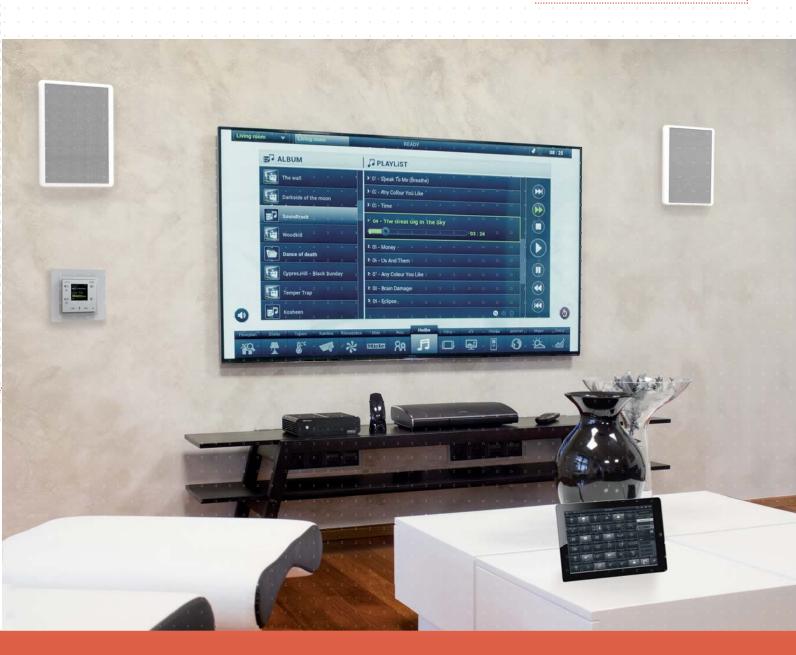


A/V DISTRIBUTION & MULTIMEDIA

AUDIO VIDEO

TECHNICAL CATALOGUE















Presentation of ELKO EP Company

The ELKO EP company is enjoying its twenty-first year on the tough and rapidly accelerating electronics market. It maintains its position thanks to its own development, precise production and distribution of devices, which make your day easier at home, and in industry, they reliably provide for a fluid process of automation technology.

A dynamic time requires fast-developing solutions. We can fortunately say that our work begins with our in-house development of such devices that you - our customers - are now demanding. We do not hesitate and we react flexibly. We are modernizing the production environment, last year automated production expanded to include the (faster, latest) SMD technology, which can handle producing up to 1,000,000 products per month. Our internal testing laboratory and a two-phase final inspection ensure oversight of quality of our manufactured products.



For several years now, we have been working intensively on developing intelligent electrical installations - in both bus and wireless design. The intelligent electrical installation (iNELS), which we designed by the way, does not just mean a control of ordinary electrical elements such as light bulbs or sockets, but also includes control of all technologies at including multimedia, and that ranks iNELS amongst the top in its field thanks to the complex concept and the control of applications.

Our mission is to bring customers modern wiring solutions that make everyday life easier, facilitate work and save money. While others merely sell, we develop and produce. ELKO EP, always brings something more.

ELKO EP in numbers

Headquarters - production facility: Holešov, Czech Republic Year founded: 1993

Number of employees: 194 in Holešov, 254 in ELKO Holding

Branches: Slovakia, Poland, Hungary, Ukraine, Russia, Germany, Spain, Austria UAE (Duhai).

Consolidated revenues: > 20 mil. EUR

Export countries: > 66

 $Important\ OEM\ customers:\ Schneider\ Electric,\ Eaton,\ Siemens,\ ETI,\ TYCO,\ GE$

Certification of processes: ISO 9001, ISO14001

Certification of products: CE (EU), UL (USA), GOST (RU), Ukrstandart (UA) a.j.

Attained awards



AWARDS GOLDEN PRODUCT FOR THE SMR-T

Super-multifunction relay SMR-T won the GOLDEN PRODUCT Award at the electrical fair in Ostrava.



AWARDS JIŘÍ KONEČNÝ ENTREPRENEUR OF THE YEAR 2004

In 2004 Jiří Konečný won the Entrepreneur of the year award.



COMPANY OF THE YEAR 2012 VODAFONE

In 2012, ELKO EP became Vodafone Company of the Year in the Zlín Region and placed second nationwide.



THE HONORABLE
MENTION "VISIONARIES"
FOR "WIRELESS SYSTEM"

In 2013 ELKO EP Ltd. company received the honorary mention of the jury Chechlnfo.



