display panel shows you the person standing at your door and helps you make conversation with the visitor, open the doorlock or switch on the entrance hall lights.
2N Part No. 91378382 Axis Part No. 01425-001 	• 2N® Indoor Touch – desk stand, black

Part Numbers:

2N Part No. 91378375WH

Axis Part No. 01669-001

2N Part No. 91378376WH

Axis Part No. 01671-001



- **2N® Indoor Touch 2.0** – white
- WiFi version (third and fourth Part Nos.)
- **2N® Indoor Touch 2.0**, an elegant indoor touch panel, is designed for all of the **2N IP intercoms**. The display panel shows you the person standing at your door and helps you make conversation with the visitor, open the doorlock or switch on the entrance hall lights.

2N Part No. 91378382W

Axis Part No. 01426-001



- **2N® Indoor Touch** – desk stand, white

Part Numbers:

91378381E

91378381GB

91378381US



- The exclusive type of power adapter **SYS1561-0912** to be used with all **2N® Indoor Touch 2.0** devices.
- Stabilised 12 V / 0,75 A source to be used where PoE supply is unavailable.
- The part numbers differ in their electric socket markings (E/GB/US).

2N Part No. 91378501
Axis Part No. 01935-001



- **2N® Indoor Compact** – black
- Indoor answering audio/video unit with touch buttons designed for all **2N IP intercoms**

2N Part No. 91378501WH
Axis Part No. 01936-001



- **2N® Indoor Compact** – white
- Indoor answering audio/video unit with touch buttons designed for all **2N IP intercoms**

VoIP Phones

2N Part No. 91378358 Axis Part No. 01421-001 	• Grandstream GXV3240 VoIP video phone • GXV3240 is the successor to the popular GXV3140 model, which allows for comfortable video calls in the IP network. Touchscreen and keypad control.
2N Part No. 91378357 Axis Part No. 01422-001 	• Grandstream GXV3275 VoIP video phone • GXV3275 is the successor to the popular GXV3175 model, which allows for comfortable video calls in the IP network. Touchscreen control.

Mounting Accessories

2N Part No.: 91378800 Axis Part No.: 01700-001 	• Flush mounting box for brick/plasterboard walls • Not included in the 2N® Indoor Talk package
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**2N Part
No. 91378802**

**Axis Part No.
02039-001**



- 2N Indoor answering unit desk stand
- Not included in the **2N® Indoor Talk** package

1.3 Terms and Symbols

The following symbols and pictograms are used in the manual:

Safety

- **Always abide** by this information to prevent persons from injury.

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.

Note

- Routines or advice for efficient use of the device.

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.com company websites for the latest **2N® Indoor Talk** firmware and User Manual.

- Where necessary, **2N® Indoor Talk** can be installed at a safe distance from the prohibited area and an Ethernet cable can only be carried to the required site.
- Install **2N® Indoor Talk** out of reach of sensitive devices and human bodies as it emits electromagnetic interference.
- Refer to S. [5. Technical Parameters](#) for the range of operating temperatures.
- **2N® Indoor Talk** may not be operated at places exposed to direct sunlight or near heat sources.
- **2N® Indoor Talk** is designed for indoor use. It may not be exposed to rain, flowing water, condensing moisture, fog, and so on.
- **2N® Indoor Talk** may not be exposed to aggressive gases, acid and solvent vapours, etc.

2N® Indoor Talk is designed for LAN connection.

Warning

- This product and its installation and configuration techniques are not intended for persons with diminished physical, sensory or mental capacities or persons with limited experience and knowledge unless expertly supervised or duly advised as to the use of this product by a person responsible for their safety.

2. Description and Installation

This section describes how to install and connect **2N® Indoor Talk** properly.

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 2N® Indoor Talk LAN Location via 2N® Network Scanner](#)
- [2.5 Zjištění IP adresy](#)

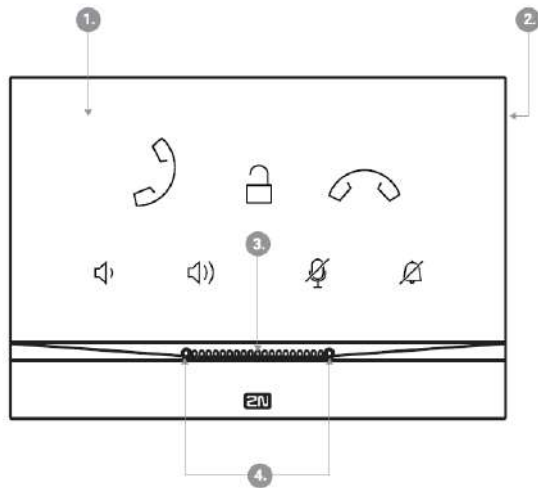
2.1 Before You Start

Product Completeness Check

Please check the product delivery before starting installation:

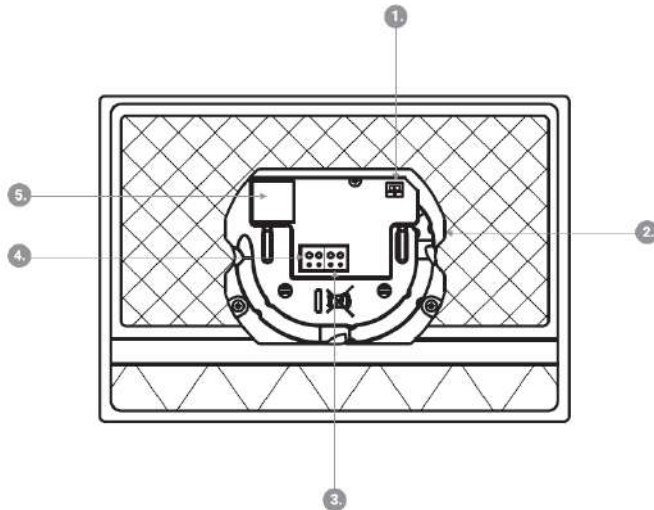
1	2N® Indoor Talk
2	External power and doorbell button terminals
1	Certificate of ownership
1	2.5 mm hexagon key wrench
1	Quick Start manual
1	display cleaning cloth

Front Layout



1. Panel with capacitive touch layer
2. Speaker
3. Microphone
4. Anchoring holes

Backside Connectors

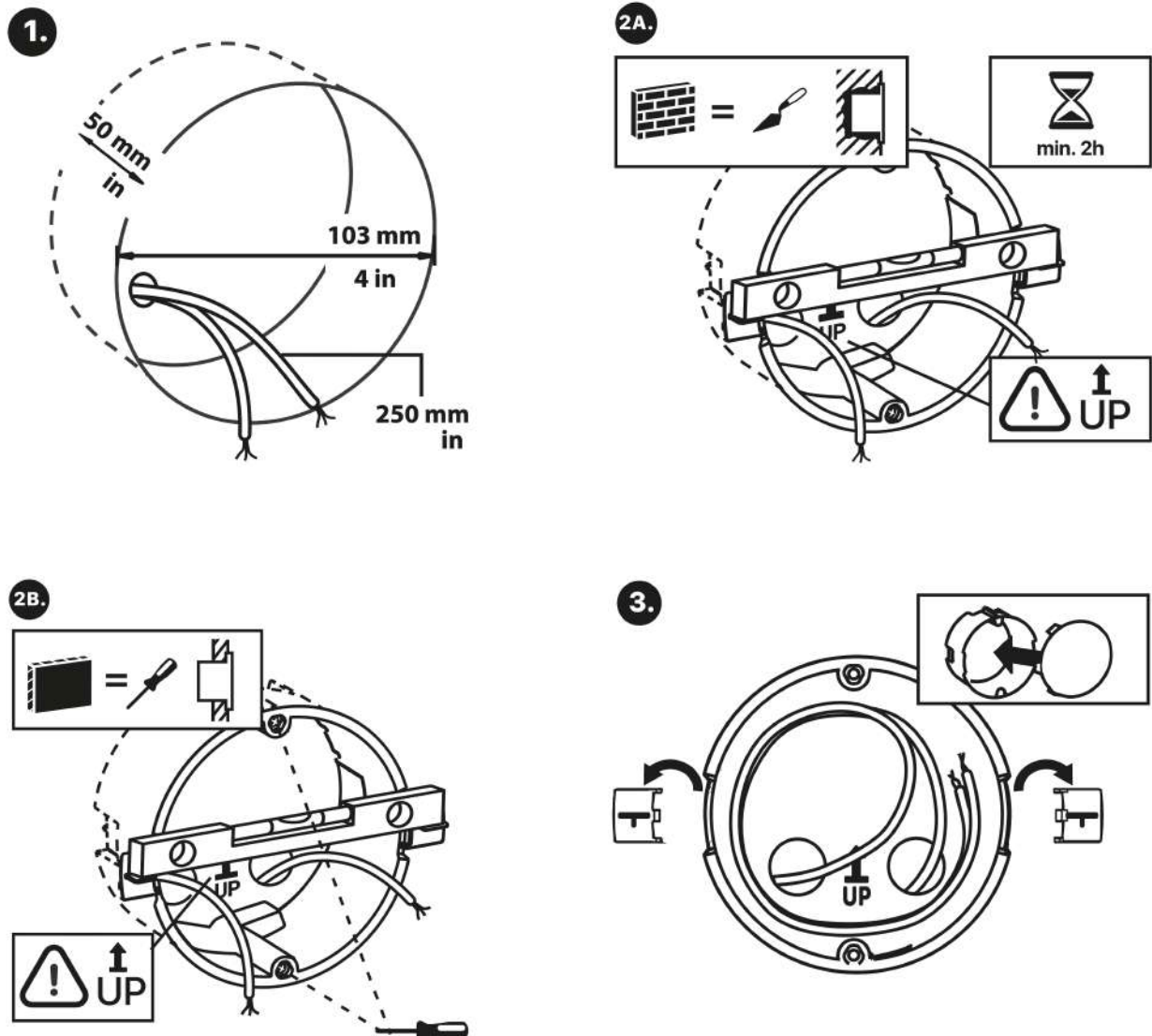


1. External induction loop output
2. Reset button
3. Doorbell button input
4. 12 V / 1 A DC power supply input
5. Ethernet

2N® Indoor Talk is designed for flush mounting (brick, plasterboard, wood). Use the flush mounting box (Part No. 91378800), which is not included in the package. Alternatively, the product can be mounted into a desk stand (Part No. 91378802), which is not included in the package.

Caution

- Before starting the mechanical installation on a selected place, make sure carefully that the preparations connected with it (drilling, wall cutting) cannot damage the electrical, gas, water and other existing wires and pipes.



Cut a circular hole of the diameter of 103 mm and depth of 50 mm before installation. It is assumed that all necessary cables of the maximum length of 25 cm will lead to the hole. Put the flush mounting box in the hole to make sure that the hole is deep enough. If the hole complies with the box size, wall in the box and level the box using a water level on the holding clips. When the mortar hardens, break off the clips and cap the box with the cover provided. Use anchoring elements to fix the device into plasterboard.

✓ **Tip**

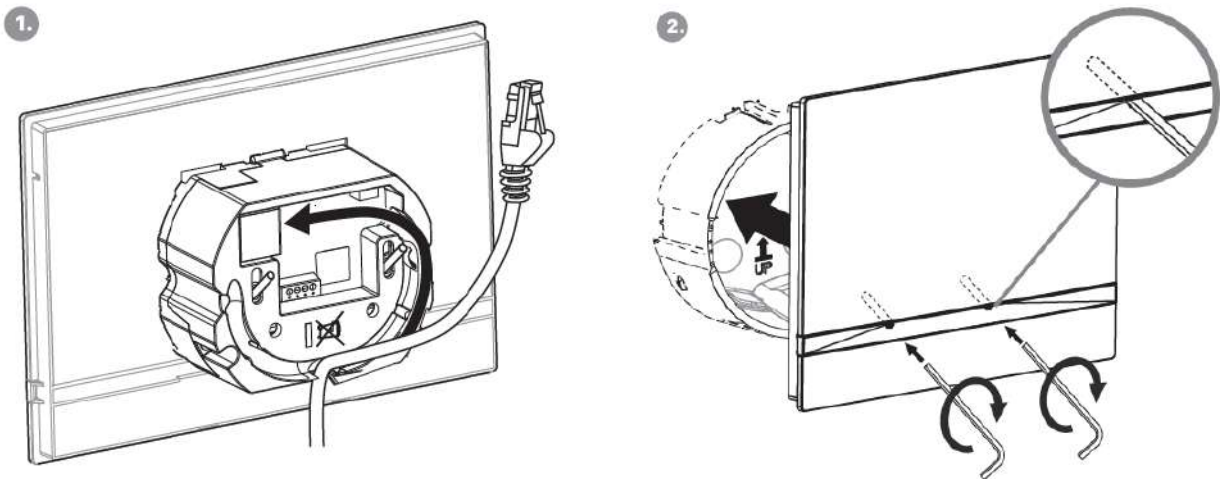
[Drill template.pdf](#)

Use a 2.5 mm hexagon key wrench (part of **2N® Indoor Talk delivery**) for fitting **2N® Indoor Talk** into the flush mounting box.

 Note

- Respect the local standards concerning installation of electronic devices on flammable materials while flush mounting **2N® Indoor Talk**.

2.2 Brief Installation Guide



Remove the cover from the walled-in **2N® Indoor Talk** flush mounting box. Remove the pre-prepared cabling, UTP cable, doorbell twin cable and power supply cable. Shorten the cables to 150 mm or less as required. Connect the doorbell twin cable or power supply cable to the connector provided. Crimp the RJ-45 connector onto the UTP cable.

Take **2N® Indoor Talk** and lean its bottom edge against the wall below the flush mounting box. First plug the green doorbell/power connector and then the LAN connector. Put the cables carefully in the pre-drilled **2N® Indoor Talk** back slot to prevent them from blocking any horizontal levelling movement during the final installation stage. Insert **2N® Indoor Talk** in the flush mounting box making sure that it clicks onto the levelling pins, which allow for a 5–6° inclination on either side for accurate horizontal levelling. Apply the box screw nuts with the hexagon key wrench provided. Level **2N® Indoor Talk** with a water level and tighten the screws gently. Now **2N® Indoor Talk** is ready for basic operation.

Alternatively, install the device in a stand. Within installation preparations, take out the pre-prepared cabling, UTP cable, doorbell (twin) cable and power supply. Shorten the cables to the required length. Connect the doorbell twin cable or power supply into the connector. Crimp an RJ-45 connector onto the UTP cable. See the figures and installation instructions below.

1. Pull the cables through the hole in the stand bottom.
2. First connect the green power supply/doorbell connector to the device. Then connect the LAN connector. Install the cables carefully into the pre-prepared groove on the back side so that they cannot get in the way and prevent free movement in the final installation stage.
3. Put the device on the stand making sure that it fits onto the centering pins. The alignment of the stand bottom edge and the device bottom strip means that the device is installed

propely. Fit the device to the stand by tightening the screws through the front side. Use a hexagon key wrench for tightening. Tighten the screws gently.

4. Remove the protective foil from the antislip belts on the stand bottom and install the device on a selected place. Now the device is ready for basic operation.

2N® Indoor Talk consumption with variable power supplies:

Supply type	Consumption
PoE, IEEE 802.3af	12 W
12 V / 2 A	12 W

Warning

- Do not connect any external power supply if PoE is used and vice versa.
- If you use a power adapter other than the recommended one, do not exceed the 12 V rated supply voltage. Also check the supply voltage polarity. Higher voltage values or misconnections may result in an irreparable device damage.

2.3 Installation Conditions

Make sure that the following **2N® Indoor Talk** installation conditions are met:

- There must be enough space for the device installation.
- The device is designed for vertical wall mounting (perpendicular to the floor) in the height of up to 120 cm above the floor. If necessary, operate the device 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 [S. 5. Technical Parameters](#) for the acceptable range of operating temperatures and relative humidity values.
- The device is not designed for environments with increased vibrations such as means of transport, machine rooms and so on.
- The device is not intended for dusty environments and places with unstable humidity and abrupt temperature changes.
- The device may not be exposed to aggressive gas, acid vapours, solvents, etc.
- The device is not intended for direct connection into the Internet/WAN.
- The device must be connected to the Internet/WAN via a separating active network element (switch/router).
- The device is designed for indoor use. It may not be exposed to rain, flowing water, condensing moisture, fog, etc.
- The device cannot be operated on places exposed to direct sunshine and near heat sources.
- Keep some free space above and below the device 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.

Power Supply Connection

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

1. Use a 12 V / 1 A DC power adapter connected to the backside terminal board.

2. Use an Ethernet cable connected to a PoE supply or PoE supporting Ethernet switch/router.

PoE Supply Connection

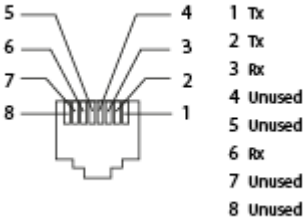
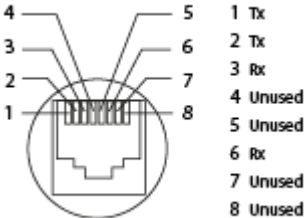
Use a standard straight RJ-45 terminated cable to connect **2N® Indoor Talk** to the Ethernet. The device supports the 10BaseT and 100BaseT protocols. The Ethernet connection state is indicated by the  symbol (hung-up receiver). If the symbol flashes, the device is disconnected from the network.

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 call quality!

Warning

- Do not connect an external power supply if PoE is used and vice versa.
- Connection of a defective or improper power supply may lead to a temporary or permanent device failure.

Ethernet cable connector	Ethernet socket
 5 4 1 Tx 6 3 2 Tx 7 2 3 Rx 8 1 4 Unused 5 Unused 6 Rx 7 Unused 8 Unused	 4 5 1 Tx 3 6 2 Tx 2 7 3 Rx 1 8 4 Unused 5 Unused 6 Rx 7 Unused 8 Unused

Firmware Upgrade

We recommend you to upgrade the **2N® Indoor Talk** firmware during installation. Refer to www.2n.com for the latest FW version. Refer to [3.2.5 System](#) for the firmware upgrade procedure.

