# 2N

2N® Helios IP Verso
2N® Helios IP Vario
2N® Helios IP Force
2N® Helios IP Safety
2N® Helios IP Uni
2N® Indoor Touch
2N® Net Audio Decoder
2N® SIP Audio Converter
2N® Net Mic

# From ideas to implementation

2N® Helios IP intercoms and public address systems
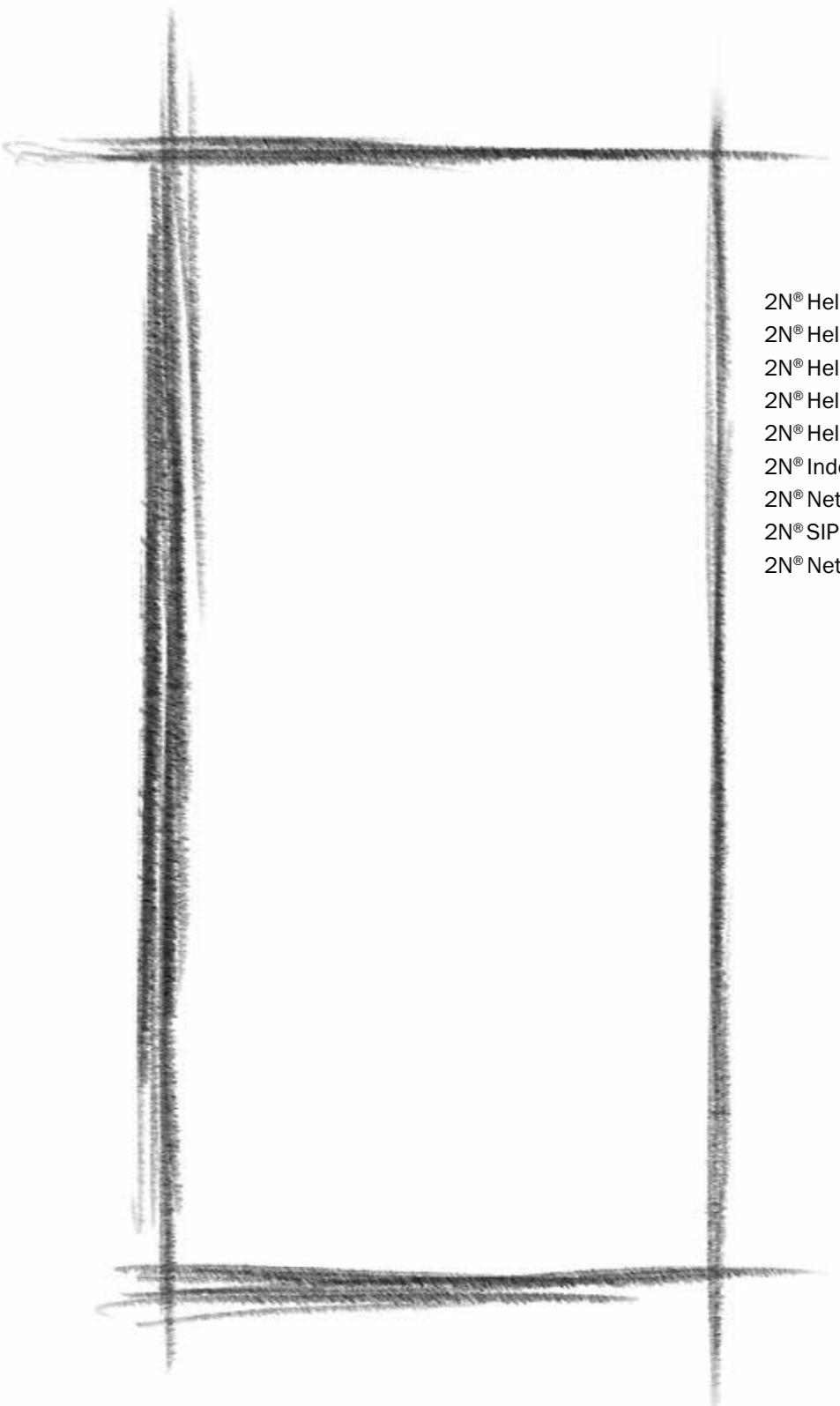
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From ideas to implementation

## Dear customers and partners,

This completely new catalogue is intended for you, a small group of experts who, like us, draw, plan and design very carefully and seek out the best solution for their customers time and time again. ,And when you've found the best solution, turn your ideas into perfect results.

This catalogue is intended for you – architects, project engineers, fitters and, of course, all users of 2N products. We aim to provide you with a useful advantage in a competitive market. We want to give you the means to speed up your work, to find new areas with added value of your business, for the effective and comfortable creation of offers, project documentation, source material for discussions with clients and, naturally, for you to find the greatest utility for the customer.
We carried out extensive customer research, asked our customers throughout the world about their needs and wishes, and we looked carefully at how they use the existing equipment, what they appreciate and what they feel is missing and what annoys them. We have combined our years of experience with the survey results from our development team to create a range of products based on internet technologies intended for residential buildings, shopping centres, public spaces, motorways, hospitals and large office complexes.

**Why read and use this catalogue?**
- 2N communication systems do not need any new cabling or infrastructure – everything is linked and operates on a regular LAN network and the Internet
- The equipment can be located anywhere in the world. Thanks to the internet there are no limits on distance, the number of components or the number of zones
- You can monitor, control, configure and upgrade all the equipment remotely
- 2N voice and video communication can be controlled easily on tablets, mobile phones, computers or telephones
- The systems are designed to be open for cooperation with third-party products and they natively use http, 802x, RTP, WMA, MP3, ONVIF, H264, M-JPEG and many other commonly used network and audio-visual formats.

You can find the current electronic version of the catalogue on our pages www.2n.cz. The large number of documents in the download section will make the creation of project documentation easier and faster for you, and the recommended SW licences can be bought online on the 2N licence portal.
Not only do we aim to deliver a high-quality, reliable product but also simplicity, speed and comfort to your work and the purchase of our products. I hope we succeed in this task and that you will become our partner in the future and a co-creator of this and similar material. We are prepared to listen to you and constantly improve and develop our products, this catalogue and the entire complex of tools associated with it.

I wish you every success in your work and every satisfaction from 2N products.

**Oldřich Stejskal**
CEO of 2N TELEKOMUNIKACE a.s.

# Introduction

# Contents

**No ideas
are too bold ...**

Using a simple graphic form we
present door intercoms in their
typical installations.

# Vision

Marina Bay Sands (Singapore)

2N® Helios IP Verso

# Only one can be perfect

The 2N® Helios IP Verso is a security intercom marked by its high degree of modularity. So it is entirely up to you whether to have a built-in HD camera with night vision, a smart card reader, or to fully integrate it into a camera and monitoring system.

2N® Helios IP Vario

# First impression count

2N® Helios IP Vario is an ideal door intercom for offices where
it is necessary to combine security and a smart design.
It has a card reader, display camera or attendance system.

2N® Helios IP Force

# A door guard
# for extreme conditions

2N® Helios IP Force is a robust door intercom for apartment complexes where it is necessary to ensure maximum resilience and security. An aluminium cover, camera with night vision and resilience to dust, water and vandals ensure that an area remains safe.

2N® Helios IP Safety

# A highly visible aid when you're in distress

2N® Helios IP Safety is a security intercom for immediate communication with assistance, and fully functional even if immersed in water or at temperatures of -30 °C. In both cases it is fully functional. It has a robust aluminium cover and comes in a distinct orange colour.

2N® Helios IP Uni

# Great value for the money

2N® Helios IP Uni is an intercom which is very easy to install and is suitable for shopping centres, offices, museums or schools. Simple operation and connection with the IP world ensures that no one will get lost, or if they do they can contact the building receptionist or security guard straight away.

SECURITY

INFOPOINT

2N
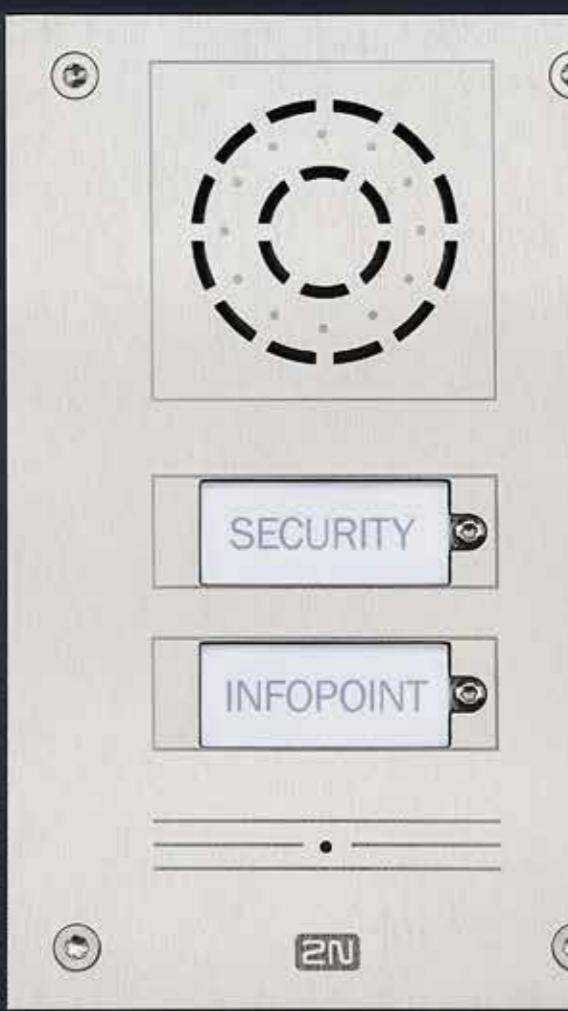
2N® Indoor Touch

# Luxury door communication solution

The 2N® Indoor Touch panel is a combination of luxury, excellent design and simple control. By simply glancing at the display, you can see who is standing at the door, easily start a conversation, unlock the door and turn on the lights in the corridor or entrance hall.
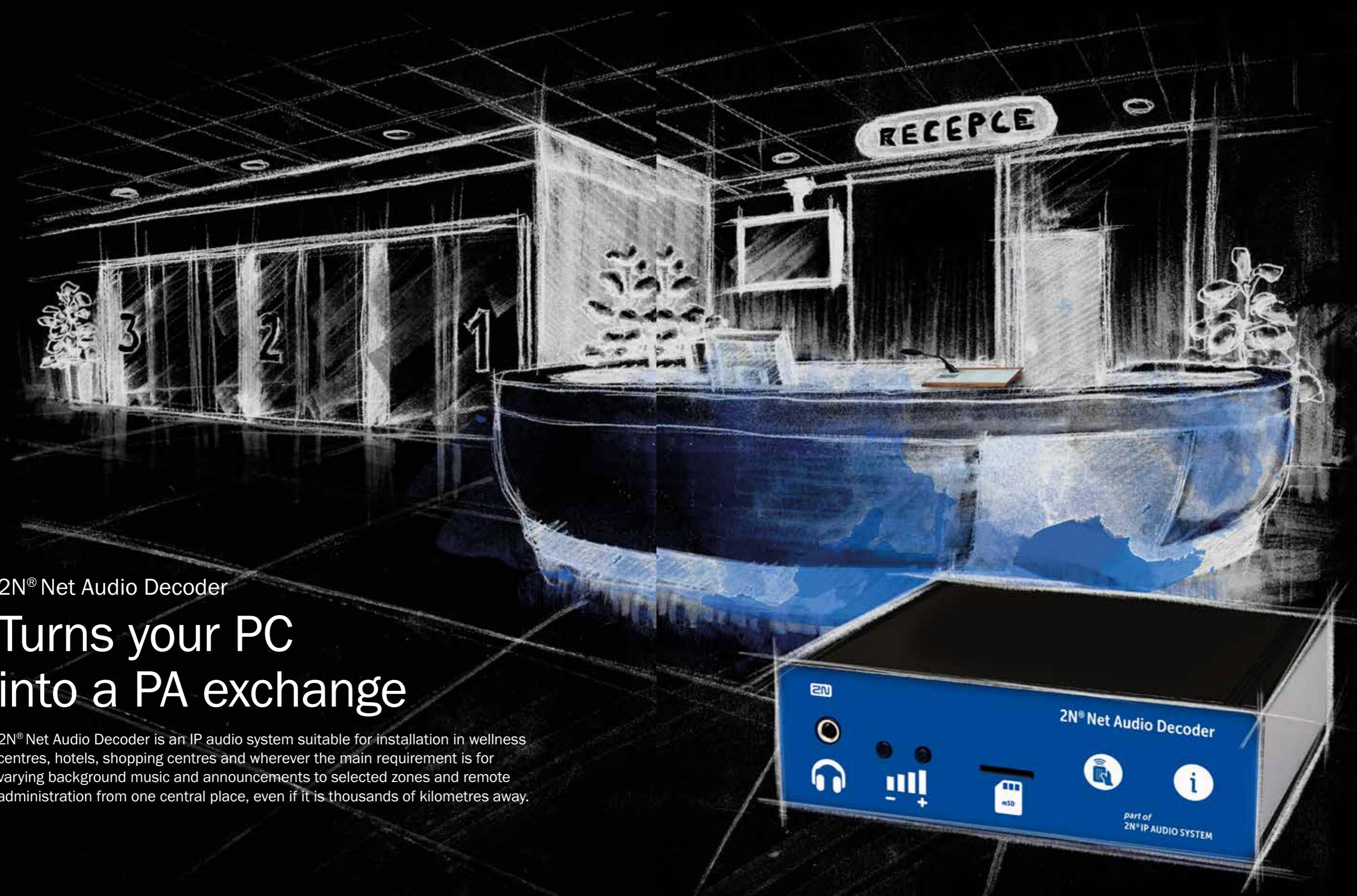
2N® Net Audio Decoder

# Turns your PC
# into a PA exchange

2N® Net Audio Decoder is an IP audio system suitable for installation in wellness centres, hotels, shopping centres and wherever the main requirement is for varying background music and announcements to selected zones and remote administration from one central place, even if it is thousands of kilometres away.

2N® SIP Audio Converter

# Effective public address

2N® SIP Audio Converter is ideal aid for public announcements in a large company complex. The existing telephone exchange can be used with a speaker as a simple PA system. And the combination of the SIP protocol and multicast offers the possibility of sending announcements to all devices or selected individual zones.

**Planning means the
creation of the future ...**

When planning our suggestions,
information about recommended
use and examples of connection in
selected environments will help you.

# Planning

# Solution for IP environment

It is also increasingly necessary to integrate IP intercoms presented here into various systems such as access control in buildings, camera systems or security applications. In order for an intercom to meet all these demands it is essential for it to use IP technology, preferably the open protocol SIP.

We became aware of this fact in 2005, and in the following year we were one of the fi rst on the market to introduce an IP version of our successful 2N® Helios communicator. Thanks to the hard work of a team of development specialists it became a cutting-edge device, able to tackle any challenges.

## Security is the priority for 2N

**When technology transforms your daily life and enhances your safety**

The 2N® Helios IP intercom range not only provides convenient and sophisticated two-way communication, but also a comprehensive security solution for fi rms and individuals. As we all know, there has been an increasing emphasis on security in recent years, and we encounter various security measures at virtually every step.

At 2N, we also take security very seriously, and we are sure that we can meet all your needs in this area. Regardless of whether your primary interest is a system for building security, monitoring people at the entrance to your premises or connecting your attendance system, all these areas require a high level of security and protection.
And intercoms in the 2N® Helios IP range, which are equipped with a whole range of security functions, can help you in these areas.

For clarity and easy comprehension, we have created a simple system of symbols called 2N 360° SECURITY SHIELD®, which encompasses all these security functions. This new form of intercom communication works on the principle that the customer's needs come fi rst, complemented by an understanding of the customer's fi eld of business. This is followed by a resolution of customer needs through security functions, all capped off with a proposed solution for a specific intercom installation. The simple system of symbols and distinct colour characteristics are complemented by the cutting-edge technology itself, which is the very best that the global IP intercom market can offer today.

We believe this new form of communication will give you a signifi cant competitive advantage and help you stay ahead of the competition.

## OVERVIEW OF IP INTERCOMS

Detailed overview of functions and parameters of IP intercoms for your better decision.

| Intercoms | 2N® Helios IP Verso | 2N® Helios IP Force | 2N® Helios IP Safety | 2N® Helios IP Vario | 2N® Helios IP Uni |
|---|---|---|---|---|---|
| Integrated camera | optional (HD) | optional | x | optional | x |
| Integrated microphone and speaker | yes | yes | yes | yes | yes |
| Audio line-in / line-out | line-out | x | x | x | x |
| Buttons | up to 146 | 1, 2 or 4 | 1 | up tp 54 | 1 or 2 |
| External buttons input | yes | optional | optional | optional | optional |
| Numerical keypad | optional | optional | x | optional | x |
| Internal RFID card reader | optional | optional | optional | optional | x |
| Display | x | x | x | optional | x |
| Integrated electric switch | yes | yes | yes | yes | yes |
| Loudspeaker power extension to 10W | x | yes | yes | x | x |
| Power supply POE 802.3af | yes | yes | yes | yes | yes |
| Power supply 12 V DC | yes | yes | yes | yes | yes |
| Tamper switch | optional | optional | optional | x | yes |
| IP coverage | IP54 | IP65 / IP69K | IP65 / IP69K | IP53 with roof | IP54 |
| Phone book positions | 2000 | 2000 | 2000 | 2000 | 2 |
| Substitute user if inacessible | yes | yes | yes | yes | x |
| Security Relay support | yes | yes | yes | yes | yes |
| 2N® Helios IP Eye support | yes | yes | x | yes | x |

## CONNECTIVITY IN IP ENVIRONMENT

IP intercoms from 2N can be connected with a wide range of external devices thanks to open standards:

CCTV

IP telephone exchange

IP camera

IP PBX

IP telephone

iPhone iPad

PC

2N® HELIOS IP

Android Telephone Android Tablet

Fingerprint reader

Security system

RRG reader

Access system

Light

Door lock
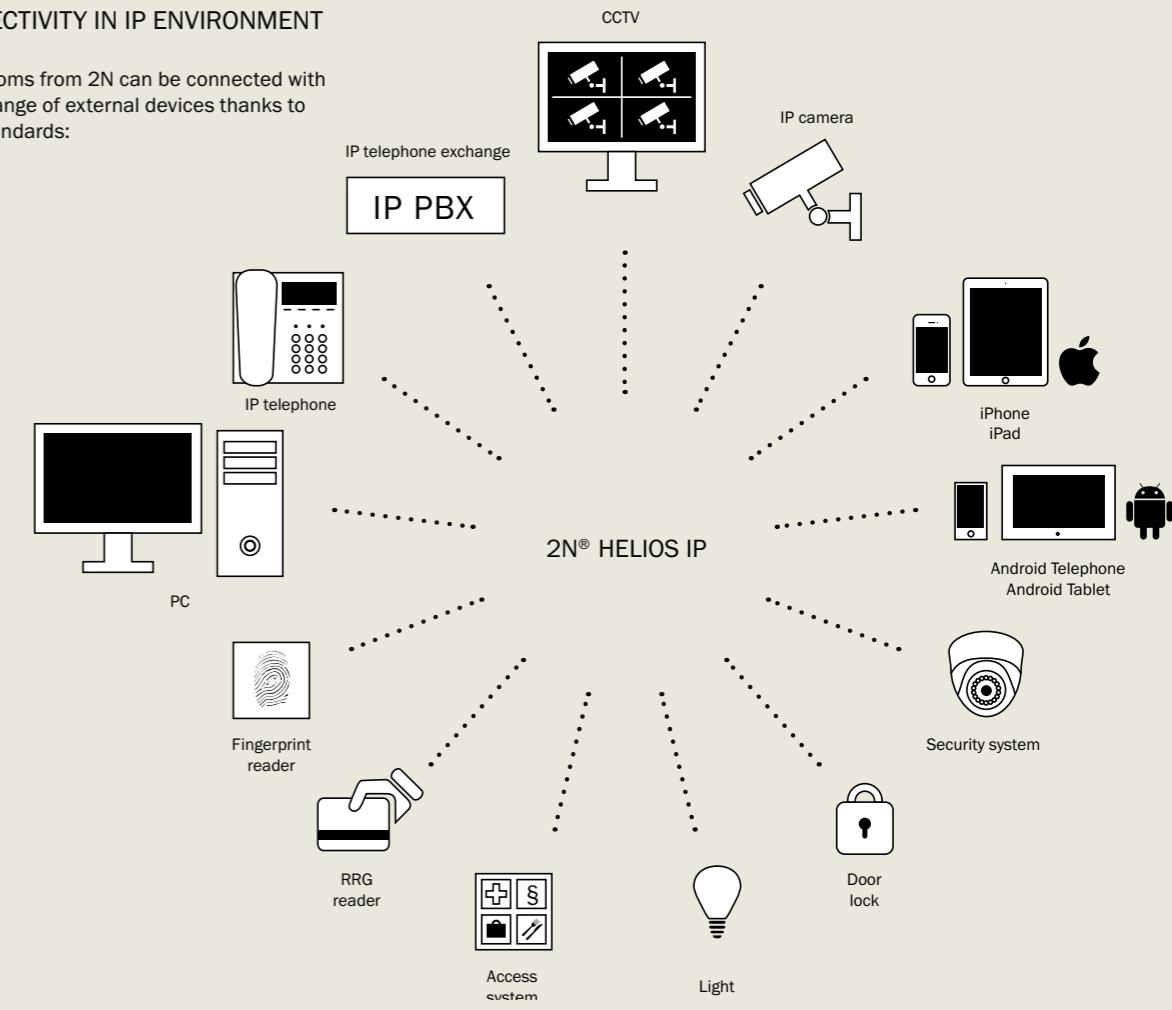
IP ENVIRONMENT

# 2N® Helios IP Verso

## SUGGESTED USES
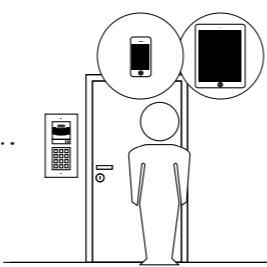
### HD video
The built-in HD camera makes it possible to send a quality image to a tablet or smartphone.

### Night vision
Infrared night vision makes it possible to film a potential assailant even in deep darkness, without that person even knowing they are being filmed.
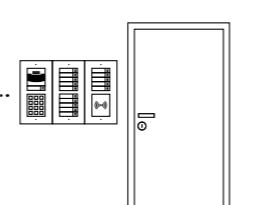
### Modularity
Thanks to its modularity, any combination of intercom components may be chosen. This means that you can combine an attendance system with a key pad, name tags and a HD camera.

RECOMMENDED USE

### Office buildings

Office buildings are showcases for the firms that have their offices there; they should be a reflection of their success, progressiveness and stability. Therefore it is desirable to welcome all your visitors not only with a pleasant environment, but also with a perfect intercom at the entrance. The 2N® Helios IP Verso combines luxury design with the latest technologies in the area of communications and security. And because security is currently one of the hottest topics, the 2N® Helios IP Verso contains the most advanced camera in the world of intercoms, with high definition and night vision, which is usually only seen in professional CCTV cameras. Of course it can be integrated into all security systems, such as a CCTV or access system.

**Main features:**
- HD Camera with night vision
- Controlled building access (cards, codes)
- Supports attendance systems
- Voice and image to a standard tabletop telephone
- Integration with CCTV and access control systems

### Public and commercial buildings

Government offices, schools or shopping centres – these are some of the typical environments for which the 2N® Helios IP Verso intercom has been designed. It meets the strictest requirements for modern design, modularity and security in one perfect unit. It is a device that allows visitors to enter and helps them orient themselves, and it restricts access by undesirable persons and monitors employee attendance. All this is made possible by unique functions such as easy integration into CCTV systems, ONVIF standard support, a HD camera with night vision and an RFID smartcard reader module, together with an attendance system for employees.

**Main features:**
- Representative and modular design
- HD camera that can be connected to a CCTV system
- Controlled building access (card, code)
- Supports attendance systems
- Collective administration of several intercoms via the internet

### Residential area

The entrance to a home is a true reflection of its owner. The 2N® Helios IP Verso intercom reveals that you like modern design and quality materials, that the safety of your loved ones is of the utmost importance and that you demand state-of-the-art technology. And what exactly do all of these details say about you? This intercom, with its luxury design made of zinc alloy, works with the latest IP technologies, such as integration with e-mail; it has a high definition camera, the latest web interface and includes security functions such as integration with camera systems, night vision and protection against lock tampering. As a bonus, the 2N® Helios IP Verso offers you the ability to call mobile devices or tablets, so you can operate your door from the comfort of your own garden.

**Main features:**
- Voice and video reception on your mobile phone or tablet
- Photos of visitors sent to your e-mail
- HD camera, which may be connected to your home CCTV system
- Remote control of other equipment (lights, garage doors)
- Connection to home automation systems

EXAMPLE OF CONNECTION OF THE 2N® HELIOS IP VERSO IN AN OFFICE ENVIRONMENT

CCTV    Smartphone    IP Video phone    Tablet    PC / Notebook    IP Telephone    Access system

2N® Helios IP Verso    LAN    2N® Helios IP Verso

IP PBX
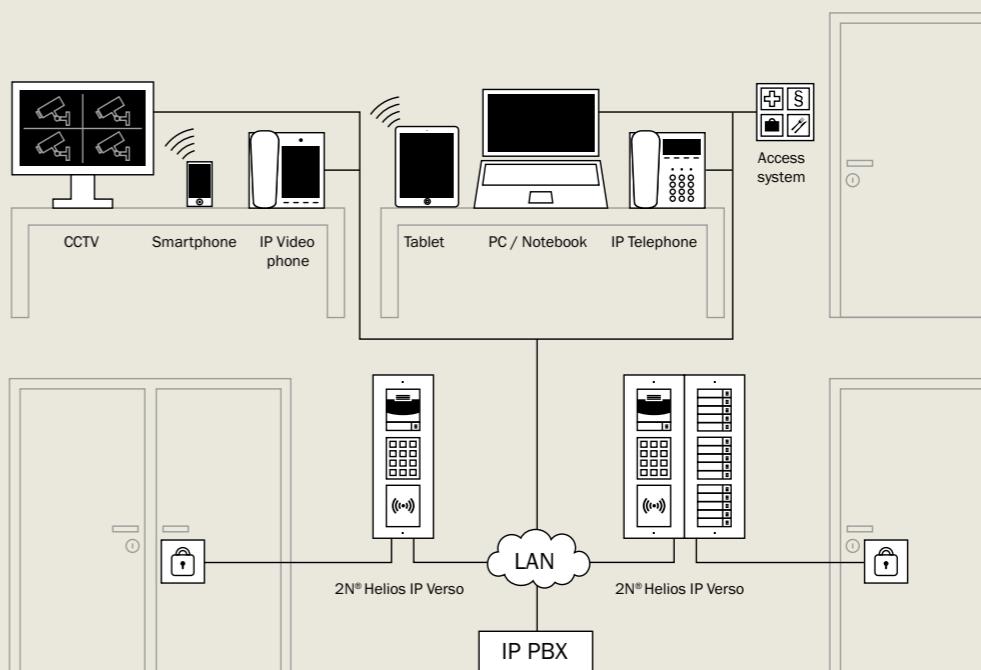
The high modularity of our device means that you can choose the solution that suits your needs. As a rule, you will need a HD camera at the entrance door, a smartcard reader and a keypad for entering access codes. At an operational entrance, you will certainly want to add employee name tags and the names of individual departments. You don't have to worry about not having enough space – the 2N® Helios IP Verso is capable of serving up to 146 name tags at once. Integration with your existing CCTV system or connection to the telephone switchboard for further functions goes without saying.

IP ENVIRONMENT

# 2N® Helios IP Vario

SUGGESTED USES
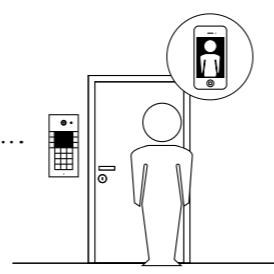
**Picture from the door to the telephone**
The video is easily displayed from an intercom on a mobile phone or tablet.
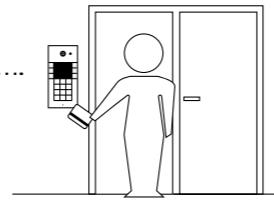
**Attendance system**
The intercom can also serve as a terminal for an attendance system of all your employees.
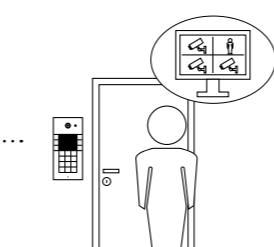
**Connection with CCTV**
You can easily send the video from the intercom to the camera system.

## RECOMMENDED USE

### Office buildings

Every office building needs to resolve the problem of security at the entrance, allowing employees access and also greeting visitors in a dignified manner. It's also good to think of an attendance system for individual employees and possible connectivity with the existing telephone system. The beauty of the technology is most evident as soon as you let a visitor in using your tabletop telephone, mobile or tablet. Thanks to the integrated camera you not only see who you are talking to, but for the purposes of greater security 2N® Helios IP Vario can also send a photograph of a visitor to an email address or connect up to your camera system using the ONVIF® protocol.

**Main advantages:**
- Control of entry to the building (card, code)
- Attendance system for employees
- Voice and picture on regular tabletop telephone
- Camera with possibility of connection to CCTV
- Colour display with telephone list

### Public and commercial buildings

Whether it's a government building, museum, school, library or shopping centre, it is necessary to keep both people and property save. 2N® Helios IP Vario is a device which can secure the entrance, monitor visitors using the built-in camera and at the same time cooperate with the camera system. It helps people find their way around in public spaces, prevents the movement of unauthorised people or seals off protected areas. Even challenging customers such as large shopping centres will appreciate the great design and possibilities of video. Moreover, thanks to the RFID reader, 2N® Helios IP Vario can be used to create an attendance and access system using a single device.

**Main advantages:**
- Smart design with backlighting
- Camera with possibility of connection to CCTV
- Control of entry to the building (card, code)
- Attendance system for employees
- Mass communications via intercoms over the internet

### Residential area

A safe entrance to the home is a basic precondition for peaceful sleep and, if we add to this the possibility of taking a call on a telephone or tablet and a luxurious appearance, we have the ideal solution for your house. A 2N® Helios IP Vario on your gate will call your mobile phone, including a picture from the built-in camera – so you will see whether a family visitor or an uninvited guest has come to visit you. Moreover 2N® Helios IP Vario will send a photograph of the visitors who called when you were out directly to an email address or will simply connect up with your camera system and allow you to see who was at your door.

**Main advantages:**
- Receipt of voice and video on mobile telephone or tablet
- Sending of photographs to email address
- Camera with possibility of linking to home CCTV (camera) system
- Control of other equipment (lights, garage doors)
- Connectivity with home automation systems

## EXAMPLE OF CONNECTION OF 2N® HELIOS IP VARIO IN OFFICE ENVIRONMENT

CCTV    IP Video phone    PC / Notebook    IP Telephone    Access system

2N® Helios IP Vario    LAN    2N® Helios IP Vario

IP PBX
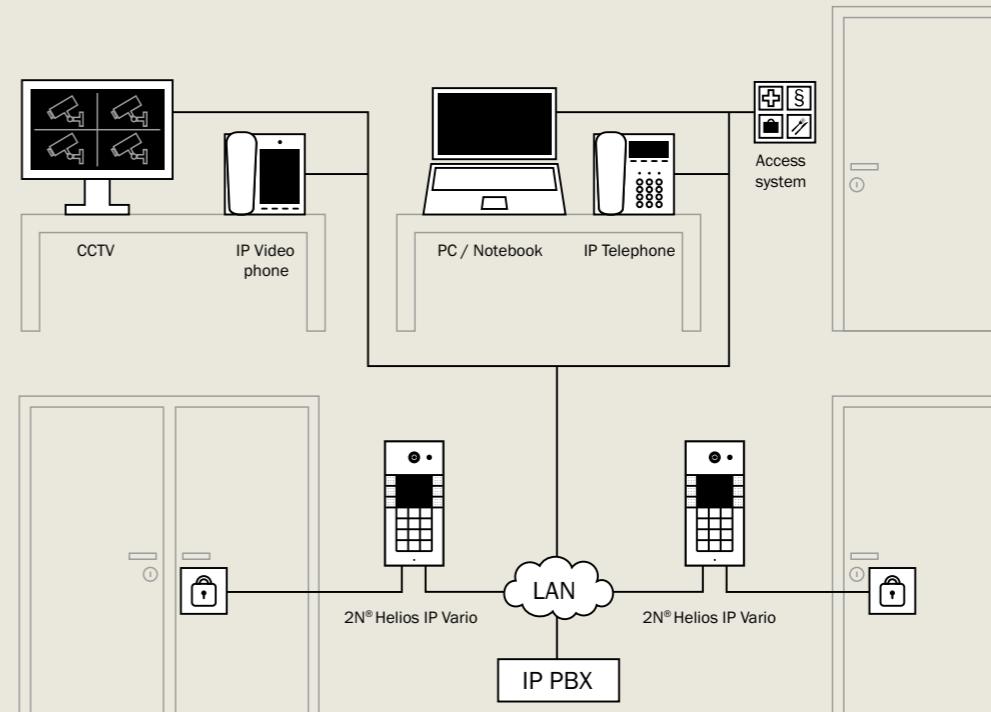
In an office environment it is possible to connect 2N® Helios IP Vario with any IP equipment. In this way it can function as part of the attendance system or CCTV system. The video from the intercom can be displayed very easily on an IP video telephone, notebook or tablet. You can easily integrate the intercom into the existing IP infrastructure.