RF TOUCH AWARDS BY FOR THE BOHEMIAN-MORAVIAN ASSOCIATIONS

ASSOCIATIONS
The ELKO EP s.r.o. company
won the prestigious
GOLDEN AMPERE Award for
the product RF Touch.

Product Lines ELKO EP



RELAYS - Modular electronic devices

www.elkoep.com

A wide range of electronic modular devices, which bring new possibilities to home and office control, monitoring and security, as well as to industrial process control: time relays, installation contactors, staircase automatic switches, time switches clocks, dimmers, thermostats, power supplies units, control and signalling devices, GSM gates, etc.



iNELS RF Control - Wireless control

www.elkoep.com

A unique wireless control system providing you perfect control over your home! The RF Control system enables you to control functions such as heating, lighting, electrical appliances and window shutters, all with a single touch. No wall cutting, fast and easy installation, exclusive design of wireless wall switch buttons and other components.



iNELS BUS SYSTEM - Intelligent electro-installation system

www.inels.com

iNELS will transform your house into a timeless intelligent household. It will take charge of heating and air-conditioning regulation, lighting control and switching home appliance, while also providing perfect security for your home. Enjoy controlling your entire house via a TV screen thanks to iNELS Multimedia (iMM) or use the elegant iNELS Touch Panel (iTP).



AUDIO/VIDEO

www.elkoep.com

In this group you can find products, which brings you a new dimension of controlling music, video and home appliances. These are not just ordinary controllers but products which can be a pefrect part of your electro-installation.



LOGUS90 - Home switches and sockets

www.elkoep.com

We offer you exclusive switches, sockets and accessories in a standard plastic or metallic design. However, there are also charming luxury frames from purely natural materials such as genuine wood, metal, granite or hardened glass. Be especial!



ELKO Lighting s.r.o.

www.elkoep.com

We don't only supply LED light sources to the market, but also we bring a complex lighting solution. Our goal is to supply quality and affordable LED light sources and provide a high-level of service - always to satisfy our customers!

Attained awards





GOLDEN AMPER AWARDS FOR "RF Touch"

RF Touch – wireless touch control unit won the GOLDEN AMPER.



AWARD OF CZECH AND MORAVIAN ELECTRICAL AND ELECTRONIC ASSOCIATION

The ELKO EP product "LARA" has gained the award – Innovative Product of the Year 2014.



AWARD FOR THE SMART RF BOX "eLAN-RF-003"

In the competition Top Energie 2014, the product "Smart RF box eLAN-RF-003" won third place.



CZECH TOP 100 AWARD

ELKO EP ranked among the best 100 Czech companies.

BUS electro-installation

What are the benefits of bus controlling?

- Save energy by regulating lighting and heating properly
- Control of blinds, awnings, exterior or internal window shutters
- Dimming lights, lighting scenes
- Control of appliances or electrical devices
- Control access gates, garage doors
- Logical and central functions (exit button, ...)
- · Manual and automatic control mode
- Preventing undesirable opening of a window or a door
- Responding to the movement of people (authorized and unauthorized)
- Remote monitoring via smartphone, tablet or laptop
- Possibility to control via the TV screen
- Integration of third-party devices (cameras, air conditioning, ...)



When you build a new house or decide on a complex reconstruction, the bus solutions of iNELS BUS system represents a unique solution of electro-installation. The system offers wide range of functions which bring a pleasant comfort to the users. It also allows to integrate each technology in the house and brings savings. The way of controlling can be changed according to user requirements, the electro-installation can also be extended.

Using of applications to smartphones or tablets is very popular. They provide efficient and easy way to control your home during your absence.

iNELS BUS System allows you to integrate and control most of technologies used in your house. It saves your money spent on energy. You don't need to wonder whether it is summer or winter. Simply set the desired the temperature in the room and your house will automatically know what to do.

The main idea of intelligent living is saving. The house is able to switch off the lighting and heating in the room at the time of your absence. In winter it pulls up the blinds, what allows the house warming by sun rays. Vice versa in the summer the blinds are pullled down earlier what reduce the switching frequence of energy-intensive air conditioning.

Flood, temperature, fire or gas leak detector sends command to close the water supply, gas, ventilation, etc.

The really useful features is also a simulation of presence when you are on vacation.