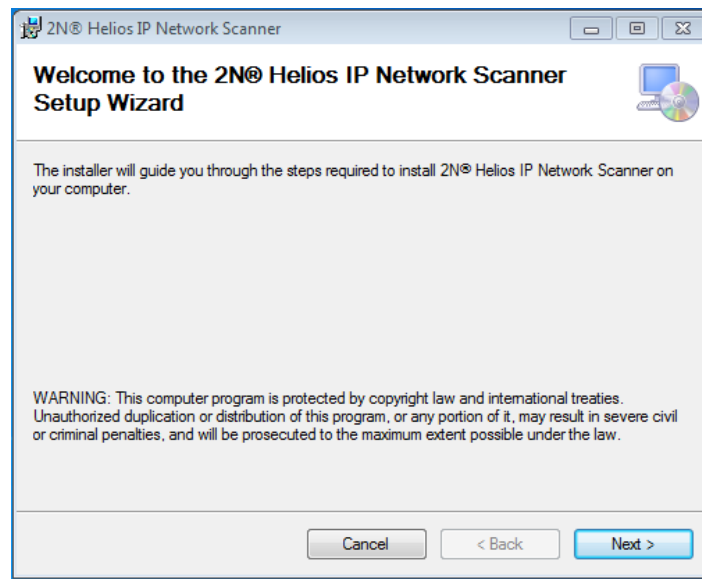
2.4 2N® Indoor Talk LAN Location via 2N® Network Scanner

2N® Indoor Talk is configured via the administration web server. Connect the device to the LAN IP and make sure it is properly powered.

2N® Network Scanner Description

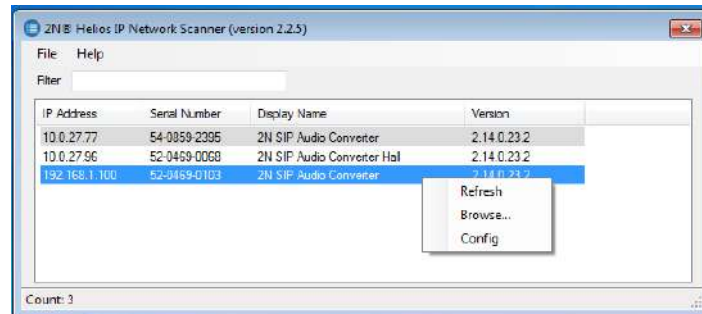
The application helps find the IP addresses of all the **2N® Indoor Talk** devices in the LAN. Download the app from the 2N web sites (www.2n.com). Make sure that Microsoft .NET Framework 2.0 is installed for successful app installation.

1. Run the **2N® Network Scanner**.
2. Use the Setup Wizard for successful installation.



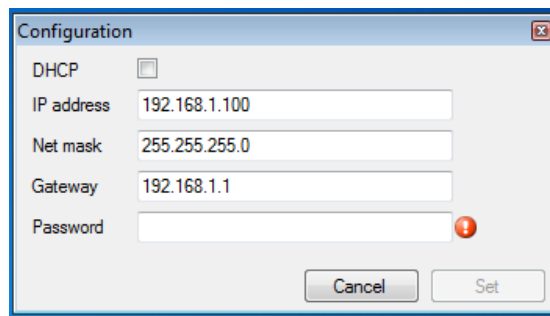
2N® IP Network Scanner Installer

3. Having installed the **2N® IP Network Scanner**, start the application using the Microsoft Windows Start menu.
4. Once started, the application begins to automatically search for all the **2N IP intercoms** in the LAN including their smart extensions (**2N® Indoor Talk**, **2N® Indoor Touch**), which are DHCP/statically assigned IP addresses. All the devices are displayed in a table.



2N® IP Network Scanner Window

5. Select the **2N® Indoor Talk** device to be configured and right-click it. Select *Browse...* to open the **2N® Indoor Talk** administration web interface login window for configuration. To change the device IP address, select *Config* and enter the required static IP address or activate DHCP. The default configuration password is 2n. If the found device is grey highlighted, its IP address cannot be configured using this application. In that case, click *Refresh* to find the device again and check whether multicast is enabled in your network.



2N® IP Network Scanner IP Address Change

2.5 Zjištění IP adresy

IP Address Lookup

To look up the **2N® Indoor Talk** IP address, take the following steps:

- Connect the device to the power supply (if connected, disconnect and reconnect it).
- Wait for the sound signal.
- Press the front panel lock button for 5 seconds within a 10s timeout.
- The device reads its IP address.
- If the address is 0.0.0.0, it means that the device has not obtained the IP address from the DHCP server.



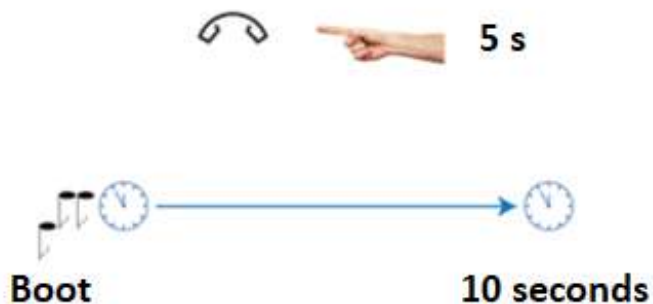
Note

- Press the button sequence within 30 seconds after the sound signal for security reasons. The pressing timeout is 2 s at most.

Dynamic/Static IP Address Switching

To switch the **2N® Indoor Talk** dynamic/static IP address, take the following steps:

- Connect the device to the power supply (if connected, disconnect and reconnect it, or press Reset).
- Wait for the first sound signal.
- Press the front panel call hang-up button for 5 seconds within a 10s timeout.
- The switching is indicated with an audio message.
- The following options are available:
 - Static IP enabled: the static address has been enabled
 - DHCP enabled: obtaining the address from DHCP has been enabled



The following network parameters will be set after restart if the static IP address is enabled:

- IP address: 192.168.1.100
- Network mask: 255.255.255.0
- Default gateway: 192.168.1.1

If DHCP is enabled, DHCP will be activated after the message is played and the IP address will be played automatically when received by the device.

Note

- Press the button sequence within 10 seconds after the sound signal for security reasons.

3. Configuration

- [3.1 Factory Reset](#)
- [3.2 Software Configuration](#)
- [3.3 Used Ports](#)

Login

Fill in the **2N® Indoor Talk** IP address or domain name into the internet browser to display the login screen. The default login user name and password are as follows:

- Username: **Admin**
- Password: **2n**

Should the login screen fail to appear, you must have typed a wrong IP address/port or the **2N® Indoor Talk** administration web server has been switched off. To find the correct IP address, use the **2N® Network Scanner** as described in [2.4 2N® Indoor Talk LAN Location via 2N® Network Scanner](#).

Language Selection

Use the menu in the right-hand upper corner of the web interface to select a language.

2N Indoor Talk CZ | EN | DE | FR | IT | ES | RU Logout

Language Selection

3.1 Factory Reset

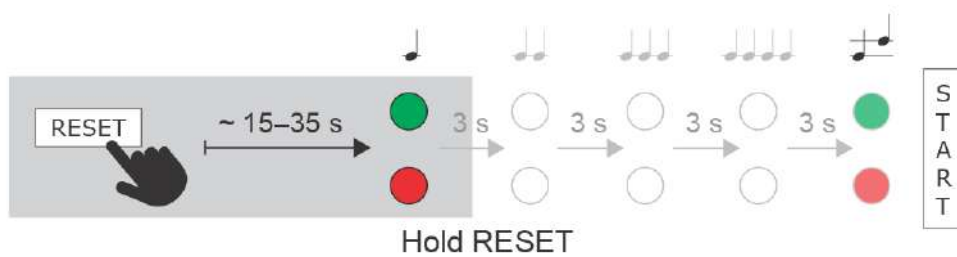
Reset Button

Located among the main unit connectors, the Reset button helps you reset the factory default values, restart the device, find the device IP address and switch the static/dynamic mode.

IP Address Finding

Follow the instructions below to **identify the current IP address**:

- Press and hold the RESET button.
- Wait until the red and green LEDs go on simultaneously on the device and the acoustic signal  can be heard (approx. 15–35 s).
- Release the RESET button.
- The device automatically announces the current IP address.



Note

- The delay after pressing RESET till the first light and sound signalling is set to 15–35 s depending on the 2N IP intercom/answering unit model used.
 - 11 s is the valid value for **2N® Indoor Talk**.

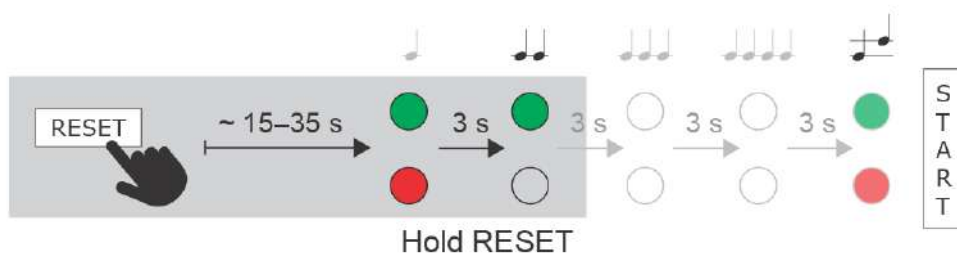
Static IP Address Setting

Follow the instructions below to switch on the **Static IP address** mode (DHCP OFF):

- Press and hold the RESET button.
- Wait until the red and green LEDs go on simultaneously on the device and the acoustic signal  can be heard (approx. 15–35 s).
- Wait until the red LED goes off and the acoustic signal  can be heard (approx. for another 3 s).
- Release the RESET button.

The following network parameters will be set after restart:

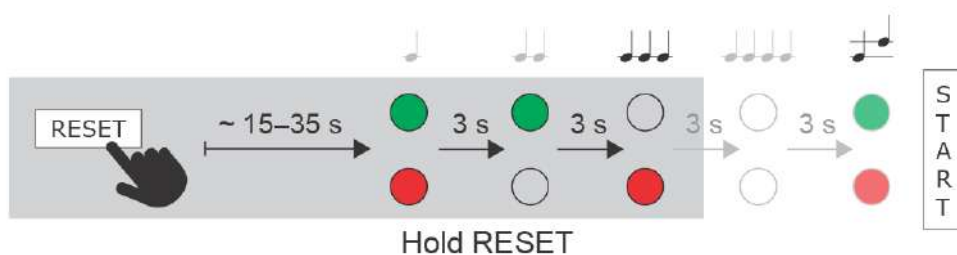
- IP address: 192.168.1.100
- Network mask: 255.255.255.0
- Default gateway: 192.168.1.1



Dynamic IP Address Setting

Follow the instructions below to switch on the **Dynamic IP address** mode (DCHP ON):

- Press and hold the RESET button.
- Wait until the red and green LEDs go on simultaneously on the device and the acoustic signal  can be heard (approx. 15–35 s).
- Wait until the red LED goes off and the acoustic signal  can be heard (approx. for another 3 s).
- Wait until the green LED goes off and the red LED goes on again and the acoustic signal  can be heard (approx. for another 3 s).
- Release the RESET button.

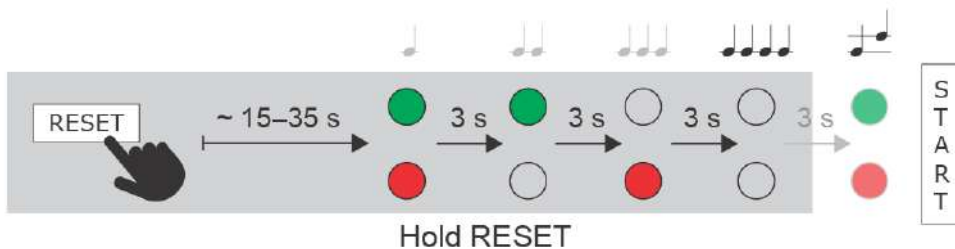


Factory Reset

Follow the instructions below to **reset the factory default values**:

- Press and hold the RESET button.

- Wait until the red and green LEDs go on simultaneously and the acoustic signal  can be heard (approx. 15–35 s).
- Wait until the red LED goes off and the acoustic signal  can be heard (approx. for another 3 s).
- Wait until the green LED goes off and the red LED goes on again and the acoustic signal  can be heard (approx. for another 3 s).
- Wait until the red LED goes off and the acoustic signal  can be heard (approx. for another 3 s).
- Release the RESET button.



Device Restart

Press the RESET button shortly (< 1 s) to restart the system without changing configuration.



Note

- The time interval between the short press of RESET and reconnection after restart is 12 s for **2N® Indoor Talk**.

3.2 Software Configuration

2N® Indoor Talk



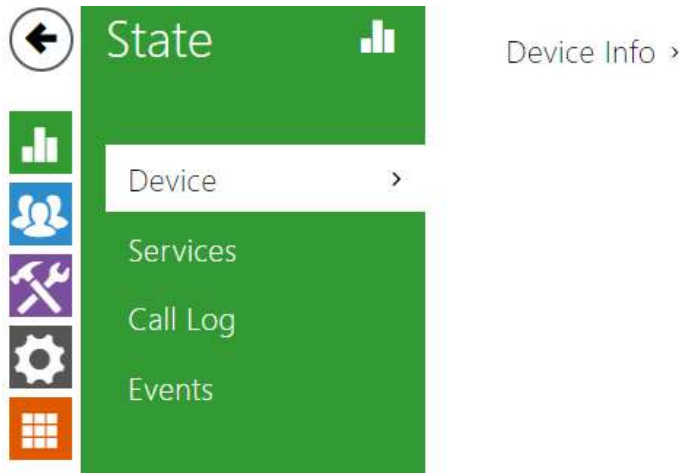
Start Screen

The start screen is displayed when you log in to the **2N® Indoor Talk** web interface. Use the back arrow  in the left-hand upper corner on each of the following web interface pages to return to this screen anytime. The screen header includes the device name (refer to the Display Name parameter in the **Services / Phone / SIP** menu). Select the web interface language with the buttons. Click the Log out button in the right-hand upper corner to log out.

The start screen also provides the first menu level and quick tile navigation to selected **2N® Indoor Talk** configuration sections. Some tiles also display the states of selected services.

- [3.2.1 Status](#)
- [3.2.2 Directory](#)
- [3.2.3 Services](#)
- [3.2.4 Hardware](#)
- [3.2.5 System](#)

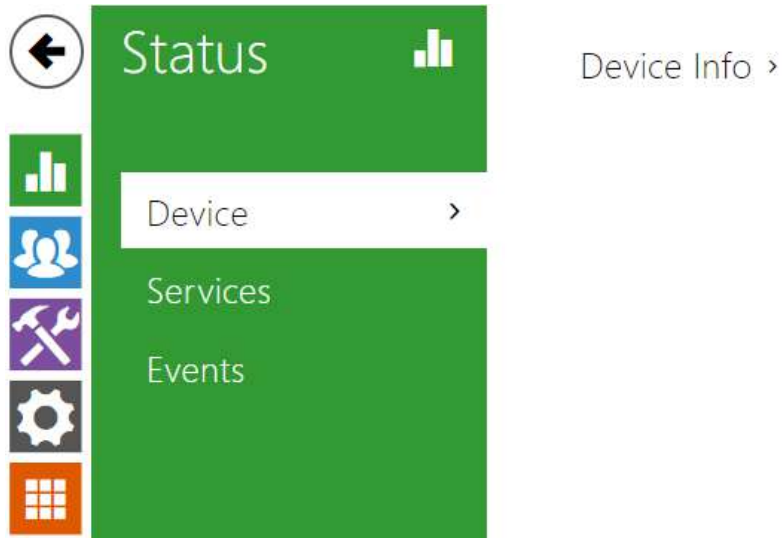
3.2.1 Status



The **Status** menu provides clear status and other essential information on the intercom. The menu is divided into four tabs: **Device**, **Services**, **Call Log** and **Events**.

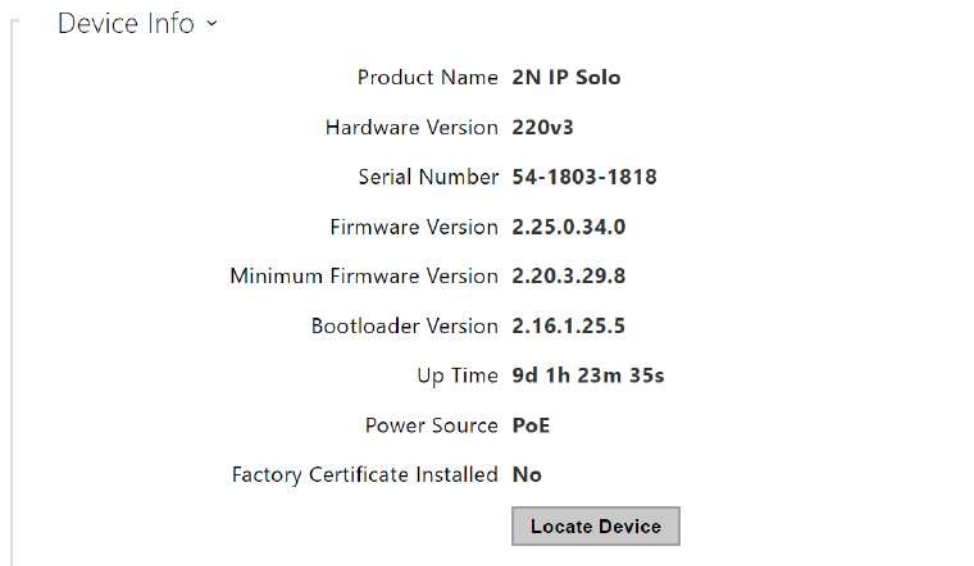
- [3.2.1.1 Device](#)
- [3.2.1.2 Services](#)
- [3.2.1.3 Call Log](#)
- [3.2.1.4 Events](#)

3.2.1.1 Device



Device

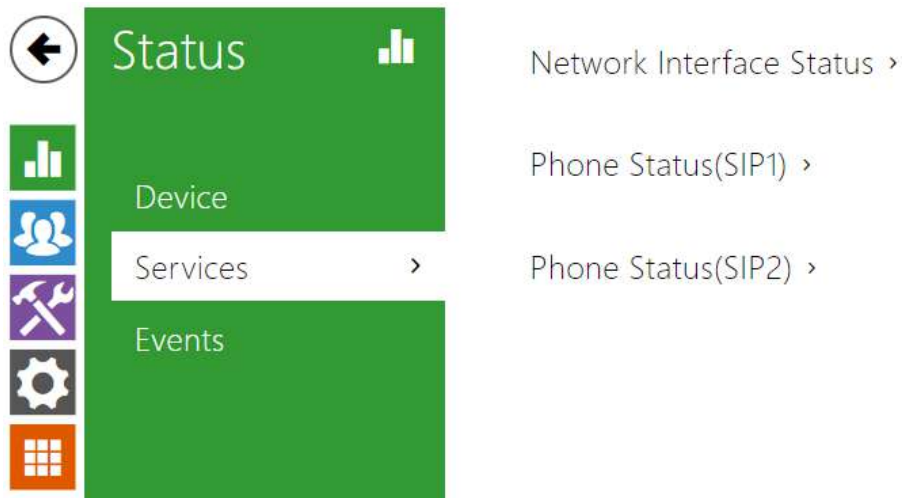
The tab displays information on the model, its features, firmware and bootloader versions, etc.