Onvif    milestone    cisco Compatible    BOSCH    AVAYA    Alcatel·Lucent

IP ENVIRONMENT

# 2N® Helios IP Force

## SUGGESTED USES
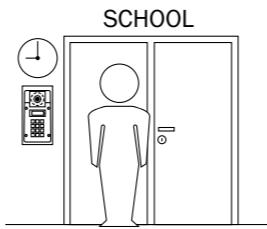
### SCHOOL

**Security of school buildings**
The time lock in the intercom can serve for the automatic closing of school entrances.

### GATE 03
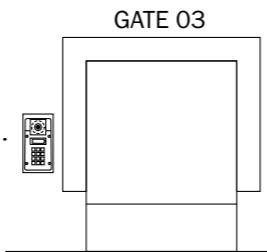
**Protection of logistics inputs**
In logistics centres no goods ramp remains unsupervised.
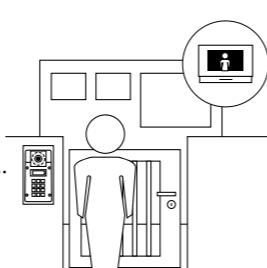
**Home guard**
The robustness and possibility of video make this intercom a suitable entry guard.

## RECOMMENDED USE

### Office buildings

Securing the entry to an office or an entire office building is no easy matter. Vandalism can occur on a daily basis and unauthorised entries of persons and theft are relatively common. It is necessary to protect against this. 2N® Helios IP Force lets you control who has access to the office, for example using a numerical keypad or RFID reader. Events in front of the doors can be monitored using wide-angle video cameras and they will notify you of any  unusual circumstances to you, either via email or in combination with the camera (CCTV) system.
All of this and more is in a cast aluminium casing resilient to the weather and vandalism.

**Main advantages:**
- Resilience to ingress of dust and water (IP up to 69K) and to vandalism
- Voice and video on regular telephone
- Wide-angle colour camera with connection to CCTV
- Control of entry to the building (card, code)

### Public and commercial buildings

Airport, government building, power station, shop floor – wherever it is necessary to ensure maximum security and control of people's movement. And it is also necessary for equipment such as an intercom to be resilient to the weather and to vandalism. As the most robust IP intercom on the market, 2N® Helios IP Force is resilient to bad weather and vandalism and it also has the function of access control via RFID cards, checking the attendance of employees or connection with the security system and camera system.

**Main advantages:**
- Highly robust aluminium cover in vandal-proof version
- Control of entry to the building (card, code)
- Wide-angle colour camera with connection to CCTV
- External power source or power over ethernet

### Schools

In addition to passing on knowledge to your children, every school must try to ensure that our children are safe. There is perhaps no worse image than a strange person with bad intentions wandering around a school corridor. To make sure that such situations do not occur there is 2N® Helios IP Force. A door guard which ensures that no-one is allowed into school during teaching hours. A visitor must ring the operator, who sees him on the monitor, and he is also recorded by the camera system. Teachers and staff will also appreciate the integrated card reader, which not only lets them into the school at any time, but also records their entry and exit in the attendance system.

**Main advantages:**
- Wide-angle colour camera with connection to CCTV
- Control of entry to the building (card, code)
- Attendance system
- Resilience to ingress of dust and water (IP up to 69K) and to vandalism

### Residential projects

Airport, government building, power station, shop floor – wherever it is necessary to ensure maximum security and control of people's movement. And it is also necessary for equipment such as an intercom to be resilient to the weather and to vandalism. As the most robust IP intercom on the market, 2N® Helios IP Force is resilient to bad weather and vandalism and it also has the function of access control via RFID cards, checking the attendance of employees or connection with the security system and camera system.

**Main advantages:**
- Highly robust aluminium cover in vandal-proof version
- Control of entry to the building (card, code)
- Wide-angle colour camera with connection to CCTV
- External power source or power over ethernet

## EXAMPLE OF CONNECTION OF 2N® HELIOS IP FORCE IN HOUSE

A secure apartment complex is a suitable environment for the installation of a robust 2N® Helios IP Force intercom. At the gate it can withstand the attacks of vandals, dust and water. Easily connected to building`s existing infrastructure provides an immediate overview of what is happening at the entrance. It can be connected with security company's control centre or camera system. Moreover the video from the intercom can be transferred to a home automation.

Wifi router    IP Telephone

2N® Helios IP Force

Wall panel    Smartphone
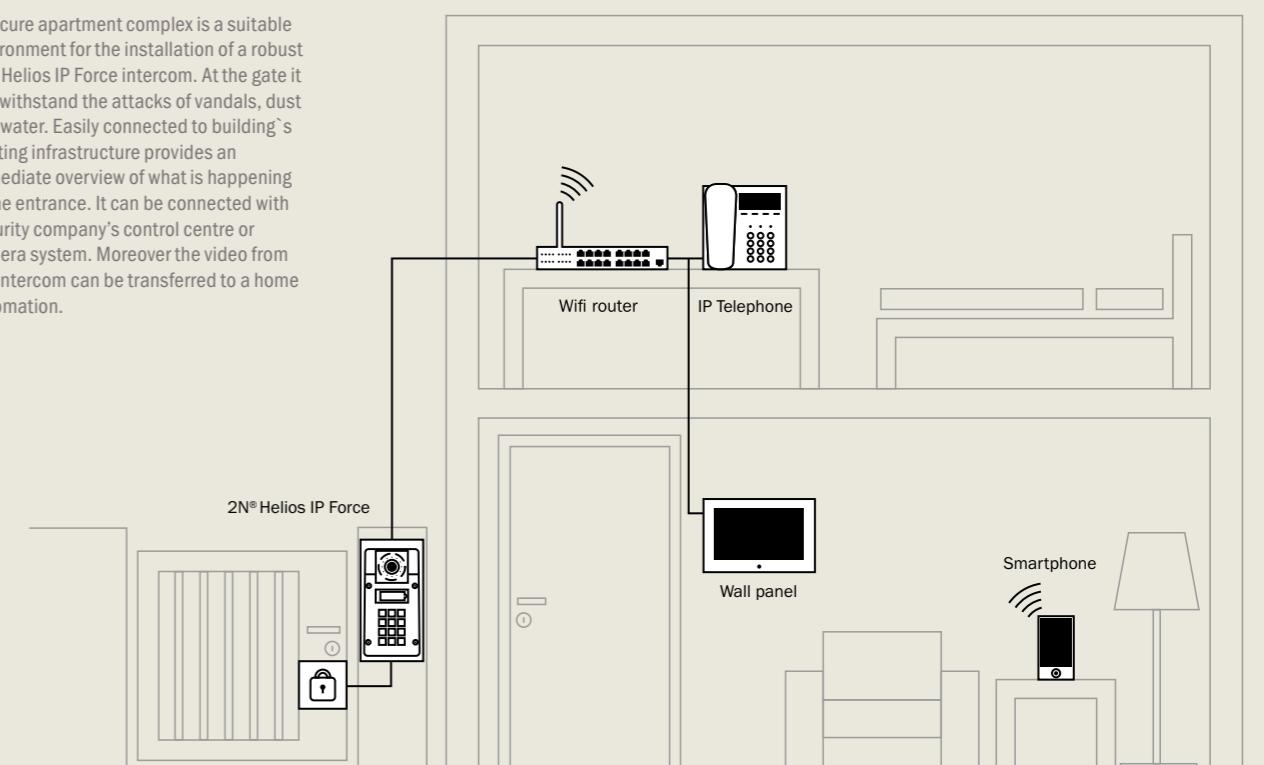
IP ENVIRONMENT

# 2N® Helios IP Safety

SUGGESTED USES
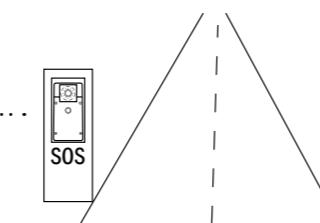
**SOS point**
Suitable for installation on
a motorway for the drivers' emergency
communication with a control centre.

**P**
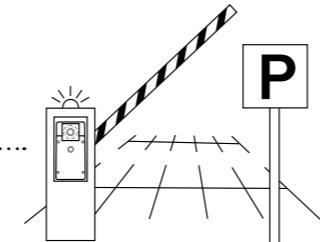
**A highly visible aid in a car park**
Installed at the exit, it serves as
an aid in unexpected situations.
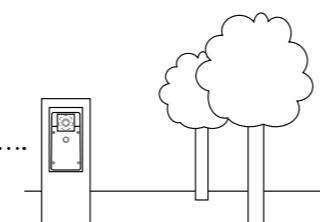
**Infopoint in town park**
A visible and easy to operate
Infopoint in a town park,
relax zone or other place.

RECOMMENDED USE

## Office buildings

Modern office buildings tend to have extensive underground car parks, where there can be accidents or thefts, where fires can break out or where other crisis situations can occur. You need a device which will simply and quickly put you in contact with remote assistance. We have developed 2N® Helios IP Safety precisely for these needs. You can see its bright orange colour from a long way off, and the backlit buttons will show you clearly just what you have to do even under poor visibility conditions. Moreover,  it is made of robust cast aluminium, which is resilient to water and vandalism. Whenever you press its button, it will connect you with assistance, and its powerful speaker will tell you clearly and comprehensibly just what to do, even in the noisiest of environments.

**Main advantages:**
• Striking orange colour
• Backlit emergency button
• High-quality audio
• Robust aluminium cover

## Public and commercial buildings

School playground, town park, underground garage or even a motorway – unfortunately you can be in an accident, a victim of an attack or simply get into difficulty in any of these places. In such a case your orange guardian in the form of 2N® Helios IP Safety is there for you. This system provides immediate connection with assistance under any conditions. And it doesn't matter if it is flooded with water or the temperature is – 30 °C. In both cases it is fully functional. Moreover, thanks to its advanced functions and connection to IP it can activate a camera system or sound an alarm at any time if necessary. For you this means that you are just a push of a button away from help in any situation.

**Main advantages:**
• Control of camera systems
• High-quality audio
• Resilience to water and cold
• Striking orange colour

## Motorway

Without activated roaming, abroken-down car on a motorway abroad can be an unexpected problem. At such a moment you will appreciate immediate help from a 2N® Helios IP Safety intercom used as a motorway SOS communicator. You can always rely on this system, even if exposed to extreme temperatures, weather or vandalism. And if it is damaged, or there is an attempt to break into it, it immediately informs the motorway servicing personnel of this, and they can ensure redress immediately.

**Main advantages:**
• Very powerful speaker for noisy environment
• Tamper switch for detection of violent ingress
• Resilience to ingress of dust and water (IP up to 69K) and to vandalism
• Illuminated resilient button for simple operation

EXAMPLE OF CONNECTION OF 2N® HELIOS IP SAFETY ON MOTORWAY

2N® Helios IP Safety can be connected to the emergency communication system on a motorway. The advantage is connection to data circuits which generally run along motorways. After pressing the button the caller is immediately connected with the control centre, and he is given the help he needs.

LAN

IP Telephone          PC with headset

2N® Helios IP Safety

2N® Helios IP Safety

SOS
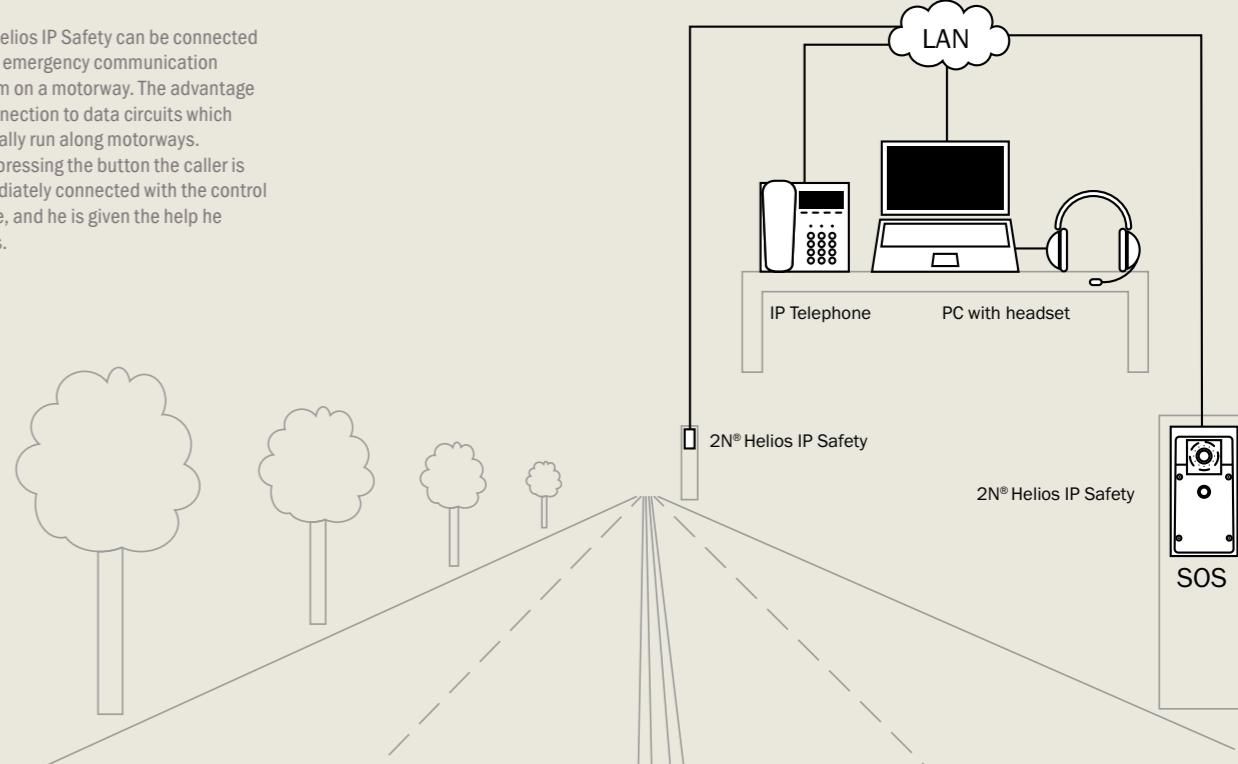
IP ENVIRONMENT

# 2N® Helios IP Uni
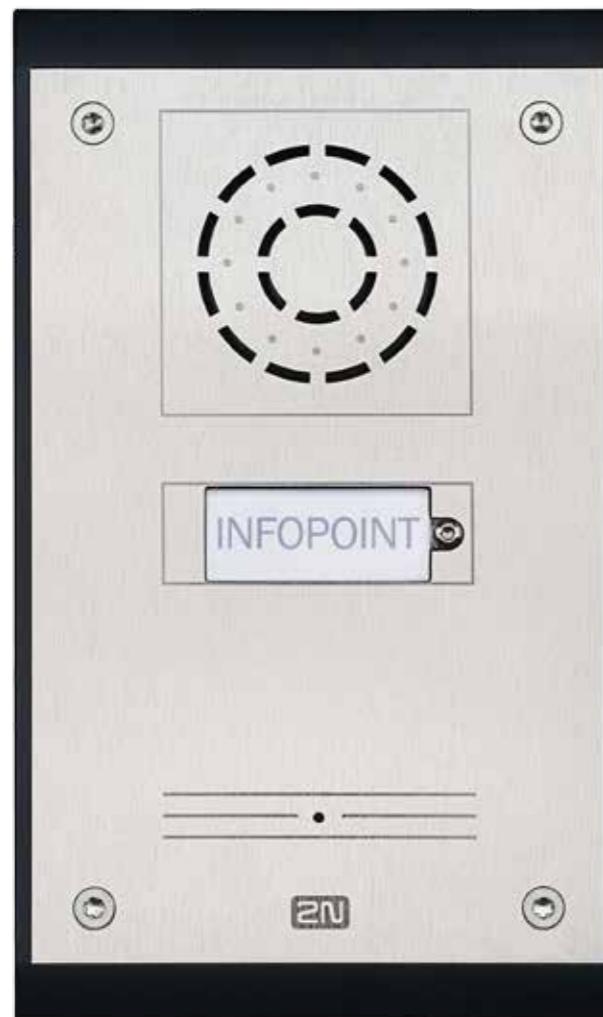
## SUGGESTED USES
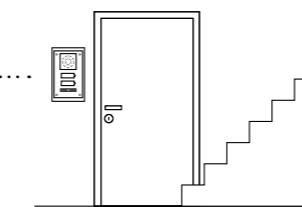
**SOS point**
Suitable for installation on a motorway for the drivers' emergency communication with a control centre.
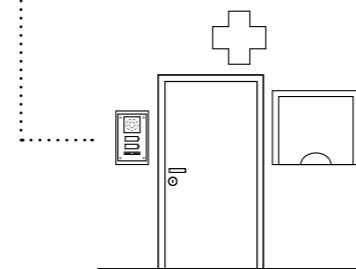
**A highly visible aid in a car park**
Installed at the exit, it serves as an aid in unexpected situations.

## RECOMMENDED USE

### Office buildings

Most office buildings have many places such as rear or goods entrances, fire escapes or entrances within the building which should remain closed, and where authorisation is necessary for access. The ideal solution in this case is 2N® Helios IP Uni. This IP intercom is a simple device allowing the reliable connection and control of doors. So for example, when they bring the post to the goods entrance tomorrow, it's possible that postman got to you with the help of the 2N® Helios IP.

**Main advantages:**
- Simple installation in existing IP infrastructure
- Alarm in case of tampering
- Web interface
- Tool for central administration

### Public and commercial buildings

It is very easy to get lost in buildings such as hospitals, museums, schools or government offices, or simply not to know which door leads to the right doctor or clerk. The 2N® Helios IP Uni is especially for these cases; an intercom which can be installed easily in any place. In a moment it will connect you with the receptionist and thus ensure professional help for you.
The location of the person taking the call is irrelevant, because with VoIP communication the call can be routed not only to a tabletop telephone, but also a mobile phone or DECT appliance in the building.

**Main advantages:**
- VoIP communication
- Simple installation
- Utilisation of existing LAN/WAN network

## EXAMPLE OF CONNECTION OF 2N® HELIOS IP UNI IN SHOPPING CENTRE
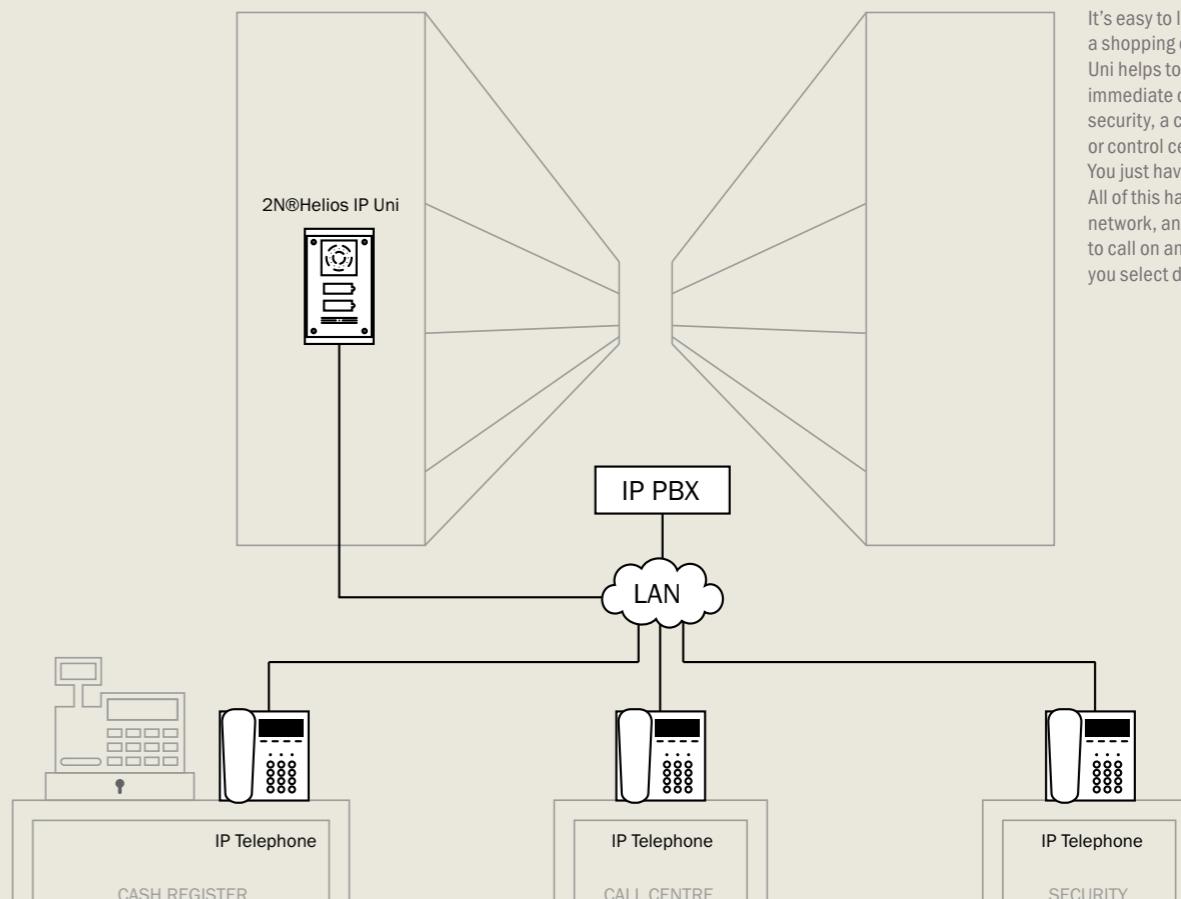
It's easy to lose your way in a shopping centre. 2N® Helios Uni helps to provide an immediate connection with security, a checkout operator or control centre here. You just have to choose.
All of this happens over the IP network, and so it is possible to call on any device which you select during installation.

2N®Helios IP Uni

IP PBX

LAN

IP Telephone
CASH REGISTER

IP Telephone
CALL CENTRE

IP Telephone
SECURITY

CISCO Compatible    BOSCH    AVAYA    Alcatel·Lucent

IP ENVIRONMENT

# 2N® Indoor Touch

## SUGGESTED USES
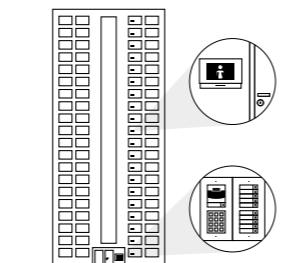
**Residential building**
An internal unit, which you can use to operate the entry door even if it is 25 storeys below you, can be placed in each apartment.
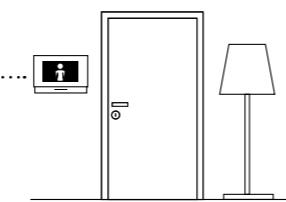
**Luxury home**
For your luxury furnished flat or house, you can use it as a terminal for monitoring what is happening at your door; including video.

## RECOMMENDED USE

### Residential area

Everyone wants to surround themselves with only beautiful things in the comfort of their own home. Whether it's furniture, electronics or other accessories, we simply want to have nice things around us. So, we've come up with the ideal accessory for 2N® Helios IP intercoms for residential installations in the form of a touch panel that receives video calls and controls the door lock. But it's not just its clean lines and modern design, together with the large touch screen that makes the 2N® Indoor Touch unique. You see, as a bonus it offers the option of connection to IP cameras, from which it can display video during the call and even after the end of the call. This means you can look to see if your children are still playing in the garden, or if the postman left the parcel by the garage door, as you asked him to over the intercom.

### Residential buildings and condominiums

Residential complexes or residential buildings with twenty storeys, all places where dozens of families live and want to see and hear who is coming to visit them or why they are ringing their doorbell. No one wants to take the lift twenty storeys down or run a kilometre to the entrance every time a visitor or postman rings. Why not simply let the occupants take a video call from the entrance to ask the postman from a distance to leave the package with the concierge and arrange it with him directly via the terminal, or open the door and use the video to tell a visitor where to find you, or invite your neighbour to a barbecue, or configure the do-not-disturb „DND" mode at night? All of this can be configured easily on the great-looking 2N® Indoor Touch communicator, which, thanks to its elegant black finish and stylish glass touchscreen panel, will fit in with the interior decor and become a design accessory for your household. 2N® Indoor Touch uses the Android operating system like today's tablets and is prepared for the installation of other home automation components. So after coming to an agreement with an intelligent household supplier,

you can control of the blinds, air-conditioning, lights, underfloor heating and security system. Then you have everything in one place, on one touchscreen panel, which you can also connect up to the internet and so make it a central information point for the entire household.

**Main advantages:**
- 7" touchscreen with power saving mode
- Multicolour LED status indicator
- Receipt of HD picture from door intercom
- Two-way communication with other units in the network
- Display of missed calls, including photograph
- Setting of Do not Disturb – "DND" – mode
- PoE power or via external power source
- Android operating system
- Simple control and configuration

## EXAMPLE OF CONNECTION OF THE 2N® INDOOR TOUCH
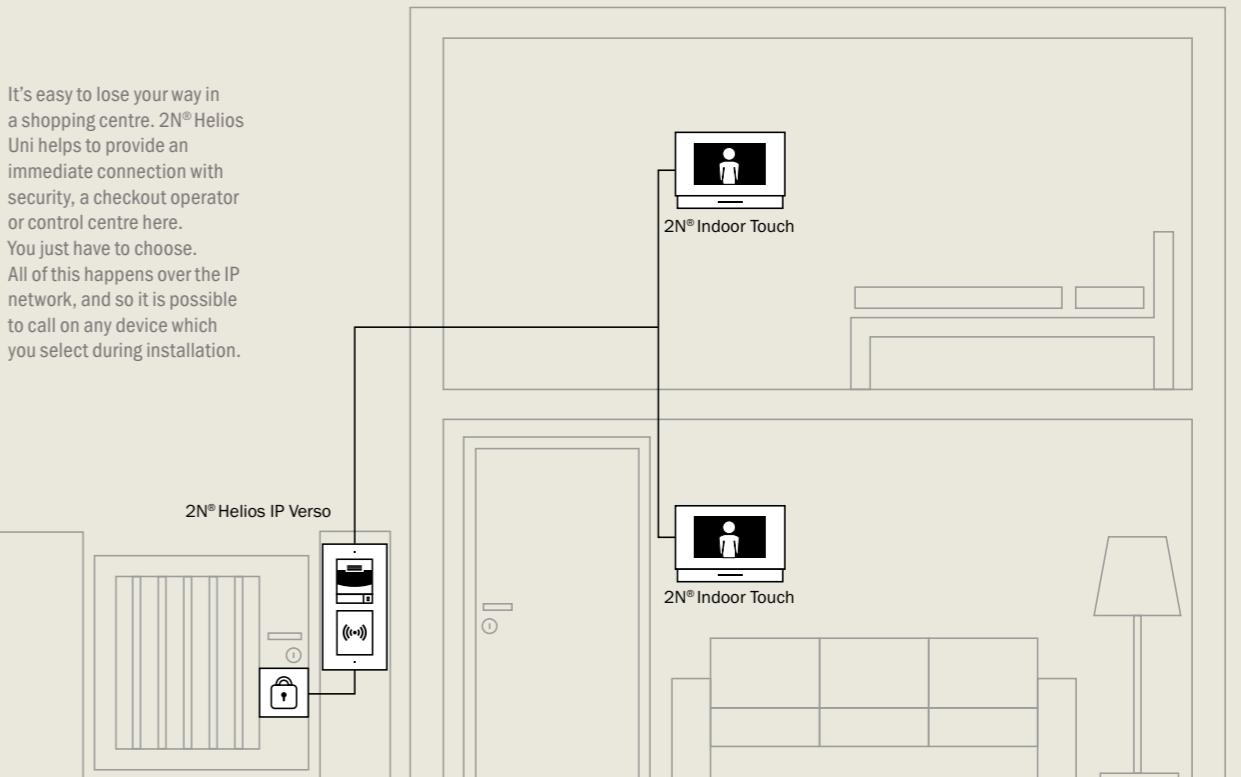
It's easy to lose your way in a shopping centre. 2N® Helios Uni helps to provide an immediate connection with security, a checkout operator or control centre here. You just have to choose. All of this happens over the IP network, and so it is possible to call on any device which you select during installation.
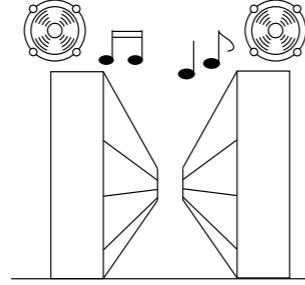
2N® Indoor Touch

2N® Indoor Touch

2N® Helios IP Verso

IP ENVIRONMENT

# 2N® Net Audio Decoder
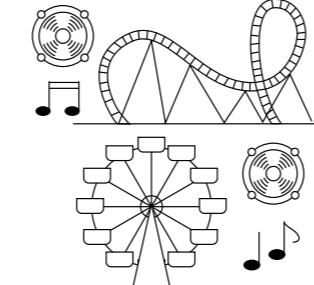
RECOMMENDED USE

## Commercial sector

Listening to pleasant music has become an integral part of our leisure time, whether we spend our time actively in sports centres, or passively in relaxation centres or restaurants. Each building of this type needs to resolve the question of how to provide an audio solution for various zones and at the same time have the possibility of playing a different type of music or spoken word audio to each of them.
Easy operation from one place (usually reception) and the possibility of control within the context of the given zone are basic requirements. The IP Audio system 2N®Net Audio Decoder uses existing structure cabling or Wi-Fi cover and so does not require the laying of audio cables. It is the ideal solution for small restaurants, hotels, bars, fitness and wellness centres, saunas, squash centres and various types of gym because it allows the supply of music and audio advertisements at the given time, the broadcasting of recorded messages and the an-nouncement of information using a microphone. Thanks to the native integration of the SIP protocol it is possible to use the entire system not only to play background music, but also for connection with an IP PBX for active announcements to the individual zones from any telephone.

**Main advantages:**
- Up to 100 independent zones
- Support of internet radios
- Installation on common structured cabling (Cat 5)
- Easy operation using PC, tablets, mobile phones or remote controller
- Possibility of connection to IP PBX and announcements for individual zones from telephones
- Possibility of wireless connection of speakers using Wi-Fi

## Centralised PA in remote localities

We may not even notice the background music or adverts which accompany us virtually every time we go shopping, but renowned marketing studies state that audio advertising influences us when we select goods. Retail chains are trying to find a way to centralise the broadcasting of background music and advertising to all their branches throughout the entire country. The audio solution in each shop is generally realised separately (using 100V PA systems or evacuation centres) without central administration. The IP Audio system 2N®Net Audio Decoder is an ideal solution for connecting audio over the data (IP) network of all branches and their traditional audio systems. The system allows zoning, and as a result it is possible, for example, to broadcast background music and also react flexibly and inform the public about sales, which can differ in the various regions.

Thanks to the native integration of the SIP protocol it is possible to use the entire system not only to play background music, but also to connect with an IP PBX for active announcements to the individual zones from any telephone.

**Main advantages:**
- Up to 10000 branches
- Up to 1000 zones
- Simple administration of background music and advertisements
- Online monitoring of all units
- Online reporting about music played
- Possibility of playing backup content from SD card in the case of a failure in data connectivity
- Possibility of connection to IP PBX and announcements for individual zones from telephones (including mobile telephones)

EXAMPLE OF CONNECTION OF 2N® NET AUDIO DECODER IN WELLNESS CENTRE

SUGGESTED USES

**In-store audio in shopping centre**
Play background music and advertising messages in individual departments in a selected shop.

