An Axis company

Quick Start Guide

2N® IP Verso

Contents

Introduction

This quick start guide is designed to help you set up and use the 2N® IP Verso intercom. It describes how to configure and install the product. Most sections contain a link to documentation or video guides that contain further details or tips and tricks.

Documentation

2N provides numerous resources to help you quickly find and obtain necessary information about 2N products. Looking for product certifications, declarations of conformity, CAD files, installation or configuration manuals, quick setup guides, video guides etc.? This is where you can find the requested resources:

Manuals

This is where you can find up-to-date technical specifications, **installation and configuration** manuals documenting every step of installation and configuration of 2N products. Other very useful documents here are **interoperability, HTTP API, and automation** manuals which can help you integrate our products with hundreds of 3rd party products and systems.

FAQ

Looking for **short**, straight-to-the-point, **how-to guides or some tips and tricks**? Do you need to quickly set up 2N IP intercoms with 2N® Indoor Touch? Want to see some **automation examples**? Then our FAQ section is the place to look.

Video guides

Do you prefer video guides to written manuals? Check our YouTube channel, specifically the installation videos playlist, where you can find the most important installation and configuration guides for 2N products. As an example, this is where you can find a **comprehensive flush installation guide for 2N® IP Verso** with many tips, hints and recommendations to make the installation easier.

Product Certifications, A&E materials etc.

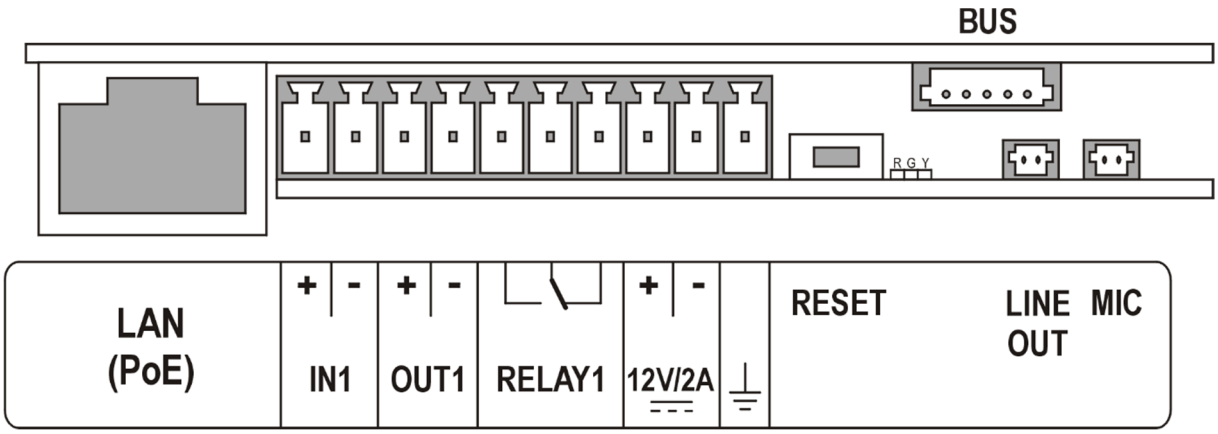
Planning a project and need a 3D model or declaration of conformity of a 2N product? The 2N webpage's documentation section has you covered. This is also the place to download 2N software, firmware, diagrams etc.

Product Overview

2N® IP Verso is based on an **in-house developed software platform** that's shared among other devices from the 2N portfolio, such as other IP intercoms, answering units, SIP speakers, access units. This software is built with **easy 3rd party integration** in mind and is constantly updated to provide latest features that the market requires. Thanks to the software and hardware being developed in synergy, it allows us to keep even the oldest 2N IP intercoms (from 2008) on an **up-to-date FW** equal with the latest intercoms.

The main function of 2N® IP Verso is to provide a **wide range of access control and communication options** to its users in a sleek, functional and modular design. The product offers outgoing video and two-way audio communication and is classified for **IP54 and IK08** ratings, which allow it to be used in both indoor and outdoor locations. If necessary, you can opt for a version without a camera. Thanks to its modularity, 2N® IP Verso may be equipped with several extending modules, **such as touch display, keypad, card reader, Bluetooth, fingerprint, Wiegand, I/O etc.** To further increase physical security, you can install a tamper switch and a security relay and combine access credentials.

The device connects to existing IP networks and supports **Power over Ethernet** to simplify cabling requirements. PoE is enough to power the main unit, several modules and 12V door strikes with up to 400mA DC. Available connections can be seen in the following picture.



The product is available in silver and black and can be both **surface and flush mounted**. The main unit is always the same, but you need to obtain the correct mounting accessories for each installation type. Surface installation is easier and requires a surface frame and optionally a backplate for uneven surfaces. Flush installation requires a flush frame and an installation box. Please see the installation manual for further info.

2N® IP Verso provides loud and clear full duplex audio communication thanks to its 2W loudspeaker with max SPL of 78dB (1kHz@1m), adaptive volume and echo cancellation. Voice communication can be realized via **SIP**, this allows for easy interconnection with IP phones and PBX systems; the intercom also supports multicast and InformaCast protocols for paging. Supported audio codecs are G.711, G.722, G.729, L16/16kHz.