- **Factory Certificate Installed** – specify the user certificate and private key to validate the intercom right to communicate with the ACS.

- **Locate device** – optical and acoustic signalling of a device. Optical signalling is possible only if the device is equipped with control backlight (**2N® IP Style, 2N® IP Verso, 2N® IP Solo, 2N® IP Base, 2N® IP Vario, 2N® IP Force, 2N® IP Safety a 2N® IP Uni, 2N® Indoor Compact, 2N® Indoor Talk, 2N® Indoor Touch, 2N® IP Indoor Toouch 2.0**). If a speaker is not integrated in the device, make sure than an external speaker is connected (**2N® IP Audio Kit** and **2N® IP Video Kit**) to use sound signalling.

3.2.1.2 Services



Services

The tab displays the states of the network interface and selected services.

Network Interface Status ▾	
MAC Address	7C-1E-B3-02-B9-A0
DHCP Status	USED
IP Address	10.0.25.170
Network Mask	255.255.255.0
Default Gateway	10.0.25.1
Primary DNS	10.0.100.101
Secondary DNS	10.0.100.102
Phone Status (SIP1) ▾	
Phone Number (ID)	4272
Registration State	REGISTERED
Failure Reason	-
Registrar Address	10.0.97.150
Last Registration Time	2018-10-04 13:30:28

Phone Status (SIP2) ▾

Phone Number (ID) **111**

Registration State **NOT REGISTERED**

Failure Reason -

Registrar Address

Last Registration Time **N/A**

3.2.1.3 Call Log

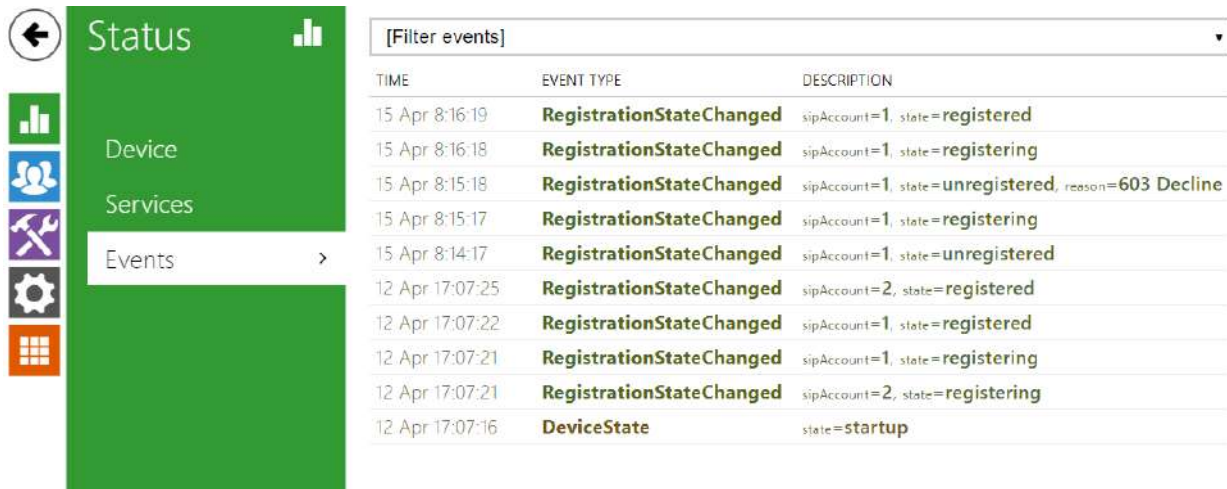
The Call Log displays a list of all accomplished calls. Each call includes the contact type, called/calling user ID, call date and time, call duration and status (incoming, outgoing, missed, picked up elsewhere, doorbell button). The search box is used for fulltext search in the call name. The check box is used for selecting all records for bulk deletion. The selected call record can also be deleted individually using the  button. The list includes the last 20 records that are arranged from the latest call to the oldest one.

Call Logs ▾

Search

☐		Name	Date and Time	Call Duration	
☐	 	2NIPVerso-5423019827	2022-03-02 10:55:29	0s	
☐	 	2NIPVerso-5423019827	2022-03-02 10:54:13	0s	
☐	 	2NIPVerso-5423019827	2022-03-02 10:53:51	0s	
☐	 	2NIPVerso-5423019827	2022-03-02 10:52:37	0s	
☐	 	2NIPVerso-5423019827	2022-03-02 10:50:23	0s	

3.2.1.4 Events



TIME	EVENT TYPE	DESCRIPTION
15 Apr 8:16:19	RegistrationStateChanged	sipAccount=1, state=registered
15 Apr 8:16:18	RegistrationStateChanged	sipAccount=1, state=registering
15 Apr 8:15:18	RegistrationStateChanged	sipAccount=1, state=unregistered, reason=603 Decline
15 Apr 8:15:17	RegistrationStateChanged	sipAccount=1, state=registering
15 Apr 8:14:17	RegistrationStateChanged	sipAccount=1, state=unregistered
12 Apr 17:07:25	RegistrationStateChanged	sipAccount=2, state=registered
12 Apr 17:07:22	RegistrationStateChanged	sipAccount=1, state=registered
12 Apr 17:07:21	RegistrationStateChanged	sipAccount=1, state=registering
12 Apr 17:07:21	RegistrationStateChanged	sipAccount=2, state=registering
12 Apr 17:07:16	DeviceState	state=startup

Events

The tab displays the last 500 events captured by the device. Every event includes the recording time and date, event type and detailed description. Use the pop-up menu above the event record to filter the events by the type.



TIME	EVENT TYPE	DESCRIPTION
01 Jan 1:00:03	InputChanged	port=doorbell_button, state=true

Event	Description
ApiAccessRequested	Generated whenever the request is sent to /api/accesspoint/grantaccess with the "success" : true result.
CallSessionStateChanged	Event describing the call direction/state, address, session number and call sequence number.
CallStateChanged	Indicates the call direction (incoming, outgoing) and opponent / SIP account identification at a call state change (ringing, connected, terminated).

DeviceState	Device state indication, startup of the device, for example.
DtmfEntered	DTMF code received in call or off call locally.
DtmfSent	DTMF code sent in call or off call locally.
InputChanged	Signals a state change of the logic input.
KeyPressed	Generated whenever a button is pressed (numeric keypad digits are 0, 1, 2..., 9 and quickdial buttons are %1, %2 ...).
KeyReleased	Generated whenever a button is released (numeric keypad digits are 0, 1, 2..., 9 and quickdial buttons are %1, %2 ...).
LoginBlocked	Event generated after 3 wrong logins to the web interface. Contains information about IP address.
RegistrationStateChanged	Change of the SIP Proxy registration state.

3.2.2 Directory

Type	Name	Phone Number	Features
	2N IP Safety	device:2NIPSafety-5439170...	
	testDevice	sip:200@192.168.0.240	

15 1 - 2 of 2 1

Here is what you can find in this section:

- [3.2.2.1 Devices](#)
- [3.2.2.2 Time Profiles](#)
- [3.2.2.3 Holidays](#)

3.2.2.1 Devices



Directory is one of the crucial parts of the device configuration. It helps add new devices (2N IP intercoms and other answering units) and provides essential information on them. Up to 99 devices can be added to the directory.

The Search function works as a fulltext search in names and phone numbers. It searches for all matches in the whole directory. The icon helps find registered devices and add them to the Directory list if necessary. The icon helps create a new device and the icon displays the user settings details. The icon helps remove a device from the list deleting all its data.

You can arrange the list according to the name or feature (indicates that the device may be

displayed, indicates that incoming calls are allowed to the device, indicates the feature of the device to which the call started with a short call button press is created and

indicates the feature of the device to which the alarm call started with a the doorbell button press is created). One list page can include 15, 25 or 50 devices.




Search

☐	Type	Name	Phone Number	Features
☐		2N Indoor Compact	device:2NIndoorCompact-...	  
☐		2N IP Verso	device:2NIPVerso-5416710...	  
☐		2N IP Verso	device:2NIPVerso-5419215...	  
☐		Front Door		  
☐		IP Verso	sip:10.0.24.32	  
☐		Reception		  

1 - 6 (Total 6)

1

Each device list item includes the following data:

Basic Settings ▾

Device Name

Phone Number

- **Device Name** – enter the device name for the selected Phone Book position. This parameter is optional and helps you find items in the Phone Book more easily.
- **Phone Number** – set the phone number for the call to be directed to. Enter sip: [user_id@]domain[:port] for Direct SIP calling, e.g.: sip:200@192.168.22.15 or sip:name@yourcompany. Enter device:device_name for calls to the **2N® IP Mobile** application. Set the device name in the mobile application. Enter **/1** or **/2** behind the phone number to specify which SIP account shall be used for outgoing calls (account 1 or 2). Enter **/S** or **/N** to force an encrypted or unencrypted call respectively. The account and encryption selections can be combined into the suffix **/1S**, for example. Click  to edit the phone number details.

✕

Edit Phone Number

Phone Number

Call Type [unspecified] ▼

Destination

Preferred SIP Account [unspecified] ▼

Call Encryption [unspecified] ▼

Door Opening ☐

Use number
Close

- **Call Type** – set the scheme in the called destination URI. If you choose Without scheme, the URI is completed with the data from the SIP account settings. Further settings include direct SIP calls (sip:), 2N local calls (device:), Crestron calls (rava:) or calls with video management systems, e.g. AXIS Camera Station (vms:).
- **Destination** – Set the other parts of the called destination URI. As a rule, it contains the number, IP address, domain, port or device identifier. Enter an asterisk (*) for calls to the VMS.
- **Preferred SIP Account** – SIP account 1 or 2 is primarily used for calling.
- **Call Encryption** – set mandatory call encryption or no encryption.
- **Door Opening** – via callbacks.

Call Button Function ▼

Start call with a short press ☒

Start call with a long press ☐

- **Start call with a short press** – a phone call to this device will be set up after a short press of the call button.
- **Start call with a long press** – a phone call to this device will be set up after a long press of the call button.

Alarm call ▼

Start call with a doorbell button press ☒

- **Start call with a doorbell button press** – a phone call to this device will be set up after the call button is pressed. Set alarm call activation for the doorbell in the HW / Digital inputs / Doorbell button section.

Unlock Button Function ▾

Code after a short press

Code after a long press

- **Code after short press** – code assigned to a short press of the unlock button. Used for remote unlocking of the entrance door, for example. Make sure that the code includes a minimum of two characters for door unlocking via a keypad and one character for door unlocking via DTMF. Four characters at least are recommended.
- **Code after long press** – code assigned to a long press of the unlock button. Used to remote unlocking of the entrance door, for example. Make sure that the code includes a minimum of two characters for door unlocking via a keypad and one character for door unlocking via DTMF. The supported characters also include * or #. Four characters at least are recommended. Code after the long press works only during the call.

3.2.1.1.1 Call Connection Settings

To make calls with other terminal devices in IP networks, it is necessary to assign the device to a contact in the Directory.

Connection with 2N Devices in LAN

1. Make sure that Local calls is enabled on both the 2N devices.
2. Click Search for registered devices . Check the listed device that you want to make connection to. Once the device is added, editing become available.
3. You can edit the following:
 - starting a call with the contact by a long/short press of the call button
 - basic information
4. Make sure that Local calls is enabled on the called 2N device to make a successful call.

Connection with Other Devices

1. Click the  icon to create a new contact or open an existing contact detail.
2. Click the pencil  icon next to the Phone number to open phone number editing.
3. Select the type of call:
 - *SIP* for calls via SIP,
 - *rava* for calls with Creston,
 - *vms* for calls with Axis Camera Station,
 - *device* for calls with a local 2N device.
4. Enter the calling destination address into the destination field to which the call is to be routed.
Complete SIP URI in the format *user_name@host* or the target IP address (e.g.: *johana@255.0.255.0* or *johana@calls.2N.com*). For local calls, fill in the called 2N device ID, refer to Local Calls in 3.2.3.1. Phone.
5. You can edit the following:
 - starting a call with the contact by a long/short press of the call button
 - basic information
6. Make sure that the call transmitting service is enabled on the called device to make a successful call.

3.2.2.2 Time Profiles

Such intercom functions as outgoing calls and RFID card/numeric code access, for example, can be time-limited by being assigned a **time profile**. By assigning a time profile you can:

- block all calls to a selected user beyond the set time interval
- block calls to selected phone numbers beyond the set time interval
- block RFID access for a user beyond the set time interval
- block numeric code access for a user beyond the set time interval
- block switch activation beyond the set time interval

Assign a time profile according to a week time sheet to define availability of the selected function. Just set from-to or days in the week on which the function shall be available. **2N IP intercom** helps you create up to 20 time profiles (depending on the **2N IP intercom** model) that can be assigned to the function; refer to the Users, Access Cards and Switches settings.

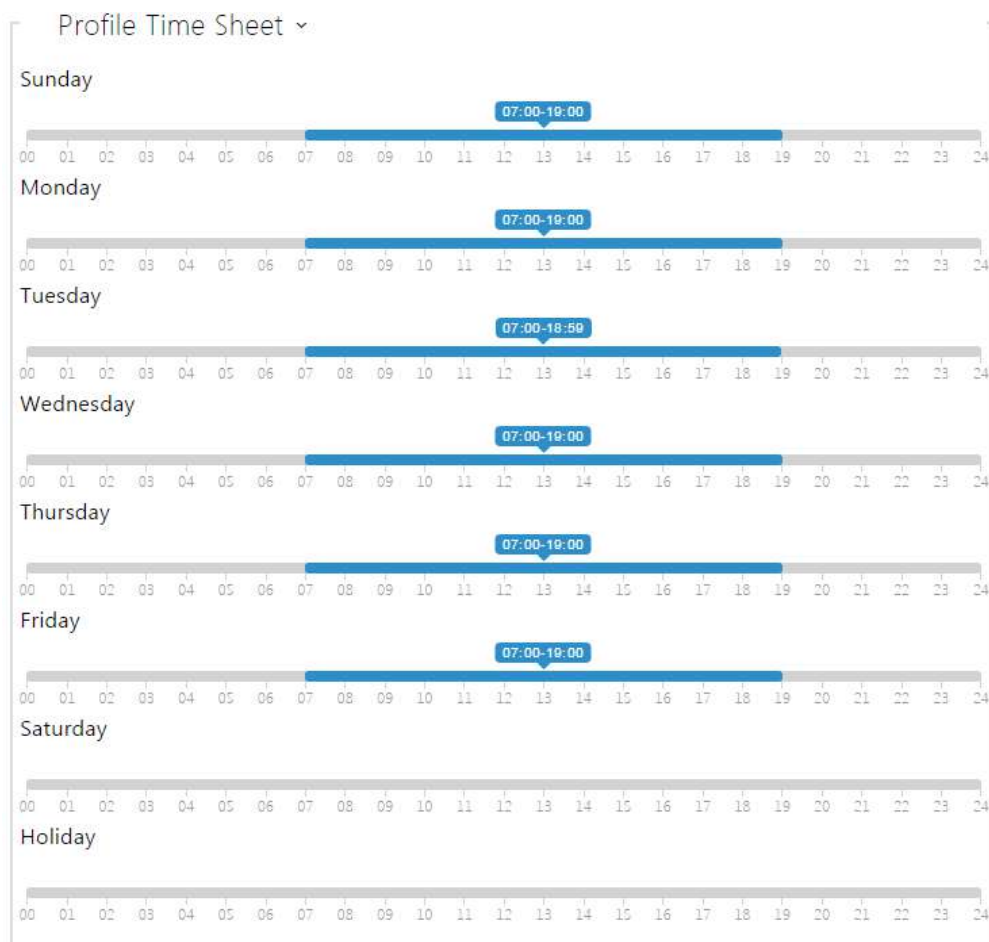
The time profiles are defined not only using the week time sheet but also manually with the aid of special activation/deactivation codes that you can assign to them after arriving in/before leaving your office, for example. Enter the activation/deactivation codes using the numeric keypad of your intercom or phone (during the intercom call). Refer to the **Directory / Time Profiles** menu for the time profile settings.

List of Parameters

Basic Settings ▾

Profile Name

- **Profile name** – enter a profile name. This parameter is optional and helps you find items in the time profile list and select profiles in the switch, card and phone number settings more easily.



This parameter helps you set time profiles within a week period. A profile is active when it matches the set intervals.