To control the electro-installation you can use wall-switches, glass touch switches, touch display, smartphone, tablet or TV screen. So you can easily control whole house from one place. Do you like to listen music, to watch movies or to view pictures? All these data can be available from anywhere in your house thanks to iNELS Multimedia. In addition you can easily turn off the children's television in other room. Whole house can be controlled via TV screen.



Switching el. appliances



Light dimming



Heating regulation



Air conditioning control



Roller blind control



Detector control



Multimedia

CONTROL YOUR ELECTRO-INSTALLATION VIA SMARTPHONE

Get your house under control thanks the Apps in your smartphone or tablet. The Apps have been developed for these operating systems – Android and iOS (iPhone, iPad).



The EST unit with colour touch screen allows you to control heating, adjust the colour of LED strips and control lighting, shutters, other appliances or scenes. This unit is especially suitable for areas/rooms where would otherwise be necessary to use a bunch of controllers.



From the comfort of your couch you can easily control the whole house, you can adjust the temperature in the given room or turn the lights OFF in your garage. The multimedia extension allows you to view pictures from your holiday, play the movie in the other room or listen the radio or music. All your pictures, movies and music will be stored in just one place, but available from any room in the house.







Wireless electro-installation

What are the benefits of using wireless control?

- Remotely switching of home appliances or electrical devices
- Light dimming, light scenes
- Controlling shutters, blinds and internal window blinds
- Controlling the entrance gate and garage door
- Manual or automatic control according to a pre-set program
- Switching on/off home appliances depending on the response of sensors
- Response to (undesired) opening a window or a door
- Response to the movement of people (authorized and unauthorized)
- Saving energy thanks to lighting and heating regulation



RF Control - Wireless RF system is a unique solution of intelligent electrical installation especially for reconstructions of houses, apartments or wiring extensions. Installation can be performed easily without breaking or cutting into the walls. Units (actuators) can be installed directly into suitable wall boxes, lighting covers, switchboards and wherever installation allows you to do so.

Flexible location: ideal for installing in existing buildings, as well as for refurbished and new buildings: thanks to RF Control, you are not limited by the location of a switch, for instance when moving furniture. The wireless wall switch button may be glued to glass, mounted on a beam or just placed on a night table and easily moved elsewhere at anytime.

Controlling lights from your terrace or opening your garage? You will have the keychain - your portable controller - always readu!

The universal transmitter module converts up to 4 potential-free external inputs (buttons) to RF signal, facilitating the connection of the following devices to the system: door switches or buttons, electronic alarm sensors (fire, smoke, door detector...), bells, etc. Property protection and safety. A flood, temperature, fire or gas leakage sensor sends a signal to the actuator, which closes the water or gas supply, switches on ventilation, etc.

Receivers (actuators) may be mounted in an installation box, under the existing switch, light covers or ceiling, or on a DIN rail inside the switchboard.

A smart design of wireless wall switch buttons with plastic, glass,wood, metal or granite finish.



Switching el. appliances



Light dimming



Heating regulation



Air conditioning control



Roller blind control



SMART BOX FOR CONTROLLING YOUR ELECTRICAL INSTALLATION WITH YOUR SMART PHONE

It's used for controlling the electro-installation with your smart phone or tablet. Control options are through the Web browser or iHC application (Android).



RF Touch offers you complete control over the electro-installation. All these with the possibility of setting a weekly program, all automatically and wirelessly.

REMOTE CONTROL "RF PILOT" WITH OLED DISPLAY

With an excellent complement to the RF Control system, the remote control comes with an elegant design and an OLED display. Thanks to RF Pilot you have a comfortable control over the home devices and appliances.













A KIT TO CONTROL LIGHTS VIA SMARTPHONE

It's never been easier to set the appropriate ambience for reading a book or, watching a movie or a party with friends. All you need is wireless bulbs and a smart box, then you can control every device from the comfort of your smartphone, tablet or smart TV. You can't just control colored or white light bulbs, but also other appliances too.

RADIO & MUSIC IN THE SWITCH



A KIT FOR CONROLLING MUSIC, WHICH PERFECTLY FITS IN YOUR HOME'S INTERIOR

LARA is a music and internet radio player. We have registered 40 favorite Czech radios stations as presets stations, however you can easily change it using the configurator. LARA plays the music, which is stored in the NASA storage or in the external source (phone, MP3 player) that is connected through a cable on the front panel of the device. Built-in amplifier that allows direct connection of speakers (in the same LOGUS⁹⁰ design) or allows connection of external in-wall or ceiling speakers.