The device boasts a wide-angle camera capable of 1280×960px resolution in JPEG mode or 640×480px in video mode. Its video capabilities can be adjusted in settings to adapt to a wide range of lighting conditions. Camera controls include brightness, saturation, indoor/outdoor mode with optional highlight compensation (akin to HDR), day/night mode, infrared LED brightness and motion detection. Additionally, you can connect an external

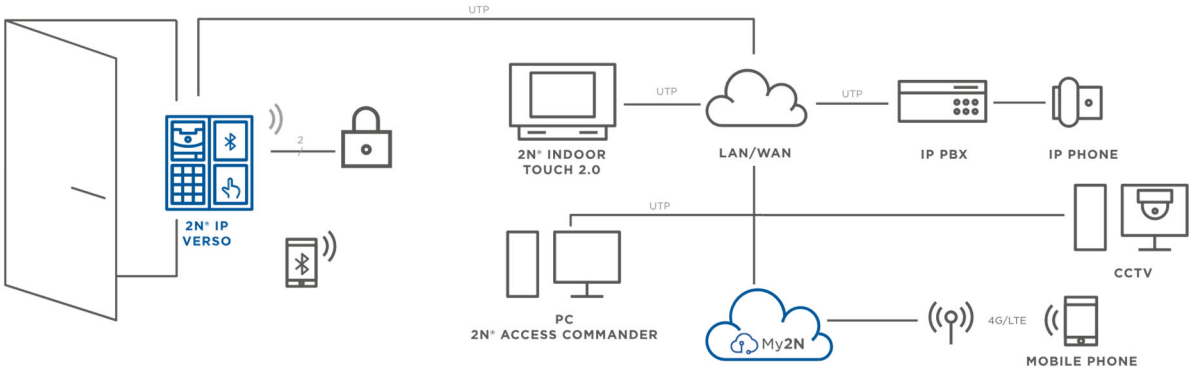
camera and switch between them on demand. Supported video codecs are H.263, H.263+, H.264, MPEG-4, MJPEG.

The intercom may be integrated with 3rd party devices and software due to its extensive support of open protocols and standards. Integration with Home Automation systems or Video Management Systems is straightforward thanks to full ONVIF Profile S support and HTTP commands. See our interoperability manual for 3rd party compatibility and integration guides.

Key features and benefits

Feature	Benefit
High quality audio	Very loud audio with adaptive echo canceller and adaptive volume to provide clear two-way audio.
PoE support	Allows for easy installation of the product. One Ethernet cable will suffice in many installations as it should provide enough power for the unit as well as recommended door strikes.
Remote entry control	Related to the previous point; you can control doors directly via physical outputs or remotely using e.g. HTTP relays or even 3rd party systems.
Use of open protocols	Easy integration with 3rd party systems using SIP, ONVIF, RTSP, HTTP API, Wiegand etc.
Outdoor-ready and vandal resistant design	With IP54 and IK08, the product is more than capable to handle outdoor conditions and vandals.
Automation interface	The intercom provides the option to use our proprietary Automation to replace or enhance the intercom's functionality. It is very often used in integrations with 3rd party systems. See the FAQ for automation examples.

Typical use scenario



Known challenges

These are some things that you might have to consider while using this product.

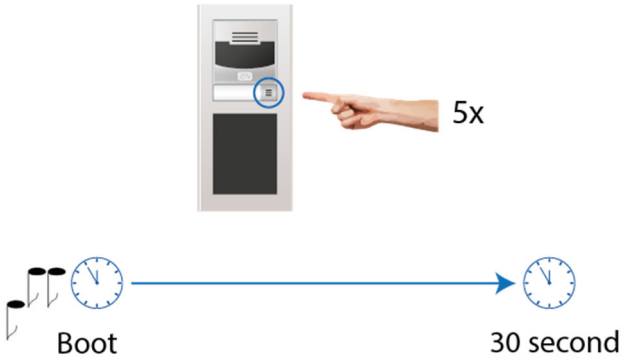
- SIP communication might be blocked or altered in your network. Consult your network administrator in case of any problems. The device offers tracing and syslog for troubleshooting.
- Audio quality may vary based on environment, SIP provider or client.
- If the device is accessible from the Internet and is configured to accept incoming calls, you might face spam callers/bots. You may improve the intercom's security by turning on IP Address Filter in Services>Phone>SIP#>Advanced Settings or by creating a whitelist using our proprietary automation interface.
- Always use the latest browser version.
- If you have a door strike that requires more than 400mA, then use the passive output that supports up to 30V/1A.
- 3rd party devices or systems might not fully support the same protocols as the 2N® IP Verso does. That's why we recommend consulting the interoperability manual to verify that the required features will work.
- There are **multiple RFID modules** with differing functionality, make sure to get the one that best suits your usage scenario. We also offer so-called combo modules that combine e.g. Bluetooth and RFID to save space.
    - **Supported 125kHz cards are:**
        - EM4xxx
    - **Supported 13.56MHz cards are:**
        - ISO14443A (Mifare, DESFire)
        - PicoPass (HID iClass)
        - FeliCa
        - ST SR(IX)
        - 2N® Mobile Key
        - *HID SE (Seos, iClass SE, Mifare SE) – This card format can only be read by secured RFID readers. The secured RFID readers allow for reading either CSN or PAC ID.*