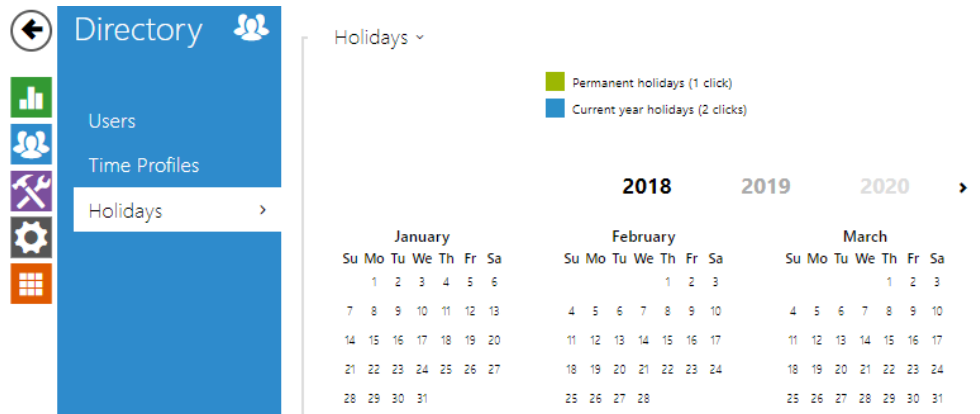
If a day is marked as holiday (refer to **Directory** → **Holidays**), the last table row (Holiday) is applied regardless of the day in a week.

Make sure that the real time settings are correct (refer to the Date and Time subsection) to make this function work properly.

 Note

- *You can set any number of intervals within a day: 8:00–12:00, 13:00–17:00, 18:00–20:00, e.g.*
- *To make a profile active for the whole day, enter one day-covering interval: 00:00–24:00.*

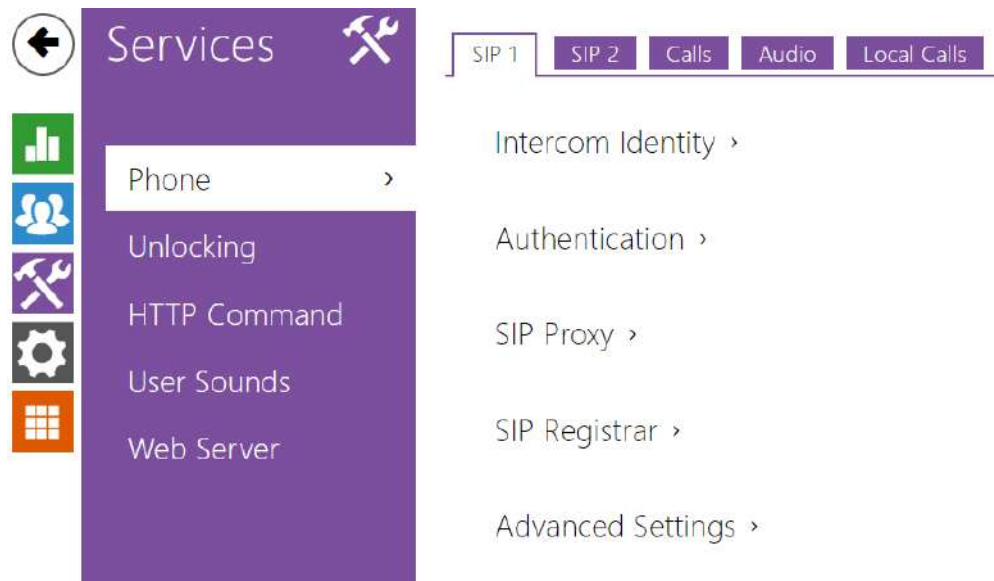
3.2.2.3 Holidays



Here select the bank holidays (including Sundays). You can assign them different time intervals than to working days in their time profiles.

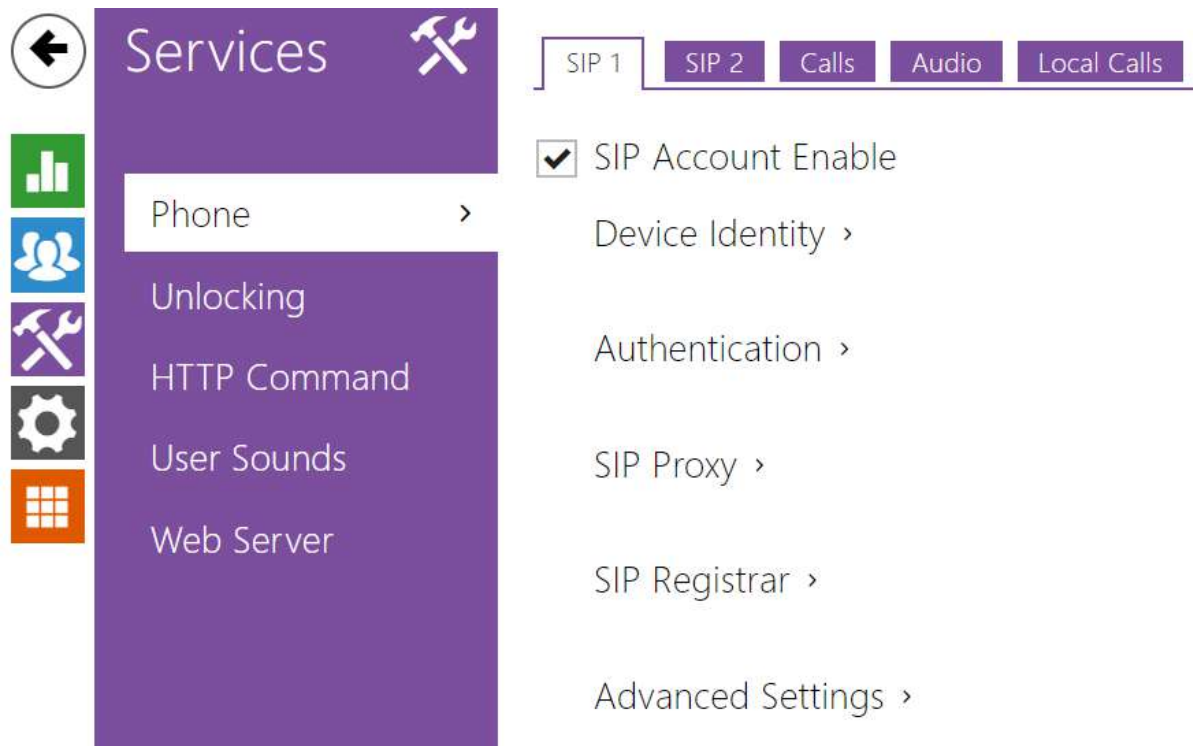
You can set holidays for the coming 10 years (click the year number at the top of the screen to select a year). The screen displays a calendar for the whole year for you to select/unselect a holiday. Fixed (annual) holidays are marked green and variable holidays (valid for the particular year only) are blue. Click a date once to select a fixed holiday, click twice to select a variable holiday and click for the third time to remove the holiday from the holiday list.

3.2.3 Services



- 3.2.3.1 Phone
- 3.2.3.2 Unlocking
- 3.2.3.3 HTTP Command
- 3.2.3.4 User Sounds
- 3.2.3.5 Web Server

3.2.3.1 Phone



Phone is an essential function of **2N® Indoor Talk** allowing you to establish connections to other IP network terminals. **2N® Indoor Talk** supports the extended SIP.

Parameter List

2N® Indoor Talk Phone includes the following four tabs:

- **SIP 1,2** – complete SIP account settings.
- **Calls** – incoming and outgoing call settings.
- **Audio** – audio codec, DTMF and other audio stream parameter transmission settings.
- **LAN device** – general parameters and count of identified LAN devices.

SIP 1 and SIP 2

Two SIP accounts can be configured on **2N® Indoor Talk**.

☒ SIP Account Enable

- **SIP Account Enable** – allow the SIP account use for calling. If disallowed, the account cannot be used for making outgoing calls and receiving incoming calls.

Intercom Identity ▾

Display Name

2N Indoor Talk

Phone Number (ID)

111

Domain

192.168.1.1

Test Call

- **Display name** – set the name to be displayed on the called user's phone as CLIP.
- **Phone number (ID)** – set your device phone number (or another unique ID composed of characters and digits). Together with the domain, this number uniquely identifies the devices in calls and registration.
- **Domain** – set the domain name of the service with which the device is registered. Typically, it is identical with the SIP Proxy or Registrar address.
- **Test call** – display a dialogue window to make a test call to the selected phone number, see below.

Authentication ▾

Authentication ID

Password

- **Authentication ID** – enter the alternative user ID for the device authentication. Phone Number (ID) will be used if this parameter is left empty.
- **Password** – set the authentication password. If your PBX requires no authentication, the parameter will not be applied.

SIP Proxy ▾

Proxy Address	192.168.1.1
Proxy Port	5060
Backup Proxy Address	
Backup Proxy Port	5060

- **Proxy Address** – set the SIP Proxy IP address or domain name.
- **Proxy Port** – set the SIP Proxy port (typically 5060).
- **Backup Proxy Address** – set the backup SIP Proxy IP address or domain name to be used if the main Proxy fails to respond to requests.
- **Backup Proxy Port** – set the backup SIP Proxy port (typically 5060).

SIP Registrar ▾

Registration Enabled	☐
Registrar Address	192.168.1.1
Registrar Port	5060
Backup Registrar Address	
Backup Registrar Port	5060
Registration Expires	120 [s]
Registration State	NOT REGISTERED
Failure Reason	-

- **Registration Enabled** – enable device registration with the set SIP Registrar.
- **Registrar Address** – set the SIP Registrar IP address or domain name.
- **Registrar Port** – set the SIP Registrar port (typically 5060).
- **Backup Registrar Address** – set the backup SIP Registrar IP address or domain name to be used if the main Proxy fails to respond to requests.
- **Backup Registrar Port** – set the backup SIP Registrar port (typically 5060).
- **Registration Expires** – set the registration expiry, which affects the network and SIP Registrar load by periodically sent registration requests. The SIP Registrar can alter the value without letting you know.
- **Registration State** – display the current registration state (Unregistered, Registering..., Registered, Registration terminated...).
- **Failure Reason** – display the cause of failure of the last registration attempt – the Registrar's last error response is displayed, e.g. 404 Not Found.

Advanced Settings ▾

SIP Transport Protocol	TLS ▾
Lowest Allowed TLS Version	TLS 1.0 ▾
Verify Server Certificate	☐
Client Certificate	[Signed by device] ▾
Local SIP Port	5060
PRACK Enabled	☐
REFER Enabled	☐
Send KeepAlive Packets	☐
IP Address Filter Enabled	☐
Receive Encrypted Calls Only (SRTP)	☐
Encrypted Outgoing Calls (SRTP)	☐
Use MKI in the SRTP Packets	☐
Do Not Play Incoming Early Media	☐
QoS DSCP Value	0
External IP Address	
Starting RTP Port	4900
RTP Timeout	60
Compatibility with Broadsoft Devices	☐
Rotate SRV Records	☐

- **SIP Transport Protocol** – set the SIP communication protocol: UDP (default), TCP or TLS.
- **Lowest Allowed TLS Version** – set the lowest TLS version to be accepted for device connection.
- **Verify Server Certificate** – verify the SIP server public certificate against the CA certificates uploaded in the device.
- **Client Certificate** – specify the client certificate and private key used for verifying the intercom's authority to communicate with the SIP server.
- **Local SIP Port** – set the local port for the device for SIP signaling. A change of this parameter will not be applied until the device is restarted. The default value is 5060.
- **PRACK Enabled** – enable the PRACK method for reliable confirmation of SIP messages with codes 101–199.
- **REFER Enabled** – enable call forwarding via the REFER method.
- **Send Keep Alive Packets** – set that the device shall inquire periodically about the state of the called station via SIP OPTIONS requests during the call (used for station failure detection during the call).

- **IP Address Filter Enabled** – enable the blocking of SIP packet receiving from addresses other than SIP Proxy and SIP Registrar. The primary purpose of the function is to enhance communication security and eliminate unauthorized phone calls.
- **Receive encrypted calls only (SRTP)** – set that SRTP encrypted calls shall only be received on this account. Unencrypted calls will be rejected. At the same time, TLS is recommended as the SIP transport protocol for higher security.
- **Encrypted outgoing calls (SRTP)** – set that outgoing calls shall be SRTP encrypted on this account. At the same time, TLS is recommended as the SIP transport protocol for higher security.
- **Use MKI in SRTP Packets** – enable the use of MKI (Master Key Identifier) if required by the counterparty for master key identification when multiple keys rotate in the SRTP packets.
- **Do Not Play Incoming Early Media** – disable playing of the incoming audio stream before the call sent by some PBXs or other devices is picked up (early media). A standard local ringtone is played instead.
- **QoS DSCP Value** – set the SIP packet priority in the network. The set value is sent in the TOS (Type of Service) field in the IP packet header. Enter the value as a decimal number. A change of this parameter will not be applied until the device is restarted.
- **External IP Address** – set the public IP address or router name to which the device is connected. If the device IP address is public, leave this parameter empty.
- **Starting RTP Port** – set the initial local RTP port in the range of 64 ports used for audio and video transmission. The default value is 4900 (i.e. the range is 4900–4963). The parameter is only set for account 1 but applies to both the SIP accounts.
- **RTP Timeout** – set the audio stream RTP packet receiving timeout during a call. If this limit is exceeded (RTP packets are not delivered), the call will be terminated by the device. Enter 0 to disable this parameter. The parameter is only set for account 1 but applies to both the SIP accounts.
- **Broadsoft Compatibility Mode** – set the Broadsoft PBX compatibility mode. Having received re-invite from a PBX in this mode, the intercom replies by repeating the last sent SDP with currently used codecs instead of sending a complete offer.
- **Rotate SRV Records** – allow SRV record rotation for SIP Proxy and Registrar. This is an alternative method of transition to backup servers in the event of main server failure or unavailability.

Calls

General Settings ▾

Call Time Limit [s]

- **General Settings** – set the call duration limit after which the call is automatically terminated. The intercom signals termination with a beep 10 s before the call end. Enter any DTMF character into the call (# on your IP phone, e.g.) to extend the call time.

Incoming Calls ▾

Call Answering Mode (SIP1)	Automatic ▾
Call Answering Mode (SIP2)	Automatic ▾
Local Call Receiving Mode	Manual Pickup ▾
Pick Up in	0 [s]
Time Limited DND Mode	8 hours ▾
Reject Calls in DND Mode	☐
DND Mode for Doorbell Button	☐
Do Not Disturb Mode with Time Profile	☒ [not used] ▾ ☐ 

- **Call Answering Mode (SIP1, SIP2)** – set the way of receiving incoming calls. The following three options are available:
 - **Always busy** – the device rejects incoming calls.
 - **Manual answering** – the device signals incoming calls by ringing and the user can answer the call using a numeric keypad.
 - **Automatic** – the device picks up incoming calls automatically. You can set the call receiving mode for each SIP account separately.
- **Local Call Receiving Mode** – set the way of receiving incoming local calls. The following three options are available:
 - **Always busy** – the device rejects incoming calls.
 - **Manual Pickup** – the device rings to signal incoming calls and the user can press a keypad button to pick up.
 - **Automatic** – the device picks up incoming calls automatically. You can set the call receiving mode for each SIP account separately.
- **Pick up in** – this parameter is only active when the Automatic parameter pickup mode is enabled. The call is picked up automatically after the preset timeout.
- **Time Limited DND Mode** – Disable ringing for a limited time (silent mode). If this function is activated, the device shall not ring for a limited time when a call comes in.
- **Reject Calls in DND Mode** – if this function is activated, the device reject calls in the Do not Disturb mode. The function can be used for immediate call redirection at absence to a mobile phone call, for example.
- **DND Mode for Doorbell Button** – if this function is activated, the device shall not ring when the doorbell button is pressed.
- **Do Not Disturb Mode with Time Profile** – choose one or more time profiles to be applied. Set the time profiles in Directory / Time profiles.

-  – select one of the pre-defined profiles or set the time profile for the given element manually.

Outgoing Calls ▾

Connecting Time Limit	32	[s]
Ring Time Limit	32	[s]

- **Connecting Time Limit** – set the maximum outgoing call connection timeout after which the calls are automatically terminated. If the calls are routed to the GSM network via GSM gateways, you are advised to set a value higher than 20 s.
- **Ring Time Limit** – set the maximum call setup and ringing time in which all outgoing calls are automatically terminated. If the calls are routed to the GSM network via GSM gateways, you are advised to set a value longer than 20 s. Minimum value: 1 s, maximum value: 600 s. Set 0 to disable the time parameter.

Audio

Audio Codecs ▾

CODEC	ENABLED	PRIORITY
PCMU	☒	2
PCMA	☒	3
L16/16kHz	☐	4
G.729	☐	5 (lowest)
G.722	☒	1 (highest)

- Enable/disable the audio codecs offered for call setup and set their priorities.

The tab below helps you define how DTMF characters shall be sent from the intercom. Check the DTMF receiving options and settings of the opponent to make the function work properly.

DTMF Sending ▾

In-Band (Audio) ☐

RTP (RFC-2833) ☒

SIP INFO (RFC-2976) ☐

- **In-Band (Audio)** – enable the classic method of sending DTMF in the audio band using standardised dual tones.
- **RTP (RFC-2833)** – enable sending DTMF via the RTP according to RFC-2833.
- **SIP INFO (RFC-2976)** – enable sending DTMF via SIP INFO messages according to RFC-2976.

The tab below helps you define how DTMF characters shall be received from the intercom. Check the DTMF receiving options and settings of the opponent to make the function work properly.

DTMF Receiving ▾

In-Band (Audio) ☒

RTP (RFC-2833) ☒

SIP INFO (RFC-2976) ☒

- **In-Band (Audio)** – enable classic DTMF dual tone receiving in the audio band.
- **RTP (RFC-2833)** – enable DTMF receiving via the RTP according to RFC-2833.
- **SIP INFO (RFC-2976)** – enable DTMF receiving via SIP INFO messages according to RFC-2976.