ONE CONTROLLER FOR ALL



A SET FOR CONTROLLING IR DEVICES VIA A SMARTPHONE

Thanks to the Smart IR box, you can control the home appliances via a Smartphone. Thus you no longer need a bunch of controllers, you do not have to look for them, and you do not need to replace the battery. You always stick your phone in your pocket, always at hand. Moreover, you can control other devices which are placed in another room (e.g. you can turn off the TV in the children room).

YOUR HOUSE UNDER "THE THUMB"



CONTROL YOUR HOUSE VIA A SMARTPHONE

The kit "House under the thumb" which you're holding in your hands is the basic starter kit for you, which would like to make your home more comfortable. The starter kit consists of 2 colored wireless bulbs, 1 x switching socket and 1 x camera, which allows you to try the basic units of iNELS RF Control – wireless solution. Everything is preset to ensure fast and easy control.

VIRTUAL KITS

The virtual kit is a set of wireless units that are packed individually (as an individual product), but on the other hand, they are preset together (they are meant to work together) to ensure a simple installation. They are offered at a discounted price and it is not possible to separate any unit from this price.

UNDERFLOOR HEATING - BY WATER

Any wireless temperature regulator measures the room temperature, it compares with set temperature and time program, then sends a command to switch on the units. Based on the command from the temperature regulator, 6-channels switching unit is able to control up to 6 thermo-valves corresponding to heating circuits.

KIT CONSISTS OF:

Wireless temperature controller RFTC-50/G, wireless switch unit (6 outputs) RFSA-66M, thermodriver TELVA/230V.

UNDERFLOOR HEATING - BY ELECTRICITY

Temperature and switching unit (two in one) measures the floor temperature via external sensor (built-in). Then it sends data to wireless touch unit RF Touch, which compares it with the temperature set along with the time schedule and then sends a command back to switch on/switch off the heating circuits. It is possible to connect up to 4 temperature/switching units.

Advice 1) If just one reference temperature is enough for you, so then it can be measured by temperature sensor RFTI-10B and to switch up to 6 independent heating circuits you can use 6-channels switching actuator RFSA-66M.

Advice 2) The wireless unit RF Touch can be replaced by Smart RF box and all can be controlled via your smartphone. Both solution can be used together.

KIT CONSISTS OF:

Switching actuator with thermosensor RFSTI-11/G, Wireless touch unit RF Touch.



HEATING WITH SAVINGS



1 WIRE

WIRELESS CONTROL



3× WIRELESS
THERMOVALVES



A KIT TO CONTROL HEATING VIA WIRELESS RF TOUCH UNIT

Includes 3 wireless thermovalves that are installed instead the standard radiator valves. It measures the room temperature and sends it to the RF Touch control unit. RF Touch compares it with the temperature set along with time schedule and sends a command to open or close the valve. You can set heating programs in the weekly schedule, separately for each circuit (room).

REMOTE HEATING



SMART RF



3× WIRELESS
THERMOVALVES



A KIT TO CONTROL HEATING VIA SMARTPHONE

It includes 3 wireless thermovalves that are installed instead the standard radiator valves. They measures the room temperature and send it to the Smart RF box. The Smart RF box compares it with the temperature set along with the time schedule in the application of your phone and sends a command to open or close the valve. You can always turn on the heating circuit via an app, whether you're at home, or just going to visit your cottage and do not want to come to unheated place.

EASY HEAT REGULATION



1× TEMPERATURE CONTROLLER



1× SWITCHING



A KIT FOR WIRELESS TEMPERATURE REGULATION IN THE HOME

This kit enables convenient and quick control of heater, oil heater, panel heater or portable air conditioner. Just plug the device into controlled switching sockets and appropriately place your controller RFTC-50/G. The desired temperature is set on the controller, that compares it with the current record and it sends a command to turn the device ON.

TECH. SUPPORT



+420 800 100 671

VIRTUAL KITS

AGAINST THE FLOOD

A wireless sensor monitors the water leaks or flooding in the critical places (basement, pits, shafts, bathroom, laundry room,...) and sends immediately a command to the switching unit to close the solenoid valve of the main water supply. You can be also informed of that accident through a GSM gateway by sending SMS text messages.

The KIT CONSISTS OF:

Switch unit RFUS-61, wireless flood detector RFSF-1B, flood probe FP-1.

We recommend: solenoid valve: MPW SS 304 - 1/2 (3/4) 230V AC.