Installation

Connecting to the network

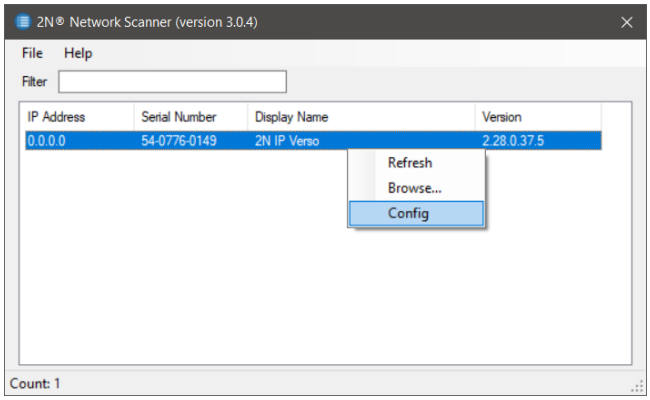
The easiest way to connect and power up your 2N® IP Verso is to connect it to a PoE (802.3af) network switch that will provide connection to your network as well as enough power to support the device and its accessories. We recommend you use Cat 5e cable or better.

Once connected to the PoE switch, the device will start booting up. This is indicated by a set of beeps and the LEDs coming on. If there's a properly configured DHCP server in the network, then finding and setting up the device on the network will be very easy since the device is set to **DHCP mode by default**.



Once you've heard the beeps and the intercom's main quick dial button is lit, it means the device has booted up. The easiest way to find out the intercom's IP address is to press this button 5 times within 30s of boot. The intercom will then tell you its IP address.

If it says **0.0.0.0**, then it hasn't obtained an IP address from the DHCP server.



You now have two options, you can either switch the intercom to static IP address mode by rebooting the device and pressing the button 15 times within 30s of boot – this will change the IP to 192.168.1.100. You can also use our 2N® Network Scanner to find the device on the network and change its IP configuration by right-clicking it and choosing Config. Fill in the necessary IP configuration, enter the current password (default is **2n**) and hit Set.

You are now all set to access the intercom's web interface.

*Note: Make sure that **DNS server** is configured while using static IP address mode to ensure full functionality of internet services such as e-mail. This setting can be verified in **System>Network>Basic>Manual Settings**.*

Connecting a door strike

The **active output** can provide up to 8-12V/400mA DC, while the **relay output** can handle up to 30V/1A AC/DC. Please see the electric installation manual for detailed information.

We offer a number of door strikes you can purchase along with the intercom that are compatible with the active output.

If you have a door strike that meets the active output requirements, then you can connect it to the OUT1 terminal. The intercom will then have to be configured to control this output – it's set to RELAY1 by default. This setting can be found in Hardware>Switches>Switch#>Controlled Output. Please refer to Door control for further details.

Connecting an exit button

You can connect an exit button to the intercom's input terminals. Configuration is then done from the Door section.

Connecting extending modules

It's possible to connect up to 30 modules to the 2N® IP Verso (including the main unit). This is only possible when the intercom is powered externally, otherwise the number of modules is smaller.

Extending modules are connected via so-called Verso bus (or Vbus) and can be placed in a frame with the main unit or they can be in a separate frame e.g. on the other side of the door connected via extension cable(s) which can be up to 7m long in total.

Some modules can also be placed underneath others, these include the tamper switch, I/O and Wiegand modules.

HW module configuration is possible in Hardware>Extenders.

Setup

Accessing the web interface

You can enter the intercom's IP address into your web browser directly or double-click the intercom in the 2N® Network Scanner to access its web interface. You should see a certificate warning, simply ignore it or add it to exceptions and proceed to the login screen.

The default username/password combination is **Admin/2n**, once you log in for the first time, you'll be asked to enter a more secure password. Use a minimum password length of 8 or more characters containing a combination of numbers and both lowercase and uppercase letters. Confirm the password and hit Change.

Once the password has been set, you'll be presented with this or similar homepage:

The interface is color-coded and divided into 5 sections:

- **Green** – general info, event log…
- **Blue** – contacts, global time profiles
- **Purple** – SW settings, call settings, automation, password, language…
- **Gray** – HW settings, inputs/outputs, door control…
- **Orange** – network settings, licenses, configuration backup, FW…

Note: The interface is dynamic and only shows relevant sections for currently connected accessories. This means that if you have a fingerprint module connected, a fingerprint section will appear in Users and the module itself will be visible in Hardware>Extenders etc.

Language

You can quickly switch between languages at the top right of the web interface. This quick language change will reset after logout. Default language can be changed in **Services>Web Server>Web Interface Language**.

Password

Password can be changed in **Services>Web Server>Password**. If you forgot the password and can't access the web interface, then the only option to regain access is to perform HW factory reset.

Hint: When you restore General settings, then the password will change to what was saved in the backup. To prevent getting locked off, always change the password after configuration import.

Firmware update

One of the first things you should verify is that the intercom is running the latest firmware. If the intercom is connected to the Internet, it will automatically verify firmware availability and notify you at the bottom of the green Status rectangle. If you downloaded the firmware from our website, then you can update manually from the **System>Maintenance** tab.