Transmission Quality Settings ▾

QoS DSCP Value

Jitter Compensation

- **QoS DSCP value** – set the audio RTP packet priority in the network. The set value is sent in the TOS (Type of Service) field in the IP packet header.

- **Jitter Compensation** – set the buffer length for compensation of interval unevenness in audio packet arrivals. Set a higher value to increase the receiving immunity at the cost of a higher sound delay.

Local Calls

☒ Enable Local Calls

- **Enable Local Calls** – enable calls between devices in the LAN. With this function off, the other LAN devices cannot locate this device, i.e. cannot call the device in the device:device_ID format.

Network Identification ▾

Device ID
2NIndoorCompact-522339

- **Device ID** – Set the device ID to be displayed in the LAN device list in all the 2N devices in one and the same LAN. You can direct a call to this device by setting the user phone number as device:device_ID in these devices.

Connection to Intercoms ▾

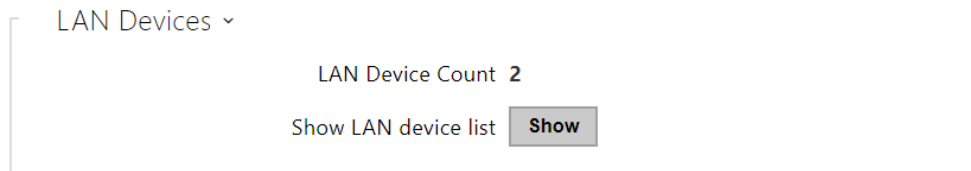
Access Key 1
Access Key 2

- **Access Key 1, 2** – set the access key shared by the 2N answering units and intercoms. If the keys in the 2N answering units and intercoms fail to match, the device cannot communicate, i.e. the intercom cannot call the 2N answering unit and vice versa.

Connection to answering units ▾

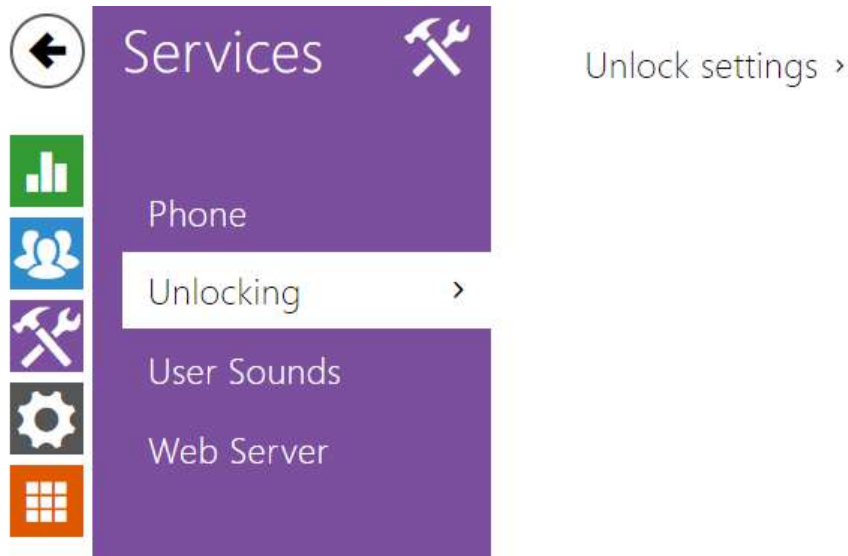
Access Key
Multicast Address
235.255.255.240

- **Access Key** – set the access key shared by the 2N answering units. If the keys in the 2N answering units fail to match, the answering units cannot communicate, i.e. the answering units cannot call each other.
- **Multicast Address** – set the network multicast address to which the answering unit message shall be sent.



- **LAN Device count** – display the number of local devices in the network.
- **Show LAN devices list** – display a detailed list of local devices in the network.

3.2.3.2 Unlocking



Unlocking is another function of **2N® Indoor Talk**, which sets the remote door unlocking parameters.

Unlock settings ▾

Default Unlock Code

Hang up after door unlocking

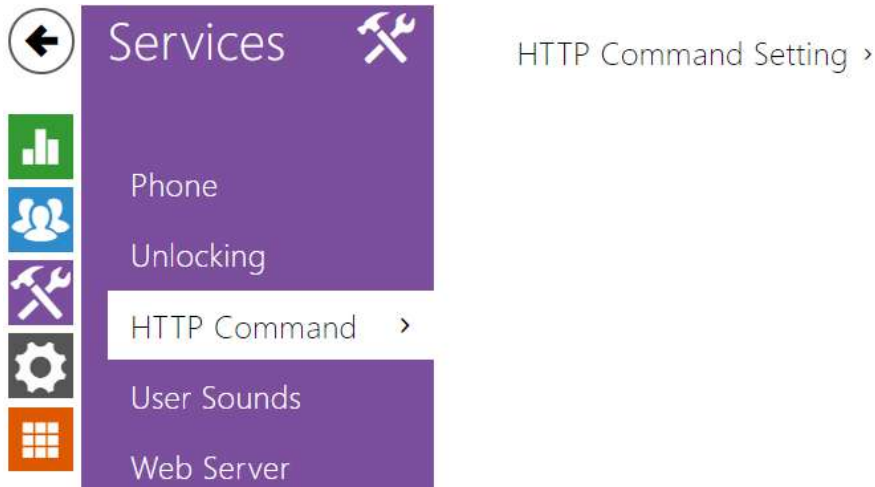
☐

Hang-up delay

 [s]

- **Default Unlock Code** – use this code when a call has been set up with a device/phone number that is not added to the unit phone book.
- **Hang up After Door Unlocking** – end the call when the door unlocking request has been sent successfully.
- **Hang-up delay** – end the call when the door unlocking request sending timeout has elapsed.

3.2.3.3 HTTP Command



HTTP Command on the **2N® Indoor Talk** answering unit helps you send a selected HTTP command by a long press of the lock button in the device relax state. If the function is disabled or no IP address is completed, a long press of the lock button at relax has no function. The lock button keeps flashing while the command is being processed and cannot be used for another HTTP command sending or unlocking during this time. The function is disabled by default.

HTTP Command Setting ▾

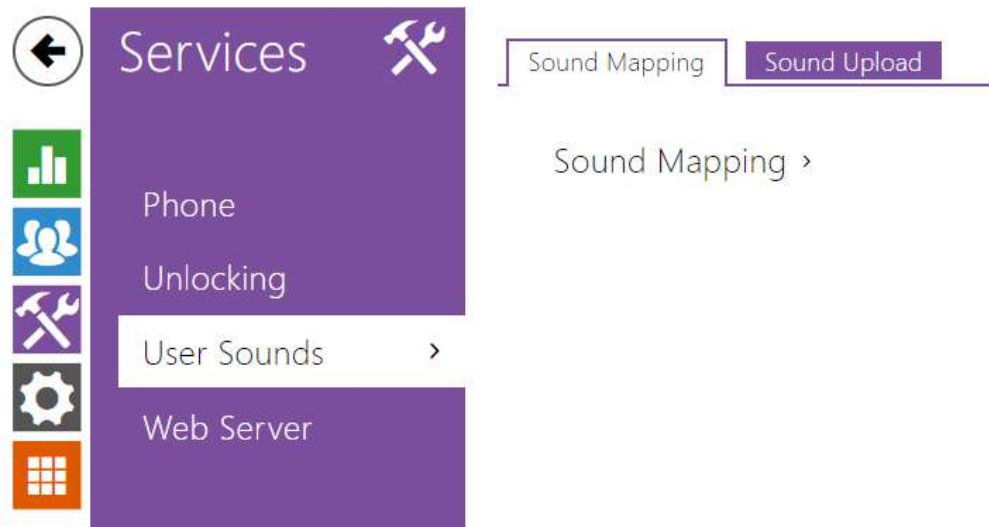
COMMAND	URL	NAME	USERNAME	PASSWORD
1				

- **URL** – set the HTTP command to be sent to an external device by pressing a button. The command is sent via the HTTP (GET request). The command format is http://ip_address/path. E.g. <http://192.168.1.50/relay1=on>. If the parameter is empty, the command is not sent.
- **Name** – set the HTTP command name.
- **Username** – set the user name for authentication of the HTTP command to be sent by pressing a button. The parameter is mandatory only if the requested device requires authentication.
- **Password** – set the password for authentication of the HTTP command to be sent by pressing a button. The parameter is mandatory only if the requested device requires authentication.

⚠ Caution

- A long press of the lock button 30 s after the device restart does not send an HTTP command but reads the device IP address.

3.2.3.4 User Sounds



2N® Indoor Talk signals variable operational statuses with a sequence of tones. If standard signalling tones do not meet your requirements, you can modify them.

The device allows you to modify sound signalling for the following states:

- a. **Ringtone before call pickup**
- b. **Ringing tone**
- c. **Busy tone**
- d. **Call end signalling**
- e. **Doorbell**

Sound Mapping

Sound Message Language

- **Sound Message Language** – select a language of spoken messages. If there is a translation available for a mapped sound, the message will be played in specified language. The language defaults to English or to a language-neutral sound if there is no translation.

Sound Mapping ▾

Busy Tone	Default ▾	▶
Call End Signaling	Silence (Default) ▾	▶
Ringtone	Default ▾	▶
Ringing before Call Answering	Marimba III (Default) ▾	▶
Doorbell	Ding dong (Default) ▾	▶
Away Message	Default ▾	▶

- **Busy Tone** – set the busy tone (to be played when the called user is busy).
- **Call End Signaling** – set the sound to be played upon the call end.
- **Ringtone** – set the sound to be played when the called user is ringing.
- **Ringing before Call Answering** – set the sound to be played before answering an incoming call (intercom ringtone).
- **Doorbell** – set the sound to be played when the door button is pressed.

Sound Upload

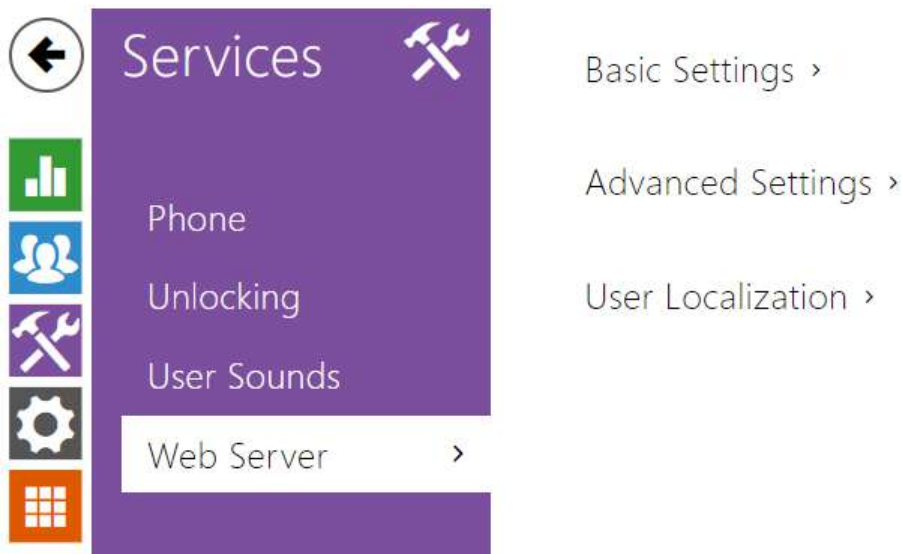
Sound Upload ▾

	NAME	SIZE				
1	User sound 1	N/A	▶	×	📶	🎤
2	User sound 2	N/A	▶	×	📶	🎤
3	User sound 3	N/A	▶	×	📶	🎤
4	User sound 4	N/A	▶	×	📶	🎤
5	User sound 5	N/A	▶	×	📶	🎤
6	User sound 6	N/A	▶	×	📶	🎤
7	User sound 7	N/A	▶	×	📶	🎤
8	User sound 8	N/A	▶	×	📶	🎤
9	User sound 9	N/A	▶	×	📶	🎤
10	User sound 10	N/A	▶	×	📶	🎤

You can load up to 10 user sound files to the device and name each of them for better orientation.

Press  to load a sound file to the device. Select a file from your PC and click **Load**. Press  to remove a file. Click  to play a successfully loaded sound file (locally on your PC). Press  to record a sound file via your PC microphone.

3.2.3.5 Web Server



2N® Indoor Talk can be configured using a common browser that approaches the web server integrated in the device. The HTTPS protocol is used for the browser - device communication. Enter the login user name and password first. The default values are **admin** and **2n** respectively. We recommend to you change the default password as soon as possible.

Parameter List

- **Device Name** – set the device name to be displayed in the right-hand upper corner of the web interface, in the login window and in other applications if necessary (Network Scanner, etc.)
- **Web Interface Language** – set the default language for administration web server login. Use the upper toolbar buttons to change the web interface language temporarily any time.
- **Password** – set the device login password. Click  to edit the password. make sure that the password contains 8 characters at least, including one small alphabet letter, one capital alphabet letter and one digit.

Advanced Settings ▾

HTTP Port	80
HTTPS Port	443
Minimum Allowed TLS Version	TLS 1.0 ▾
HTTPS User Certificate	Self Signed ▾
Remote Access Enabled	☒

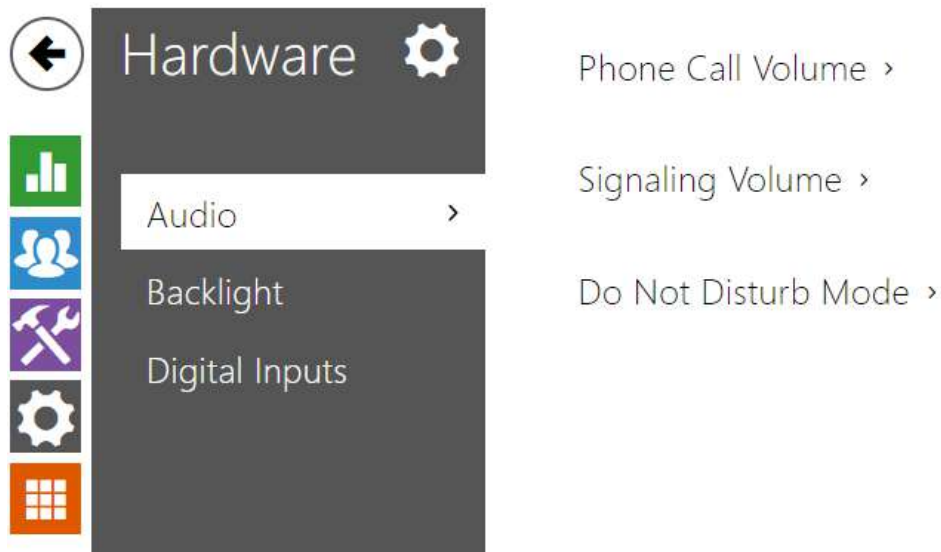
- **HTTP port** – set the web server port for insecure HTTP communication. The port change will not be applied until the device is restarted.
- **HTTPS port** – set the web server port for secure HTTPS communication. The port change will not be applied until the device is restarted.
- **Minimum Allowed TLS Version** – define the lowest TLS version to be connected to the devices.
- **HTTPS User Certificate** – set the server certificate and private key used for encrypting the communication between the device HTTPS server and user web browser.
- **Remote Access Enabled** – enable remote access to the web server from IP address beyond the LAN.

User Localization ▾

FILE	SIZE	
Original Language	187 kB	
Custom Language	N/A	  

- **Original Language** – download an original file from the device including all user interface texts in English. The file format is XML, see below.
- **User Language** – upload or remove user files including translations of the user interface texts.

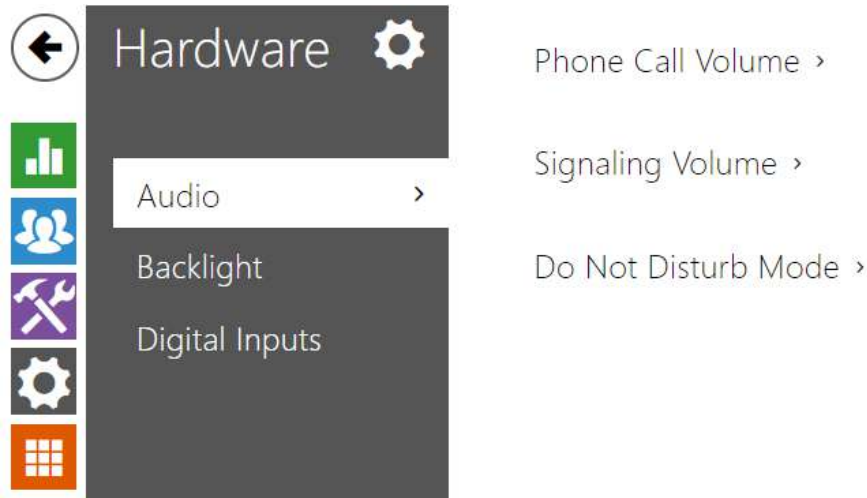
3.2.4 Hardware



The **Audio** menu displays clearly the current audio information and audio features.

- [3.2.4.1 Audio](#)
- [3.2.4.2 Backlight](#)
- [3.2.4.3 Digital Inputs](#)

3.2.4.1 Audio



2N® Indoor Talk is equipped with a speaker. This configuration section helps you set the phone call volume and state signalling volume. **Master volume** controls the general device volume including call volume, signalling tone volume, and so on. Consider the noise level of the ambient environment while setting this parameter.

Parameter List

Phone Call Volume ▾

Call Volume	0 dB ▾
Ringtone Volume	+6 dB ▾
Call-Progress Tone Volume	0 dB ▾

- **Call Volume** – set the phone call volume.
- **Ringtone Volume** – set the incoming call ringing volume.
- **Call-Progress Tone Volume** – set the dial, ring and busy tone volume. In case the call-progress tones are automatically generated by the PBX, this setting will not be applied.