COLORED RGB LED STRIP

The app in your smartphone can send (through RF smart box) the commands to the dimming unit to which the RGB strip is connected. From your app it is possible to switch ON/OFF, to set the color or to run the scene of automatic color blending.

Advice 1) The colored RGB strip can be controlled through RF Pilot, by controllers RFWB-20/40, RF Key,...

Advice 2) If you do not want the colored RGB strip, we can replace it by monochromatic (warm white, cool white, red, ...). Then you can connect 8 m of monochromatic strip (power 7.2W/m) to RFDA-73M/RGB to each output.

KIT CONSISTS OF:

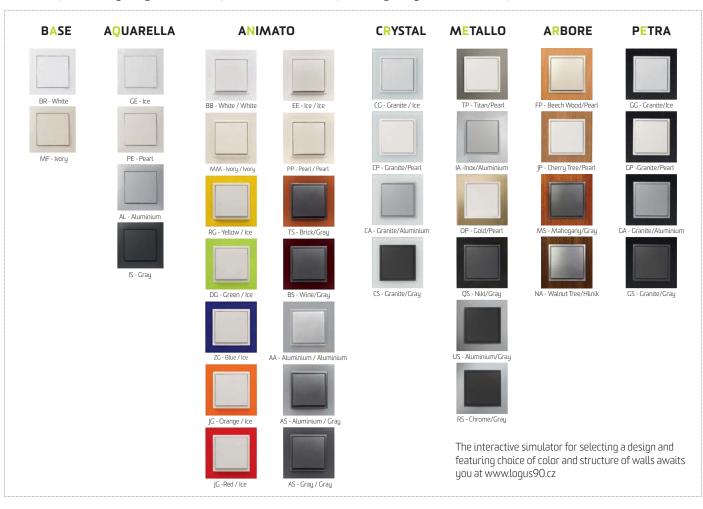
Smart RF box, dimmer RFDA-73M/RGB, 2 x 5m coloured RGB strip 7.2W/m, power supply 230V/12V/100W.

Switches and sockets

We off er you switches, sockets and accessories in standard design, plastic or metallic, but you are also sure to be enchanted by the luxurious designs of frames made from natural materials: solid wood, metal, granite or hardened glass - crystal.

The frame is complemented by a button cover in the shades of pearl, aluminum or e.g. dark gray or ice - where many combinations come alive based on the customer's wishes and personal taste. Not just their refi ned design, but also long service life and resilience are the hallmarks of these switches.

You will see quality not only in the visible parts of the covers, but also in the switch mechanism itself. The mechanisms excel for their many features that make installation quick and easy, and guarantee safe operation. Thanks to their special design, they can even deal with potential wall unevenness



DESIGN LINES

BASE – Smart finish. Discrete shape of function.

AQUARELLA - Distinct colors. Shades that characterize the space.

ANIMATO – Large selection of colors, modern design and pleasant price.

CRYSTAL – Brightness and clarity. Shades that bring the shine of crystals into a honed experience.

METALLO - Distinction and modern feel. The refi nement and brightness of metal enhance the value of the surroundings, and lend inspiration to great moments.

ARBORE - Selection of natural materials. Warm shades of wood with their varying structures create a room full of happiness and

sincere comfort.

PETRA – The beauty and stability of nature. Stone with its uneven patterns, shaped by time and nature, represent the sense of firm and unending existence.

DEVICES OVERVIEW



EXAMPLE OR ORDER



Device MEC21 order no.: 21 . ., e.g.: 21011 = switch 1-pin 21111 = socket order no.: 909 .. T x x, e.g.: 90910 TBR = 1 frame, plastic/ white 90930 TCS = 3 frame, glass/gray

Cover
order no.: 90 ... T x x, e.g.:
90601TBR = cover simple, white
90652TAL = cover sockets,