**IP audio at theme park**
For each attraction it is possible to play various sounds or broadcast important information without having to announce it to the entire park.
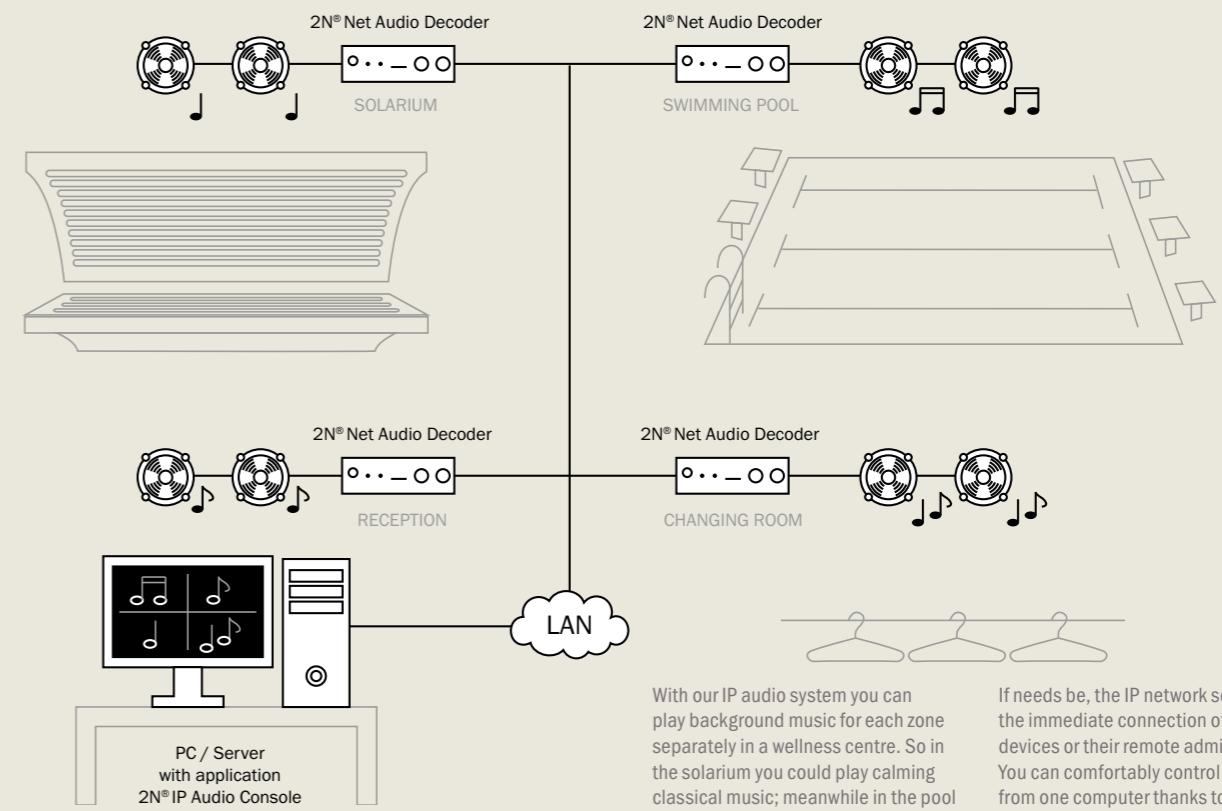
With our IP audio system you can play background music for each zone separately in a wellness centre. So in the solarium you could play calming classical music; meanwhile in the pool where there is a water polo game going on you will hear a medley of rock song.

If needs be, the IP network serves for the immediate connection of other devices or their remote administration. You can comfortably control everything from one computer thanks to the supplied software.

IP ENVIRONMENT

# 2N® SIP Audio Converter



## SUGGESTED USES
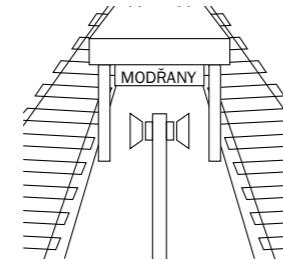
**Public announcements at railway station**
Simple connection of audio with existing exchange for announcements at metro, train and bus stations.
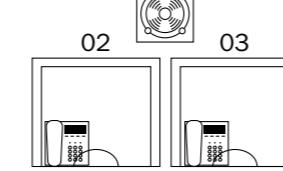
**Announcement at public offices**
Every clerk has a telephone on their desk and can use it to make any announcements of important information to those visiting the office.

RECOMMENDED USE

## Warehouses, waiting rooms, remote sites

In warehouses or waiting rooms there is a need to make loud announcements – typically to report a new order or call another patient. This need has also arisen in remote sites such as transformer stations or the base stations of mobile operators. Although they are fenced off and monitored by cameras, experience has show that not even these measures deter unwelcome visitors from these buildings. Although the security operative can see that an intruder has entered the object, before he can get to the scene the intruder is usually gone. Experience has shown that verbal warning information is far more effective if combined with visual information (the security operative can announce: "You in the blue turtleneck, I can see you!") 2N® SIP Audio Decoder allows remote announcements to be made to any places where there is a data network, and it exists in two variants. As a separate unit, which you can connect to any external speaker (4-8 Ω) or as a ready solution, i.e., directly built into the 2N speaker.

**Main advantages:**
- Powerful built-in amplifier
- Universal input/output – external sensors may be connected
- Installation on common structured cabling (Cat 5 and higher)
- Input for external microphone
- Warehouses, waiting rooms, remote sites
- Power supply via PoE or adapter

## Office buildings

Do you need to ensure easy announcements from IP telephones in the PA exchange? There used to be a private branch exchange (PBX) installed in each office building in order to save on costs and because of the services which helped make work more effective. These days the traditional analogue exchanges have most often been replaced by IP exchanges (IP PBX) or even the Centrex operator service (virtual exchange), i.e., a service where no HW is installed on the customer side, only IP telephones. Most office buildings also have a PA exchange installed. So that a customer can use his own telephone for announcements, PA exchanges have been connected to telephone exchanges using so-called audio/relay cards. But these cards are generally supported by new IP exchanges, and certainly not by virtual exchanges. And this is resolved by 2N® SIP Audio Decoder, which serves as a simple converter between the IP exchange and traditional PA exchange and so allows easy announcements from IP telephones or even from mobile telephones.

**Main advantages:**
- Support of all virtual and IP exchanges
- Power supply via PoE or adapter
- Installation on common structured cabling (Cat 5 and higher)
- Easy installation via web menu

EXAMPLE OF CONNECTION OF 2N® SIP AUDIO CONVERTER IN CONNECTED WAREHOUSES
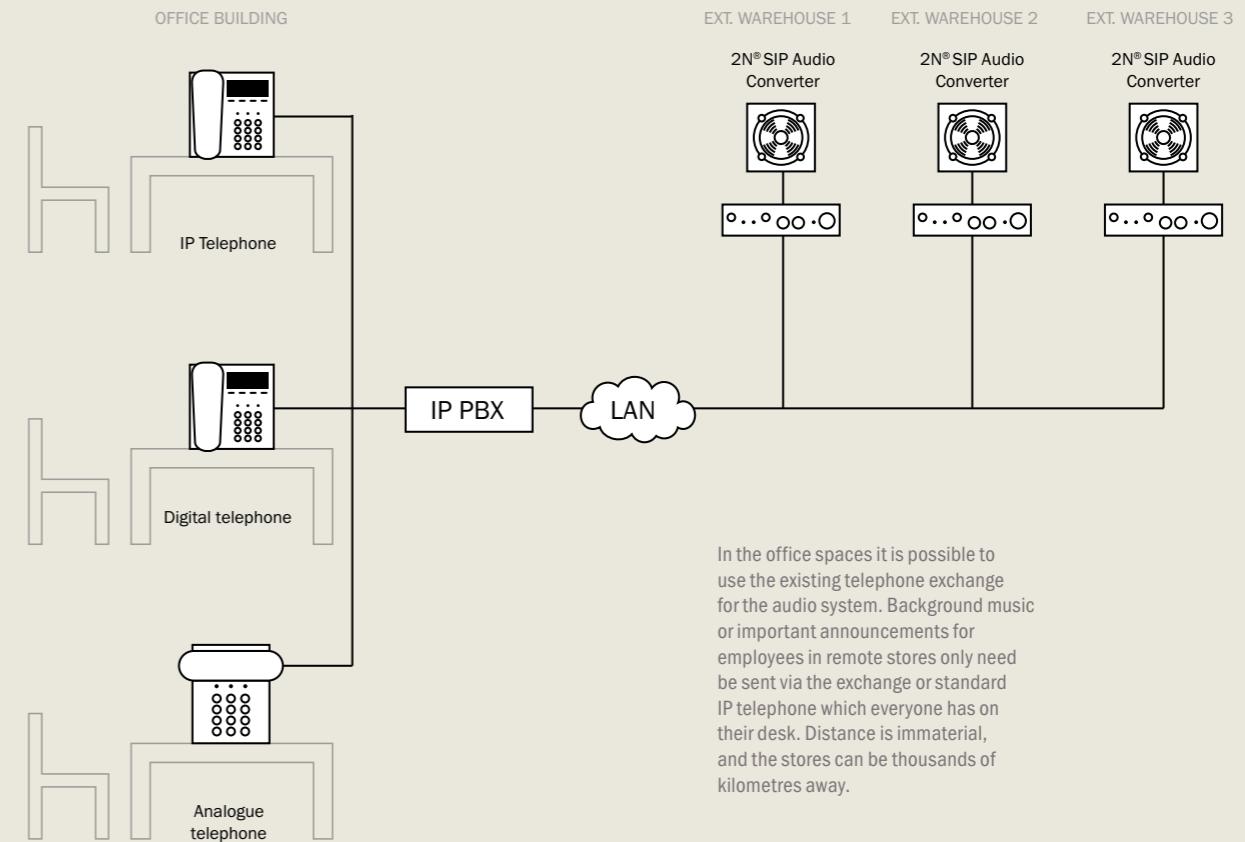


In the office spaces it is possible to use the existing telephone exchange for the audio system. Background music or important announcements for employees in remote stores only need be sent via the exchange or standard IP telephone which everyone has on their desk. Distance is immaterial, and the stores can be thousands of kilometres away.

IP ENVIRONMENT

# 2N® Net Mic

SUGGESTED USES

PRODUCTION HALL

MALL

**In production halls**
Can be used to control operations by playing recorded or live announcements when necessary.

**In shops and entertainment centres**
Can be used both for playing recorded announcements or live broadcasts.

RECOMMENDED USE

## Shops and entertainment facilities

In every shopping and entertainment centre, it is necessary to make a live or recorded announcement from time to time. This announcement can be made universally (through all speakers) or specifically (to specific zones). The 2N® Net Mic enables both live and recorded announcements to any desired zone. Operating staff simply select the chosen zone(s) by pressing a button and can start talking, or play a pre-recorded message. Thanks to status indicators for the given zone (stand-by = you can speak, busy = a different announcement is being made in that zone), the operator cannot interrupt an announcement being made. The 2N® Net Mic uses the existing structured cabling or Wi-Fi signal and so needs no audio cable installation. It is an ideal solution for shopping, entertainment and wellness centres or various types of gym. It is the ideal accessory for the 2N® Net Audio Decoder IP Audio system, which enables music to be broadcast and recorded advertisements to be played at set times.

**Main advantages:**
• Audio broadcasting to the zone(s) of your choice
• Listening in to audio announcements in various zones
• Ability to connect anywhere in the network (IP solution)
• Simple and convenient operation (even without a computer)
• Simple configuration via the 2N® IP Audio Control Panel app

EXAMPLE OF CONNECTION OF THE 2N® NET MIC

In an emergency, this can be used to report a lost child, for instance: "A small child has been found near the ice-cream stand. He / she is well. Would his / her parents please come and pick him / her up from the information centre.

" The announcement is first sent to a specific zone, and if five minutes goes by without a response, the announcement can be sent to all zones.

2N® Net Audio Decoder

ATTRACTION NO. 1

2N® Net Audio Decoder

ATTRACTION NO. 2

2N® Net Audio Decoder

INFORMATION

REFRESHMENTS

2N® Net Mic

LAN

PC

CONNECTIVITY IN ANALOGUE ENVIRONMENT

Thanks to open standards analogue intercoms from 2N can be connected with a wide range of external devices:

Telephone exchange

PBX

Security system

RPD reader

2N® HELIOS

Door lock

Camera

Telephone

# Solution for analogue environment

Analogue technology today tends to be associated with outdated devices. But in telecommunication technology there are still many devices which use this technology due to its simplicity and undemanding nature.

In 2N we have more than 20 years experience with the development of analogue telecommunication technology, and we are constantly trying to improve our analogue products so that they provide the greatest utility in spite of the simplicity of their interface.

This led to the creation of the 2N®Helios group of intercoms, which offers their users the best of the current technology of analogue communication exchanges.

ANALOGUE ENVIRONMENT

# 2N® Helios Vario

## SUGGESTED USES
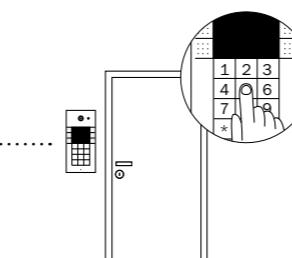
**Code controlled entry**
In the analogue environment of an office an intercom can serve for code-based entry.
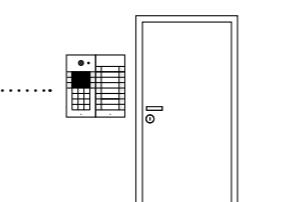
**Entry to apartment building**
Can be expanded up to 54 buttons therefore suitable for large apartment blocks.

## RECOMMENDED USE

### Office buildings

Every office building needs to resolve the security of its entrance, allowing employees access and also greeting visitors in a respectable manner. 2N® Helios Vario is a unique solution for an office building equipped with an analogue PBX, which can be connected to easily and which makes it possible to call individual employees. The camera can send a picture to the camera system or monitor and so improve the overview of movement at the entrance. Another advantage for office buildings is the possibility of integrating an RFID card reader in the intercom and thus simpli-fying access for employees.

**Main advantages:**
- Up to 54 physical buttons
- Checking access to the building (coded)
- Colour camera
- Voice on regular tabletop telephone
- Remote administration of intercom over regular telephone line

### Public and commercial buildings

Government offices, schools, shopping centres and libraries are all places where you can find an analogue PBX. If under these conditions you need to install an intercom to check entry and communication with visitors, 2N® Helios Vario is the right solution for you, and it comes in a smart stainless steel finish.
And using the built-in camera 2N® Helios Vario also allows you to display the events in front of the door on a monitor or send the picture to a camera system and so contribute to greater security of the object.

**Main advantages:**
- Smart design with backlighting
- Camera
- Up to 54 physical buttons
- Checking access to the building (coded)

### Residentia area

Many houses today have a small PBX for home intercoms. 2N® Helios Vario represents an ideal addition for ensuring safety and comfort for users and visitors. A call from 2N® Helios Vario can be taken on a telephone within the house, and you can open the door for a visitor at the touch of a button. 2N® Helios Vario may also be equipped with a video camera module which can send a picture to a monitor at the door or directly to your camera system. So in combination with a mobile telephone you can control your doors from anywhere.

**Main advantages:**
- Camera with possibility of linking to CCTV (camera) system
- Control of other equipment (lights, garage doors)
- Twin-wire analogue connection to existing exchange
- Checking access to the building (coded)

EXAMPLE OF CONNECTION OF 2N® HELIOS VARIO IN AN ANALOGUE OFFICE ENVIRONMENT
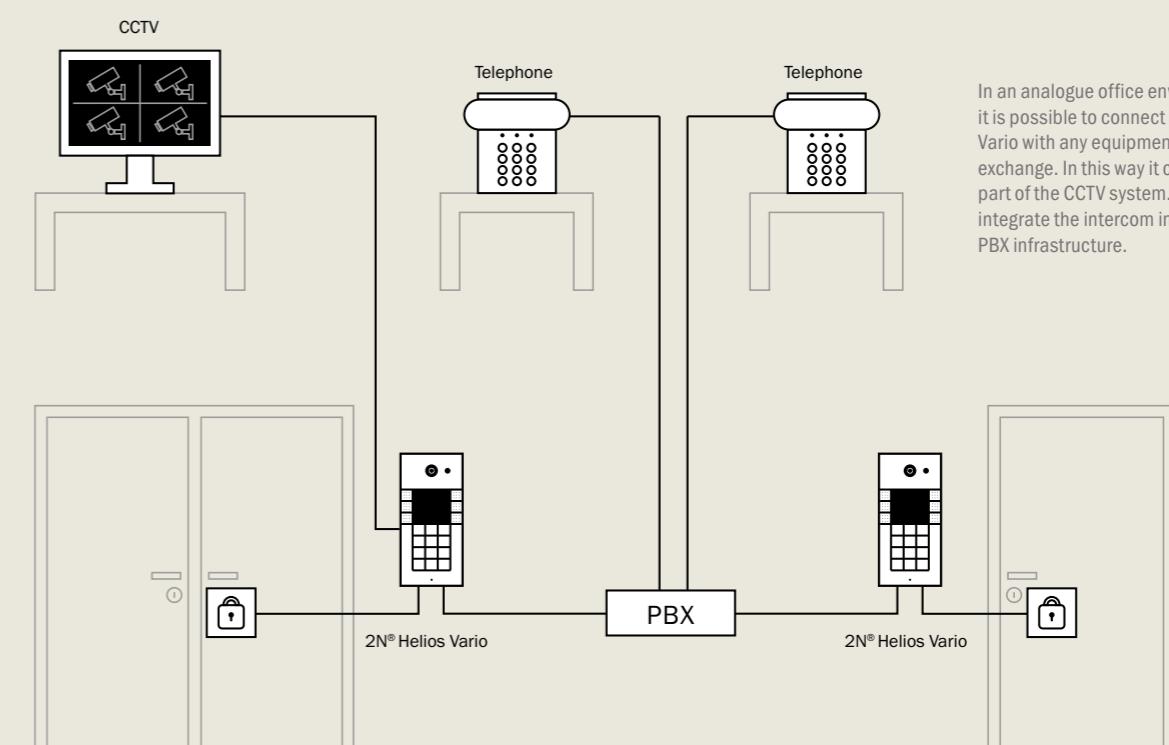
In an analogue office environment it is possible to connect a 2N® Helios Vario with any equipment via a telephone exchange. In this way it can serve as part of the CCTV system. You can easily integrate the intercom into the existing PBX infrastructure.

ANALOGUE ENVIRONMENT

# 2N® Helios Force



## SUGGESTED USES
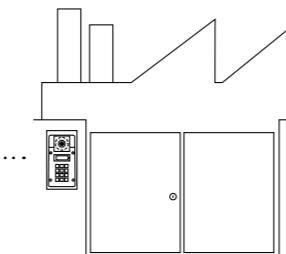


**Vehicular entry
to industrial complex**
It protects extensive industrial complexes where the deployment of IP technology is not possible.
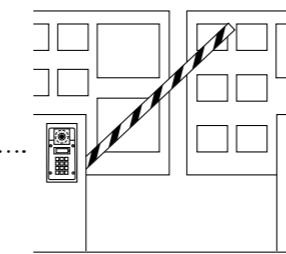


**Vehicular entry
to residential complex**
For large residential projects with a need for robustness and security.

## RECOMMENDED USE

### Office buildings

2N® Helios Force is at home wherever it is necessary to allow comfortable communication for visitors and to have the opportunity to open the door to them from reception or from another place. Many office buildings still use analogue PBXs, and these are an ideal environment in which to use 2N® Helios Force. Its resilient aluminium alloy body and integrated amplifier ensure reliable communication under adverse conditions, and thanks to the keypad version it is possible to use it as an access system via numerical codes.

**Main advantages:**
• Highly robust aluminium cover in anti-vandal version
• Highest resilience on the market according to standard IP65
• Twin-wire analogue connection to existing exchange
• Checking access to the building (coded)

### Public and commercial buildings

Entrance protection is an important theme in all types of commercial buildings, be they shopping centres, spas or government offices. But what can one do if there is only an analogue exchange in these buildings, but you still need a robust entry guard? The solution is the 2N® Helios Force analogue intercom, which offers the best of analogue technology and maximum robustness thanks to the standard IP65. A powerful speaker, top of the range hands free set and great resilience ensures reliable communication and the possibility to control the entrance from any telephone in the building

**Main advantages:**
• Powerful amplifier
• Highly robust aluminium cover in anti-vandal version
• Connection to existing analogue exchange
• Remote administration over regular telephone line
• Highest resilience on the market according to standard IP65

### Industry

Even modern industrial operations suffer from dust, high temperatures and interference from powerful equipment. Another problem here is long distances, which make it difficult or even impossible to use IP technology. 2N® Helios Force, a resilient intercom intended for connection to an analogue exchange, is just ideal for such installations. Thanks to the simplicity of the analogue interface, it can be several kilometres away from the exchange and still provide a perfect voice. Modern body and because of the powerful integrated amplifier provides high volume output.

**Main advantages:**
• Integrated amplifier with function of bridging during power failure
• Operates from exchange only in case of a power failure
• Highest resilience on the market according to standard IP65
• Twin-wire analogue connection to existing exchange

## EXAMPLE OF CONNECTION OF 2N® HELIOS FORCE IN AN INDUSTRIAL ENVIRONMENT
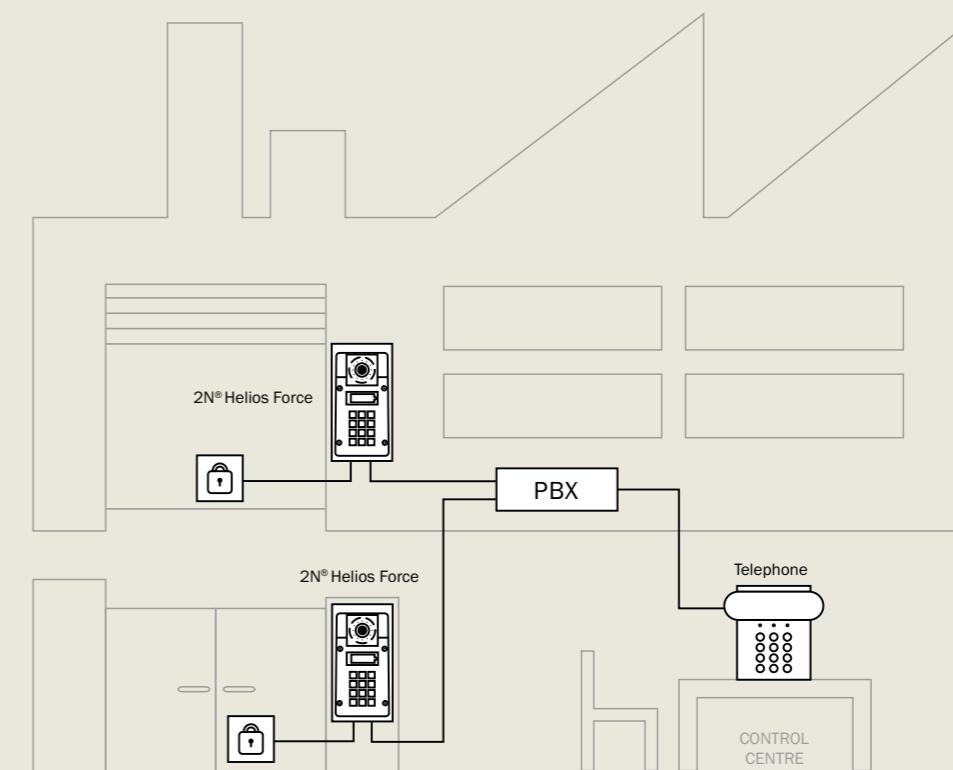


Industrial operations are usually equipped with an exchange, and the environment is analogue. In such a case the analogue 2N® Helios Force is suitable for securing entries and exits. At the gate it can withstand the attacks of vandals, dust and water. It can be connected with the control centre of the security service or camera system.

ANALOGUE ENVIRONMENT

# 2N® Helios Safety

## SUGGESTED USES
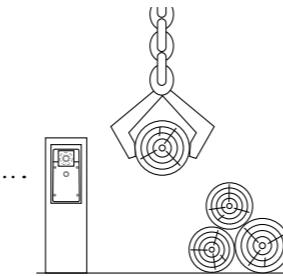
**SOS in industry**
A striking aid in distress for industrial complexes, where analogue technology is commonplace.

### PARKING
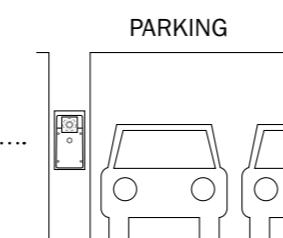
**SOS in garages**
Summon help easily in underground garages, even with reduced visibility.

## RECOMMENDED USE

### Heavy industry

A foundry, rolling mill or quarry is a place where reliable communication is vitally important for the safety of workers. An intercom is exposed to dust, extreme temperatures or mechanical damage. 2N®Helios Safety, the most resilient analogue intercom, which is robust due to its solid aluminium body is robust and ensures communication under any conditions, was created for such conditions. An analogue interface is suitable here by virtue of its simplicity and it is possible to connect it several kilometres from the exchange. It offers a high volume output for even noisy environments.

**Main advantages:**
- Highest cover class (standard IP65)
- Striking orange colour for easy location
- Twin-wire analogue connection to existing exchange
- High volume and comprehensible

### Public and commercial buildings

A school playground, town park, underground garage or even a motorway – you could witness an accident or attack or simply get into difficulty in any of these places. In such a case an orange guardian is here for you in the form of 2N® Helios Safety, which is intended for installation with an analogue line. So for example you can locate the communicator easily in a place even without telephone infrastructure because all analogue communicators, including 2N® Helios Safety can be combined with analogue 2N GSM gateways and so ensure safe communication really from anywhere.

**Main advantages:**
- Highest cover class (standard IP65)
- Robust orange cover in vandal-proof version
- Combination with GSM gateways
- Striking orange colour according to standard IP65

## EXAMPLE OF CONNECTION OF 2N® HELIOS SAFETY TO A PARKING SYSTEM

Telephone

PBX

CONTROL CENTRE

2N® Helios Safety
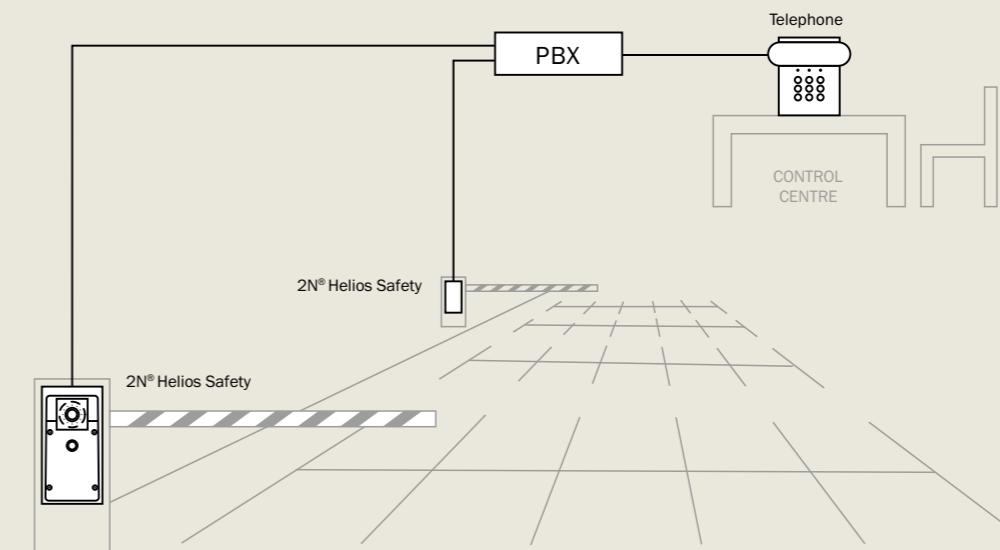
2N® Helios Safety

2N® Helios Safety can be connected to the emergency communication system on a car park or a shopping centre where a complete analogue environment has already been created. After pressing the button the caller is immediately connected via the existing PBX with the control centre, and he is given the help he needs.

ANALOGUE ENVIRONMENT

# 2N® Helios Uni
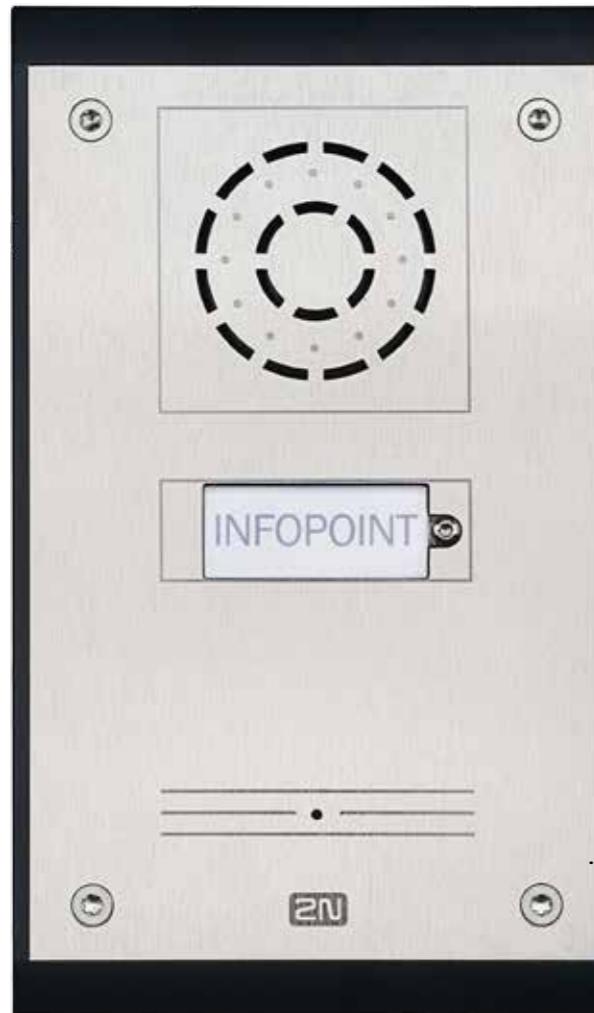
## SUGGESTED USES
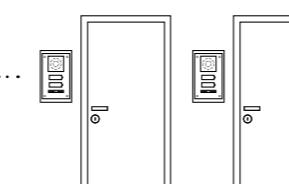
**Communication at government office**
Simple communication where an exclusive design or special function is not needed.
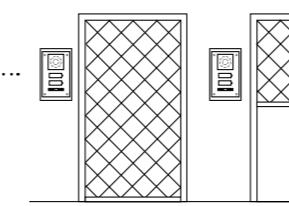
**Communication in shopping centre**
The communicator can summon assistance, security or another person.

## RECOMMENDED USE

### For office buildings

Most office buildings have many places such as rear or goods entrances, fire escapes or entrances within the building which should remain closed, and where authorisation is necessary for access. And if an analogue exchange and analogue distribution wiring are used in the building, 2N® Helios Uni is the right solution. Its simple installation will save you time and money for installation and configuration using a voice menu that can be performed remotely by a technician. Naturally locks can be controlled using a telephone, 2N® Helios Uni is a perfect solution for your entry in an analogue technology environment.

**Main advantages:**
- Remote configuration over telephone
- Additional amplifier
- Power supply from analogue line
- Simple installation on existing IP infrastructure

### For public and commercial buildings

You have probably had an experience where you couldn't find the right room in an institution, or you found yourself in a hospital, standing in front of a closed door that you had to get through. In such a situation you would definitely appreciate being able to call someone who could help you. And if an analogue telephone distribution system and exchange are used in such a building too, at a great price, 2N® Helios Uni is the perfect solution which allows you to communicate from anywhere and open the right door for you.