Signaling Volume ▾

Key Beep Volume	0 dB ▾
Warning Tone Volume	0 dB ▾
Suppress Warning Tones	☐
User Sounds Volume	0 dB ▾

- **Key Beep Volume** – set the key beep volume. The volume values are relative against the set master volume.
- **Warning Tone Volume** – set the volume of warning and signalling tones described in the Signalling of Operational Statuses section. The volume values are relative against the set master volume.
- **Suppress Warning Tones** – suppress signalling of the following operational states. Internal application started, IP address received and IP address lost.
- **User sound volume** – set the volume of user sounds. The volume values are relative against the set master volume.

Do Not Disturb Mode ▾

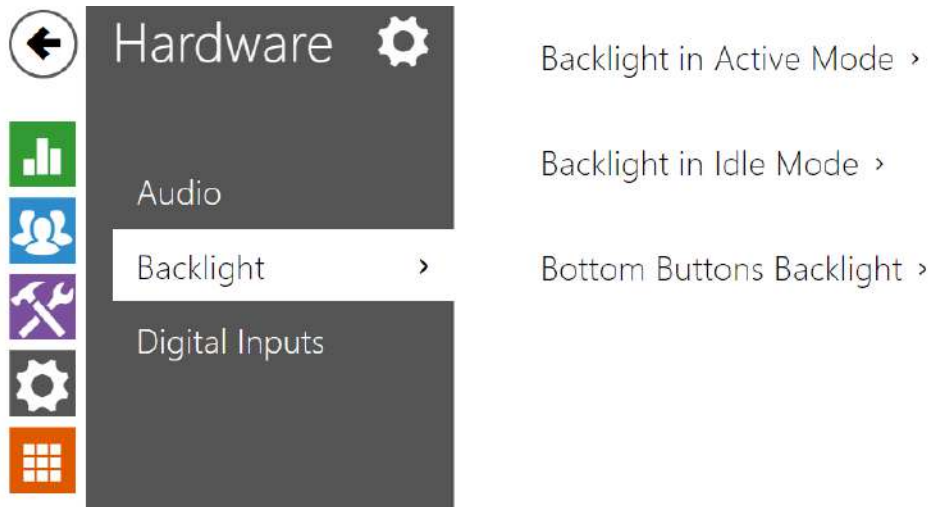
Time Limited DND Mode 8 hours ▾

DND Mode for Doorbell Button ☐

Reject Calls ☐

- **Time Limited DND Mode** – Disable ringing for a limited time (silent mode). If this function is activated, the device shall not ring for a limited time when a call comes in.
- **DND mode for the doorbell button** – if this function is activated, the device shall not ring when the doorbell button is pressed.
- **Reject Call** – if this function is activated, the device reject calls in the Do not Disturb mode. The function can be used for immediate call redirection at absence to a mobile phone call, for example.

3.2.4.2 Backlight



Set the backlight level separately on this tab.

Backlight in Active Mode ▾
 Button Backlight Intensity ▾

- **Button Backlight Intensity** – set the backlight intensity value in per cent of the maximum possible LED brightness.

Backlight in Idle Mode ▾
 Backlight intensity decrease ▾
 Go to Idle Mode in ▾

- **Backlight intensity decrease** – backlight intensity decrease when the device has switched to the idle mode.
- **Go to Idle Mode in** – time of inactivity after which the device enters idle mode.

Bottom Buttons Backlight ▾
 Enable bottom button row ☒

- **Enable bottom button row** – enable the bottom button row (volume, mute, DND mode). If disabled, the bottom buttons are inactive and non-backlit.

 Note

- The brightness level considerably affects the functionality, consumption and general appearance of the device. A high backlight value may dazzle the person standing in front of the device if the ambient light is low and also increases the overall device consumption.

3.2.4.3 Digital Inputs



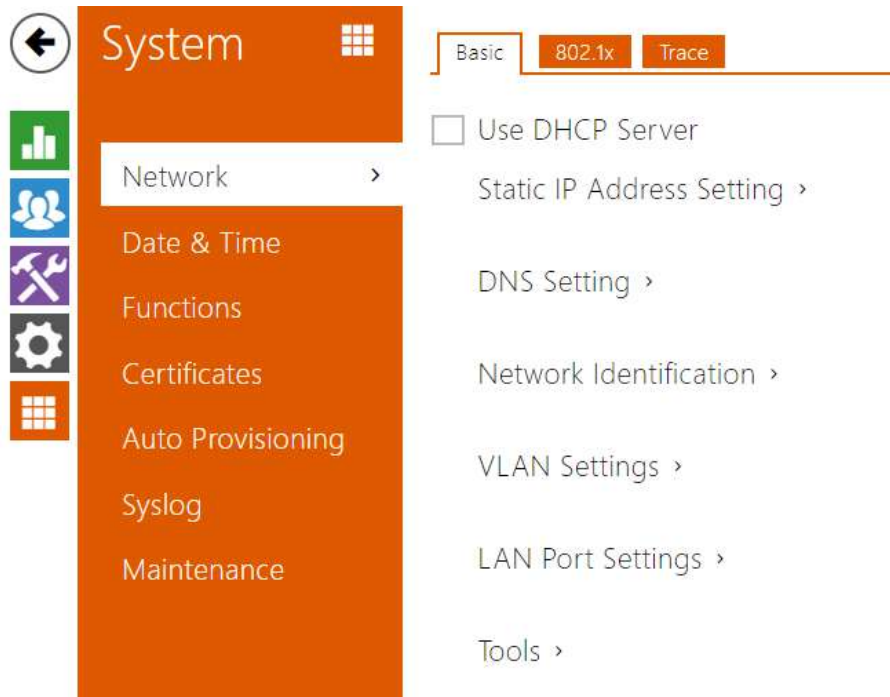
Doorbell button >

This subsection describes the digital input options of the device.



- **Doorbell Button Function** – select doorbell function (doorbell, alarm call). The button is used either as a classical doorbell or for alarm call activation.

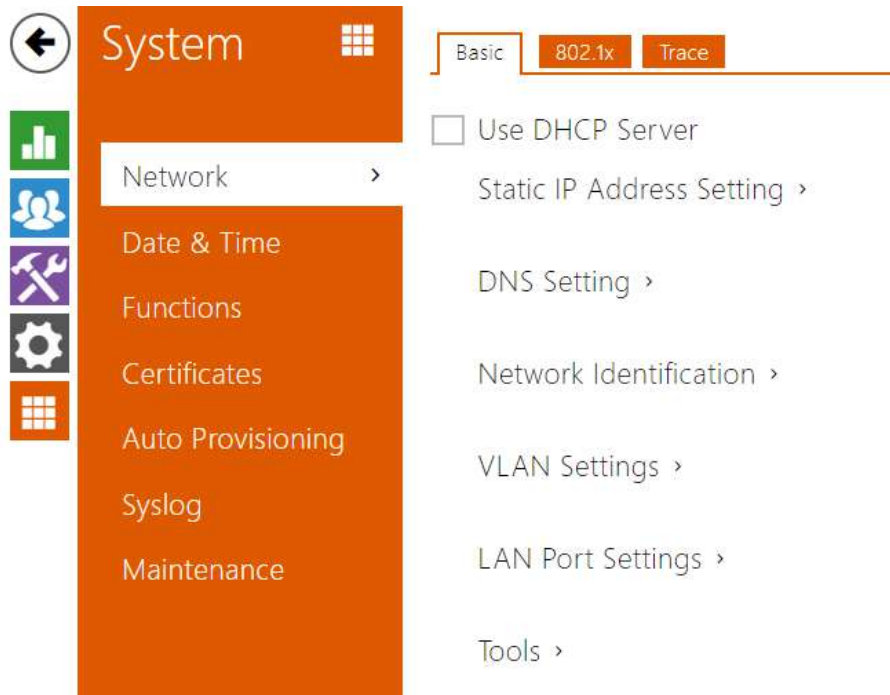
3.2.5 System



Here is what you can find in this subsection:

- [3.2.5.1 Network](#)
- [3.2.5.2 Date and Time](#)
- [3.2.5.4 Certificates](#)
- [3.2.5.5 Auto Provisioning](#)
- [3.2.5.6 Diagnostics](#)
- [3.2.5.7 Maintenance](#)
- [5.2.5.3 Functions](#)

3.2.5.1 Network



2N® Indoor Talk is connected to the LAN and has to be assigned a valid IP address or obtain the IP address from the LAN DHCP server. The Network section helps you configure the IP address and DHCP.

✓ **Tip**

- To loop up the **2N® Indoor Talk** IP address, apply the **2N® Network Scanner**, which can be downloaded freely from www.2n.com, and use the mechanism described in 2.4 2N® Indoor Talk LAN Location via 2N® Network Scanner.

Parameter List

Basic

☒ Use DHCP Server

- **Use DHCP server** – enable automatic obtaining of the IP address from the LAN DHCP server. If there is no DHCP server or the DHCP cannot be used in your network, use the manual network setting.

Static IP Address Setting ▾

Static IP Address	10.0.24.80
Network Mask	255.255.255.0
Default Gateway	10.0.24.1

- **Static IP address** – static IP address of the device. The address is used together with the parameters below unless Use DHCP server is enabled.
- **Network Mask** – network mask setting.
- **Default Gateway** – default gateway address for off-LAN communication.

DNS Setting ▾

Always Use Manual Setting	☒
Primary DNS	8.8.8.8
Secondary DNS	8.8.4.4

- **Primary DNS** – primary DNS address for domain name-to- IP address translation.
- **Secondary DNS** – secondary DNS address where the primary DNS is unavailable.

Network Identification ▾

Hostname

Vendor Class Identifier

- **Hostname** – set the device LAN identification.
- **Vendor Class Identifier** – set the Vendor Class Identifier – character string to be passed in the DHCP Option 60.

VLAN Settings ▾

VLAN Enabled ☐

VLAN ID

- **VLAN Enabled** – enable the virtual network support (VLAN according to 802.1q). Remember to set the VLAN ID too.
- **VLAN ID** – choose a VLAN ID from the range of 1–4094. The device shall only receive packets with the set ID. An incorrect setting may result in a connection loss and subsequent factory reset.

LAN Port Settings ▾

Required Port Mode

Current Port State **Full Duplex - 100Mbps**

- **Required Port Mode** – set the LAN port mode to be preferred: Automatic or Half Duplex – 10 Mbps, which reduces the bit rate to 10 Mbps in case the available LAN cabling is unreliable for a 100 Mbps traffic.
- **Current Port State** – current LAN port state: Half or Full Duplex – 10 Mbps or 100 Mbps.

801.1x

Device Identity ▾

Device Identity

- **Device Identity** – username (identity) for authentication via EAP-MD5 and EAP-TLS.

MD5 Authentication ▾

MD5 Authentication Enabled ☒

Password

- **MD5 Authentication Enabled** – enable authentication of network devices via the 802.1x EAP-MD5 protocol. Do not enable this function if your LAN does not support 802.1x. If you do so, the intercom will become inaccessible.
- **Password** – enter the access password for EAP-MD5 authentication.

TLS Authentication ▾

TLS Authentication Enabled ☒

Trusted Certificate

User Certificate

- **TLS Authentication Enabled** – enable authentication of network devices via the 802.1x EAP-TLS protocol. Do not enable this function if your LAN does not support 802.1x. If you do so, the intercom will become inaccessible.
- **Trusted Certificate** – specify the set of trusted certificates for verification of the RADIUS server public certificate validity. Choose one of three sets of certificates; refer to the Certificates subsection. If no trusted certificate is included, the RADIUS public certificate is not verified.
- **User Certificate** – specify the user certificate and private key for verification of the intercom authorisation to communicate via the 802.1x-secured network element port in

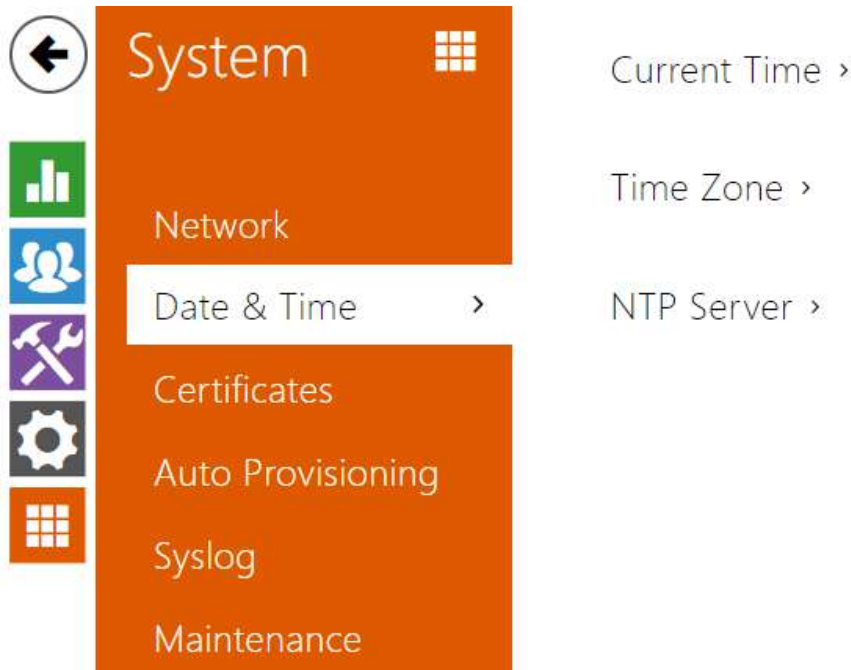
the LAN. Choose one of three sets of user certificates and private keys; refer to the Certificates subsection.

PEAP MSCHAPv2 authentication ▾

Authentication Allowed	☒
Trusted Certificate	Not used ▾
Password	*****

- **Authentication Allowed** – enable authentication of network devices via the 802.1x PEAP MSCHAPv2 protocol. Do not enable this function if your LAN does not support 802.1x. If you do so, the device will become inaccessible.
- **Trusted Certificate** – specify the set of trusted certificates for verification of the RADIUS server public certificate validity. Choose one of three certificate sets, see the Certificates subsection. If no trusted certificate is included, the RADIUS public certificate is not verified.
- **Password** – enter the access password for PEAP-MSCHAPv2 authentication.

3.2.5.2 Date and Time



2N® Indoor Talk is equipped with a real time clock without backup for power outages.

Select **Use time from Internet** to synchronize **2N® Indoor Talk** time with the internet time or click **Synchronize with browser** to synchronize the intercom time with your current PC time.

Note

- *A correct date/time value is unnecessary for the basic function of **2N® Indoor Talk**. The current date and time are necessary for a correct display of time of events in various lists (Syslog, tapped card records, device log downloaded via **HTTP API**, etc.)*

To maximize the accuracy and reliability, we recommend that you always enable the **Use time from Internet** function. The device time error can be up to ± 2 minutes per month under normal operation conditions.

Parameter List

Current Time ▾

Use time from Internet ☒

Current Device Time **08/23/2022 11:00:48**

Synchronize with Browser

- **Synchronize with Browser** – click the button to synchronize the device time with your current PC time value.

Time Zone ▾

Automatic Detection ☐

Detected Time Zone **N/A**

Manual Selection Custom Rule ▾

Custom Rule UTC0

- **Automatic Detection** – define whether the time zone shall be detected automatically from My2N. In case automatic detection is disabled, the Manual selection parameter is Used (manually selected time zone or Own rule).
- **Detected Time Zone** – display the automatically found time zone. In case the function is unavailable or disabled, N/A is displayed.
- **Manual Selection** – set the installation site time zone. Set the time shift and summer/winter time transitions.
- **Custom Rule** – if the device is installed on a site that it not included in the Time Zone parameter, set the time zone rule manually. The rule is applied only if the Time Zone parameter is set to Manual.

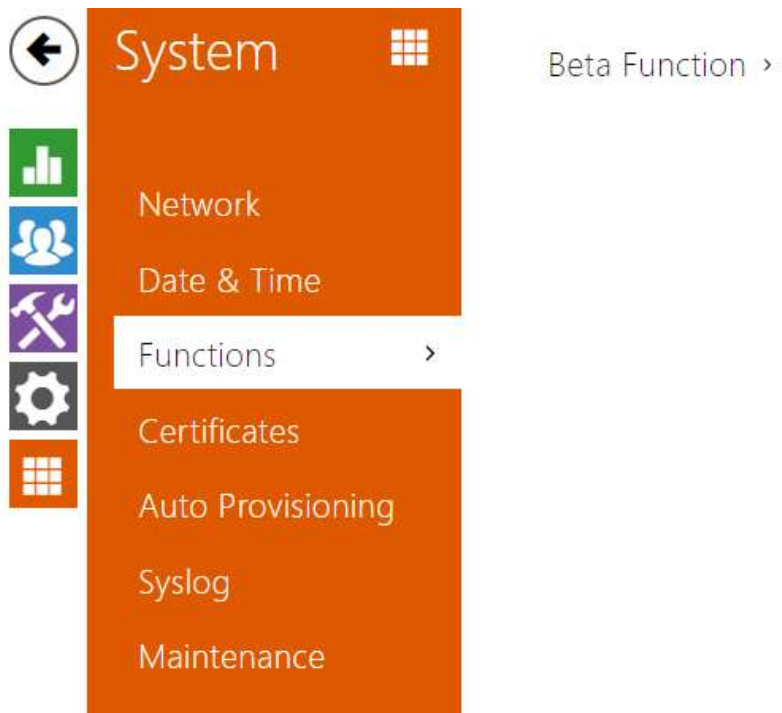
NTP Server ▾

NTP Server Address time.nist.gov

NTP Time Status **Synchronized**

- **NTP Server Address** – set the IP address/domain name of the NTP server used for the device internal time synchronization. The server IP address and domain name cannot be set if **Use Time from Internet** is disabled.
- **NTP Time State** – display the state of the last local time synchronization attempt via NTP: Unsynchronized, Synchronized, Error.