Licenses

The intercom doesn't need any licenses for normal operation, but if you'd like to use advanced features such as automation, RTSP, anti-passback, enhanced encryption etc., then you may purchase additional licenses to obtain these features. There's also an option to activate a **trial Gold license in System>License**. Look here for more info about licenses.

Date & Time

Make sure the intercom has accurate date, time and time zone to ensure correct timestamps for calls, access control and 3rd party system integrations. These settings can be found in **System>Date & Time**.

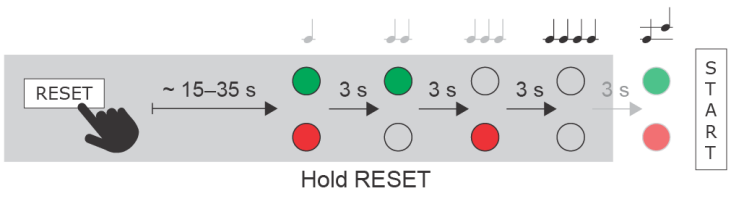
Troubleshooting

If you're having issues with calling, email, proxy registration etc. you can capture a network trace in **System>Network>Trace**.

*Note: The trace buffer will start overwriting itself once it hits the maximum size – **4096kB**. Because the **buffer for traces is limited**, it is necessary to start the trace right before you make a test call and then **stop it before it reaches the maximum buffer size**.*

Factory reset

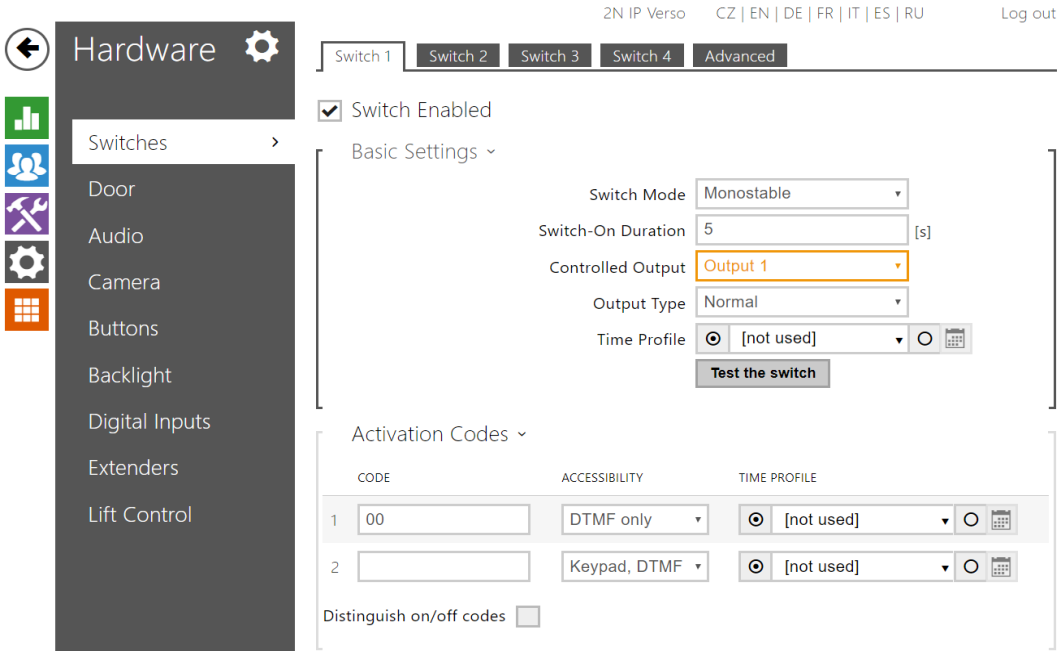
There are two ways you can perform factory reset. If you have access to the unit's web interface, then you can go do it via **System>Maintenance>Reset Configuration**. If you don't have access, then press and hold the reset button until this LED sequence is complete or the intercom beeps for the 4th time (4 times). The beeps were introduced with FW 2.27.