**Main advantages:**
- Simple installation
- Powered from existing analogue exchange
- Power supply from analogue line
- Remote configuration over telephone

## EXAMPLE OF CONNECTION OF 2N® HELIOS UNI IN SHOPPING CENTRE
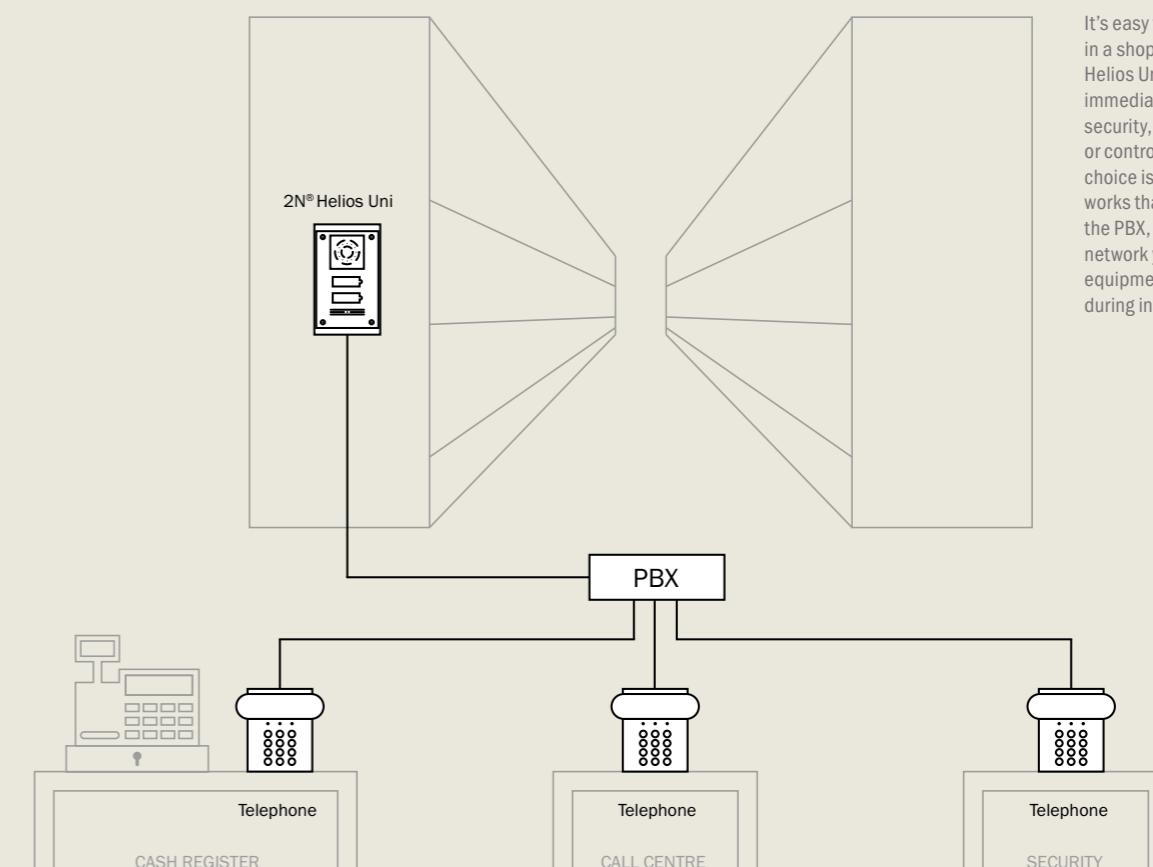
It's easy to lose your way in a shopping centre. 2N® Helios Uni helps to provide immediate connection with security, a checkout operator or control centre here. The choice is yours. Everything works thanks to connection the PBX, over the analogue network you can call any equipment which you choose during installation.

2N® Helios Uni

PBX

Telephone — CASH REGISTER

Telephone — CALL CENTRE

Telephone — SECURITY

**Even the smallest detail an important role …**

For the selection of an appropriate intercom you will find information here about its functions, versions and available equipment.

# Selection

# Functions of intercoms

## IP ENVIRONMENT
## 2N® Helios IP

**Security**

- Integration into camera systems
- Sending photographs to email address
- Night vision (2N® Helios IP Force)
- HD camera with infrared light and night vision (2N® Helios IP Verso)
- Secure connection of lock
- Secure HTTPS communication
- Secured SIPS signalling
- Secure connection to network
- Event log
- RFID card reader (2N® Helios IP Verso, 2N® Helios IP Vario, 2N® Helios IP Force)
- Access control

**Physical security**

- Cover level up to IP69K (2N® Helios IP Force, 2N® Helios IP Safety)
- Antivandal version (2N® Helios IP Force, 2N® Helios IP Safety)
- Security screws (2N® Helios IP Force, 2N® Helios IP Safety)
- Tamper switch (2N® Helios IP Force, 2N®Helios IP Safety, 2N® Helios IP Uni)

**Communication**

- Calling via exchange
- Calling directly to telephone
- Calling to up to 3 telephones at once
- Substitute function
- Time profiles for calling
- Up to 2000 records in list
- "Telephone" function
- Automatic echo suppression
- Fully duplex communication
- Automatic setting of speaker volume
- Automatic setting of microphone sensitivity
- Interference suppression
- Automatic picking up of call

**Video**

- Integrated camera (only versions with camera)
- Integrated HD camera (2N® Helios IP Verso only)
- RTSP streaming server
- Up to 4 independent streams
- Web access to camera
- VGA video definition
- Connection of external IP camera
- Control of external IP camera
- Video before pick up

**Software**

- Integrated web server
- Software for bulk configuration
- Software for displaying video
- Software for video monitoring
- Application for Apple iPhone/iPad
- Application for Android 2.3 and higher

**Interface**

- Up to 4× relays
- Active output 8–14 VDC/350–700 mA
- Wiegand (only with RFID reader, or Wiegand module for 2N® Helios IP Verso)
- HTTP API for control
- Ethernet 100Mbit, PoE

**Services**

- Backup and automatic recording of configuration
- Automatic firmware update
- Network trace directly in equipment
- User sound customisation
- Systems log
- Event logging
- Time profiles

**Integration**

- Control of intercom over internet
- Control of locks
- Control of video
- Connection with CCTV
- Connection with access control

## ANALOGUE ENVIRONMENT
## 2N® Helios

**Security**

- Tamperswitch (2N® Helios Uni, 2N® Helios Vario)
- Night vision (2N® Helios Vario)
- Possibility of RFID card reader (2N® Helios Vario)
- Access control

**Physical security**

- Cover level up to IP65 (2N® Helios Force, 2N® Helios Safety)
- Antivandal version (2N® Helios Force, 2N® Helios Safety)
- Security screws (2N® Helios Force, 2N® Helios Safety)
- Tamper switch (2N® Helios Force, 2N® Helios Uni, 2N® Helios Safety)

**Communication**

- Calling via exchange
- Up to 54 recordings
- Up to 6 numbers under one button Function "telephone" (models with keypads)
- Automatic picking up of call

**Video**

- Analogue camera as equipment (only 2N® Helios Vario)
- Camera definition 420 TV lines, PAL
- Night vision
- Integration via composite entry
- Possibility of connecting video server

**Software**

- No SW required

**Interface**

- Always one relay integrated
- Possibility of additional switch (apart from 2N® Helios Uni)
- RJ12 connector for simple connection (apart from 2N® Helios Vario, terminal strips)

**Services**

- Possibility of day/night mode
- Voice menu for configuration

**Integration**

- Only one free FXS port required at the exchange

IP ENVIRONMENT

# 2N® Helios IP Verso

| | |
|---|---|
| **Order No.** | **9155101** |
| **Name** | 2N® Helios IP Verso basic unit |
| **Desc.** | basic unit |

| | |
|---|---|
| **Order No.** | **9155101C** |
| **Name** | 2N® Helios IP Verso basic unit with camera |
| **Desc.** | • basic unit<br>• HD camera |

| | |
|---|---|
| **Order No.** | **9155021** |
| **Name** | 2N® Helios IP Verso frame for installation on the surface |
| **Desc.** | • frame for installation on the surface<br>• 1 modul |

| | |
|---|---|
| **Order No.** | **9155022** |
| **Name** | 2N® Helios IP Verso frame for installation on the surface |
| **Desc.** | • frame for installation on the surface<br>• 2 moduls |

| | |
|---|---|
| **Order No.** | **9155011** |
| **Name** | 2N® Helios IP Verso frame for installation in the wall |
| **Desc.** | • frame for installation in the wall<br>• 1 modul |

| | |
|---|---|
| **Order No.** | **9155012** |
| **Name** | 2N® Helios IP Verso frame for installation in the wall |
| **Desc.** | • frame for installation in the wall<br>• 2 moduls |

| | |
|---|---|
| **Order No.** | **9155023** |
| **Name** | 2N® Helios IP Verso frame for installation on the surface |
| **Desc.** | • frame for installation on the surface<br>• 3 moduls |

| | |
|---|---|
| **Order No.** | **9155030** |
| **Name** | 2N® Helios IP Verso infopanel |
| **Desc.** | infopanel |

| | |
|---|---|
| **Order No.** | **9155013** |
| **Name** | 2N® Helios IP Verso frame for installation in the wall |
| **Desc.** | • frame for installation in the wall<br>• 3 moduls |

| | |
|---|---|
| **Order No.** | **9155014** |
| **Name** | 2N® Helios IP Verso box for installation in the wall |
| **Desc.** | • box for installation in the wall<br>• 1 modul |

| | |
|---|---|
| **Order No.** | **9155031** |
| **Name** | 2N® Helios IP Verso keypad |
| **Desc.** | keypad |

| | |
|---|---|
| **Order No.** | **9155032** |
| **Name** | 2N® Helios IP Verso RFID card reader |
| **Desc.** | RFID card reader 125 kHz |

| | |
|---|---|
| **Order No.** | **9155015** |
| **Name** | 2N® Helios IP Verso box for installation in the wall |
| **Desc.** | • box for installation in the wall<br>• 2 moduls |

| | |
|---|---|
| **Order No.** | **9155016** |
| **Name** | 2N® Helios IP Verso box for installation in the wall |
| **Desc.** | • box for installation in the wall<br>• 3 moduls |

| | |
|---|---|
| **Order No.** | **9155033** |
| **Name** | 2N® Helios IP Verso Čtečka RFID karet |
| **Desc.** | RFID card reader 13 MHz |

| | |
|---|---|
| **Order No.** | **9155034** |
| **Name** | 2N® Helios IP Verso I/O modul |
| **Desc.** | I/O modul |
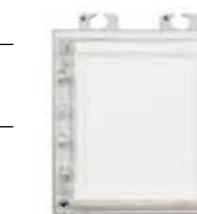
# 2N® Helios IP Verso

| Order No. | **9155035** |
|---|---|
| **Name** | 2N® Helios IP Verso buttons |
| **Desc.** | buttons |

| Order No. | **9155037** |
|---|---|
| **Name** | 2N® Helios IP Verso wiegand modul |
| **Desc.** | wiegand modul |

| Order No. | **9155038** |
|---|---|
| **Name** | 2N® Helios IP Verso tamper switch |
| **Desc.** | tamper switch |

| Order No. | **9155039** |
|---|---|
| **Name** | 2N® Helios IP Verso blind module |
| **Desc.** | blind module |

| Order No. | **9155050** |
|---|---|
| **Name** | 2N® Helios IP Verso connection cable – long |
| **Desc.** | connection cable – long |

IP ENVIRONMENT

# 2N® Helios IP Vario

| Order No. | **9137111U** |
|---|---|
| Name | 2N® Helios IP Vario 1 button |
| Desc. | • 1 button<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137131U** |
|---|---|
| Name | 2N® Helios IP Vario 3 buttons |
| Desc. | • 3 buttons<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137161CU** |
|---|---|
| Name | 2N® Helios IP Vario 3 × 2 buttons + camera |
| Desc. | • 6 buttons<br>• camera<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137111CKU** |
|---|---|
| Name | 2N® Helios IP Vario 1 button + keypad + camera |
| Desc. | • 1 Button<br>• camera<br>• keypad<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137161U** |
|---|---|
| Name | 2N® Helios IP Vario 3 × 2 buttons |
| Desc. | • 6 buttons<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137111KU** |
|---|---|
| Name | 2N® Helios IP Vario 1 button + keypad |
| Desc. | • 1 button<br>• keypad<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137131CKU** |
|---|---|
| Name | 2N® Helios IP Vario 3 buttons + keypad + camera |
| Desc. | • 3 buttons<br>• camera<br>• keypad<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137161CKU** |
|---|---|
| Name | 2N® Helios IP Vario 3 × 2 buttons + keypad + camera |
| Desc. | • 6 buttons<br>• camera<br>• keypad<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137131KU** |
|---|---|
| Name | 2N® Helios IP Vario 3 buttons + keypad |
| Desc. | • 3 buttons<br>• keypad<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137161KU** |
|---|---|
| Name | 2N® Helios IP Vario 3 × 2 buttons + keypad |
| Desc. | • 6 buttons<br>• keypad<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137160KDU** |
|---|---|
| Name | 2N® Helios IP Vario 3 × 2 buttons + keypad + display |
| Desc. | • 6 buttons<br>• graphic display<br>• keypad<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137160CKDU** |
|---|---|
| Name | 2N® Helios IP Vario – 3 × 2 buttons + keypad + camera + display |
| Desc. | • 6 buttons<br>• graphic display<br>• camera<br>• keypad<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137111CU** |
|---|---|
| Name | 2N® Helios IP Vario 1 button + camera |
| Desc. | • 1 button<br>• camera<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

| Order No. | **9137131CU** |
|---|---|
| Name | 2N® Helios IP Vario 3 buttons + camera |
| Desc. | • 3 buttons<br>• camera<br>• control of one electric lock<br>• possibility of connecting card reader, extenders or information panel or additional switch |

# Expansion modules (2N® Helios IP Vario)

| | | |
|---|---|---|
| Order No. | **9135181E** | |
| Name | 2N® Helios extendr 8 × 1 button | |
| Desc. | expansion module with 8 buttons | |

| | | |
|---|---|---|
| Order No. | **9135182E** | |
| Name | 2N® Helios extendr 8 × 2 buttons | |
| Desc. | expansion module with 16 buttons | |

| | | |
|---|---|---|
| Order No. | **9135310E** | |
| Name | 2N® Helios infopanel no buttons | |
| Desc. | backlit panel without buttons, used for inserting telephone list, company logo, house numbers etc | |

## Diagram for connection of expansion modules

Possibility of connecting up to 54 buttons

# Mounting elements (2N® Helios IP Vario)

| | | |
|---|---|---|
| Order No. | **9135331E** | |
| Name | 2N® Helios shelter for 1 module | |
| Desc. | • shelter for external use • installation on surface • for one module | |

| | | |
|---|---|---|
| Order No. | **9135332E** | |
| Name | 2N® Helios shelter for 2 modules | |
| Desc. | • shelter for external use • installation on surface • for two modules | |

| | | |
|---|---|---|
| Order No. | **9135351E** | |
| Name | 2N® Helios flush box for 1 module | |
| Desc. | • box for installation in interior wall • for one module | |

| | | |
|---|---|---|
| Order No. | **9135352E** | |
| Name | 2N® Helios flush box for 2 modules | |
| Desc. | • box for installation in interior wall • for two modules | |

| | | |
|---|---|---|
| Order No. | **9135361E** | |
| Name | 2N® Helios shelter and flush box for 1 module | |
| Desc. | • shelter for use in external environment • installation in wall • for one module | |

| | | |
|---|---|---|
| Order No. | **9135362E** | |
| Name | 2N® Helios shelter and flush box for 2 modules | |
| Desc. | • shelter for use in external environment • installation in wall • for two modules | |

IP ENVIRONMENT

# 2N® Helios IP Force

| Order No. | **9151101** |
|---|---|
| **Name** | 2N® Helios IP Force 1 button |
| **Desc.** | • 1 button<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151101C** |
|---|---|
| **Name** | 2N® Helios IP Force 1 button + camera |
| **Desc.** | • 1 button<br>• camera<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151102R** |
|---|---|
| **Name** | 2N® Helios IP Force 2 buttons (card reader ready) |
| **Desc.** | • 2 buttons<br>• possibility of connecting card reader<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151102CR** |
|---|---|
| **Name** | 2N® Helios IP Force 2 buttons + camera (card reader ready) |
| **Desc.** | • 2 buttons<br>• camera<br>• possibility of connecting card reader<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151101W** |
|---|---|
| **Name** | 2N® Helios IP Force 1 button + 10 W loudspeaker |
| **Desc.** | • 1 button<br>• 10 W loudspeaker<br>• extra robust version<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151101CW** |
|---|---|
| **Name** | 2N® Helios IP Force – 1 button + camera + 10 W loudspeaker |
| **Desc.** | • 1 button<br>• camera<br>• 10 W loudspeaker<br>• extra robust version<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151101CRP** |
|---|---|
| **Name** | 2N® Helios IP Force 1 button with pictograms |
| **Desc.** | • 1 button<br>• camera<br>• 10 W loudspeaker<br>• extra robust version<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151104** |
|---|---|
| **Name** | 2N® Helios IP Force 4 buttons |
| **Desc.** | • 4 buttons<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151104C** |
|---|---|
| **Name** | 2N® Helios IP Force 4 buttons + camera |
| **Desc.** | • 4 buttons<br>• camera<br>• control of two electric locks<br>• possibility of connecting additional switch |

## Mounting elements (2N® Helios IP Force)

| Order No. | **9151101K** |
|---|---|
| **Name** | 2N® Helios IP Force 1 button + keypad |
| **Desc.** | • 1 button<br>• keypad<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151101CK** |
|---|---|
| **Name** | 2N® Helios IP Force 1 button + camera + keypad |
| **Desc.** | • 1 button<br>• keypad<br>• camera<br>• control of two electric locks<br>• possibility of connecting additional switch |

| Order No. | **9151001E** |
|---|---|
| **Name** | flush wall box |
| **Desc.** | box for installation in wall |

| Order No. | **9151002** |
|---|---|
| **Name** | flush plasterboard box |
| **Desc.** | box for installation in plasterboard |

IP ENVIRONMENT

# 2N® Helios IP Safety

| Order No. | **9152101** |
|---|---|
| Name | 2N® Helios IP Safety<br>1 button |
| Desc. | • 1 button<br>• control of two electric locks<br>• possibility of connecting<br>  additional switch |

| Order No. | **9152101W** |
|---|---|
| Name | 2N® Helios IP Safety<br>1 button + 10 W loudspeaker |
| Desc. | • 1 button<br>• 10 W loudspeaker<br>• extra robust version<br>• control of two electric locks<br>• possibility of connecting<br>  additional switch |

## Mounting elements (2N® Helios IP Safety)

| Order No. | **9151001E** |
|---|---|
| Name | flush wall box |
| Desc. | box for installation in wall |

| Order No. | **9151002** |
|---|---|
| Name | flush plasterboard box |
| Desc. | box for installation in plaster-board |

| Order No. | **9152000** |
|---|---|
| Name | 2N® Helios IP Safety<br>frame (orange) |
| Desc. | orange frame suitable<br>for covering edges when<br>installed in wall |

IP ENVIRONMENT

# 2N® Helios IP Uni

| Order No. | **9153101** |
|---|---|
| Name | 2N® Helios IP Uni<br>1 button |
| Desc. | • 1 button<br>• control of one electric lock<br>• protective switch |

| Order No. | **9153102** |
|---|---|
| Name | 2N® Helios IP Uni<br>2 buttons |
| Desc. | • 2 buttons<br>• control of one electric lock<br>• protective switch |

| Order No. | **9153101P** |
|---|---|
| Name | 2N® Helios IP Uni<br>1 button with pictograms |
| Desc. | • 1 button<br>• control of one electric lock<br>• protective switch |

## Mounting elements (2N® Helios IP uni)

| Order No. | **9153003** |
|---|---|
| Name | 2N® Helios IP Uni<br>wall box |
| Desc. | box for surface installations |

# 2N® Indoor Touch

| Order No. | **91378365** |
|---|---|
| Name | 2N® Indoor Touch |
| Desc. | Indoor touch unit for audio and<br>video communication with IP<br>intercom |

IP ENVIRONMENT

# Equipment

| Order No. | **9135301E** |
|---|---|
| **Name** | Replacement nameplate one button (2N® Helios IP Vario) |
| **Desc.** | Replacement nameplate one button |

| Order No. | **9135302E** |
|---|---|
| **Name** | Replacement nameplate two buttons (2N® Helios IP Vario) |
| **Desc.** | Replacement nameplate two buttons |

| Order No. | **91378100E** |
|---|---|
| **Name** | PoE injector EU socket |
| **Desc.** | for powering an intercom over an Ethernet cable in the absence of a PoE switch |

| Order No. | **9137310E** |
|---|---|
| **Name** | Additional switch (only for 2N® Helios IP Vario) |
| **Desc.** | • allows the control of a second appliance<br>• make and break contact optional<br>• switching for unlimited period max. 48 V / 2 A |

| Order No. | **9135311E** |
|---|---|
| **Name** | Nameplate for information panel (2N® Helios IP Vario) |
| **Desc.** | • replacement of four nameplates with one cover<br>• allows use of half of the expansion module, for telephone list, office hours etc. |

| Order No. | **91341481E** |
|---|---|
| **Name** | 12 V power adapter |
| **Desc.** | • stabilised 12 V/2 A power source<br>• must be used if PoE power is not used |

| Order No. | **9159010** |
|---|---|
| **Name** | 2N® Helios IP Security relay |
| **Desc.** | • simple additional equipment to increase security<br>• prevents tampering with the lock<br>• It is installed between the intercom, from which it is also powered, and the lock which it controls |

| Order No. | **9137410E** |
|---|---|
| **Name** | 2N® Helios IP Security relay – 1 output |
| **Desc.** | • separate IP equipment which may be controlled from the IP intercom thanks to HTTP commands<br>• allows the control of one device at any distance |

| Order No. | **932070E** |
|---|---|
| **Name** | Standard electric lock |
| **Desc.** | standard electric lock BEFO 1211 12 V / 600 mA |

| Order No. | **932080E** |
|---|---|
| **Name** | Electric lock with torque bolt |
| **Desc.** | • electric lock with torque bolt BEFO 221 12 V / 600 mA<br>• a brief (momentary) electrical impulse which releases the lock and puts it in the OPEN position is all that is required to open (release) the lock<br>• a brief electrical after entering the lock is CLOSED |

| Order No. | **9137411E** |
|---|---|
| **Name** | 2N® Helios IP security relay – 4 outputs, PoE |
| **Desc.** | • separate IP equipment which may be controlled from the IP intercom thanks to HTTP commands<br>• allows the control of up to four devices at any distance |

| Order No. | **9151010** |
|---|---|
| **Name** | Additional switch + protective switch (only for 2N® Helios IP Force) |
| **Desc.** | • allows the control of a second appliance<br>• passive switching for unlimited period<br>• max. 30 V / 1 A or active 12 V DC / max 700 mA<br>• also contains protective switch to signal/report/warn/notify if front panel is opened |

| Order No. | **932090E** |
|---|---|
| **Name** | Electric lock with mechanical blocking |
| **Desc.** | • Electric lock with mechanical blocking BEFO 1211MB 12 V / 600 mA<br>• allows the mechanical setting of the lever in the OPEN or CLOSED position<br>• in the OPEN position it is permanently open, otherwise it behaves like a standard lock |

| Order No. | **932928** |
|---|---|
| **Name** | 12 V AC transformer for electric lock |
| **Desc.** | for supply of external 12 V alternating power |

| Order No. | **9137420E** |
|---|---|
| Name | External RFID card reader (USB) |
| Desc. | • External RFID card reader<br>• for connection to PC via USB interface<br>• suitable for management of system and addition of cards via PC application 2N® Helios IP Manager<br>• reads EM4100, EM4102 cards |

| Order No. | **9137430E** |
|---|---|
| Name | 2N® Helios IP card reader |
| Desc. | • internal RFID card reader<br>• for fi tting in 2N® Helios IP Vario basic module<br>• reads cards EM4100, EM4102 and HID Proximity, 125kH<br>• another two switches and Wiegand interface<br>• compatible with all 2N® Helios IP Vario models |

| Order No. | **9151011** |
|---|---|
| Name | 2N® Helios IP card reader + protective switch (only for 2N® Helios IP Force) |
| Desc. | • internal RFID card reader<br>• for fi tting in 2N® Helios IP Force<br>• reads cards EM4100, EM4102 and HID Proximity, 125kH<br>• another two switches and Wiegand interface<br>• compatible with 9151102xR 2N® Helios IP Force 2 buttons and readiness for reader |

| Order No. | **9159030** |
|---|---|
| Name | External RFID card reader |
| Desc. | • secondary reader for connection to internal reader<br>• allows control of entry by card from both sides of door<br>• cover IP67<br>• also suitable for exterior<br>• reads EM4100, EM4102 cards |

| Order No. | **9134165E** |
|---|---|
| Name | Chip card |
| Desc. | • contactless card for access system<br>• Type EM4100 |

| Order No. | **9134166E** |
|---|---|
| Name | Chip key ring |
| Desc. | • contactless key ring for access system<br>• Type EM4100 |

| Order No. | **9151016** |
|---|---|
| Name | 2N® Helios IP RFID card reader 13 MHz |
| Desc. | • internal RFID card reader for fitting in 2N® Helios IP Force<br>• reads cards Mifare, iClass, DESFire and other standarts<br>• another two switches, logical inputs and Wiegand module<br>• compatible with 2N® Helios IP Force 2 buttons and pictograms<br>• contains protective switch |

## 2N® Helios IP Licence

Licences and licence functions are not available for 2N® Helios IP Uni.
2N® Helios IP Vario with display already has a Gold licence loaded.

| Order No. | **9137905** |
|---|---|
| Name | 2N® Helios IP Enhanced Audio licence |
| Desc. | Licence for unlocking advanced audio functions. |

| Order No. | **9137906** |
|---|---|
| Name | 2N® Helios IP Enhanced Video licence |
| Desc. | Licence for unlocking advanced video functions. |

| Order No. | **9137907** |
|---|---|
| Name | 2N® Helios IP Enhanced Integration licence |
| Desc. | Licence for unlocking advanced integration functions. |

| Order No. | **9137908** |
|---|---|
| Name | 2N® Helios IP Enhanced Security licence |
| Desc. | Licence for unlocking advanced security functions. |

| Order No. | **9137909** |
|---|---|
| Name | 2N® Helios IP Gold licence |
| Desc. | Licence for unlocking all advanced functions. |

| Order No. | **9137902** |
|---|---|
| Name | 2N® Helios IP Licence G729 (pro 2N® Helios IP + 2N® SIP Audio Converter) |
| Desc. | Licence for unlocking audio codex G.729. |

## 2N® Helios IP Manager

2N® Helios IP Manager for 1 device unlimited period of time,
or for fi ve devices for 30 days, is available for free download on www.2n.cz.

| Order No. | **9137911** |
|---|---|
| Name | 2N® Helios IP Manager licence for supervision of 2–5 devices |
| Desc. | • software for collective management of intercoms<br>• confi guration of display<br>• advanced management of access system users<br>• the number of intercoms in a single installation is restricted by license |

| Order No. | **9137912** |
|---|---|
| Name | 2N® Helios IP Manager licence for supervision of 6–20 devices |
| Desc. | • software for collective management of intercoms<br>• confi guration of display<br>• advanced management of access system users<br>• the number of intercoms in a single installation is restricted by license |

| Order No. | **9137913** |
|---|---|
| Name | 2N® Helios IP Manager licence for supervision of 21–50 devices |
| Desc. | • software for collective management of intercoms<br>• confi guration of display<br>• advanced management of access system users<br>• the number of intercoms in a single installation is restricted by license |

| Order No. | **9137914** |
|---|---|
| Name | 2N® Helios IP Manager unlimited licence for supervision of devices |
| Desc. | • software for collective management of intercoms<br>• confi guration of display<br>• advanced management of access system users<br>• the number of intercoms in a single installation is restricted by license |

IP ENVIRONMENT

# 2N® Net Audio Decoder

| Order No. | **914010E** |
|---|---|
| **Name** | 2N® Net Audio Decoder |
| **Desc.** | • IP audio decoder<br>• 14 W amplifi er<br>• PoE/12 V<br>• 10/100Base Ethernet<br>• terminals for connecting loudspeakers 4–16 Ohm |

| Order No. | **914031E** |
|---|---|
| **Name** | 2N® Net Audio Decoder Ceiling Loudspeaker – IC Audio |
| **Desc.** | • IP audio decoder built into flush ceiling-mounted speaker<br>• 14 W<br>• PoE/12 V<br>• 10/100Base Ethernet |

| Order No. | **914202E** |
|---|---|
| **Name** | 2N® IP Audio Server SW free to download from 2N web site (including 5× NAD licences) |
| **Desc.** | • SW application for configuration and control of Net Audio Decoder system<br>• free licence for connection of 5× Net Audio Decoder |

| Order No. | **914204E** |
|---|---|
| **Name** | 2N® IP Audio Server 1× NAD add on licence |
| **Desc.** | 1× additional licence for connection of 1× Net Audio Decoder necessary if 6 or more connected Net Audio Decoders) |

| Order No. | **914060E** |
|---|---|
| **Name** | 2N® Net Audio Decoder PC (inc. Win 7, IP Audio Server SW 914202E, totaly 10 NAD licences) |
| **Desc.** | • PC with installation of Windows 7<br>• IP Audio Server SW application<br>• 10 licences for connection free of charge<br>• 10× Net Audio Decoder |

IP ENVIRONMENT

# 2N® SIP Audio Converter

| Order No. | **914401E** |
|---|---|
| **Name** | 2N® SIP Audio Converter StandAlone box |
| **Desc.** | • IP audio decoder<br>• 18 W amplifier<br>• PoE/12 V<br>• 10/100Base Ethernet<br>• terminals for connecting loudspeakers 4–16 Ohm<br>• support for SIP protocol |

| Order No. | **914420E** |
|---|---|
| **Name** | 2N® SIP Audio Converter Loudspeaker Set, wall mounted |
| **Desc.** | • IP audio decoder built into wall-mounted loudspeaker<br>• 18 W amplifier<br>• PoE/12 V<br>• 10/100Base Ethernet<br>• support for SIP protocol |

| Order No. | **914430E** |
|---|---|
| **Name** | 2N® SIP Audio Converter Loudspeaker Set, flush mounted |
| **Desc.** | • IP audio decoder built into flush-mounted speaker<br>• 18 W amplifi er<br>• PoE/12 V<br>• 10/100Base Ethernet<br>• support for SIP protocol |

| Order No. | **914102E** |
|---|---|
| **Name** | 2N® Net Audio Decoder/ 2N® SIP Audio Converter Power Supply |
| **Desc.** | Stabilised 12 V / 2 A, power source, must be used if PoE power is not used |

| Order No. | **914105E** |
|---|---|
| **Name** | 2N® Net Audio Decoder Mounting set |
| **Desc.** | fitting set for wall installation |

# 2N® Net Mic

| Order No. | **914071E** |
|---|---|
| **Name** | 2N® Net Mic Organic |
| **Desc.** | Hardware console with microphone for live announcements or for broadcasting pre-recorded files to various zones |

ANALOGUE ENVIRONMENT

# 2N® Helios Vario

| Order No. | 9135110E |
|---|---|
| Name | 2N® Helios Vario 1 button |
| Desc. | • 1 button • control of one electric lock • possibility of connecting extenders or information panel or additional switch |

| Order No. | 9135130E |
|---|---|
| Name | 2N® Helios Vario 3 buttons |
| Desc. | • 3 buttons • control of one electric lock • possibility of connecting extenders or information panel or additional switch |

| Order No. | 9135160E |
|---|---|
| Name | 2N® Helios Vario 3 × 2 buttons |
| Desc. | • 6 buttons • control of one electric lock • possibility of connecting extenders or information panel or additional switch |

| Order No. | 9135110KE |
|---|---|
| Name | 2N® Helios Vario 1 button + keypad |
| Desc. | • 1 button • keypad • control of one electric lock • possibility of connecting extenders or information panel or additional switch |

| Order No. | 9135130KE |
|---|---|
| Name | 2N® Helios Vario 3 buttons + keypad |
| Desc. | • 3 buttons • keypad • control of one electric lock • possibility of connecting extenders or information panel or additional switch |

| Order No. | 9135160KE |
|---|---|
| Name | 2N® Helios Vario 3 × 2 buttons + keypad |
| Desc. | • 6 buttons • keypad • control of one electric lock • possibility of connecting extenders or information panel or additional switch |

## Expansion modules (2N® Helios Vario)

| Order No. | 9135181E |
|---|---|
| Name | 2N® Helios extendr 8 × 1 button |
| Desc. | • expansion module with 8 buttons |

| Order No. | 9135182E |
|---|---|
| Name | 2N® Helios extendr 8 × 2 buttons |
| Desc. | • expansion module with 16 buttons |

| Order No. | 9135310E |
|---|---|
| Name | 2N® Helios infopanel no buttons |
| Desc. | • backlit panel without buttons • serves for telephone numbers, company logo, house numbers etc. |

### Diagram for connection of expansion modules

Possibility of connecting up to 54 buttons

## Mounting elements (2N® Helios Vario)



| Order No. | 9135331E |
|---|---|
| Name | 2N® Helios shelter for 1 module |
| Desc. | • shelter for external use<br>• installation on surface<br>• for one module |



| Order No. | 9135332E |
|---|---|
| Name | 2N® Helios shelter for 2 modules |
| Desc. | • shelter for external use<br>• installation on surface<br>• for two modules |



| Order No. | 9135351E |
|---|---|
| Name | 2N® Helios flush box for 1 module |
| Desc. | • box for installation in interior wall<br>• for one module |



| Order No. | 9135352E |
|---|---|
| Name | 2N® Helios flush box for 2 modules |
| Desc. | • box for installation in interior wall<br>• for two modules |



| Order No. | 9135361E |
|---|---|
| Name | 2N® Helios shelter and flush box for 1 module |
| Desc. | • shelter for use in external environment<br>• installation in wall<br>• for one module |



| Order No. | 9135362E |
|---|---|
| Name | 2N® Helios shelter and flush box for 2 modules |
| Desc. | • shelter for use in external environment<br>• installation in wall<br>• for two modules |