5.2.5.3 Functions



A list of public beta functions designed for user testing is shown here.
The list includes:

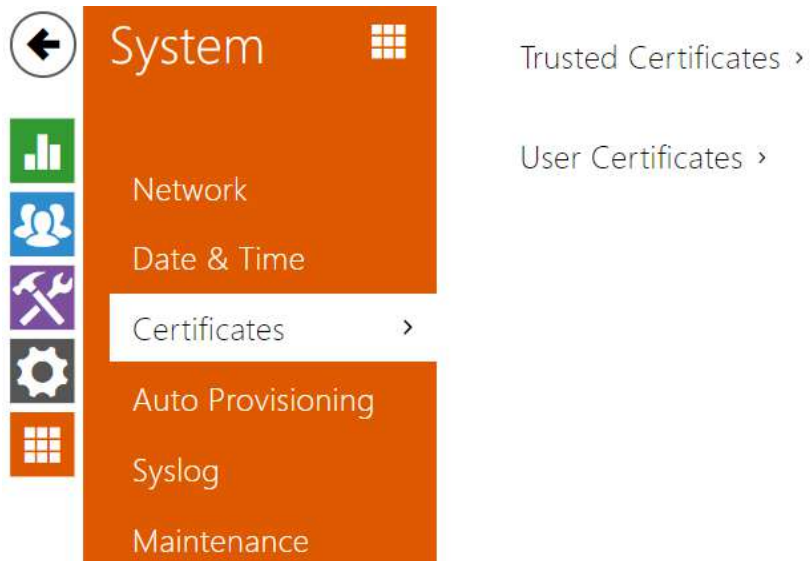
- function name,
- function status: started or stopped,
- event allowing to start/stop the function.

The function does not start/stop until the device is restarted. Hence, the status change request can be canceled by **Interrupt** until the restart.

Note

- There is no warranty on the testing functions and 2N TELEKOMUNIKACE a.s. shall not be held liable for any functional limitations and damage incurred as a result of functional limitations of the beta functions. The beta functions are provided for testing purposes exclusively.

3.2.5.4 Certificates



Some **2N® Indoor Talk** LAN services use the secure TLS protocol for communication with the other LAN devices. This protocol prevents third parties from eavesdropping on or modifying call contents. TLS is based on one/two-sided authentication, which requires certificates and private keys.

2N® Indoor Talk services that use TLS:

- a. Web server (HTTPS)
- b. 802.1x (EAP-TLS)
- c. SIPs

2N® Indoor Talk allows you to download up to 3 sets of certificates from certification authorities, which help you authenticate the communicating device, and also 3 user certificates and private keys for encryption purposes.

Each certificate requiring service can be assigned one certificate set, refer to [Web Server](#). The certificates can be shared by multiple services.

2N® Indoor Talk accepts the DER (ASN1) and PEM certificates.

Once powered, **2N® Indoor Talk** generates automatically the so-called **Self Signed certificate** and a **private key**, which can be used for the **Web server** and **E-mail** services without the need to load a unique certificate and private key.

Note

- If you use the Self Signed certificate for encryption, the **2N® Indoor Talk** web server - browser communication is secure, but the browser notifies you that it cannot authenticate the **2N® Indoor Talk** certificate.

Refer to the two tables below for the current list of loaded certificates from certification authorities and user certificates:

Trusted Certificates ▾		
CA IDENTITY	ISSUER	EXPIRY TIME
(1)		
(2)		
(3)		

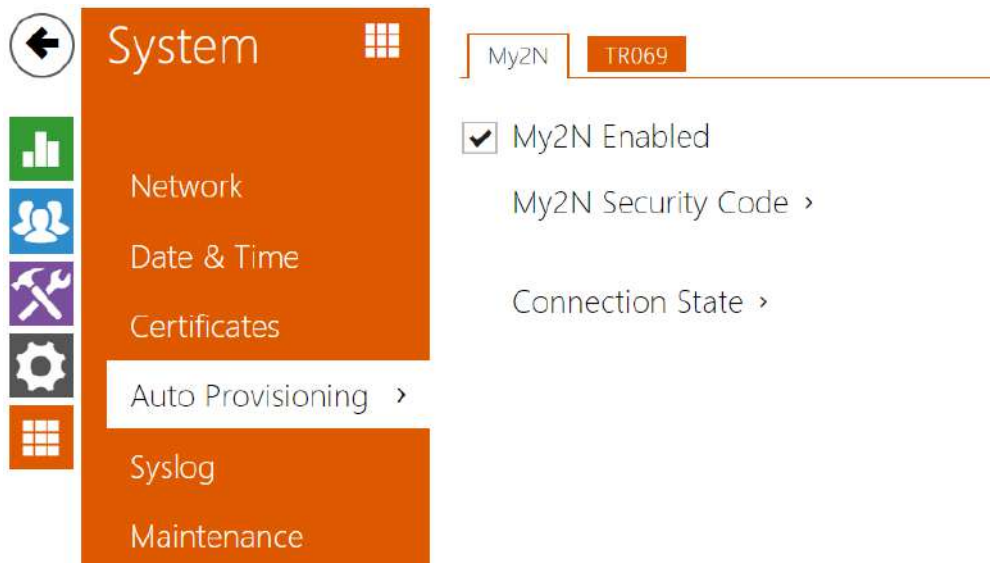
User Certificates ▾		
CA IDENTITY	ISSUER	EXPIRY TIME
(1)		
(2)		
(3)		

Press  to download a certificate from your PC to the device. Select the certificate (or private key) file in a dialogue window and click **Load**. Press  to remove a certificate from **2N® Indoor Talk**.

 Note

- Note that a certificate with a private RSA key longer than 2048 bits may be rejected and the following message appears: **The private key file or password has not been accepted by the device!**
- For certificates based on elliptic curves use the secp256r1 (aka prime256v1 aka NIST P-256) and secp384r1 (aka NIST P-384) curves only.

3.2.5.5 Auto Provisioning



My2N

The My2N cloud platform is used for remote administration and configuration of the 2N IP devices and helps you remotely connect to the device web interface.

☒ My2N Enabled

- **My2N Enabled** – enable connection to My2N.



- **Serial Number** – display the serial number of the device to which the valid My2N code applies.
- **My2N Security Code** – device code for adding to My2N.
- **Generate New** – the active My2N Security Code will be invalidated and a new one will be generated.



It displays information on the state of the device connection to My2N.

- **My2N ID** – unique identifier of the company created via the My2N portal.

TR069

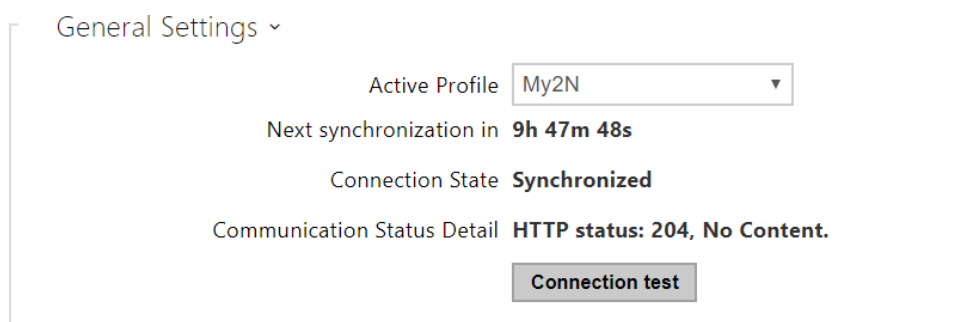
Use this tab to enable and configure remote device management via the TR-069 protocol. TR-069 helps you reliably configure the device parameters, update and back up configuration and/or upgrade device firmware.

The TR-069 protocol is utilized by the My2N cloud service. Make sure that TR-069 is enabled and Active profile set to My2N to make the device work with My2N properly. Only then the device will be able to log in to My2N periodically for configuration.

This function helps you connect the device to your ACS (Auto Configuration Server). In this case, the connection to My2N will be disabled in the device.

☒ My2N / TR069 Enabled

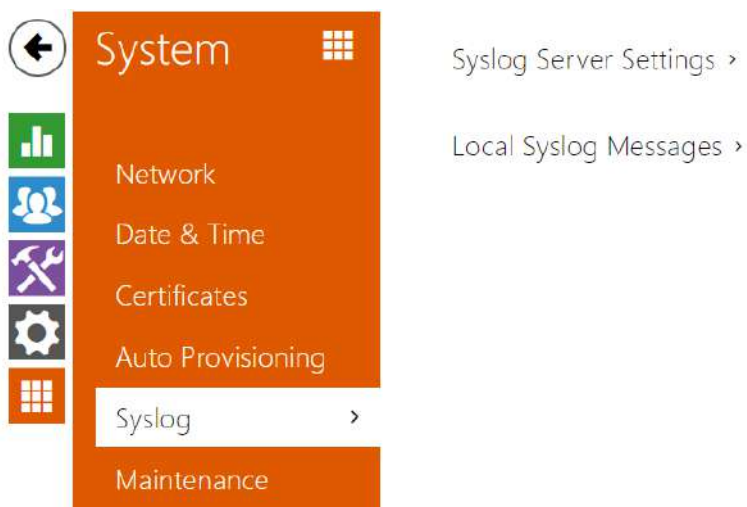
- **My2N / TR069 Enabled** – enable connection to My2N or another ACS server.



- **Active Profile** – select one of the pre-defined profiles (ACS), or choose a setting of your own and configure the ACS connection manually.

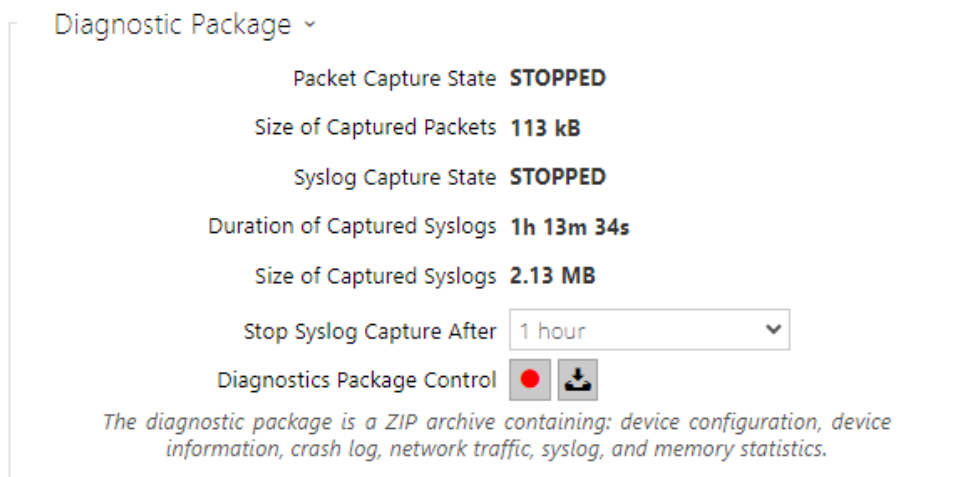
- **Next Synchronization in** – display the time period in which the device shall contact a remote ACS.
- **Connection Status** – display the current ACS connection state or error state description if necessary.
- **Communication Status Detail** – server communication error code or HTTP status code.
- **Connection test** – test the TR069 connection according to the set profile, see the Active profile. The test result is displayed in the Connection status.

3.2.5.6 Diagnostics



Diagnostics

The interface helps you start capturing diagnostic logs for subsequent download and sending to the Technical Support. The captured diagnostic logs help identify and solve reported problems. The logs contain information on the device, its configuration, network traffic, crash log and memory statistics.

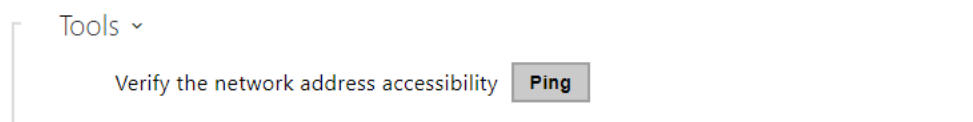


- **Packet Capture State** – shows whether packet capture has been started/stopped in the Packet capture folder.
- **Size of Captured Packets** – shows the size of packets captured.
- **Syslog Capture State** – shows whether syslog capture has been started/stopped in the Syslog folder.
- **Duration of Captured Syslogs** – shows the syslog capture duration in the Syslog folder.
- **Size of Captured Syslog** – shows the size of syslogs captured.
- **Stop Syslog Capture After** – set the data capture timeout.

Press  to start capturing. Repress the button to restart and rerun capturing. Press  to download the packet capture file.

Caution

- Starting diagnostic data capture restarts packet capture if running.

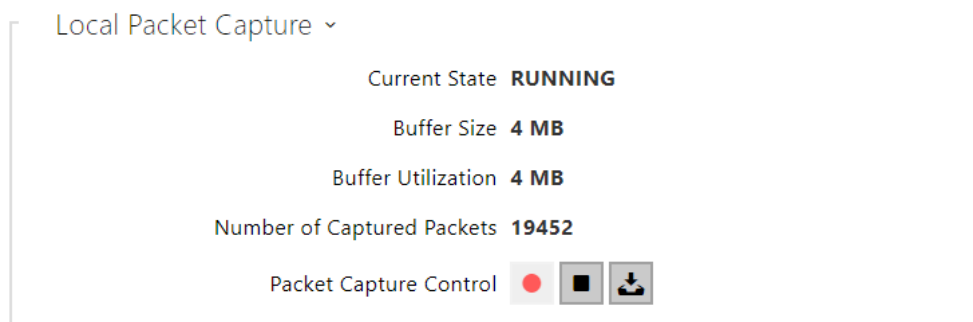


- **Verify the network address accessibility** – verify the network address accessibility via the Ping command in standard operating systems. Press Ping to display a dialogue, enter the IP address/domain name and click Ping to send test data to this address. If the selected IP address/domain name is invalid, a warning is displayed and Ping remains inactive until the given IP address becomes valid. The function progress and result are also displayed in the dialogue. Failed means either inaccessibility of the given IP address within 10 seconds or inability to translate the domain name into an address. If a valid response is received, the IP address from which

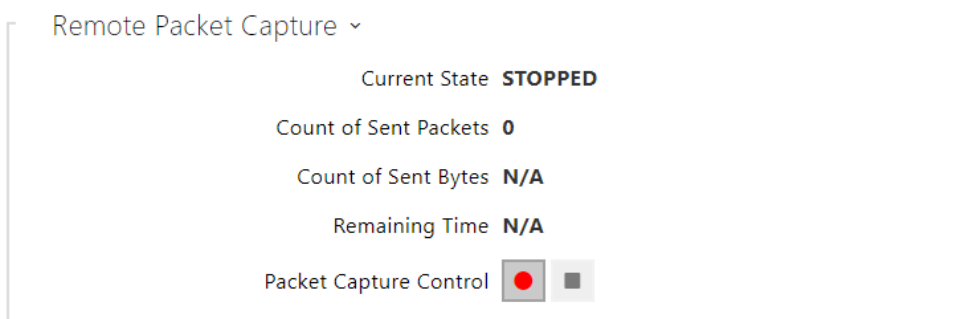
the response came and the response waiting time in milliseconds are displayed.
Repress Ping to send another query to the same address.

Packet Capture

In the tab, you can launch capturing of incoming and outgoing packets on the intercom network interface. The captured packets can be stored locally in the IP intercom 4 MB buffer or remotely in the user PC. The file with captured packets can be downloaded for Wireshark processing, e.g. (www.wireshark.org).



When the local capture buffer is full, the oldest packets are rewritten automatically. We recommend that you lower the video stream transmission rate below 512 kbps while capturing packets locally. Press  to start,  to stop and  to download the packet capture file.



Press  to start remote capturing. Specify the capturing time interval (s) for the incoming and outgoing packets. When the set time value passes, the packet capture file will be downloaded automatically to the user PC. Press  to stop capturing.

Syslog

2N® Indoor Talk allows you to send syslog messages including relevant device state and process information to a syslog server for recording and further analysis or auditing of the device observed. It is unnecessary to configure this service for common operations.

Syslog Server Settings ▾

Send Syslog Messages ☒

Server Address

Severity Level Info ▾

- **Send Syslog Messages** – enable sending of syslog messages to the Syslog server. Make sure that the server address is valid.
- **Server Address** – IP/MAC address of the server on which the syslog recording application is running.
- **Severity Level** – set the severity level of the messages to be sent. Debug 1–3 level setting is only recommended to facilitate troubleshooting for the Technical Support department.

Local Syslog Messages ▾

Saving Syslog Messages **RUNNING**

Syslog Messages Saving Passed Time **0h 4m 26s**

Syslog Messages Saving Remaining Time **0h 55m 34s**

Saved Syslog Messages Size **78,335 B**

Available Syslog Messages Saving Time **0h 4m 26s**

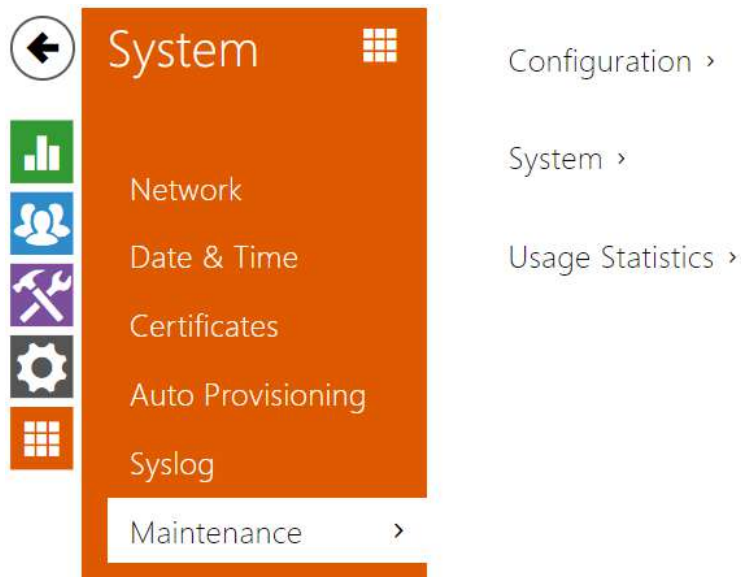
Available Syslog Messages Size **78,335 B**

Required Saving Time 1 hour ▾

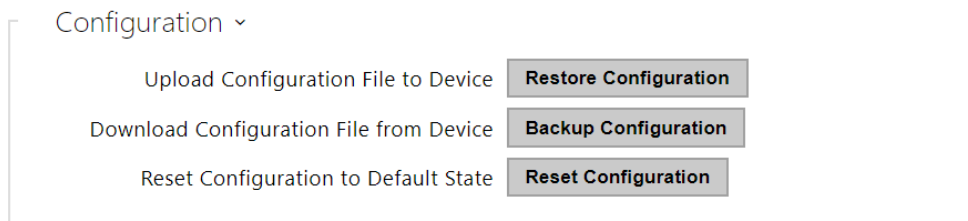
Syslog Messages Saving Control    

General overview of local syslog messages.