Quick setup guide

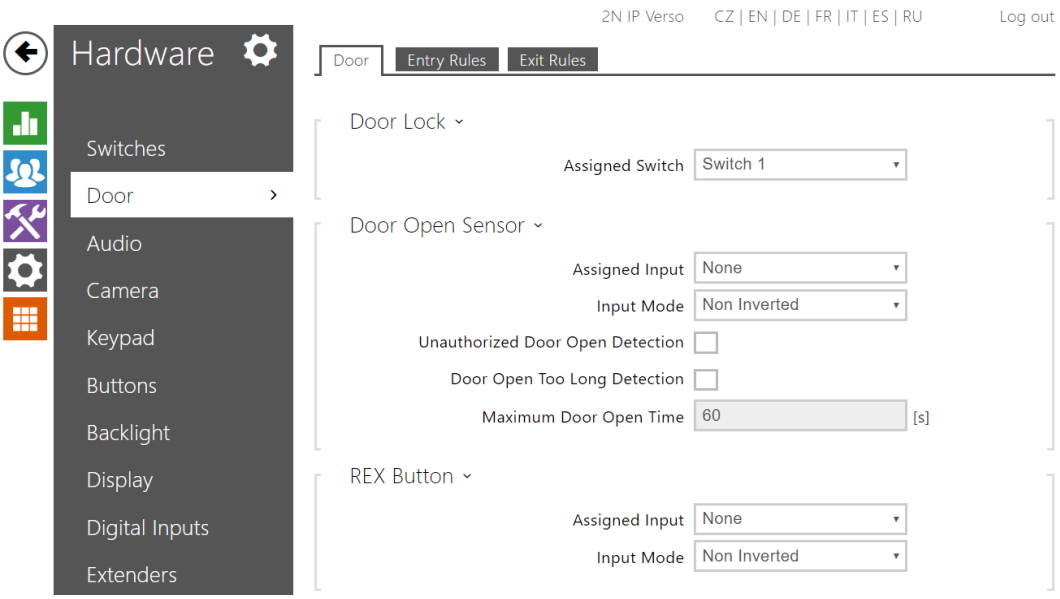
Door control

As mentioned in the Connecting a door strike section, you can connect a door strike to an active output or a passive relay. Select the controlled output here.



You may also adjust other settings, such as switch-on duration, global activation codes, time restraints or extended activation which allows you to automatically trigger the switch when something else happens.

In case you'd like use an exit button or monitor door status, then you can connect these to one of the inputs and configure them from here:



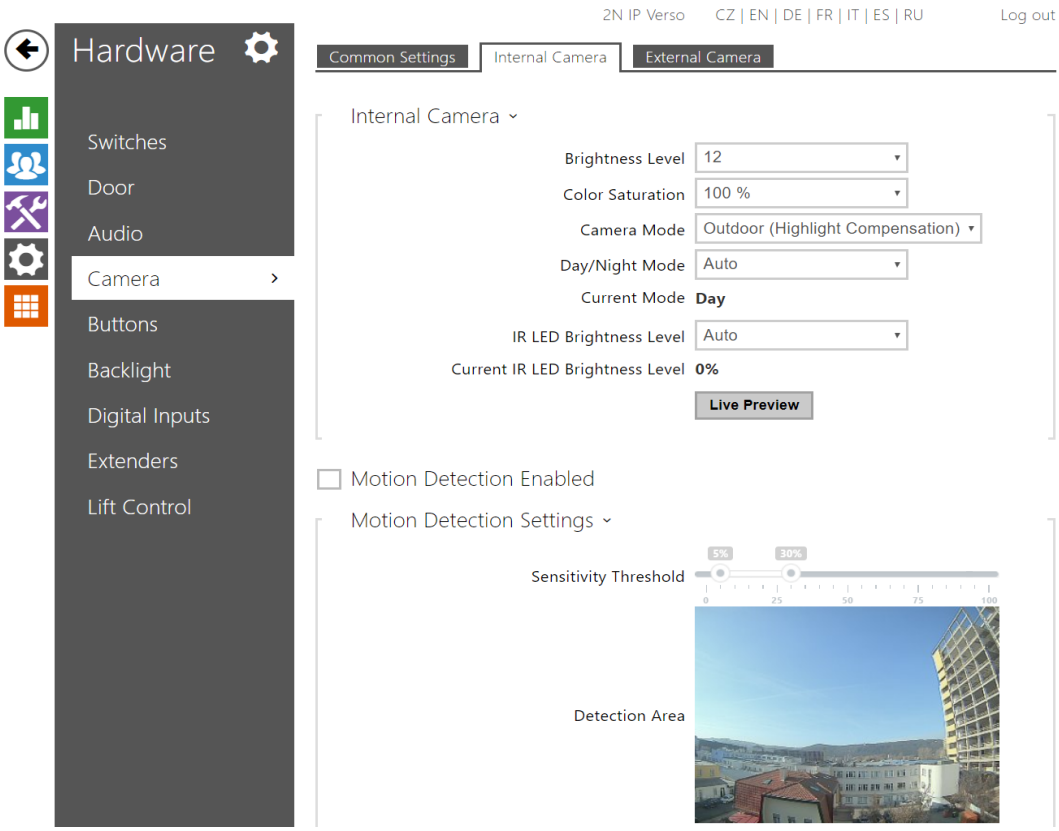
Camera settings

You can adjust camera settings in **Hardware>Camera>Internal Camera**.

The Camera Mode dropdown is especially useful since it allows you to choose between indoor or outdoor modes and select your power line frequency to avoid flicker under artificial lighting. The **Highlight Compensation** mode selected in the following picture is very similar to HDR/WDR modes on other cameras and helps in backlit situations.

Note: You might have to adjust brightness if you turned on highlight compensation.

Leave the rest of the settings at default settings or adjust it according to your preferences.