ANALOGUE ENVIRONMENT

# 2N® Helios Force



| Order No. | 9151201-E |
|---|---|
| Name | 2N® Helios Force 1 button |
| Desc. | • 1 button<br>• control of up to two electric locks<br>• integrated amplifier |



| Order No. | 9151204-E |
|---|---|
| Name | 2N® Helios Force 4 buttons |
| Desc. | • 4 buttons<br>• control of up to two electric locks<br>• integrated amplifier |



| Order No. | 9151201K-E |
|---|---|
| Name | 2N® Helios Force 1 button + keypad |
| Desc. | • 1 button<br>• keypad<br>• control of up to two electric locks<br>• integrated amplifier |

## Mounting elements (2N® Helios Force)



| Order No. | 9151001E |
|---|---|
| Name | flush wall box |
| Desc. | box for installation in wall |



| Order No. | 9151002 |
|---|---|
| Name | flush plasterboard box |
| Desc. | box for installation in plasterboard |

ANALOGUE ENVIRONMENT

# 2N® Helios Safety

| Order No. | **9152201-E** |
|---|---|
| **Name** | 2N® Helios Safety 1 button |
| **Desc.** | • 1 button<br>• control of up to two electric locks<br>• integrated amplifier |

ANALOGUE ENVIRONMENT

# 2N® Helios Uni

| Order No. | **9153201-E** |
|---|---|
| **Name** | 2N® Helios Uni 1 button |
| **Desc.** | • 1 button<br>• control of one electric lock<br>• protective switch |

| Order No. | **9153202-E** |
|---|---|
| **Name** | 2N® Helios Uni 2 buttons |
| **Desc.** | • 2 buttons<br>• control of one electric lock<br>• protective switch |

## Mounting elements (2N® Helios Safety)

| Order No. | **9151001E** |
|---|---|
| **Name** | flush wall box |
| **Desc.** | box for installation in wall |

| Order No. | **9151002** |
|---|---|
| **Name** | flush plasterboard box |
| **Desc.** | box for installation in plasterboard |

| Order No. | **9152000** |
|---|---|
| **Name** | 2N® Helios Safety frame (orange) |
| **Desc.** | orange frame suitable for covering edges when installed in wall |

## Mounting elements (2N® Helios Uni)

| Order No. | **9153003** |
|---|---|
| **Name** | 2N® Helios Uni wall box |
| **Desc.** | box for surface installations |

ANALOGUE ENVIRONMENT

# Equipment

| | |
|---|---|
| Order No. | **9135301E** |
| Name | Replacement nameplate one button (2N® Helios IP Vario) |
| Desc. | Replacement nameplate one button |

| | |
|---|---|
| Order No. | **9135302E** |
| Name | Replacement nameplate two buttons (2N® Helios IP Vario) |
| Desc. | Replacement nameplate two buttons |

| | |
|---|---|
| Order No. | **9137310E** |
| Name | additional switch (for 2N® Helios Vario) |
| Desc. | • allows the control of a second appliance<br>• possibility of make and break contact<br>• passive switching for unlimited period<br>• max. 48 V / 2 A |

| | |
|---|---|
| Order No. | **9135200E** |
| Name | built in colour CCD camera (for 2N® Helios Vario) |
| Desc. | • the camera can be built into every basic unit, even after instalation<br>• if there is insufficient light, the camera automatically switches to the black and white mode<br>• infrared illumination<br>• if mounted horizontally, the camera can also be rotated vertically |

| | |
|---|---|
| Order No. | **9135311E** |
| Name | Nameplate for information panel (2N® Helios IP Vario) |
| Desc. | • replacement of four nameplates with one cover<br>• allows use of half of the expansion module, for telephone list, office hours etc. |

| | |
|---|---|
| Order No. | **91341481E** |
| Name | 12 V power adapter |
| Desc. | • stabilised 12 V/2 A power source<br>• must be used if PoE power is not used |

| | |
|---|---|
| Order No. | **9134137E** |
| Name | Video server MPEG4 LAN |
| Desc. | • the video can be viewed via LAN on any PC<br>• no SW needed<br>• can serve up to 10 PC at the same time<br>• thanks to MPEG-4 compression the network load is roughly 10 times smaller than in the case of M-JPEG compression<br>• it also is possible to use the internet for online streaming<br>• possibility of setting quality/ data flow<br>• free SW for intelligent video recording on PC (movement detection) |

| | |
|---|---|
| Order No. | **932070E** |
| Name | Standard electric lock |
| Desc. | standard electric lock BEFO 1211 12 V / 600 mA |

| | |
|---|---|
| Order No. | **932080E** |
| Name | Electric lock with torque bolt |
| Desc. | • electric lock with torque bolt BEFO 221 12 V / 600 mA<br>• a brief (momentary) electrical impulse which releases the lock and puts it in the OPEN position is all that is required to open (release) the lock<br>• a brief electrical after entering the lock is CLOSED |

| | |
|---|---|
| Order No. | **932090E** |
| Name | Electric lock with mechanical blocking |
| Desc. | • Electric lock with mechanical blocking BEFO 1211MB 12 V / 600 mA<br>• allows the mechanical setting of the lever in the OPEN or CLOSED position<br>• in the OPEN position it is permanently open, otherwise it behaves like a standard lock |

| | |
|---|---|
| Order No. | **932928** |
| Name | 12 V AC transformer for electric lock |
| Desc. | for supply of external 12 V alternating power |

## The vision becomes reality ...

For the correct installation
of intercoms you need to know
the technical parameters,
requirements for connection
and installation dimensions.

# Installation

# IP intercoms

## 2N® Helios IP Verso

TECHNICAL PARAMETERS

| Signalling protocol | |
|---|---|
| | SIP (UDP, TCP, TLS) |
| | |
| **Buttons** | |
| Button design | White-backlit transparent buttons with replaceable nametag |
| Button count | 1 and increments of 146 |
| Button extenders | Up to 30 modules, limited by power supply |
| Numeric keypad | optional |
| | |
| **Audio** | |
| Microphone | 1 integrated microphone |
| Amplifier | 2 W (class D) amplifier |
| Speaker | 2 W/8 $\Omega$ |
| Output LINE OUT | 1 VRMS/600 $\Omega$ |
| Volume control | Adjustable with automatic adaptive mode |
| Full duplex | Yes (AEC) |
| | |
| **Audio stream** | |
| Protocols | RTP/RTSP |
| Codecs | G.711, G.729 |
| | |
| **Camera** | |
| Sensor | 1/3'' colour CMOS |
| JPEG resolution | Up to 1280 (H) × 960 (V) |
| Video resolution | 640 (H) × 480 (V) |
| Frame rate | Up to 30 snapshots/s |
| Sensitivity | 5.6 V/lux-sec (550 nm) |
| View angle | 120° (H), 90° (V), 145° (D) |
| Infrared light | Yes |
| | |
| **Video stream** | |
| Protocols | RTP/RTSP/http |
| Codecs | H.263, H.263+, H.264, MPEG-4, M-JPEG |
| IP camera function | Yes, ONVIF v2.2 profile S compatible |
| | |
| **Interface** | |
| Power supply | 12V ± 15 % / 2 A DC or PoE |
| PoE | PoE 802.3af (Class 0–12.95 W) |
| LAN | 10/100BASE-TX s Auto-MDIX, RJ-45 |
| Recommended cabling | Cat-5e or higher |
| Supported protocols | SIP2.0, DHCP opt. 66, SMTP, 802.1x, RTSP, RTP, TFTP, HTTP, HTTPS, Syslog |
| Passive switch | NO/NC contact, up to 30 V/1 A AC/DC |
| Active switch output | 8 up to 12 V DC depending on power supply (PoE: 10 V; adaptor: power supply voltage minus 2 V), max 400 mA |

| RFID card reader | |
|---|---|
| | Optionally 125 kHz or 13.56 MHz |
| Supported cards | 125 kHz – EM4100, EM4102, HID Prox |
| | 13.56 MHz |
| ISO14443A | Mifare Classic 1k & 4k, DESFire EV1, Mini, Plus S&X, SmartMX, Ultralight |
| | Ultralight C, SLE44R35, my-d move (SLE66Rxx), PayPass, Legic Advant |
| ISO14443B | Calypso, CEPAS, Moneo, SRI512, SRT512, SRI4K, SRIX4K, PicoPass, HID iCLASS |
| | |
| **Mechanical properties** | |
| Cover | Robust zinc casting with surface finish |
| Working temperature | -40 °C – 60 °C |
| Working relative humidity | 10% – 95% (non-condensing) |
| Storing temperature | -40 °C –70 °C |
| | |
| **Dimensions** | |
| Surface mounting frame | 1 modul: 107 (W) × 130 (H) × 28 (D) mm |
| | 2 moduls: 107 (W) × 234 (H) × 28 (D) mm |
| | 3 moduls: 107 (W) × 339 (H) × 28 (D) mm |
| Flush mounting frame | 1 modul: 130 (W) × 153 (H) × 5 (D) mm |
| | 2 moduls: 130 (W) × 257 (H) × 5 (D) mm |
| | 3 moduls: 130 (W) × 361 (H) × 5 (D) mm |
| Flush mounting box (minimum hole dimensions) | 1 modul: 108 (W) × 131 (H) × 45 (D) mm |
| | 2 moduls: 108 (W) × 238 (H) × 45 (D) mm |
| | 3 moduls: 108 (W) × 343 (H) × 45 (D) mm |
| Weight | Based on configuration |
| Covering level | IP54 |

CONNECTION DIAGRAM
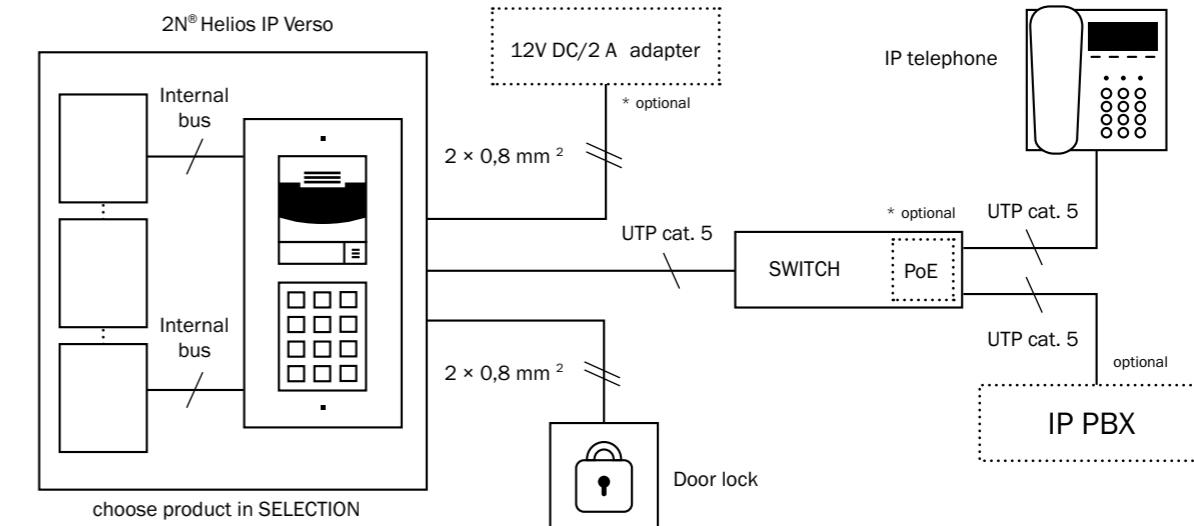


2N® Helios IP Verso

Internal bus

12V DC/2 A adapter
* optional

2 × 0,8 mm²

UTP cat. 5

Internal bus

2 × 0,8 mm²

choose product in SELECTION

Door lock

SWITCH  PoE

* optional

UTP cat. 5

UTP cat. 5

IP telephone

optional

IP PBX

# 2N® Helios IP Vario

TECHNICAL PARAMETERS

| Signalling protocol | |
|---|---|
| | SIP (UDP) |
| | |
| **Buttons** | |
| Button finish | Stainless steel buttons |
| Number of buttons | 1, 3 or 6 |
| Button expansion | up to 54 using expansion modules |
| Numerical keypad | optional |
| | |
| **Audio** | |
| Volume control | adjustable |
| Full duplex | yes (AEC) |
| | |
| **Audio stream** | |
| Protocols | RTP/RTSP |
| Codecs | G.711, G.729 |
| | |
| **Camera** | |
| Sensor | 1/4" colour CMOS |
| Definition | 640 (H) × 480 (V) |
| Frame rate | up to 30 frames/s |
| Sensitivity | 1,9 V/lux-sec (550 nm) |
| Viewing angle | 55° (H), 39° (V) |
| | |
| **Video stream** | |
| Protocols | RTP/RTSP/http |
| Codecs | H.263+, H.264, MPEG-4, M-JPEG |
| IP camera function | Yes |
| | |
| **Interface** | |
| Power supply | 12V ± 15 % / 2 A DC or PoE |
| PoE | PoE 802.3af (Class 0 – 12,95 W) |
| LAN | 10/100BASE-TX with Auto-MDIX |
| Recommended cabling | Cat-5e or better |
| Passive switch | make and break contact, max. 30 V / 1A AC/DC |
| Active switch output | 10 up to 14 V DC depending on power supply, max. 700 mA |
| | |
| **RFID card reader** | |
| | optional |
| Supported cards | EM-40XX (125 Khz) |
| | HID Proximity (125 kHz, 26 bit) |
| | |
| **Mechanical properties** | |
| Operating temperature | -20 °C – 55 °C |
| Operating relative humidity | 10 % – 95 % (non-condensing) |
| Storage temperature | -40 °C – 70 °C |
| Dimensions | 210 × 100 × 29 mm |
| Weight | 500 g |
| Cover rating | IP44, IP53 if shelter is used (see equipment for installation) |

CONNECTION DIAGRAM



2N® Helios IP Vario

Internal busbar

Internal RFID

2 × 0,8 mm²

2 × 0,8 mm²

12V DC/1 A adapter

* optional

Door lock

UTP cat. 5

SWITCH        PoE        * optional

UTP cat. 5

UTP cat. 5

IP PBX        optional

IP telephone
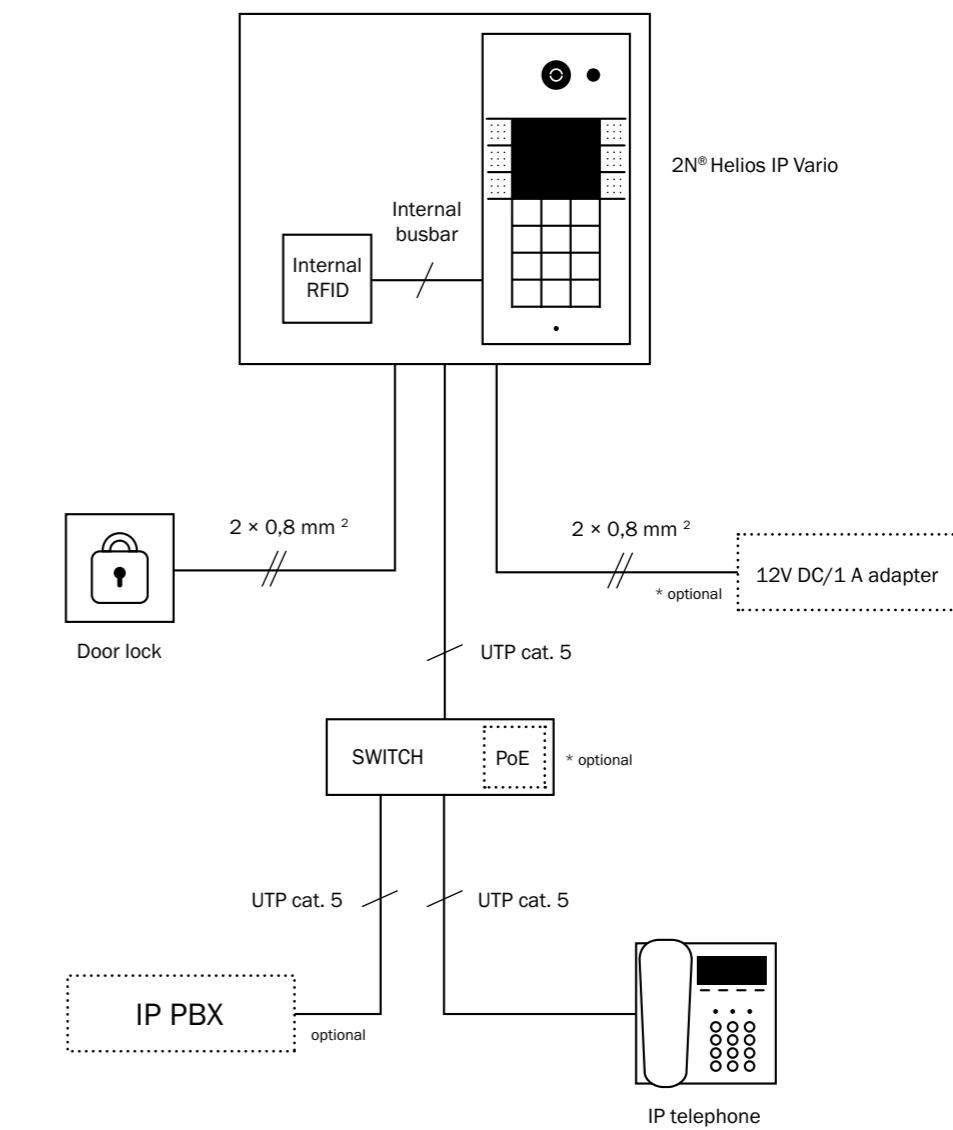
* Power from external 12V adapter or POE

# 2N® Helios IP Force

## TECHNICAL PARAMETERS

| Signalling protocol | |
| --- | --- |
| | SIP (UDP) |
| | |
| **Buttons** | |
| Button finish | Transparent buttons with white backlighting and nameplate which can be replaced with ease |
| Number of buttons | 1, 2 or 4 |
| Numerical keypad | optional |
| | |
| **Audio** | |
| Microphone | 2 integrated microphones |
| Amplifier | 10 W (class D) amplifier |
| Speaker | 1 W (10 W optional) |
| Volume control | adjustable with automatic adaptive mode |
| Full duplex | yes (AEC) |
| | |
| **Audio stream** | |
| Protocols | RTP/RTSP |
| Codecs | G.711, G.729 |
| | |
| **Camera** | |
| Sensor | 1/4" colour CMOS |
| Definition | 640 (H) × 480 (V) |
| Frame rate | up to 30 frames/s |
| Sensitivity | 1,9 V/lux-sec (550 nm) |
| Viewing angle | 135° (H), 109° (V) |
| Infrared illumination | Yes |
| | |
| **Video stream** | |
| Protocols | RTP/RTSP/http |
| Codecs | H.263+, H.264, MPEG-4, M-JPEG |
| IP camera function | Yes |
| | |
| **Interface** | |
| Power supply | 12 V ± 15 %/2A DC or PoE |
| PoE | PoE 802.3af (Class 0 – 12,95 W) |
| LAN | 10/100BASE-TX with Auto-MDIX, RJ-45 |
| Recommended cabling | Cat-5e or better |
| Passive switch | make and break contact, max. 30 V/1A AC/DC |
| Active switch output | 10 up to 14 V DC depending on power supply, max. 700 mA |
| | |
| **RFID card reader** | |
| | optional |
| Supported cards | EM-40XX (125 Khz) |
| | HID Proximity (125 kHz, 26 bit) |
| | iClass DESFire and Mifare (13.56 MHz) |

| Mechanical properties | |
| --- | --- |
| Cover | Robust aluminium casting |
| Operating temperature | -40 °C – 55 °C |
| Operating relative humidity | 10 % – 95 % (non-condensing) |
| Storage temperature | -40 °C – 70 °C |
| Dimensions | 217 × 109 × 83 mm |
| | 242 × 136 × 83 mm with frame |
| Weight | net max. 2 kg / gross max. 2,5 kg |
| Cover rating | IP65, IP69K (91511xxxW) |

## CONNECTION DIAGRAM
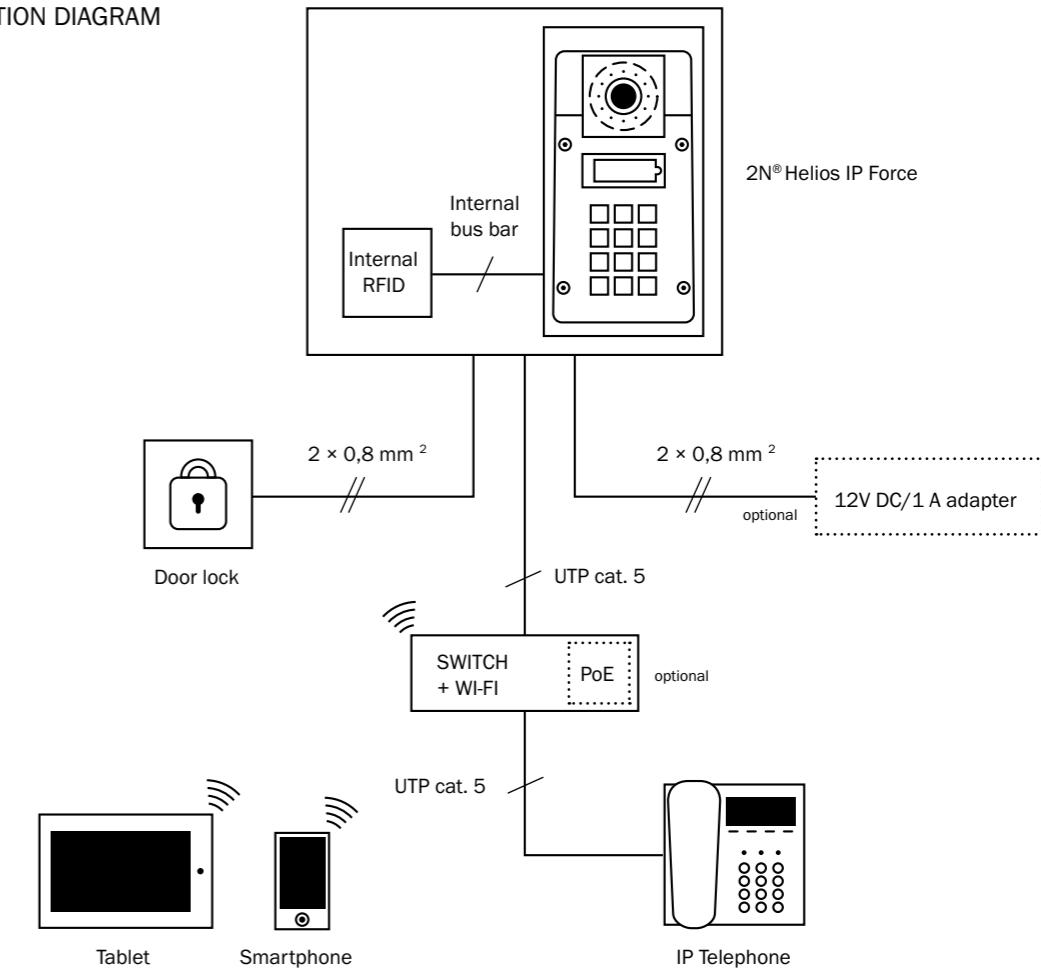


* Power from external 12V adapter or POE

# 2N® Helios IP Safety

## TECHNICAL PARAMETERS

| Signalling protocol | |
|---|---|
| | SIP (UDP) |
| | |
| **Buttons** | |
| Button finish | Industrial waterproof buttons, vandal-proof, stainless steel, blue backlit |
| Number of buttons | 1 |
| | |
| **Audio** | |
| Microphone | 2 integrated microphones |
| Amplifier | 10 W (class D) amplifier |
| Speaker | 1 W (10 W optional) |
| Volume control | adjustable with automatic adaptive mode |
| Full duplex | yes (AEC) |
| | |
| **Audio stream** | |
| Protocols | RTP/RTSP |
| Codecs | G.711, G.729 |
| | |
| **Interface** | |
| Power supply | 12 V ± 15 %/2A DC or PoE |
| PoE | PoE 802.3af (Class 0 – 12,95 W) |
| LAN | 10/100BASE-TX with Auto-MDIX, RJ-45 |
| Recommended cabling | Cat-5e or better |
| Passive switch | make and break contact, max. 30 V/1A AC/DC |
| Active switch output | 9–13 V DC/700 mA |
| | |
| **Mechanical properties** | |
| Cover | Robust aluminium casting |
| Colour | RAL 2004 (orange) |
| Operating temperature | -40 °C – 55 °C |
| Operating relative humidity | 10 % – 95 % (non-condensing) |
| Storage temperature | -40 °C – 70 °C |
| Dimensions | 217 × 109 × 83 mm |
| Weight | net max. 2 kg / gross max. 2,5 kg |
| Cover rate | IP65, IP69K (91511xxxW) |

## CONNECTION DIAGRAM



2N® Helios IP Safety

$2 × 0,8$ mm $^2$

12V DC/1 A adapter   optional

UTP cat. 5

SWITCH   PoE   optional

UTP cat. 5    UTP cat. 5

IP PBX

Computer with headset
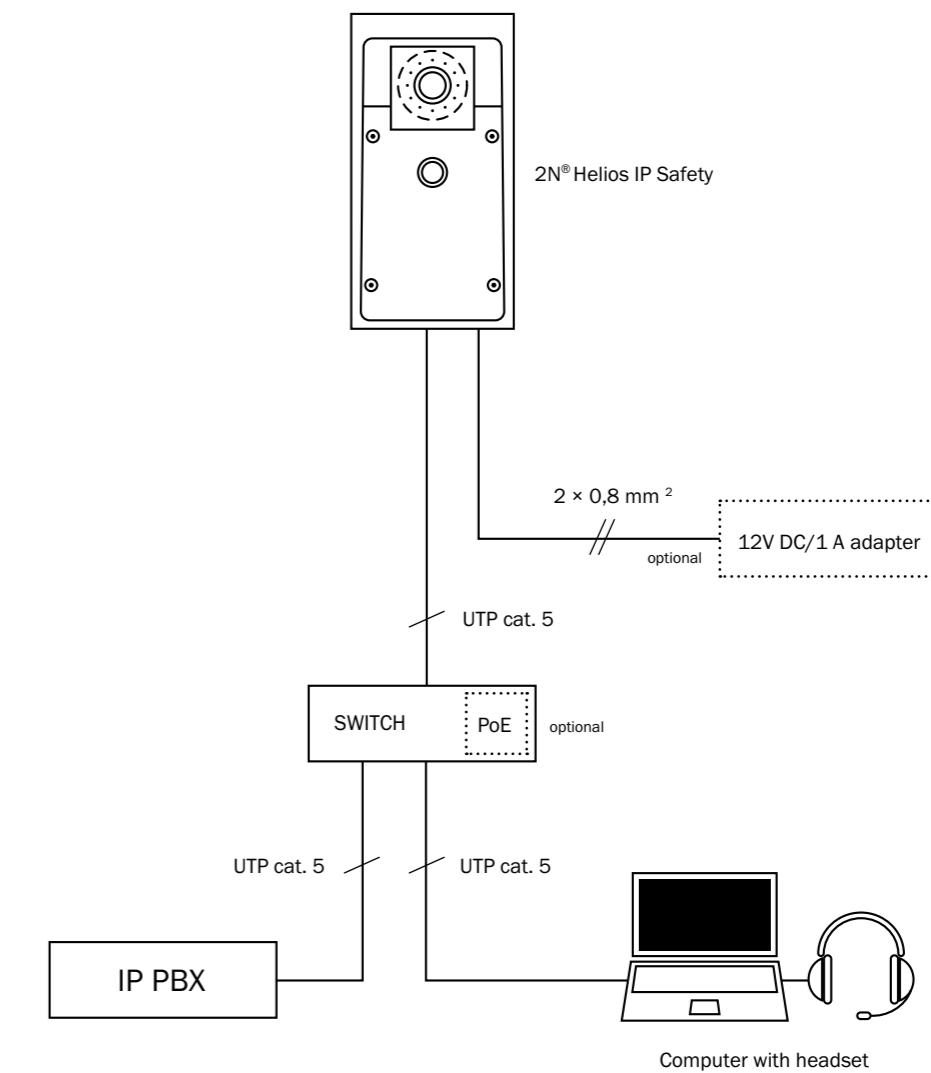
\* Power from external 12V adapter or POE

# 2N® Helios IP Uni

TECHNICAL PARAMETERS

| Signalling protocol | |
|---|---|
| | SIP (UDP) |
| | |
| **Buttons** | |
| Button finish | Transparent buttons with white backlighting and nameplate which can be replaced with ease |
| Number of buttons | 1 or 2 |
| | |
| **Audio** | |
| Microphone | 1 integrated microphone |
| Amplifier | 1 W (class D) amplifier |
| Speaker | 1 W |
| Volume control | adjustable with automatic adaptive mode |
| Full duplex | yes (AEC) |
| | |
| **Audio stream** | |
| Protocols | RTP/RTSP |
| Codecs | G.711 |
| | |
| **Interface** | |
| Power supply | 12 V ± 15 %/2A DC or PoE |
| PoE | PoE 802.3af (Class 0 – 12,95 W) |
| LAN | 10/100BASE-TX with Auto-MDIX, RJ-45 |
| Recommended cabling | Cat-5e or better |
| Passive switch | make and break contact, max. 30 V/1A AC/DC |
| Active switch output | 8–12 V DC/500 mA |
| | |
| **Mechanical properties** | |
| Cover | ABS plastic, high-quality stainless steel |
| Operating temperature | -40 °C – 55 °C |
| Operating relative humidity | 10 % – 95 % (non-condensing) |
| Storage temperature | -40 °C – 70 °C |
| Dimensions | 193 × 115 × 39 mm |
| | 197 × 119 × 47 mm fl ush fi tting box |
| | 193 × 115 × 57 mm when fi tted on surface |
| Weight | product net: 500 g |
| | wiring box: 135 g |
| | total including container: 800 |
| Cover rate | IP54 |