3.2.5.7 Maintenance



This menu helps you maintain the device configuration and firmware. You can back up and restore all the parameters, upgrade firmware and/or factory reset the device.



- **Restore Configuration** – restore configuration from a previous backup. Press the button to display a dialogue window to select a configuration file and upload it to the device. Before uploading choose whether or not the LAN settings and SIP PBX connection settings are to be applied.
- **Backup Configuration** – back up the complete current device configuration. Press the button to download all the configuration and stored it on your PC.

⚠ Caution

- *As the configuration may include delicate information, such as user phone numbers and access passwords, handle the file cautiously.*

- **Reset Configuration** – reset all the device parameters except for the LAN parameters. To reset the device completely, use the jumper or press Reset.

System ▾

Firmware Version

2.23.0.32.4

Bootloader Version

1.0.0.0.0

Software Build Type

Release

Software Build Date and Time

3/15/2018 14:05:22 PM

Upgrade Device Firmware

Upgrade Firmware

Firmware Status

Firmware up to date

Check Now

Notify of Beta Versions

☐

Restart Device

Restart Device

Licences

Show

- **Upgrade Device Firmware** – upload a new firmware version to the device. Press the button to display a dialogue window to select the proper firmware file. Once the firmware is uploaded, the device will be restarted automatically and fully operational with a new firmware version. The firmware upgrading process takes a little less than a minute. Download the current firmware version for your device from www.2n.com. Firmware upgrade does not affect configuration. The device checks the firmware file and prevents you from uploading an incorrect or corrupt file.
- **Check Now** – check online if a later firmware version is available. If so, the downloading option is offered followed by automatic upgrade.
- **Notify of Beta Versions** – enable monitoring and downloading of the latest firmware beta version.
- **Restart Device** – restart the device. The process takes about 30 s. Once restart is completed and the device is assigned its IP address, the login window will be displayed automatically.
- **Licences** – click Show to open a dialogue window including a list of used licences, third-party software and an EULA link.

Usage Statistics ▾

Send anonymous statistics data

☒

- **Send anonymous statistic data** – enable sending of anonymous statistic data on the device use to the manufacturer. No such delicate information as passwords, access codes or phone numbers are included. This information helps 2N TELEKOMUNIKACE a.s. improve

the software quality, reliability and performance. You can participate in this voluntarily and cancel your statistic data deliveries any time.

3.3 Used Ports

Services	Port	Protocol	Direction	Turned on by default	Configurable	Configuration
802.1x	–	–	In/Out	×	×	–
DHCP	68	UDP	In/Out	✓	×	–
DNS	53	TCP/ UDP	In/Out	✓	×	–
Echo (device discovery)*	8002	UDP	In/Out	✓	×	–
HTTP	80	TCP	In/Out	✓	✓	3.2.3.5 Web Server
HTTPS	443	TCP	In/Out	✓	✓	3.2.3.5 Web Server
NTP klient	123	UDP	In/Out	✓	×	–
RTP+RTCP ports (SIP)	4900+ (range of 64 ports)	UDP	In/Out	×	✓	3.2.3.1 Phone
SLP	427	UDP	In/Out	✓	×	–
SIP	5060, 5062	TCP/ UDP	In/Out	×	✓	3.2.3.1 Phone
SIPS	5061	TCP	In/Out	×	✓	3.2.3.1 Phone
Syslog	514	UDP	Out	×	×	–
My2N Klocker	443	TCP	Out	✓	×	–
My2N Tribble Tunnel	10080	TCP	Out	✓	×	–

Services	Port	Protocol	Direction	Turned on by default	Configurable	Configuration
Unitchannel	8011	UDP	In/Out	✓	×	–
Sitechannel (ICU protocol)	8004	UDP	In/Out	✓	×	–

*Echo – a proprietary protocol for the intercom discovery in the network. Used in the following applications: **2N® Network Scanner**, **2N® IP Eye**, **2N® Access Commander**.

4. Operational Statuses

This section describes the user scenarios and operational state signalling including user options and expected results of actions.

At Relax

At relax	Call to position 1 destination	press  shortly for 100 ms – 0.5 s	The call start is signalled by a change of the call answering button colour. When the called user answers the call, the device transits into the At call state. If the call is answered within a timeout, the device returns to the Relax mode. The call/lock/hang-up buttons are illuminated blue/yellow/red respectively. The muting and DND buttons are available, the others are inactive.
	Call to position 2 destination	press  for 1.5 s and more	The call start is signalled by a change of the call answering button colour. When the called user answers the call, the device transits into the At call state. If the call is answered within a timeout, the device returns to the Relax mode. The call/lock/hang-up buttons are illuminated blue/yellow/red respectively. The muting and DND buttons are available, the others are inactive.

Door unlocking	press 	Door unlocking is signalled by a green flash of the lock button and a tone. The other buttons do not change their states. The active call is terminated in 10 s if set so.
Ring tone selection	press   simultaneously for 3 seconds	The device gets in the ringtone selecting mode.
Volume up	press 	Each button press increases the ringing volume, which is signalled by a higher button brightness and louder ringtone. When the maximum volume is reached, the button starts flashing. When the 3-second timeout elapses, the ringing volume is set to the last value selected.
Volume down	press 	Each button press decreases the ringing volume, which is signalled by a lower button brightness and more silent ringtone. When the minimum volume is reached, the button starts flashing. When the 3-second timeout elapses, the ringing volume is set to the last value selected.
DND mode activation	short press of 	By a short press you switch the device into the DND mode. Another short press cancels the DND mode.

	long press of 	By a long press you switch the device into the DND mode. The DND mode is cancelled when the defined timeout passes.
Parental lock activation	press   simultaneously for 3 seconds	Press the buttons at the same time to activate the parental lock; the yellow lock symbol is illuminated.
Button brightness setting	press   simultaneously for 3 seconds	The device gets in the button brightness selecting state.

By default, all the buttons are backlit according to the selected brightness level.

Incoming Call

Incoming call	Call answering	press 	The device gets in the Call state. The call answering button is flashing: green if the call is coming in from an IP intercom/2N indoor answering unit and blue if the call is coming in from a third-party device. The lock shines yellow, the call end button is red. The other buttons are illuminated blue according to the set brightness level. The volume and mute buttons are available, DND is inactive.
	Call muting	press 	The device goes over to the silent (DND) mode. The call answering button is illuminated blue, the lock is yellow and the call end button is red. The other buttons are illuminated blue according to the set brightness level.
	Call rejection	press 	The call is terminated, the device goes over to the relax mode.
	Door unlocking	press 	Door unlocking is signalled by a green flash of the lock button and a tone. The other buttons do not change their states. The active call is terminated in 10 s if set so.
	Parental lock deactivation	press   simultaneously for 3 seconds	The buttons are activated and available again. The device gets in the Incoming call state.

	Ring volume up	press 	The volume level is increased. The state is signalled by a beep and louder ringtone. When the maximum volume is reached, the button starts flashing.
	Ring volume down	press 	The volume level is decreased. The state is signalled by a beep and more silent ringtone. When the minimum volume is reached, the button starts flashing.

At Call

At call	Door unlocking	press 	The door is unlocked. The device goes over to the call state, the lock is flashing green. The call is terminated after a timeout if set so.
	Call end	press 	The call is terminated, the device returns to the relax mode.
	Micropho ne muting	press 	The microphone is muted, the button is flashing yellow. The lock, call end and volume control buttons are active. The microphone muting deactivation is inactive. DND is inactive.
	Call volume up	press 	Each press increases the volume level. The state is signalled by a beep. When the maximum volume level is reached, the button starts flashing.
	Call volume down	press 	Each press decreases the volume level. The state is signalled by a beep. When the minimum volume level is reached, the button starts flashing.

Outgoing Call

Outgoing call	Call to position 1 destination	press  shortly	The call start is signalled by a change of the call answering button colour. When the called user answers the call, the device transits into the At call state. If the call is answered within a timeout, the device returns to the Relax mode. The call/lock/hang-up buttons are illuminated blue/yellow/red respectively. The muting and DND buttons are available, the others are inactive.
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Call to position 2 destination	press  for a long time	The call start is signalled by a change of the call answering button colour. When the called user answers the call, the device transits into the At call state. If the call is answered within a timeout, the device returns to the Relax mode. The call/lock/hang-up buttons are illuminated blue/yellow/red respectively. The muting and DND buttons are available, the others are inactive.
Call muting	press 	The device goes over to the silent (DND) mode. The call answering button is flashing blue. The call end button is shining red. The other buttons are backlit according to the set brightness level. The volume control, microphone muting and DND buttons are inactive.
Door unlocking	press 	Door unlocking is signalled by a green flash of the lock button and a tone. The other buttons do not change their states. The active call is terminated in 10 s if set so.

Parental lock deactivation	press   simultaneously for 3 seconds	The buttons are activated. The device gets in the Incoming call state.
Ringling volume up	press 	Each press increases the ringing volume level. The state is signalled by a beep and louder ringtone. When the maximum volume is reached, the button starts flashing.
Ringling volume down	press 	Each press decreases the ringing volume level. The state is signalled by a beep and more silent ringtone. When the minimum volume is reached, the button starts flashing.

Active DND mode

Active DND mode	Call to position 1 destination	press  shortly	The call start is signalled by a change of the call answering button colour. When the called user answers the call, the device transits into the At call state. If the call is answered within a timeout, the device returns to the Relax mode. The call/lock/hang-up buttons are illuminated blue/yellow/red respectively. The muting and DND buttons are available, the others are inactive.
	Call to position 2 destination	press  for a long time	The call start is signalled by a change of the call answering button colour. When the called user answers the call, the device transits into the At call state. If the call is answered within a timeout, the device returns to the Relax mode. The call/lock/hang-up buttons are illuminated blue/yellow/red respectively. The muting and DND buttons are available, the others are inactive.
	Door unlocking	press 	Door unlocking is signalled by a green flash of the lock button and a tone. The other buttons do not change their states. The active call is terminated in 10 s if set so.

Ringtone selection	press   simultaneously for 3 seconds	The device gets in the ringtone selecting mode.
Ringling volume up	press 	Each button press increases the ringing volume, which is signalled by a higher button brightness and louder ringtone. When the maximum volume is reached, the button starts flashing. When the 3-second timeout elapses, the ringing volume is set to the last value selected.
Ringling volume down	press 	Each button press decreases the ringing volume, which is signalled by a lower button brightness and more silent ringtone. When the minimum volume is reached, the button starts flashing. When the 3-second timeout elapses, the ringing volume is set to the last value selected.
DND mode deactivation	press 	Press the button to deactivate the DND mode and switch the device into the relax mode.
Parental lock activation	press   simultaneously for 3 seconds	Press the buttons at the same time to activate the parental lock and switch the device into the active parental lock state in DND. The yellow lock symbol and yellow doorbell symbol are illuminated.

	Button brightness setting	press   simultaneously for 3 seconds	The device goes over to the button brightness setting state.
	Incoming call		The call answering button is flashing.

Active Parental Lock in DND

Active parental lock in DND	Parental lock deactivation	press   simultaneously for 3 seconds	The buttons are activated. The device gets in the DND mode.
	Incoming call		The call answering button is flashing. The lock and call end buttons are illuminated: yellow and red respectively. All of these buttons are inactive. The doorbell (DND) button is shining yellow. The other buttons are not backlit. Deactivate the parental lock to activate the buttons.

Active Parental Lock

Active parental lock	Parental lock deactivation	press   simultaneously for 3 seconds	The buttons are activated. The device gets in the DND mode.
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	Incoming call		The call answering button is flashing. The lock and call end buttons are illuminated: yellow and red respectively. All of these buttons are inactive. The doorbell (DND) button is shining yellow. The other buttons are not backlit. Deactivate the parental lock to activate the buttons.
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Ringtone Setting Mode

Ringtone setting mode	Next ringtone selection	press 	Press the button to move to the next ringtone to be played.
	Previous ringtone selection	press 	Press the button to move to the previous ringtone to be played.
	Ringtone confirmation	press   simultaneously for 3 seconds or press 	Press the button(s) to confirm the ringtone setting and set the ringtone. You can also idle for 10 s to confirm your selection and quit the mode.
	Selection cancelling	press 	Press the button to cancel the ringtone selection and quit the mode without saving. If the setting is interrupted by an incoming call, the ringtone set before the changes is restored.

Brightness Setting Mode

Brightness setting mode	Brightness intensity up	press 	Each button press increases the brightness intensity, which is signalled by a beep. When the maximum intensity is reached, the symbol flashes three times.
	Brightness intensity down	press 	Each button press decreases the brightness intensity, which is signalled by a beep. When the minimum intensity is reached, the symbol flashes three times.
	Brightness confirmation	press   simultaneously for 3 seconds or press 	Press the button(s) to confirm the selected brightness level. The buttons start shining with the confirmed brightness intensity and two beeps are used for signalling. You can also idle for 10 s to confirm your selection and quit the mode.
	Selection cancelling	press 	Press the button to cancel the brightness intensity selection and quit the mode without saving. If the setting is interrupted by an incoming call, the brightness intensity set before the changes is restored.

Doorbell Activation

Doorbell activation	Doorbell activation		When the doorbell input is activated, the selected tune will be played. Applies to all the modes. You can change the doorbell ringtone in the Services / User sounds section via the user interface.
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5. Maintenance – Cleaning

If used frequently, the device surface gets dirty. Use a piece of soft cloth moistened with clean water to clean the device.

You are recommended to follow the principles below while cleaning:

Do not use aggressive detergents (such as abrasives or strong disinfectants). Use appropriate cleaning agents suitable for glasses, optical devices, screens, etc. Alcohol-based cleaners may not be applied. We recommend you to use IT cleaning wipes.

6. Technical Parameters

Power Supply

- **Type:** 12VDC $\pm 10\%$ adapter or PoE 802.3af injector Phihong PSA16U-480 (POE)
- **Recommended power supply:** 12 V / 1 A
- **Polarity reversal protection:** yes

Power Consumption

- **In idle:**
 - **12 V:** 1,2 W – 0,1 A
 - **PoE:** 1,7 W
- **Max. in active state:** 12 W / 1 A

User Interface

- **Control:** 7 capacitive buttons with RGB LED backlight
- **Service:** RESET button with long press option for factory reset, 3 status LEDs

Audio

- **Microphone:** integrated
- **Speaker:** 2W integrated
- **Induction loop output:** 600 mV_{RMS}

Interface

- **LAN:** 10/100BaseT, RJ-45; Cat5e or higher

Doorbell Input

- **Input type:** switching contact (button/relay)
- **Contact type:** normally open (NO)
- **Contact parameters:** up to 50 V / 5 mA, DC

Mechanical Parameters

- **Dimensions (w x h x d):** 185 x 128 x 48.2 mm
- **Weight:** 387 g
- **Operating temperature:** 0 to 50 °C
- **Relative humidity:** 10 to 90 % non-condensing
- **Storing temperature:** -20 to 70 °C
- **Recommended altitude:** 0-2000 m

7. Supplementary Information

This section provides supplementary information on the **2N® Indoor Talk** product.

Here is what you can find in this section:

- [7.1 Troubleshooting](#)
- [7.2 Directives, Laws and Regulations - General Instructions and Cautions](#)

7.1 Troubleshooting



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

7.2 Directives, Laws and Regulations - General Instructions and Cautions

2N® Indoor Talk conforms to the following directives and regulations:

- 2014/35/EU for electrical equipment designed for use within certain voltage limits
- 2014/30/EU for electromagnetic compatibility
- 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment
- 2012/19/EU on waste electrical and electronic equipment

Industry Canada

This Class B digital apparatus complies with Canadian ICES-003/NMB-003.

FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.

NOTE: These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency 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 cause harmful interference to radio or television reception, which can be determined 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 is connected

- Consult the dealer or an experienced radio/TV technician for help

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

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.

⚠ Caution**Warning**

In order to ensure the full functionality and guaranteed performance, we strongly recommend that the topicality of the product / device version in use be verified as early as in the installation process. The customer hereby acknowledges that the product / device can achieve the guaranteed performance and full functionality pursuant to the manufacturer's instructions only if the latest product / device version is used after having been tested for full interoperability and not having been determined by the manufacturer as incompatible with certain versions of other products, and only in conformity with the manufacturer's instructions, guidelines or recommendations and in conjunction with suitable products and devices of other suppliers. The latest versions are available at https://www.2n.com/cs_CZ/ or can be updated via the configuration interface if the devices are adequately technically equipped. Should the customer use a product / device version other than the latest one or a version determined by the manufacturer as incompatible with certain versions of other products, or should the customer use the product / device in contradiction to the manufacturer's instructions, guidelines or recommendations or in conjunction with unsuitable products / devices of other suppliers, the customer is aware of and agrees with all functionality limitations of such a product / device if any as well as with all consequences incurred as a result thereof. Using a product / device version other than the latest one or a version determined by the manufacturer as incompatible with certain versions of other products, or using the product / device in contradiction to the manufacturer's instructions, guidelines or recommendations or in conjunction with unsuitable products / devices of other suppliers, the customer agrees that the 2N TELEKOMUNIKACE a.s. company shall not be held liable for any functionality limitation of such a product or any damage, loss or injury related to this potential functionality limitation.