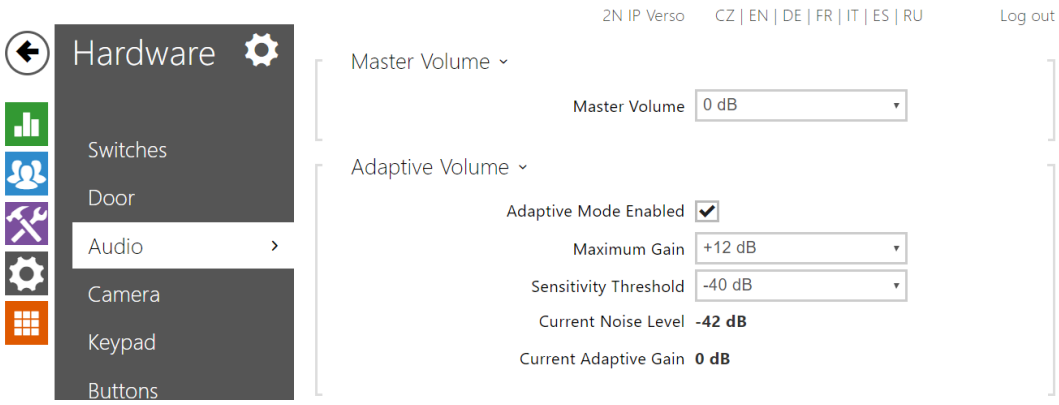


Audio settings

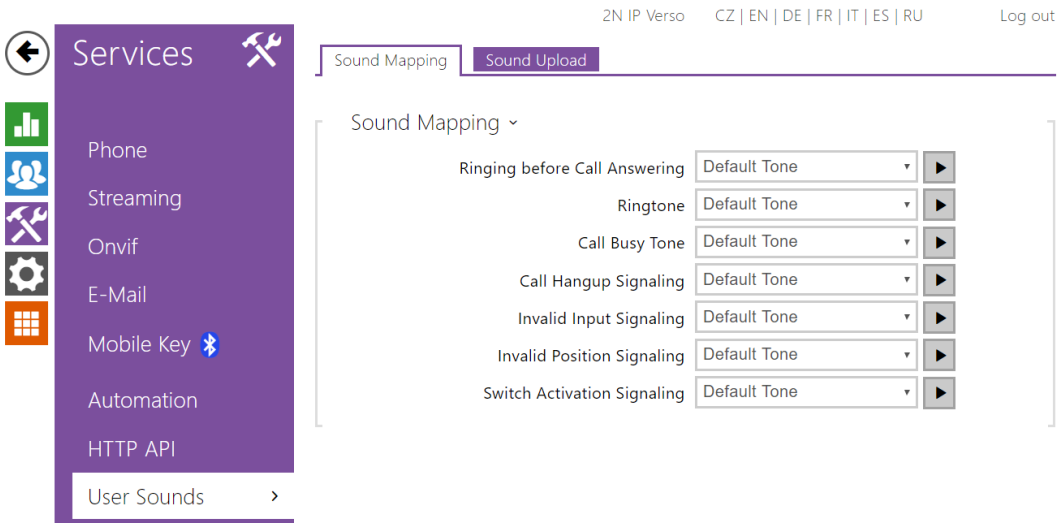
Narrow corridors and small rooms usually don't need the intercom to be as loud as it is by default. You can turn down the volume and thus improve sound quality. The echo canceller will then be able to leave more of the original audio intact.

If you are going to place the intercom in areas with changing audio levels, e.g. truck entrances, then it's recommended to enable **Adaptive Volume** to ensure optimal audibility of the intercom at all times. This setting can automatically increase the volume according to current ambient loudness once the selected threshold is exceeded.

You may also adjust the loudness of individual sounds the intercom makes here.



If you'd like to change the sounds the intercom makes during its operation, you can do so in the **User Sounds** section. Here you can also upload your own sounds or messages and map them to the following events.



SIP registration

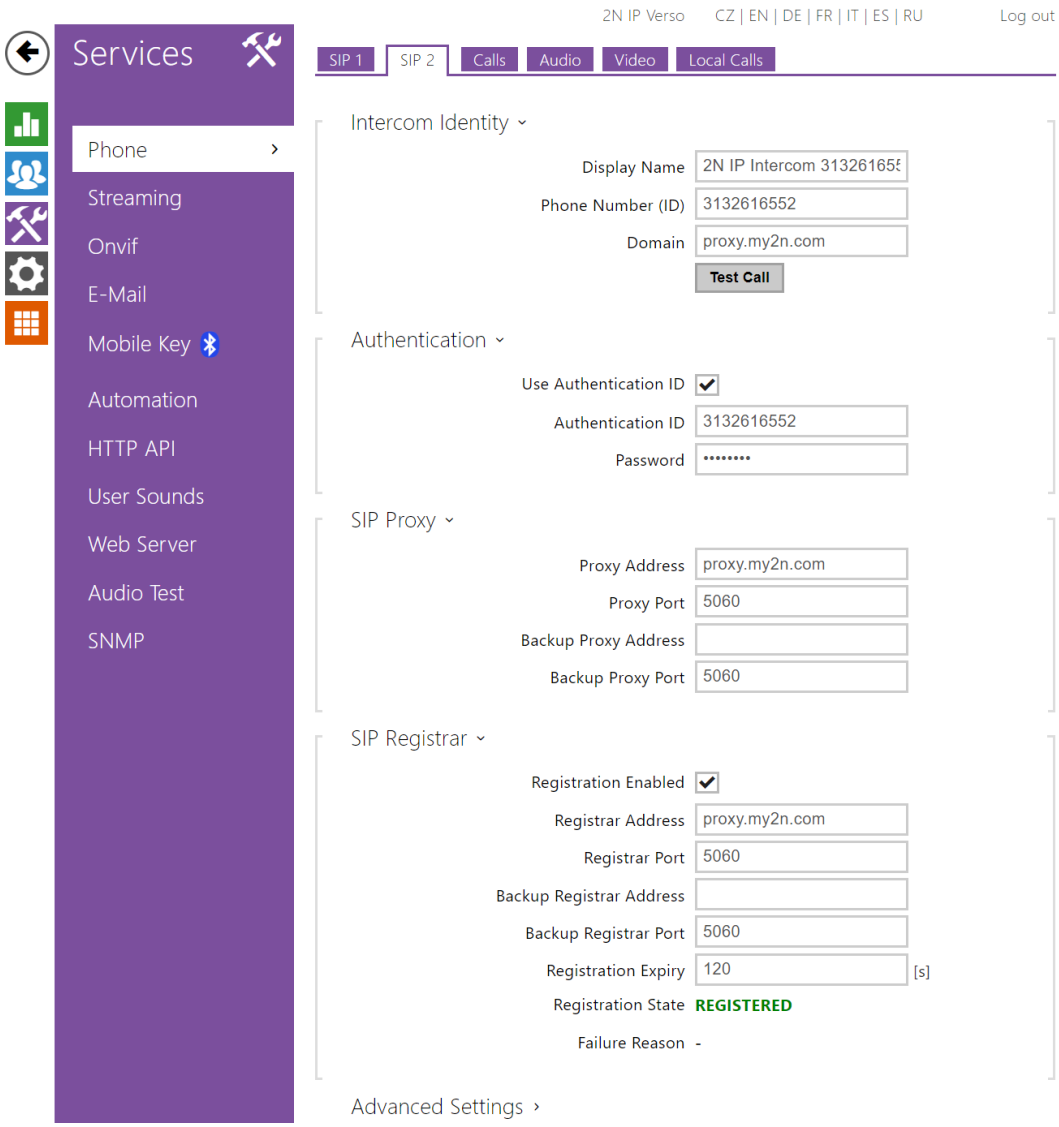
2N® IP Verso can use two independent SIP accounts. This means that the intercom may be registered with two different SIP exchanges under two phone numbers.