CONNECTION DIAGRAM



2N® Helios IP Uni

2 × 0,8 mm ²

12V DC/1 A adapter
optional

UTP cat.5

SWITCH     PoE     optional

UTP cat. 5          UTP cat. 5

IP PBX

IP Telephone
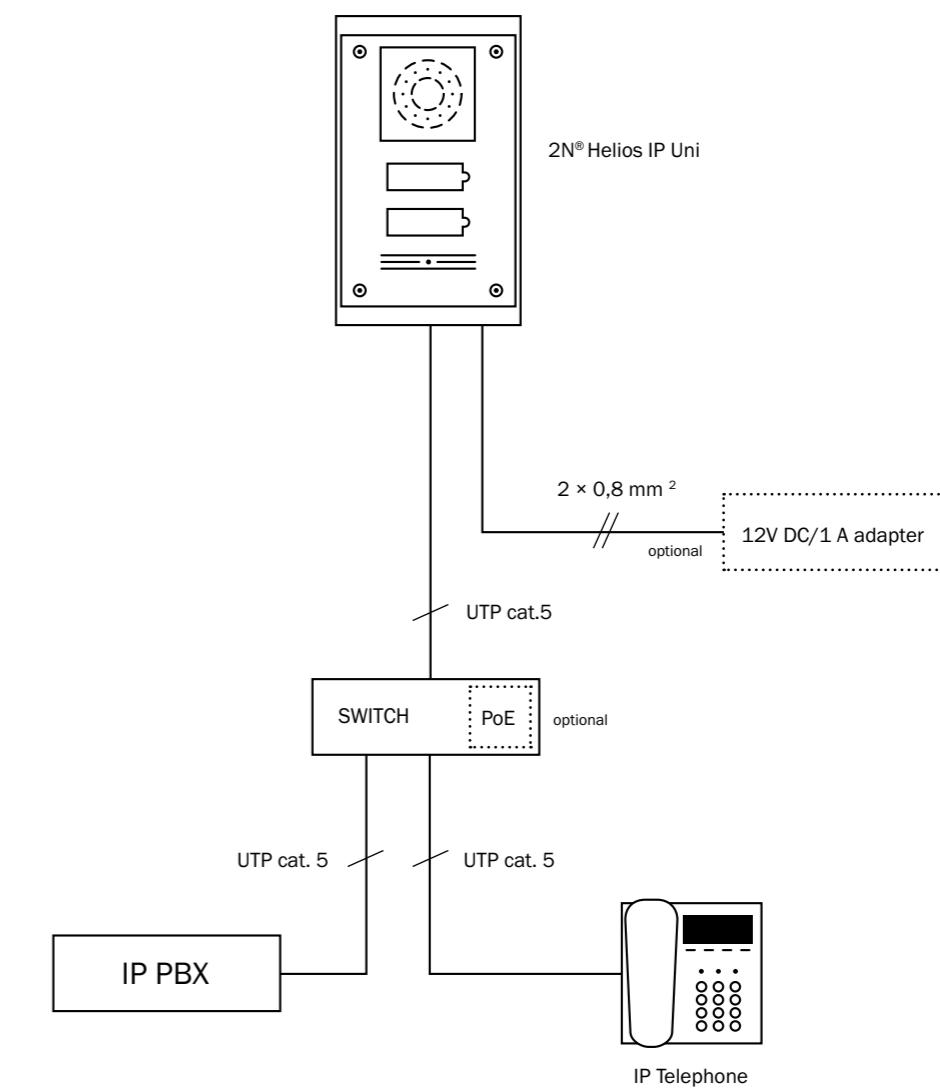
# 2N® IndoorTouch

## TECHNICAL PARAMETERS

| Signalling protocol | |
| --- | --- |
| | SIP |
| | |
| **User interface** | |
| Display | High-capacity touchscreen 16:9, 7″ display, resolution 1024 × 600 px 24 bpp (16.7 million colours), backlit LED with power saving mode, 1× RGB LED status indicator (missed calls, power saving mode, etc.) |
| | |
| **Audio** | |
| Microphone | Integrated microphone |
| Amplifier | Integrated 1× 2 W speaker |
| | |
| **Video** | |
| Protocols | RTSP, MJPEG/HTTP |
| Supervision and control of intercom | Yes |
| IP camera surveillance | Yes |
| | |
| **Operating system** | |
| OS version | Android 4.2 |
| | |
| **Interface** | |
| LAN | Ethernet 10/100BaseT, RJ–45 |
| Recommended cabling | Cat-5e or better |
| Memory card | SD type (up to 16 GB) |
| Power supply | External power adapter 12 V DC 2 A / PoE 802.3af Power comsumtion 10 W, GPIOs |
| | |
| **Mechanical properties** | |
| General | On-wall instalation |
| Operating temperature | 0 °C – 60 °C |
| Operating relative humidity | 10 % – 90 % (non-condensing) |
| Storage temperature | -20 °C – 70 °C |
| Dimensions | 235 × 165 × 40 mm |
| Weight | 850 g |

## CONNECTION DIAGRAM
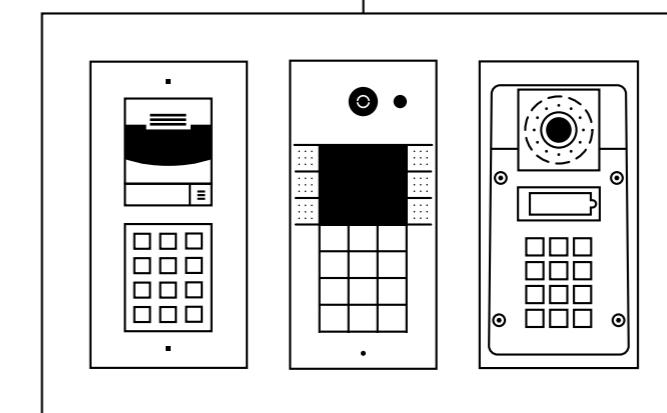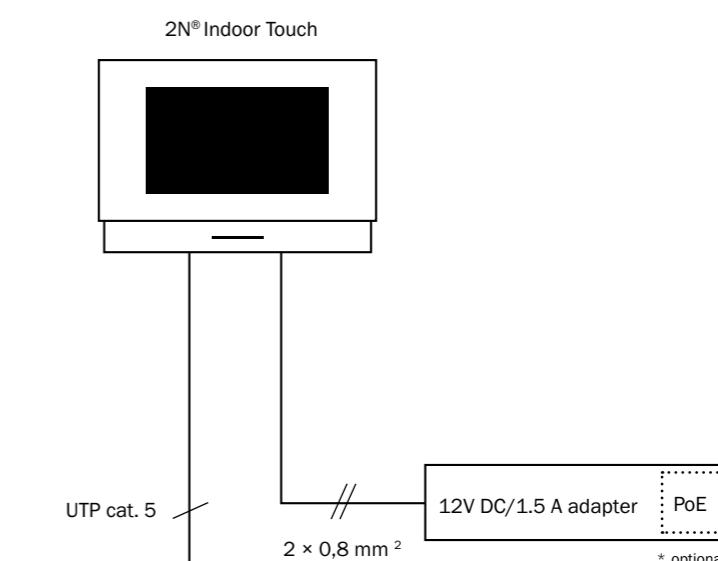


Optional VIDEO INTERCOM

# Analogue intercoms

## 2N® Helios IP Vario

TECHNICAL PARAMETERS

| Telephone part | Value | Conditions |
|---|---|---|
| Minimum line current | 15 mA | off the hook |
| Minimum line voltage | 20 V | off the hook |
| DC attenuation of voltage off the hook | < 8 V | I = 25 mA |
| | < 16 V | I = 50 mA |
| Leakage on the hook | < 25 µA | U = 60 V |
| Impedance off the hook | 220 Ω + 820 Ω | 20 to 60 mA |
| | paral. 115 nF | |
| Reflective attenuation | > 10 dB | 20 to 60 mA |
| Bandwidth | 300 to 3500 Hz | 20 to 60 mA |
| Impedance during ringing | > 2 kΩ | 25 to 50 Hz |
| | C = 470 nF | |
| Sensitivity of ringing detection | 10 to 20 V | 25 to 50 Hz |
| Reaction time to ringing | adjustable | |
| Pulse dialling | 40 / 60 ms | 20 to 60 mA |
| Level of pulse dialling | -6 and -8 dB ± 2 dB | 20 to 60 mA |
| Sensitivity of tone dialling receiver | Min. -40 dB | 20 to 60 mA |
| Sensitivity of dial tone detection | Min. -40 dB | 350–500 Hz |
| Speed of engaged tone detection | adjustable | 350–500 Hz |
| Speed of continuous tone detection | adjustable | 350–500 Hz |
| Speed of ringing tone detection | adjustable | 350–500 Hz |
| Overvoltage resilience – congruent | 1000 V | 8 / 20 µs |
| Overvoltage resilience – between wires A, B | 1000 V | 8 / 20 µs |

| Other parameters | Value | |
|---|---|---|
| Switch – max. voltage | 48 V AC, DC | |
| Switch – min. voltage | 9 V AC, DC | |
| Switch – max. current | 2 A AC, DC | |
| Illumination – nominal voltage | 12 V | |
| Illumination – max. voltage | 24 V | |
| Illumination – consumption | max. 1 A | |
| Range of operating temperatures | -20 to + 60  C | |
| Cover level | IP 53 | |
| Dimensions (1 module) | 210 × 100 × 29 mm (h × w × d) | |
| Weight | max. 500 g | |

CONNECTION DIAGRAM



2 × 0,8 mm²

1x Coax 75 Ohm

Internal module of camera

2N® Helios Vario

Door lock

2 × 0,8 mm²

2 × 0,8 mm²

12V DC/1 A adapter

only for backlighting

a/b wire

PBX

a/b wire

Analogue telephone
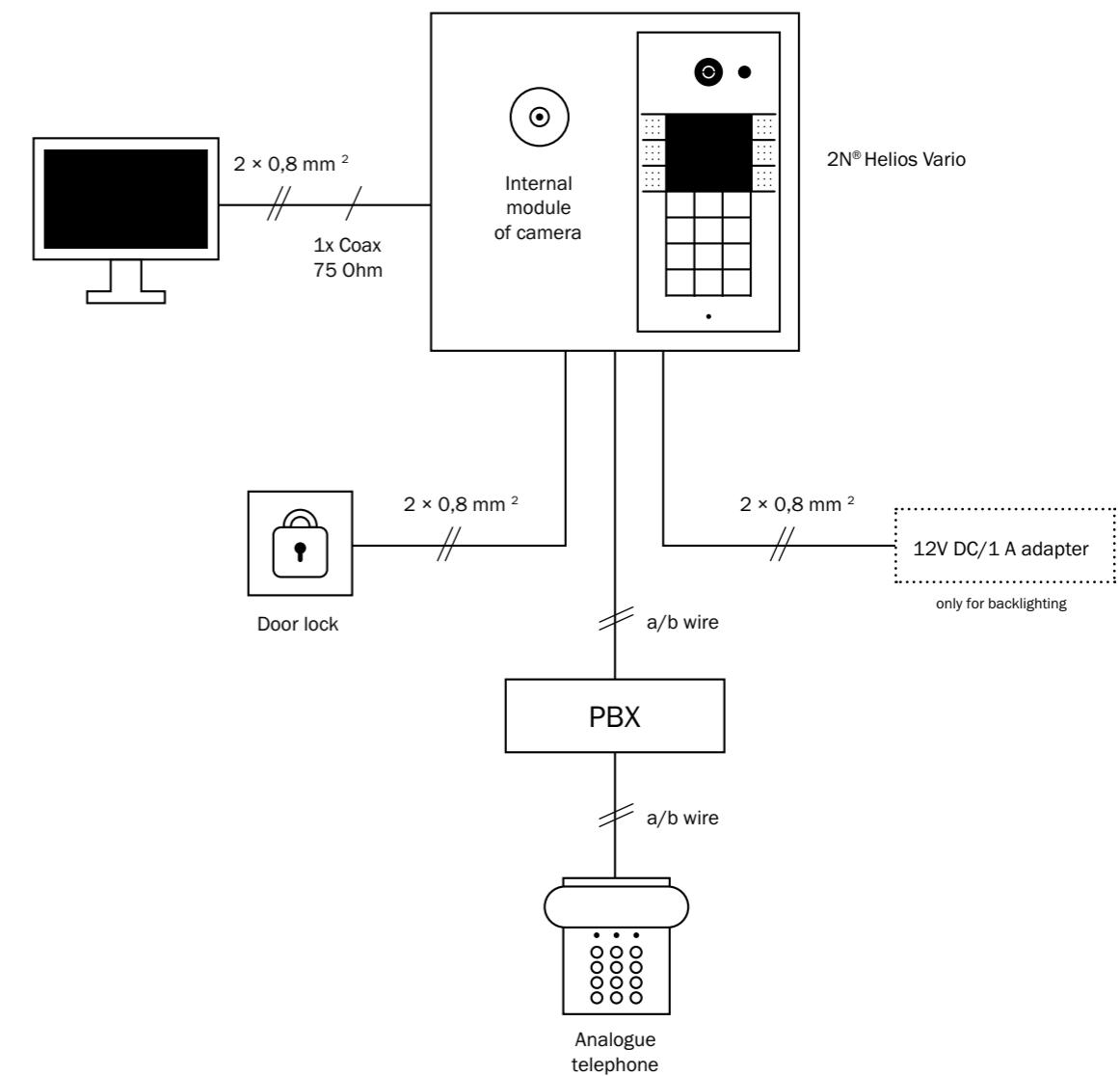
# 2N® Helios Force

TECHNICAL PARAMETERS

| Telephone part | Value | Conditions |
|---|---|---|
| Minimum line current | 15 mA | off the hook |
| Minimum line voltage | 20 V | off the hook |
| DC attenuation of voltage off the hook | < 8 V | I = 25 mA |
| | < 16 V | I = 50 mA |
| Leakage on the hook | < 25 µA | U = 60 V |
| Impedance off the hook | 220 Ω + 820 Ω | 20 to 60 mA |
| | paral. 115 nF | |
| Reflective attenuation | > 10 dB | 20 to 60 mA |
| Bandwidth | 300 to 3500 Hz | 20 to 60 mA |
| Impedance during ringing | > 2 kΩ | 25 to 50 Hz |
| | C = 470 nF | |
| Sensitivity of ringing detection | 10 to 20 V | 25 to 50 Hz |
| Reaction time to ringing | adjustable | |
| Pulse dialling | 40 / 60 ms | 20 to 60 mA |
| Level of pulse dialling | -6 and -8 dB ± 2 dB | 20 to 60 mA |
| Sensitivity of tone dialling receiver | Min. -40 dB | 20 to 60 mA |
| Sensitivity of dial tone detection | Min. -40 dB | 350–500 Hz |
| Speed of engaged tone detection | adjustable | 350–500 Hz |
| Speed of continuous tone detection | adjustable | 350–500 Hz |
| Speed of ringing tone detection | adjustable | 350–500 Hz |
| Overvoltage resilience – congruent | 1000 V | 8 / 20 µs |
| Overvoltage resilience – between wires A, B | 1000 V | 8 / 20 µs |

| Other parameters | Value | |
|---|---|---|
| Switch – max. voltage | 48 V AC, DC | |
| Switch – min. voltage | 9 V AC, DC | |
| Switch – max. current | 2 A AC, DC | |
| Illumination – nominal voltage | 12 V | |
| Illumination – max. voltage | 14 V | |
| Illumination – consumption | max. 150 mA | |
| Additional amplifier – consumption | max. 100 mA | |

| Buttons | | |
|---|---|---|
| Button finish | Buttons with backlit nameplates | |
| Number of buttons | 1 to 4 | |

| Audio | | |
|---|---|---|
| Microphone | 1 integrated microphone | |
| Amplifier | amplifier 0,5 W output | |

| Mechanical properties | | |
|---|---|---|
| Cover | Robust aluminium casting | |
| Operating temperature | -25 °C – 55 °C | |
| Operating relative humidity | 10 % – 95 % (non-condensing) | |
| Storage temperature | -40 °C – 70 °C | |
| Dimensions | 217 × 109 × 83 mm | |
| | 242 × 136 × 83 mm with frame | |
| Weight | net max. 2 kg / gross max. 2,5 kg | |
| Cover rating | IP65 | |

CONNECTION DIAGRAM
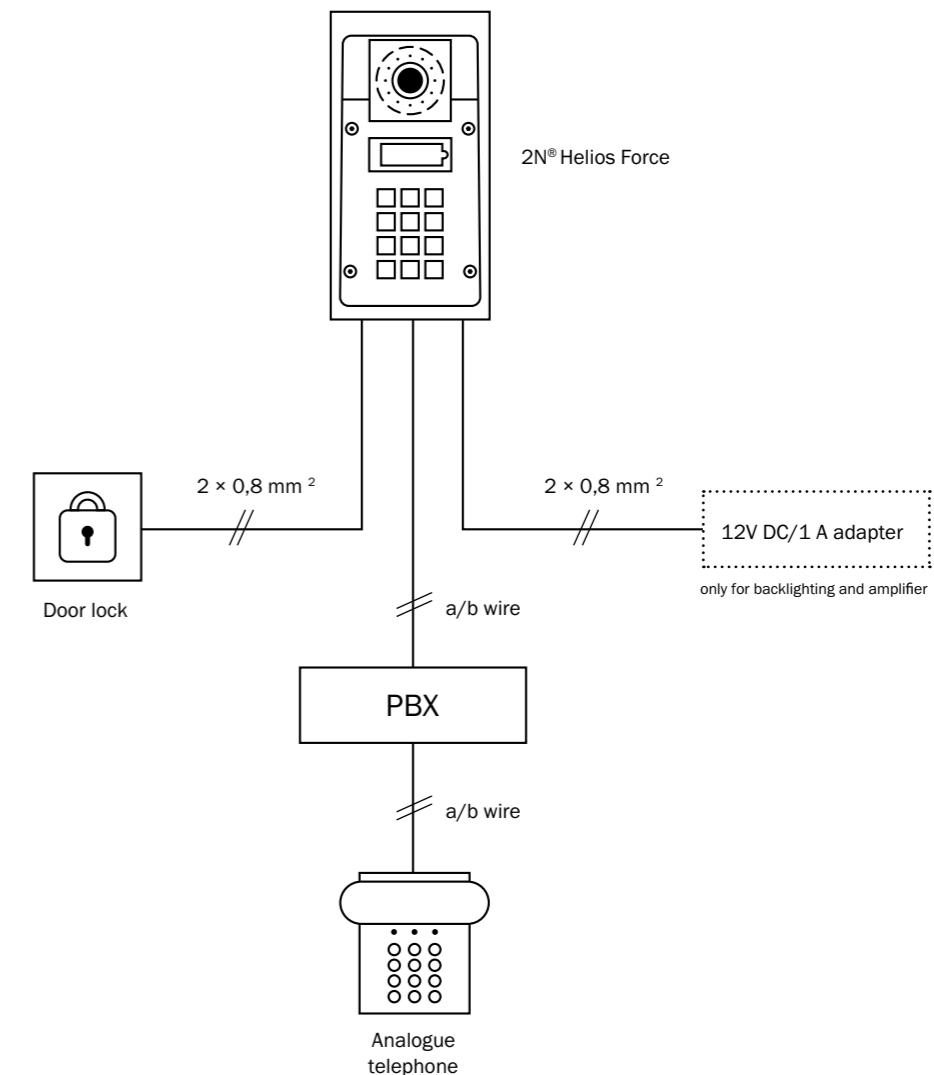
# 2N® Helios Safety

TECHNICAL PARAMETERS

| Telephone part | Value | Conditions |
|---|---|---|
| Minimum line current | 15 mA | off the hook |
| Minimum line voltage | 20 V | off the hook |
| DC attenuation of voltage off the hook | < 8 V | I = 25 mA |
|  | < 16 V | I = 50 mA |
| Leakage on the hook | < 25 μA | U = 60 V |
| Impedance off the hook | 220 Ω + 820 Ω | 20 to 60 mA |
|  | paral. 115 nF |  |
| Reflective attenuation | > 10 dB | 20 to 60 mA |
| Bandwidth | 300 to 3500 Hz | 20 to 60 mA |
| Impedance during ringing | > 2 kΩ | 25 to 50 Hz |
|  | C = 470 nF |  |
| Sensitivity of ringing detection | 10 to 20 V | 25 to 50 Hz |
| Reaction time to ringing | adjustable |  |
| Pulse dialling | 40 / 60 ms | 20 to 60 mA |
| Level of pulse dialling | -6 and -8 dB ± 2 dB | 20 to 60 mA |
| Sensitivity of tone dialling receiver | Min. -40 dB | 20 to 60 mA |
| Sensitivity of dial tone detection | Min. -40 dB | 350–500 Hz |
| Speed of engaged tone detection | adjustable | 350–500 Hz |
| Speed of continuous tone detection | adjustable | 350–500 Hz |
| Speed of ringing tone detection | adjustable | 350–500 Hz |
| Overvoltage resilience – congruent | 1000 V | 8 / 20 μs |
| Overvoltage resilience – between wires A, B | 1000 V | 8 / 20 μs |
|  |  |  |

| Other parameters | Value |  |
|---|---|---|
| Switch – max. voltage | 48 V AC, DC |  |
| Switch – min. voltage | 9 V AC, DC |  |
| Switch – max. current | 2 A AC, DC |  |
| Illumination – nominal voltage | 12 V |  |
| Illumination – max. voltage | 14 V |  |
| Illumination – consumption | max. 150 mA |  |
| Additional amplifier – consumption | max. 100 mA |  |

CONNECTION DIAGRAM



2N® Helios Safety

2 × 0,8 mm²

2 × 0,8 mm²

12V DC/1 A adapter

only for backlighting and amplifier

Door lock

a/b wire

PBX

a/b wire

Analogue
telephone
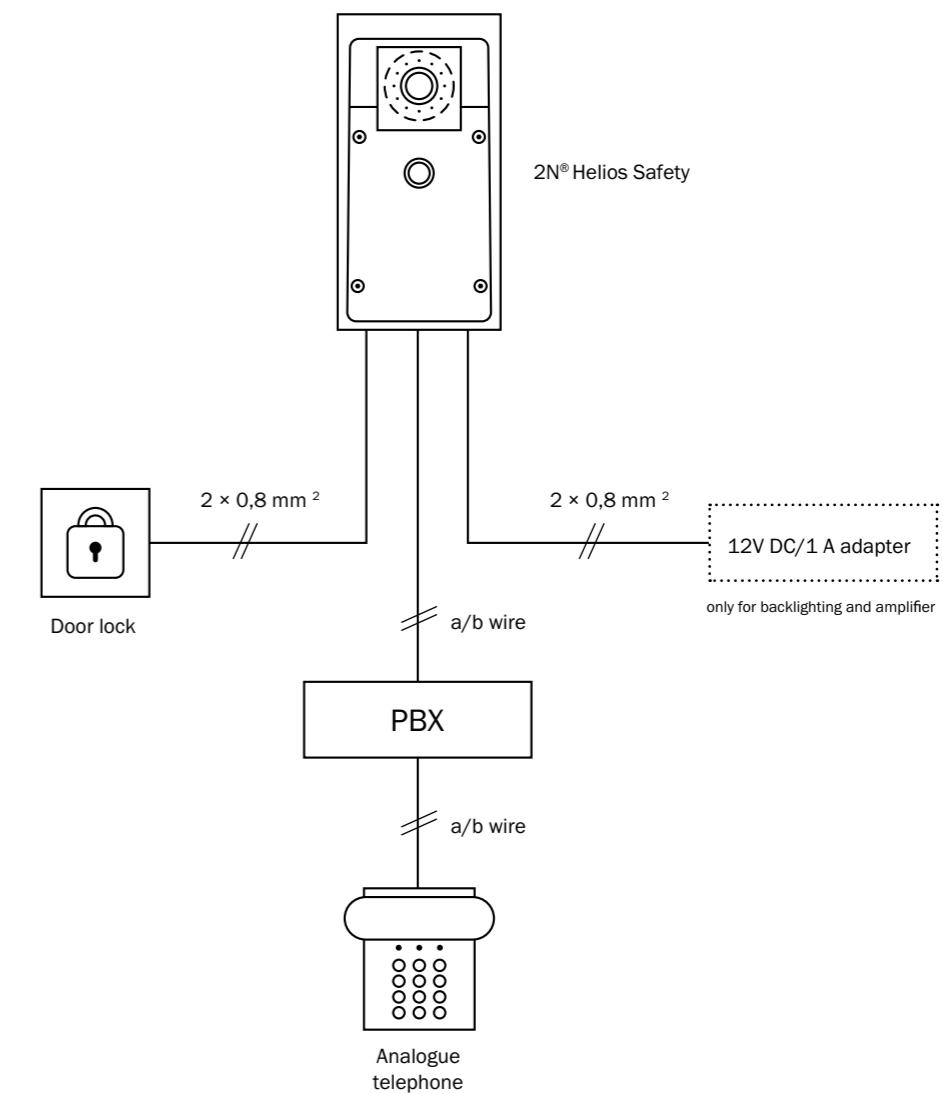
# 2N® Helios Uni

## TECHNICAL PARAMETERS

| Telephone part | Value | Conditions |
| --- | --- | --- |
| Minimum line current | 15 mA | off the hook |
| Minimum line voltage | 20 V | off the hook |
| DC attenuation of voltage off the hook | < 8 V | I = 25 mA |
| | < 16 V | I = 50 mA |
| Leakage on the hook | < 25 µA | U = 60 V |
| Impedance off the hook | 220 Ω + 820 Ω | 20 to 60 mA |
| | paral. 115 nF | |
| Reflective attenuation | > 10 dB | 20 to 60 mA |
| Bandwidth | 300 to 3500 Hz | 20 to 60 mA |
| Impedance during ringing | > 2 kΩ | 25 to 50 Hz |
| | C = 470 nF | |
| Sensitivity of ringing detection | 10 to 20 V | 25 to 50 Hz |
| Reaction time to ringing | adjustable | |
| Pulse dialling | 40 / 60 ms | 20 to 60 mA |
| Level of pulse dialling | -6 and -8 dB ± 2 dB | 20 to 60 mA |
| Sensitivity of tone dialling receiver | Min. -40 dB | 20 to 60 mA |
| Sensitivity of dial tone detection | Min. -40 dB | 350–500 Hz |
| Speed of engaged tone detection | adjustable | 350–500 Hz |
| Speed of continuous tone detection | adjustable | 350–500 Hz |
| Speed of ringing tone detection | adjustable | 350–500 Hz |
| Overvoltage resilience – congruent | 1000 V | 8 / 20 µs |
| Overvoltage resilience – between wires A, B | 1000 V | 8 / 20 µs |

| Other parameters | Value | |
| --- | --- | --- |
| Switch – max. voltage | 48 V AC, DC | |
| Switch – min. voltage | 9 V AC, DC | |
| Switch – max. current | 2 A AC, DC | |
| Illumination – nominal voltage | 12 V | |
| Illumination – max. voltage | 14 V | |
| Illumination – consumption | max. 5 mA | |

## CONNECTION DIAGRAM



2N® Helios Uni

Door lock — 2 × 0,8 mm² — a/b wire

2 × 0,8 mm² — 12V DC/1 A adapter

only for backlighting

PBX

a/b wire

Analogue telephone
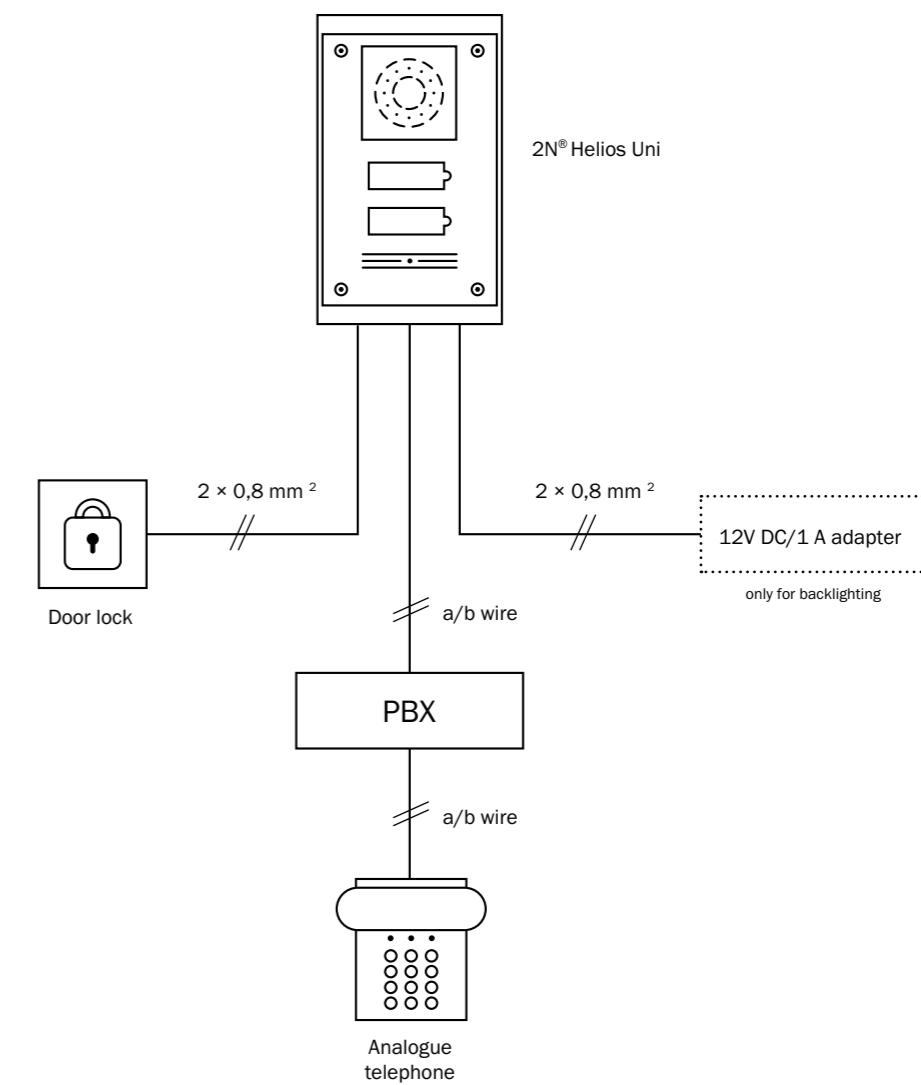
# IP PA systems

## 2N® Net Audio Decoder

### TECHNICAL PARAMETERS

| Interface | |
|---|---|
| Power from external source | 12 V DC / 2 A |
| Power from LAN | PoE IEEE 802.3af |
| LAN connection | RJ-45 connector on rear panel 10/100BASE-TX with function Auto-MDIX |
| Digital output | 1× Relay output, 24 V 1A AC/DC, galvanically insulated |
| Digital input | 1× Digital input, 5 to 24 V DC, galvanically uninsulated |
| Earphone/line out | 1× STEREO 3,5 mm jack on front panel |
| Expansion of internal memory | 1× Slot for MicroSD memory card on front panel |
| Output of powerful amplifier | 4× terminal on rear panel, STEREO/MONO with autodetection |

| Control and signalling | |
|---|---|
| Signalling state | 1× RGB LED on front panel |
| Local control | 2× button on front panel |
| Remote control | 1× Infrared detector on front panel |

| Audio | | | |
|---|---|---|---|
| Speaker impedance | 4 – 16 Ω | | |
| Amplifier performance | Speaker | 12 V/2 A | PoE |
| | 2 × 4 Ω STEREO | 2 × 2,5 W | 2 × 2,5 W |
| | 2 × 8 Ω STEREO | 2 × 7 W | 2 × 4 W |
| | 2 × 16 Ω STEREO | 2 × 4 W | 2 × 4 W |
| | 4 Ω MONO | 1 × 14 W | 1 × 8 W |
| | 8 Ω MONO | 1 × 8 W | 1 × 8 W |
| Frequency range | 20 Hz – 20 kHz (± 0,5 dB) | | |
| Harmonic distortion | 0,05 % @ 1 kHz | | |
| Signal-to-noise ratio | 91 dB | | |
| Audio compression | MPEG-1 Audio Layer II (MP2) | | |
| Bandwidth | 32–320 kbps | | |

| Mechanical properties | |
|---|---|
| Dimensions | 105 × 34 × 86 mm |
| Dimensions (with L-profiles) | 130 × 34 × 86 mm |
| Weight | 300 g |

### CONNECTION DIAGRAM



2 × 1,5 mm²    2 × 1,5 mm²
2N® Net Audio Decoder    optional   12V DC/2 A adapter
2 × 0,8 mm²
UTP cat. 5

2 × 1,5 mm²    2 × 1,5 mm²
2N® Net Audio Decoder    optional   12V DC/2 A adapter
2 × 0,8 mm²
UTP cat. 5