Fill in the details you received from your SIP provider into one of the accounts – the intercom should then register shortly. Some SIP providers might require extra settings to be enabled in the Advanced Settings section, mainly to select the correct SIP Transport Protocol, SIP port, enable SRTP etc.

*Note 1: Our cloud service, **2N® Mobile Video**, uses SIP2 for registration by default.*

*Note 2: Direct SIP calls and calls between most 2N devices can be made **even without SIP registration**. Please see the Setting up your contact list section for more details.*

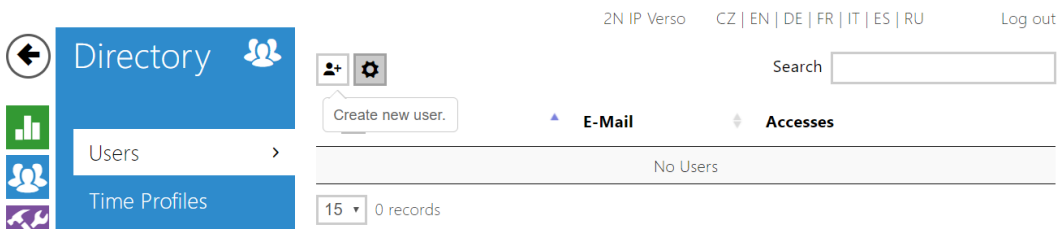
You can see an example of a properly registered SIP account in the following image.



Setting up your contact list

The blue section, called Directory, is where you can manage your contacts–users of the intercom.

Start by clicking the **Create new user** icon.



As mentioned before, the interface is dynamic and only shows sections based on which modules are currently connected to the intercom. Users are where you'll see the biggest difference since most modules are related to access control which is mostly configured from here.

Fill in a name for each user, otherwise you'll see their database identifiers instead. The remaining fields depend on your scenario.

If you only want to make calls, then just enter phone number(s). There are multiple formats you can use depending on the destination. Here are some examples.

- Direct peer-to-peer call
  - **sip:**IP
- 2N indoor units
  - **device:**devicename
- SIP proxy
  - **sip:**extension@IPorDomain:port/SIPaccountEncryptedCallback
  - extension number

Each user can have up to 3 phone numbers plus a deputy user for situations when neither of the 3 phone numbers get connected. Phone numbers can be dialed sequentially or in parallel based on the "Group call to…" checkbox.

If you'd like to control access as well, then you have multiple options which you can combine.