UTP cat. 5   SWITCH   PoE   optional

2N® IP Audio Server – Central management

UTP cat. 5

2 × 0,8 mm²
2N® Net Audio Decoder    optional   12V DC/2 A adapter

2 × 1,5 mm²    2 × 1,5 mm²

UTP cat. 5

2 × 0,8 mm²
2N® Net Audio Decoder built-in version    optional   12V DC/2 A adapter
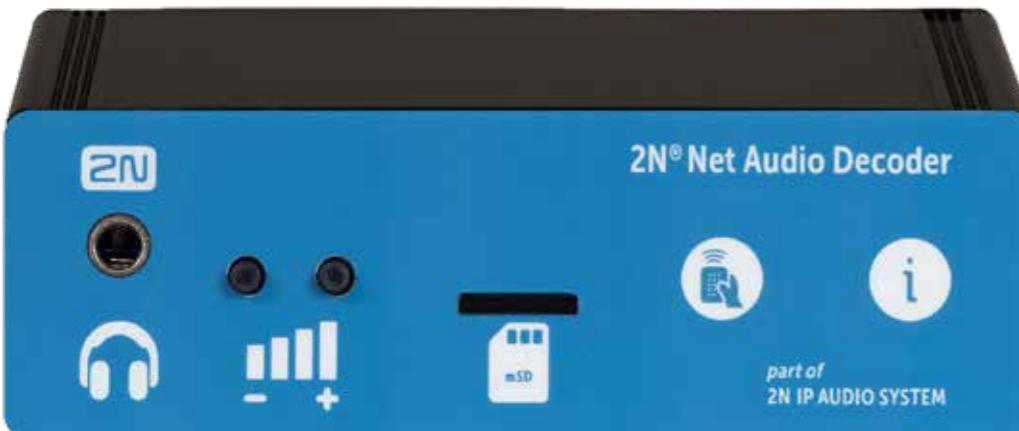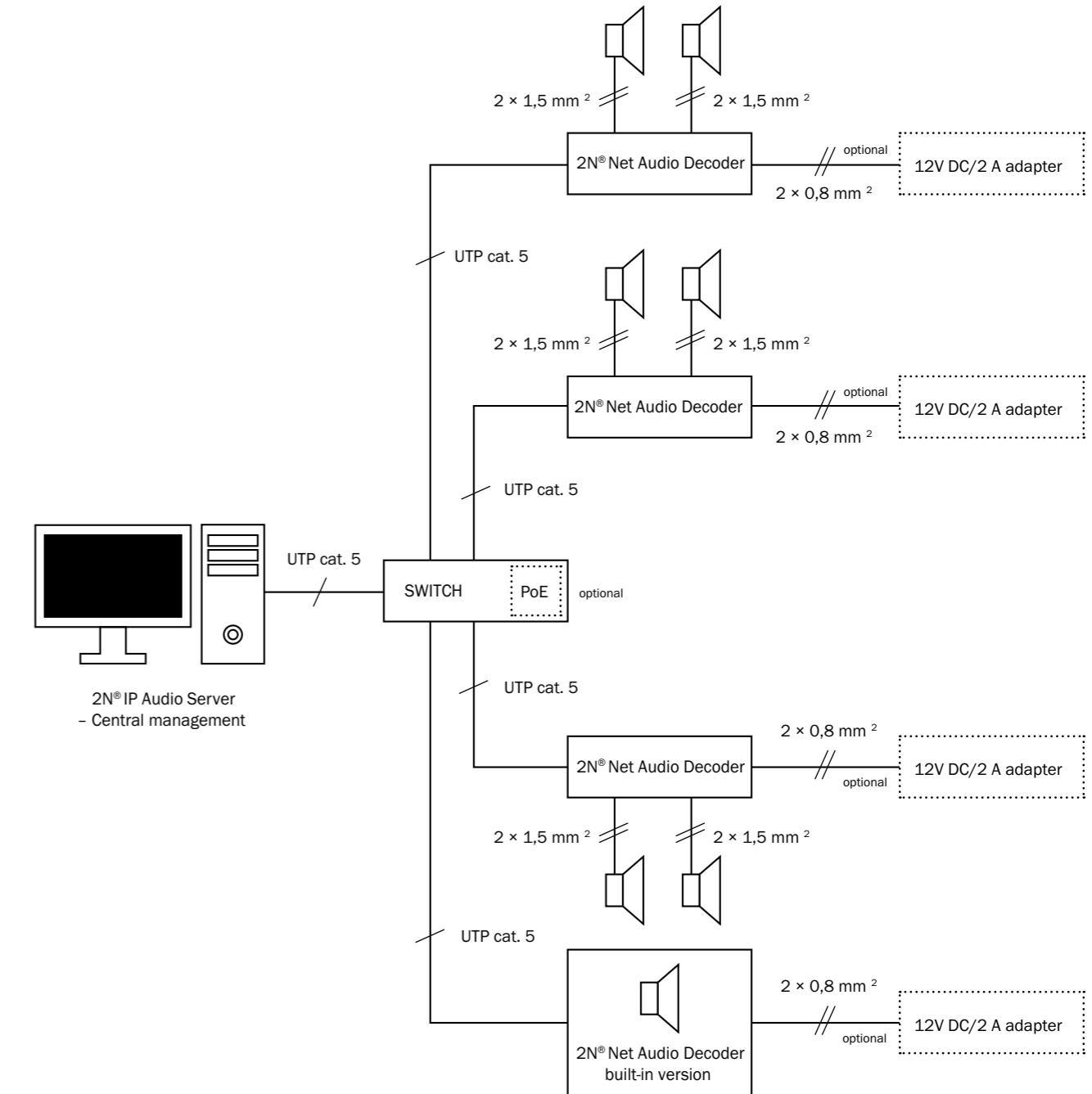
\* Power from external 12V adapter or POE

# 2N® SIP Audio Converter

## TECHNICAL PARAMETERS

| Interface | |
|---|---|
| Power from external source | 12 V DC / 2 A |
| Power from LAN | PoE IEEE 802.3af |
| LAN connection | RJ-45 connector on rear panel 10/100BASE-TX with function Auto-MDIX |
| Digital output | 1× Relay output, 24V 1A AC/DC, galvanically insulated |
| Digital input | 1× Digital input, 5 to 24 V DC, galvanically uninsulated |
| Earphone/line out | 1× STEREO 3,5 mm jack on front panel |
| Microphone/Line in | 1× STEREO 3,5 mm jack on front panel |
| Output of powerful amplifier | 4× terminal on rear panel, STEREO/MONO with autodetection |

| Control and signalling | |
|---|---|
| Signalling state | 3× RGB LED on front panel |
| Local control | 3× button on front panel |
| Remote control | 1× Infrared detector on front panel |

| Audio | | | |
|---|---|---|---|
| Speaker impedance | 4 – 8 Ω | | |
| Amplifier performance | Speaker | 12 V/2 A | PoE |
| | 2 × 4 Ω STEREO | 2 × 10 W | 2 × 5 W |
| | 2 × 8 Ω STEREO | 2 × 9 W | 2 × 5 W |
| | 4 Ω MONO | 1 × 18 W | 1 × 10 W |
| | 8 Ω MONO | 1 × 18 W | 1 × 10 W |
| Frequency range | 20 Hz – 20 kHz (± 0,5 dB) | | |
| Harmonic distortion | 0,05 % @ 1 kHz | | |
| Signal-to-noise ratio | 91 dB | | |
| Audio compression | MPEG-1 Audio Layer II (MP2) | | |
| Bandwidth | 32–320 kbps | | |
| Audiocodices | G.711 (PCMA, PCMU), G.729 (Annex A, B), L16 | | |

| Mechanical properties | |
|---|---|
| Dimensions | 105 × 34 × 86 mm |
| Dimensions (with L-profiles) | 130 × 34 × 86 mm |
| Weight | 300 g |

## TECHNICAL PARAMETERS

SIP Audio Converter
built into speaker

| Interface | |
|---|---|
| Power from external source | 12 V DC / 2 A |
| Power from LAN | PoE IEEE 802.3af |
| LAN connection | RJ-45 connector on rear panel 10/100BASE-TX with function Auto-MDIX |
| Digital output | Only external contact required |
| Digital input | 1× Digital input, 5 to 24 V DC, galvanically uninsulated |
| Output of powerful amplifier | 6 W |

| Control and signalling | |
|---|---|
| | 3 buttons |

| Audio | |
|---|---|
| Sound pressure level | 100 dB |
| Frequency range | 20 Hz – 20 kHz (± 0,5 dB) |
| Harmonic distortion | 0,05 % @ 1 kHz |
| Signal-to-noise ratio | 91 dB |
| Audiocodices | G.711 (PCMA, PCMU), G.729 (Annex A, B), L16 |

| Mechanical properties | |
|---|---|
| Dimensions | 237 × 170 × 80 mm |
| Weight | 1 300 g |

## CONNECTION DIAGRAM
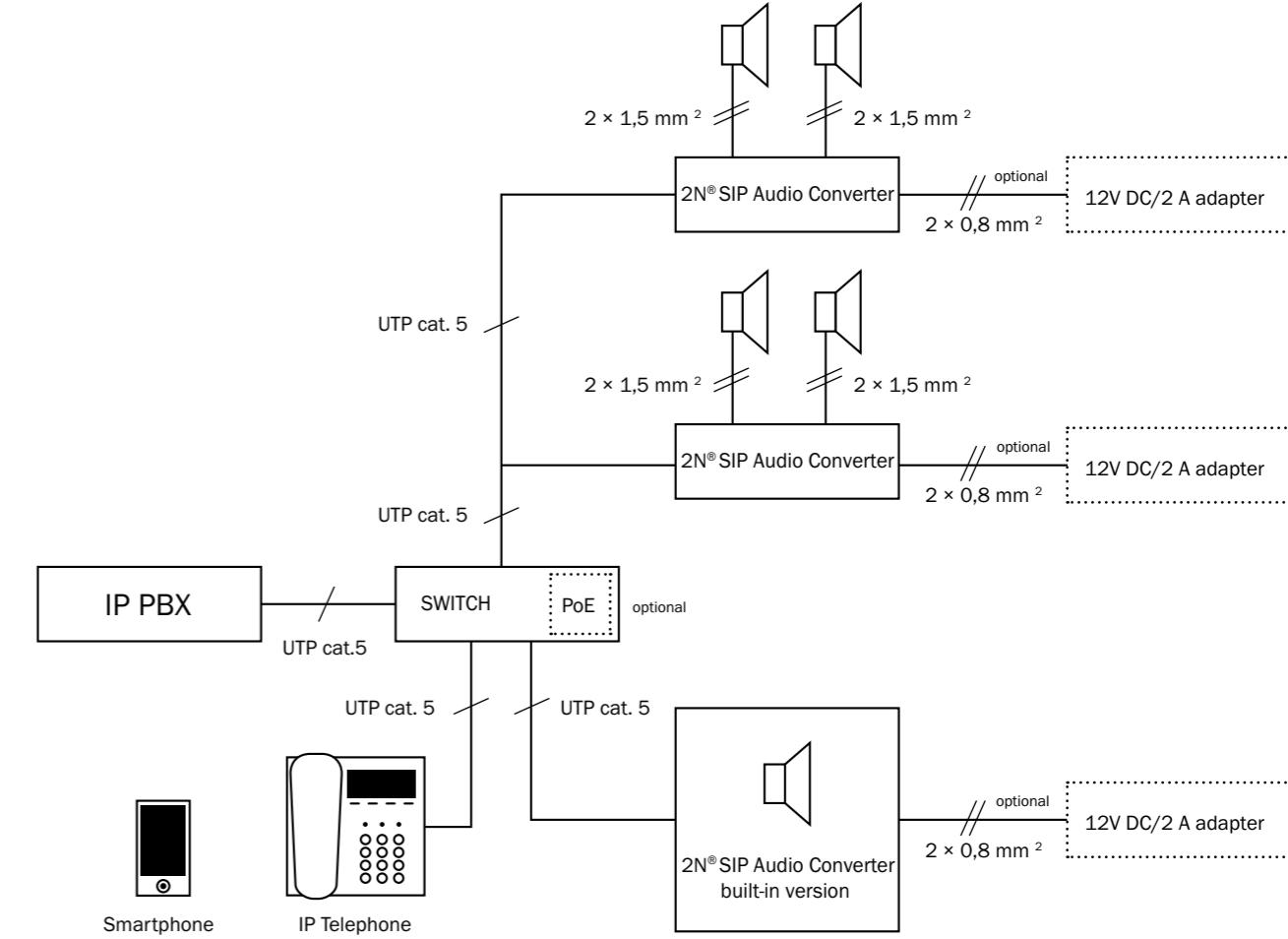


* Power from external 12V adapter or POE

# 2N® Net Mic

## TECHNICAL PARAMETERS

| Power supply | |
|---|---|
| | 12 to 32 V, max. 1 A |
| | PoE in accordance with 802.3af standard |
| | |
| **Buttons and captions** | |
| Dimensions of captions | 39.6 mm width × 9 mm height |
| 12x customizable buttons | zone selection for announcement |
| | zone selection with predefined message |
| Large button (speak) | 25.5 mm × 12 mm |
| Small button (listen) | 12 mm × 12 mm |
| | |
| **Audio stream** | |
| | PCM, 44 100KHz, 16bit, Stereo |
| Speakers | 2 built-in, stereo, power output 2 × 1 W |
| Main microphone input | Symmetrical, XLR, integrated phantom current of 24 V, DR 88 dB, THD+N -82 dB |
| | |
| **Mechanical properties** | |
| Operating temperature | 0–40 °C |
| Dimensions | 209 × 65 × 143 mm |

## CONNECTION DIAGRAM



2 × 1,5 mm²  2 × 1,5 mm²

2N® Net Audio Decoder — optional — 12V DC/2 A adapter

2 × 0,8 mm²

UTP cat. 5

UTP cat. 5   SWITCH   PoE   UTP cat. 5   2N® Net Mic   2 × 0,8 mm²   optional   12V DC/2 A adapter

optional

2N® IP Audio Server
– Central management

UTP cat. 5

2 × 0,8 mm²

2N® Net Audio Decoder — optional — 12V DC/2 A adapter

2 × 1,5 mm²  2 × 1,5 mm²
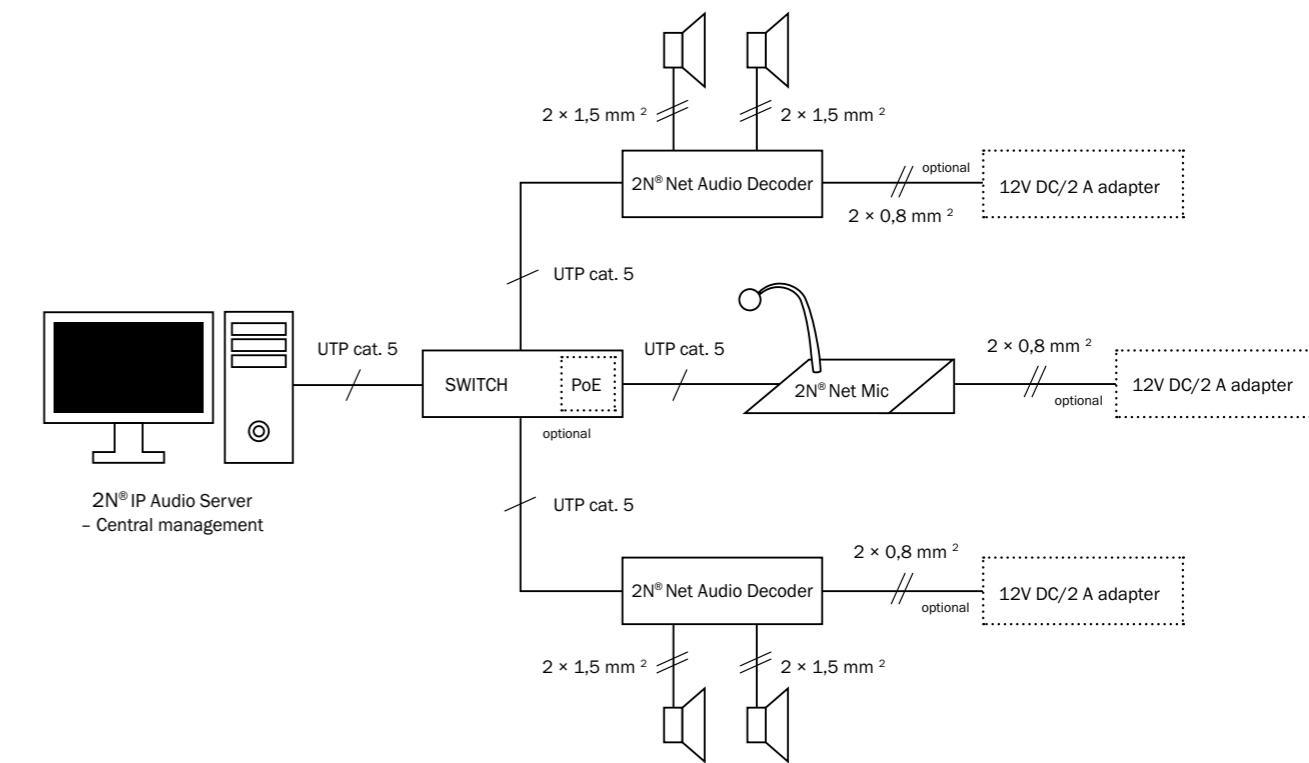
* Power from external 12V adapter or POE

# Dimensions and fitting

## 2N® Helios IP Verso

IN-WALL 2 MODULES
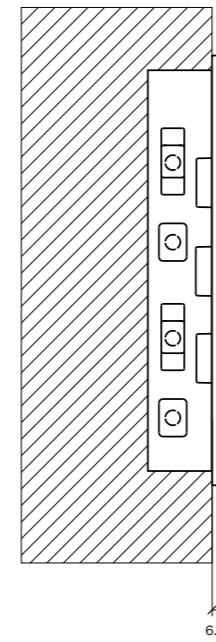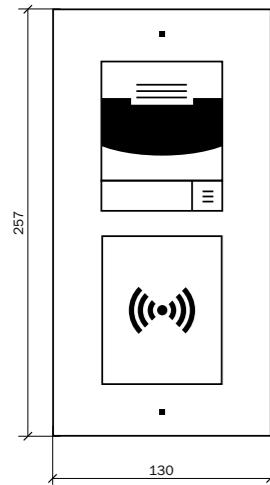


2× IN-WALL 2 MODULES



IN-WALL 3 MODULES
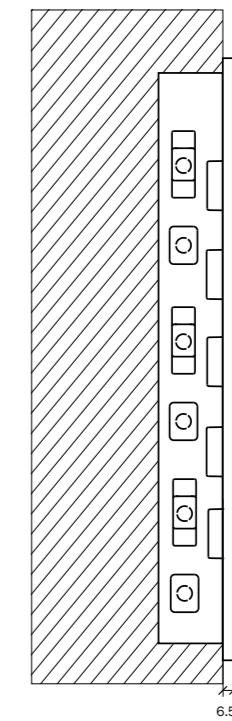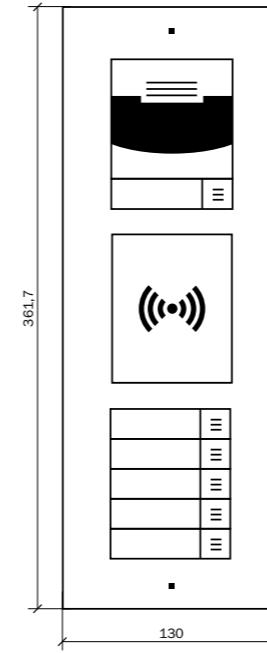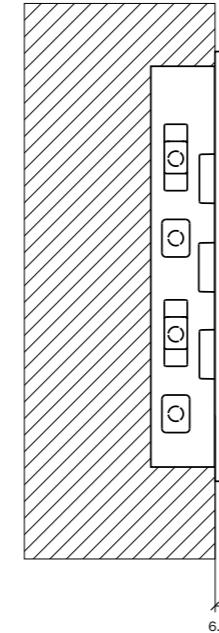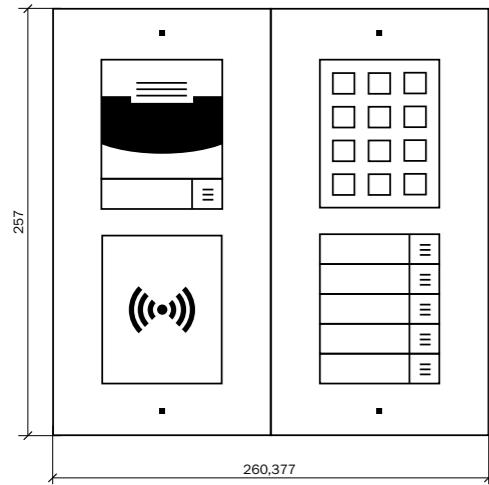


2× IN-WALL 3 MODULES
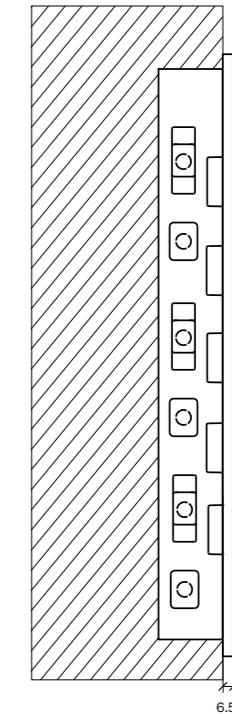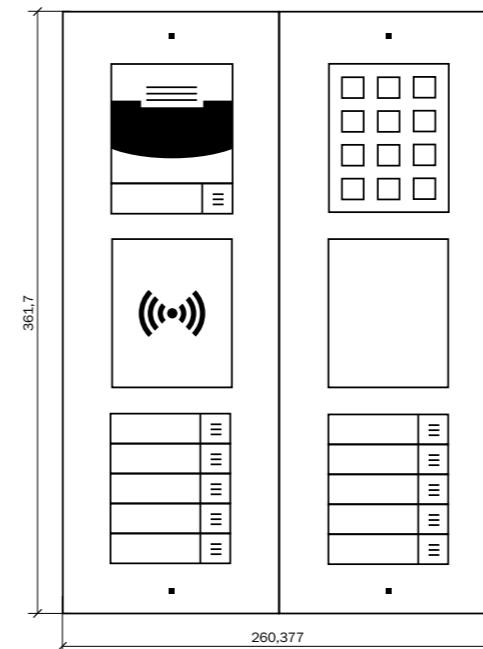
WALL-MOUNTED 2 MODULES
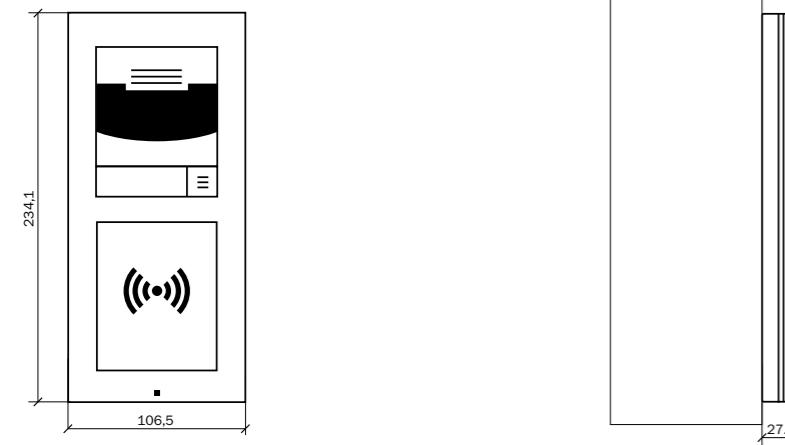


WALL-MOUNTED 3 MODULES
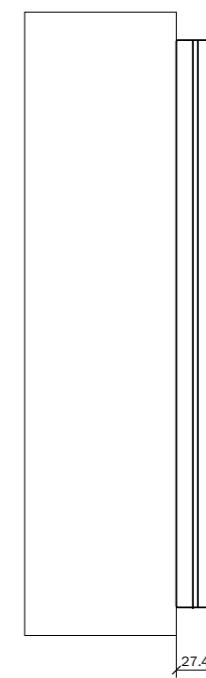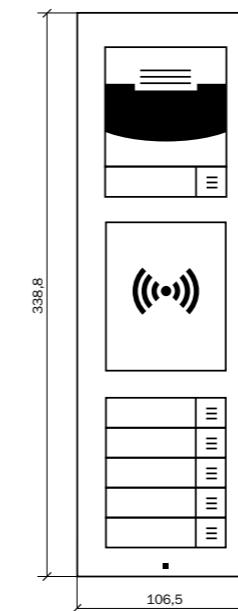


2× WALL-MOUNTED 2 MODULES
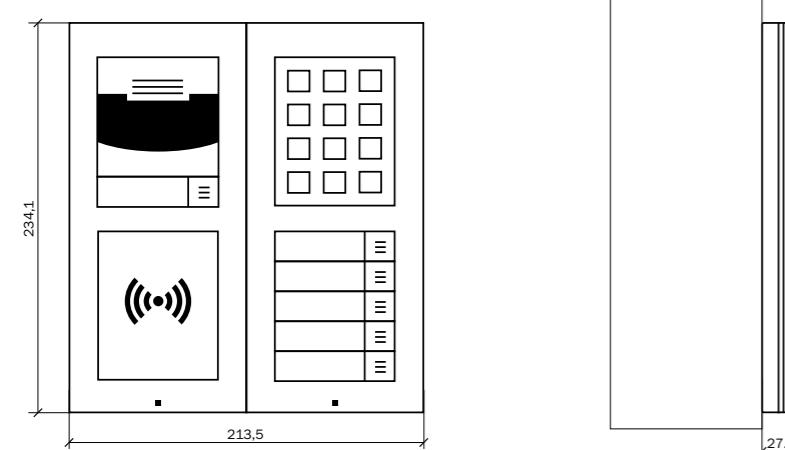


2× WALL-MOUNTED 3 MODULES

1 MODULE, WALL-MOUNTED

129.7

106.5

27.45

IN-WALL 1 MODULE

152.3

130

6.5
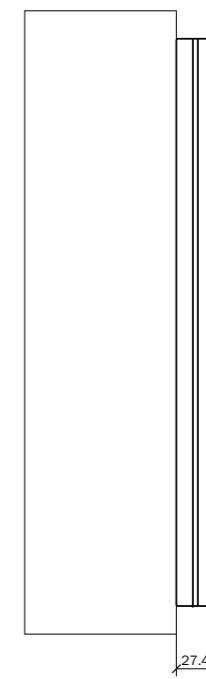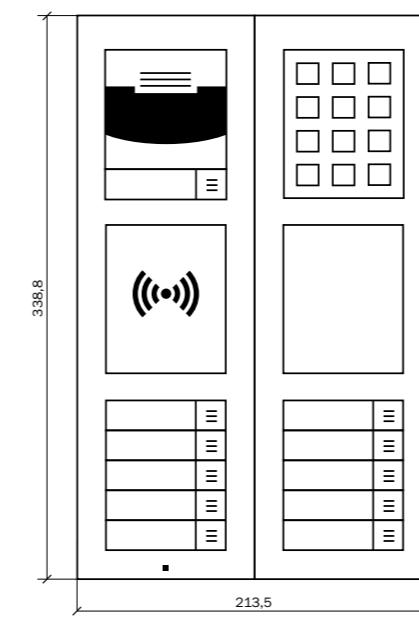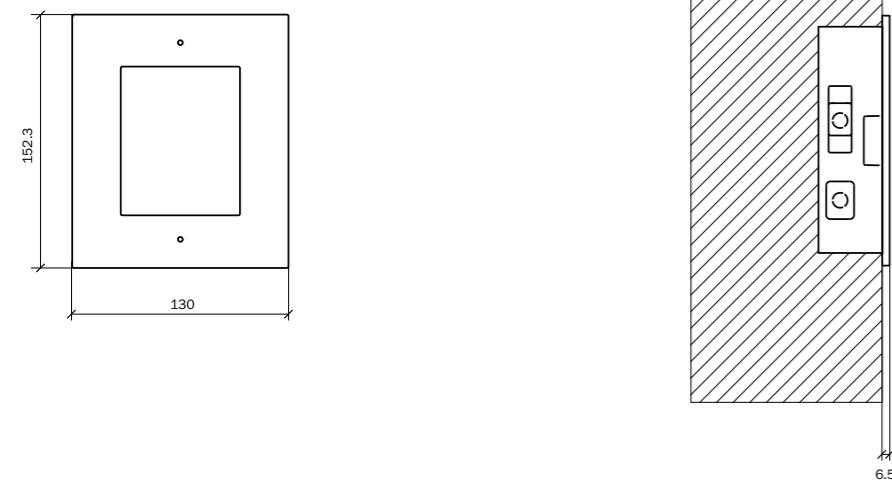
# 2N® Helios (IP) Vario

### 1 MODULE, FLUSH-MOUNTED
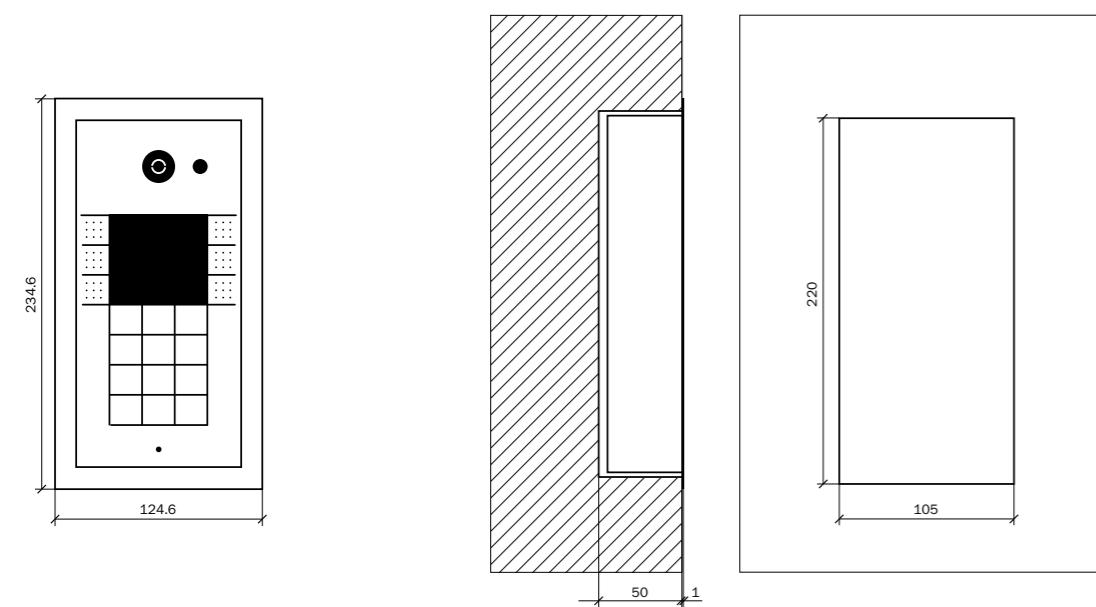


### 2 MODULES, FLUSH-MOUNTED
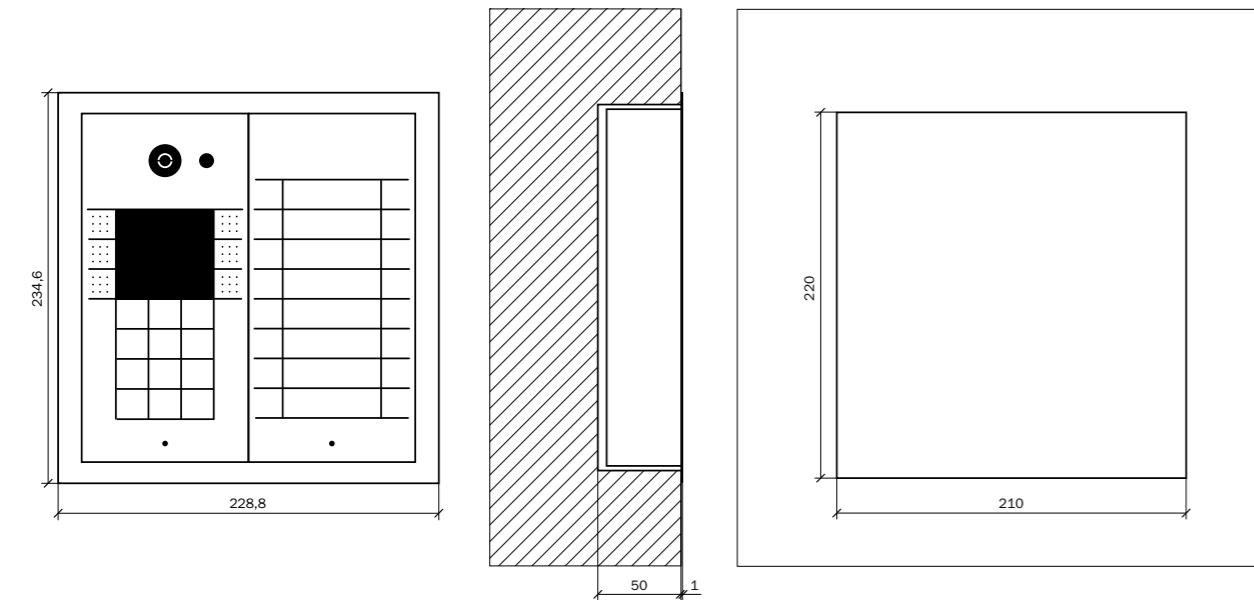


### 1 MODULE WITH SHELTER, FLUSH-MOUNTED
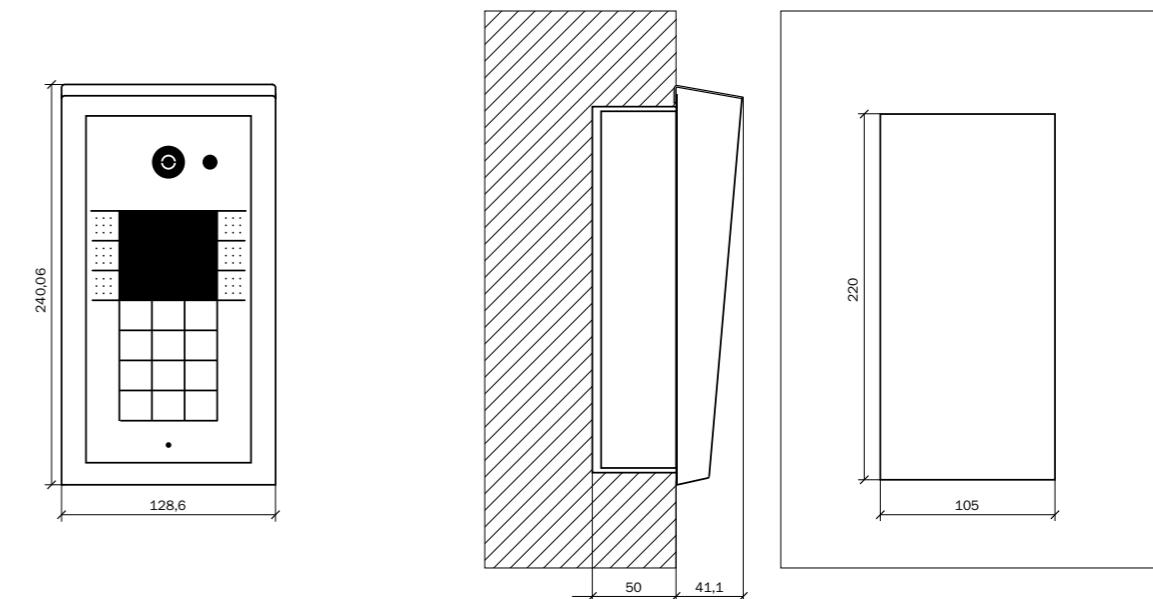


### 2 MODULES WITH SHELTER, FLUSH-MOUNTED

1 MODULE, WALL-MOUNTED



210

100

29,6
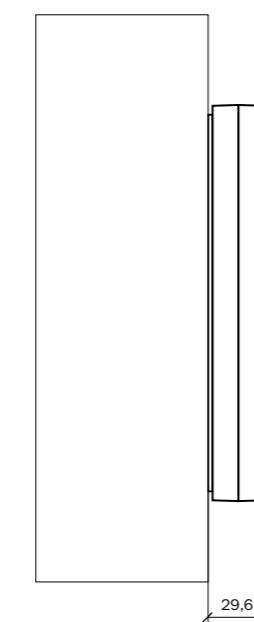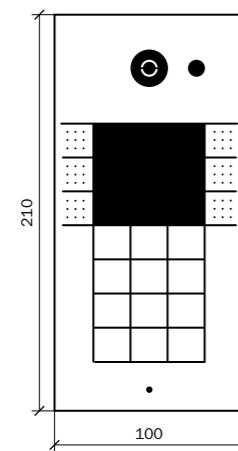
1 MODULE WITH SHELTER, WALL-MOUNTED