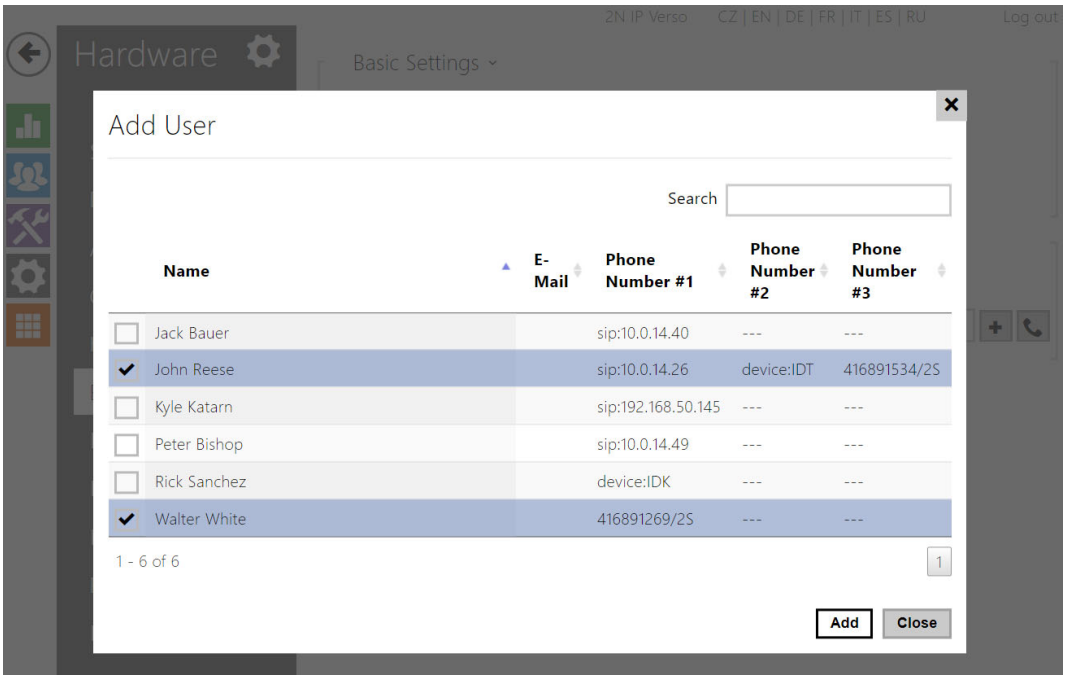
- **User codes** for keypad or DTMF use
- **Fingerprints**
- **Bluetooth** for use with our Mobile Key app
- **RFID** cards (125kHz SIO, 13.56MHz SIO or PAC ID)
  - You may also use your mobile phone with **NFC** and Mobile Key

You can obtain a **Card's ID** by reading it on the intercom's RFID module, copying the ID from **Status>Access Log** and pasting it into the respective user's Card ID field. Other credentials can be enrolled directly on the device. However, we recommend purchasing the respective USB accessories for larger installations and ease of use.

Please refer to the manual for detailed information on user configuration.

Quick dial button configuration

Once you have created the necessary users, you can go to **Hardware>Buttons** and set up your quick dial buttons. Click the **+** icon and assign one or more users to each button.



The 1st phone number of each user assigned to a button will be dialed immediately upon button press, the remaining numbers, if any, will ring based on the Group call checkbox and timers in Services>Phone>Calls.

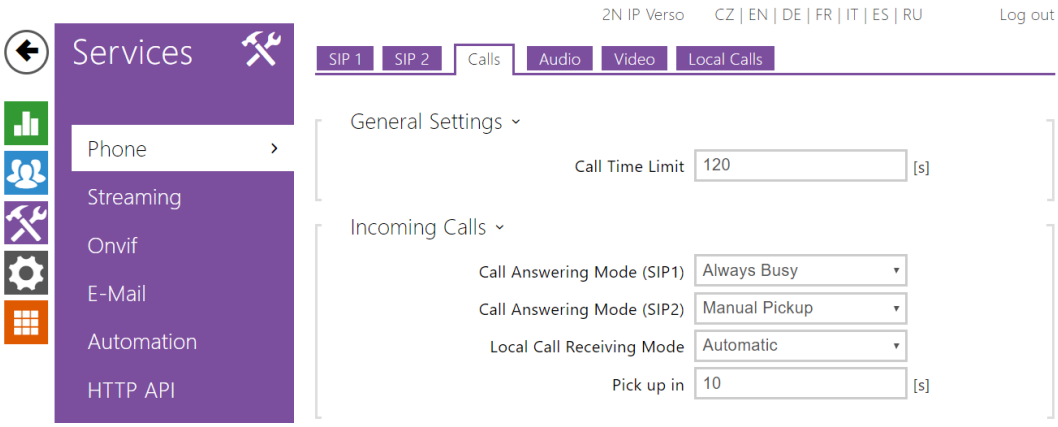
There can only be **one active connected call** at any given time, but the intercom can **ring up to 16 destinations at the same time**. The dialing itself lasts until one of the destinations answers or one of the limits is reached.

If you'd like to verify a button's functionality remotely, you can do so by clicking the **phone icon** next to it and starting the test.

Incoming calls

By default, the intercom is configured to reject all incoming calls. This can be changed in **Services>Phone>Calls>Incoming Calls**. This setting can be configured independently for both SIP accounts and 2N answering units. You may also configure automatic pick up after a set period.

The SIP1 setting affects both the SIP1 account and direct peer-to-peer calls.



Backing up the intercom's configuration

It's recommended to back up the intercom's configuration once everything has been configured. Backup and restore can be found in **System>Maintenance**.

Managing multiple devices

There are two ways you can distribute credentials and settings over multiple 2N devices based on the 2N IP intercom platform.

The first one, usable in smaller installations, is a simple import of configuration backup from another intercom – we recommend only doing so between the same kind of devices, e.g. two 2N® IP Verso units.

The second one is our 2N® Access Commander software which may be used for credential distribution, bulk management, monitoring etc. of 2N devices.

Availability and support

The 2N® IP Verso is available through our distributors, most of which also provide technical support. 2N also provides online chat service to quickly answer your technical questions.

Contacts

Should you have any additional questions or would like to request more information, please contact:

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