217,4

102,6

60

2 MODULES, WALL-MOUNTED



210

200,2

29,6

2 MODULES WITH SHELTER, WALL-MOUNTED



217,4

202,8

60
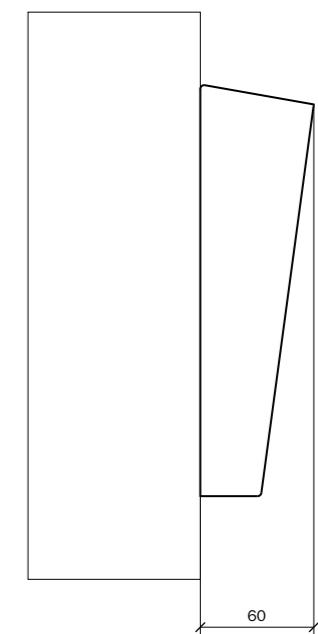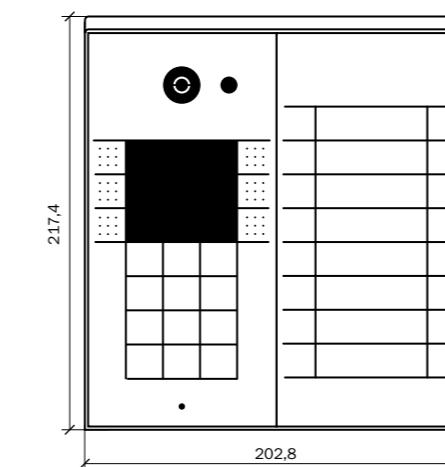
# 2N® Helios (IP) Force

### FLUSH-MOUNTED WITHOUT BOX
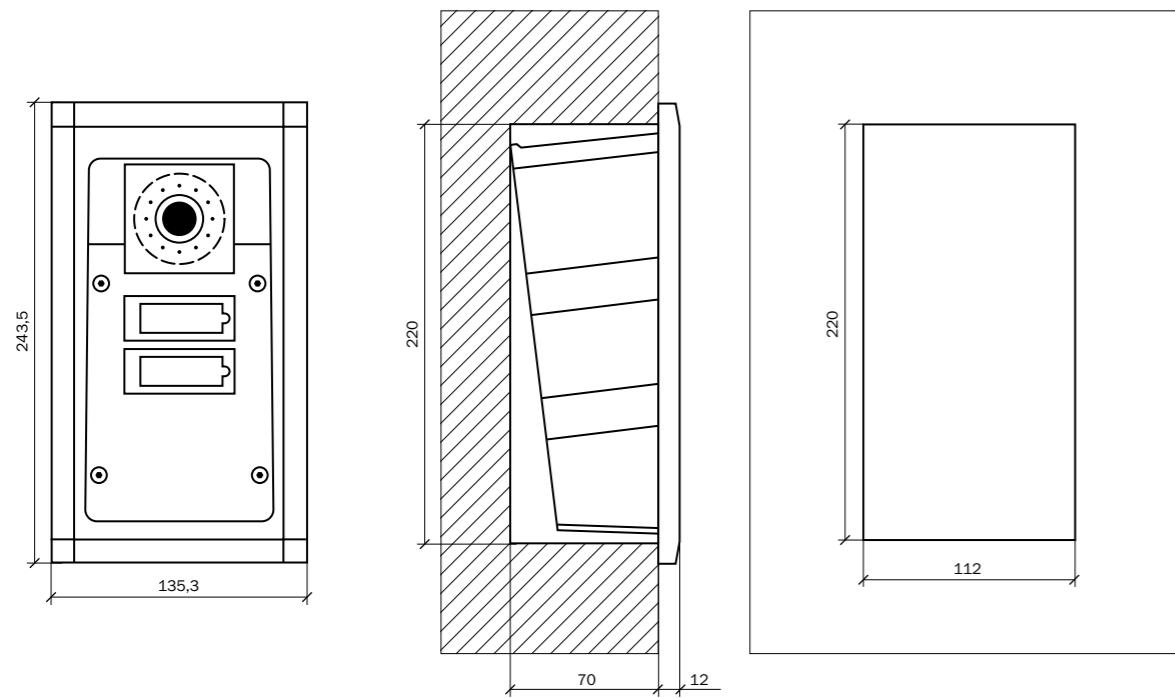


### FLUSH-MOUNTED WITH BOX



### MOUNTING IN PLASTERBOARD
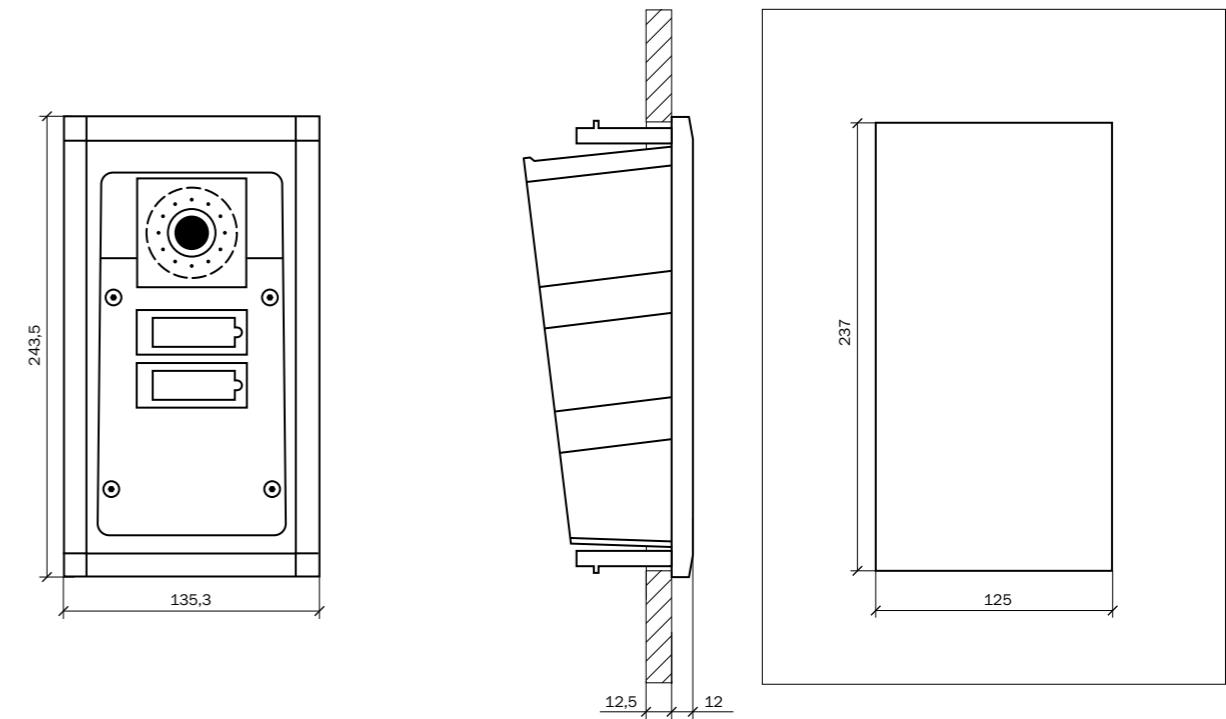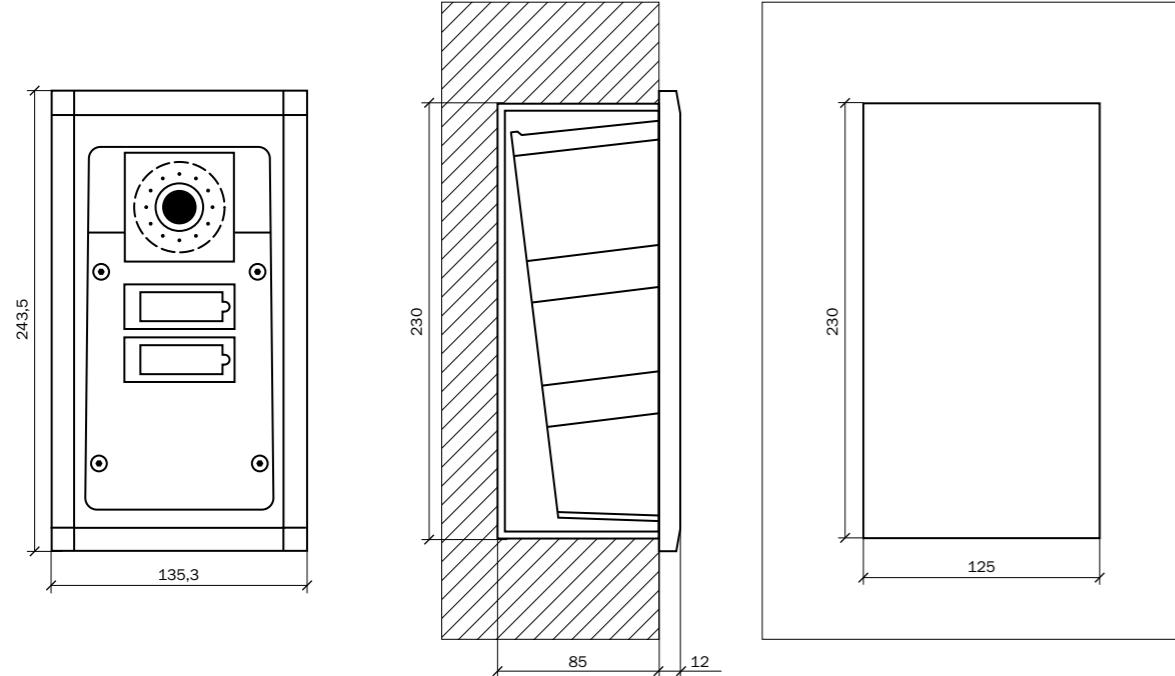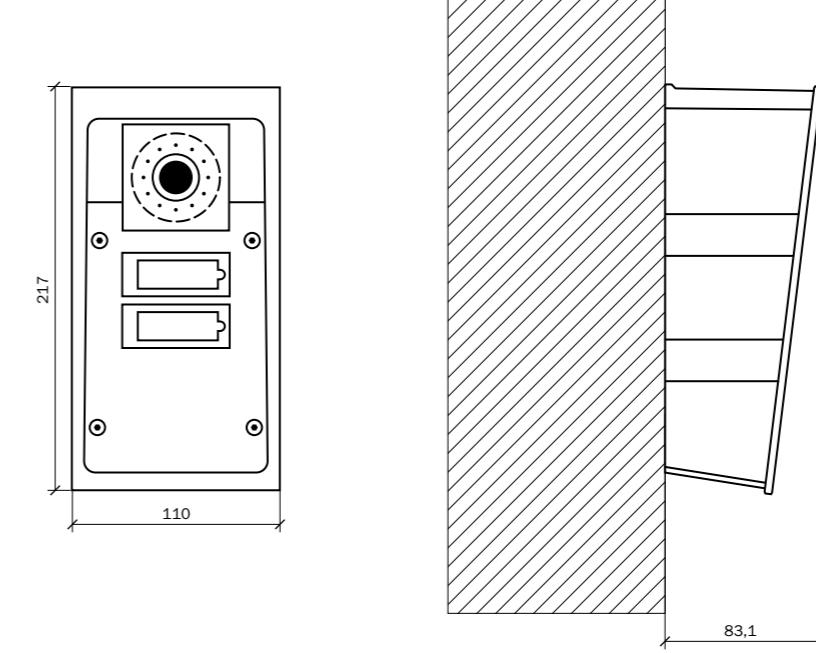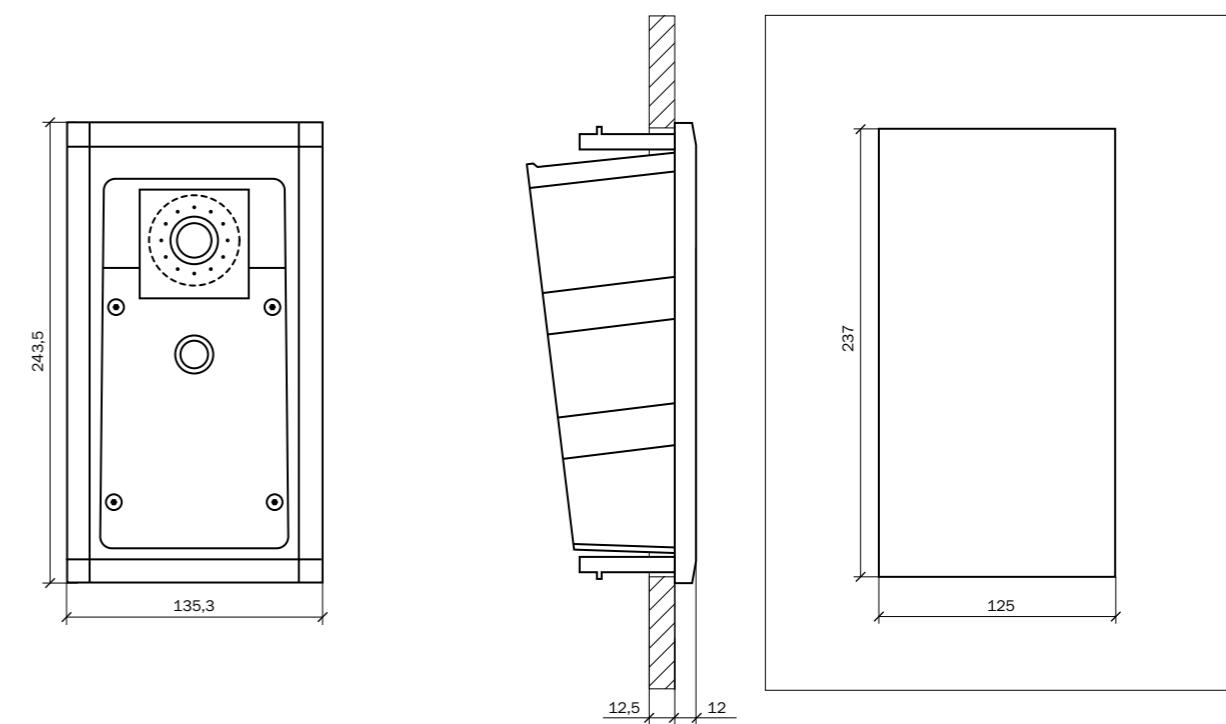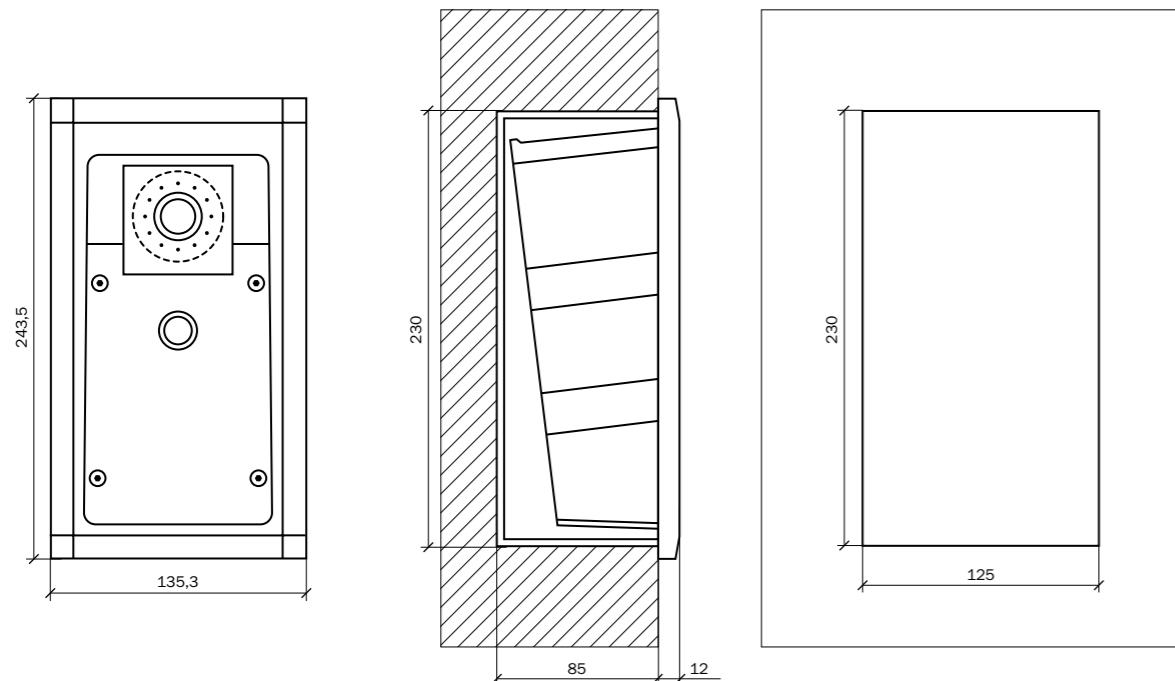


### WALL-MOUNTED

# 2N® Helios (IP) Safety

**FLUSH-MOUNTED WITHOUT BOX**



243,5
135,3
220
70
12
220
112

**FLUSH-MOUNTED WITH BOX**



243,5
135,3
230
85
12
230
125

**MOUNTING IN PLASTERBOARD**



243,5
135,3
237
12,5
12
125

**WALL-MOUNTED**



217
110
83,1
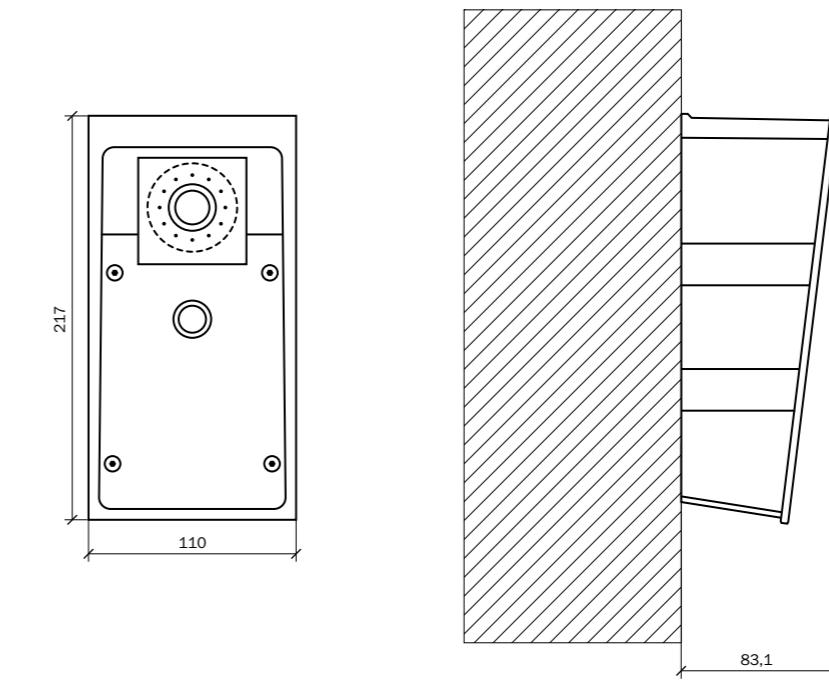
# 2N® Helios (IP) Uni

### FLUSH-MOUNTED
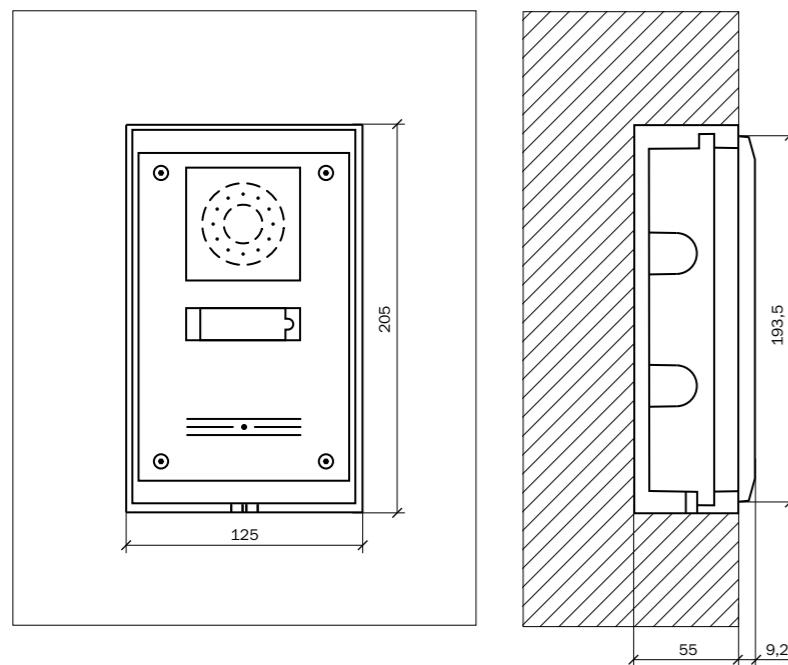


### WALL-MOUNTED
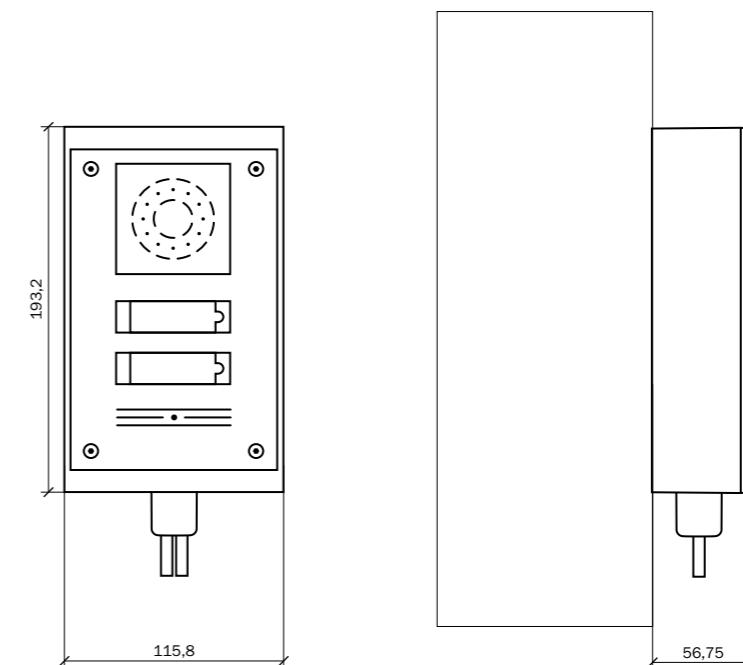


### MOUNTING IN PLASTERBOARD
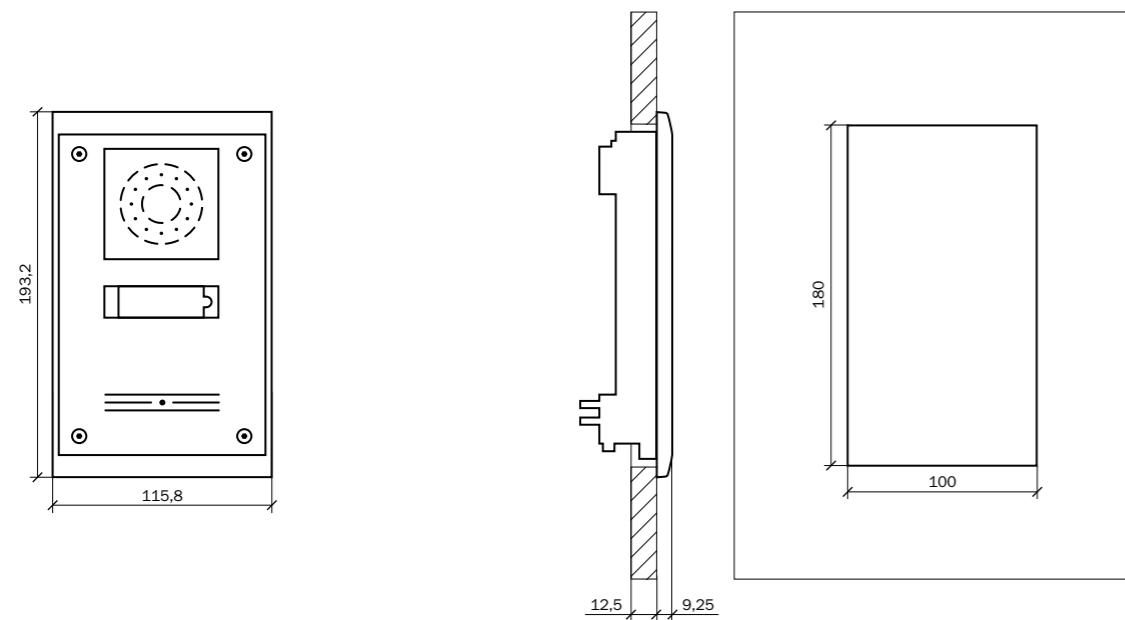
# 2N® Net Audio Decoder

WITHOUT LUGS
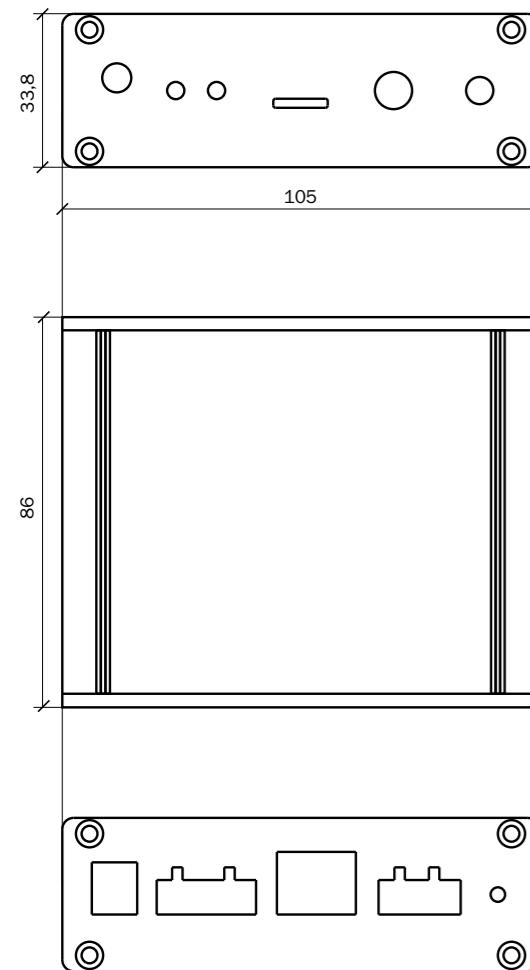
WITH LUGS
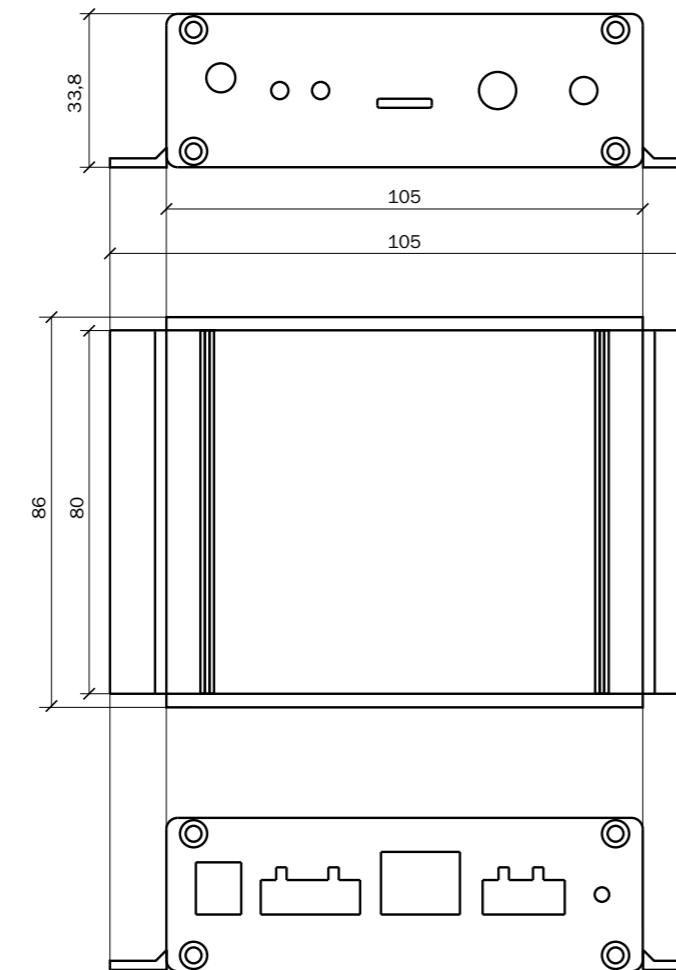


# 2N® SIP Audio Converter

WITHOUT LUGS
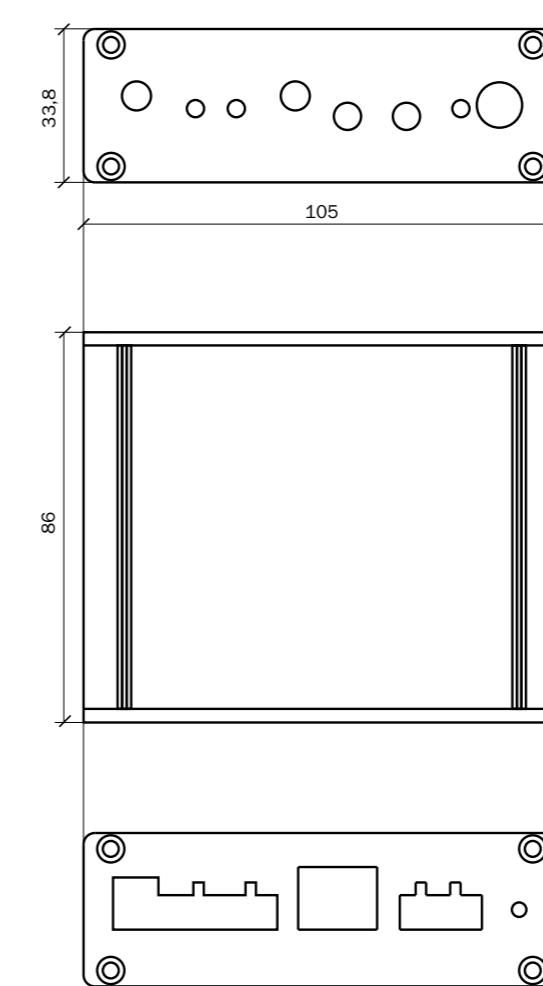
WITH LUGS

# From ideas to implementation

www.2n.cz