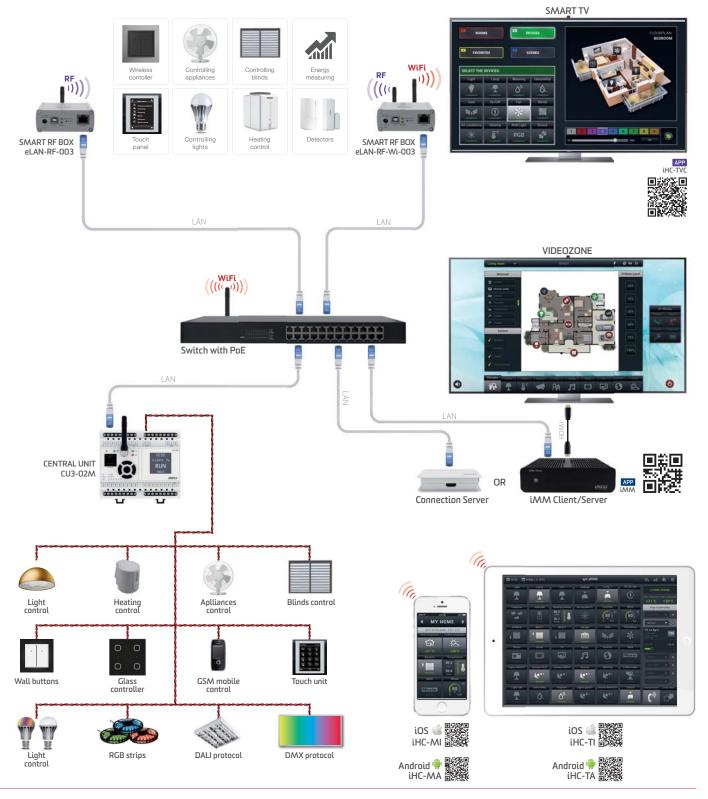
Complete device order no., e.g.: 21011, 90910 TBR, 90601 TBR device, frame, cover

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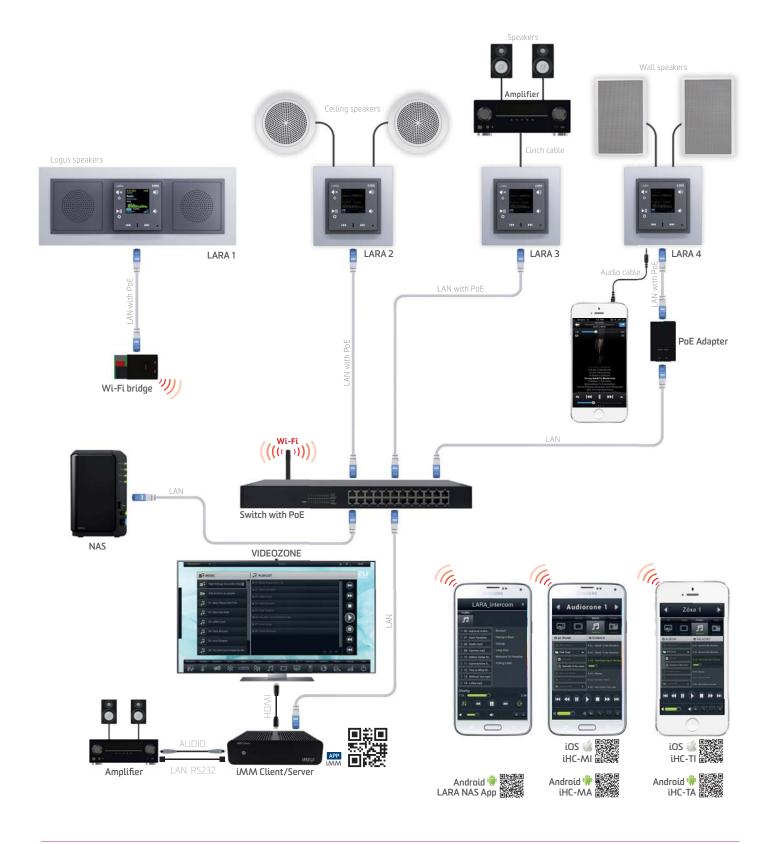




Control possibilities:

- Using Smart RF box eLAN-RF (eLAN-RF-Wi), RF units can be controlled from iHC-MARF apps (Android smartphone) and iHC-MIRF apps (iPhone).
- Using iMM Server (or Connection Server) RF units can be integrated into complex apps (so both BUS and RF can be controlled from one app) iHC-MA (Android smartphone), iHC-MI (iPhone), iHC-TA (Android tablet) and iHC-TI (iPad)
- Using eLAN-RF (eLAN-RF-Wi) RF units can be controlled from Smart TV.
- Using iMM Client both BUS and RF units can be controlled from Videozone.





LARA control possibilities:

- 6 touch buttons on the front panel
- IR remote controller
- LARA NAS App
- (stand-alone solution NAS required)
 iHC-MA, iHC-MI, iHC-TA, iHC-TI
- (system solution, iMM required)
 iMM GUI/VIDEOZONE (system solution, iMM required)

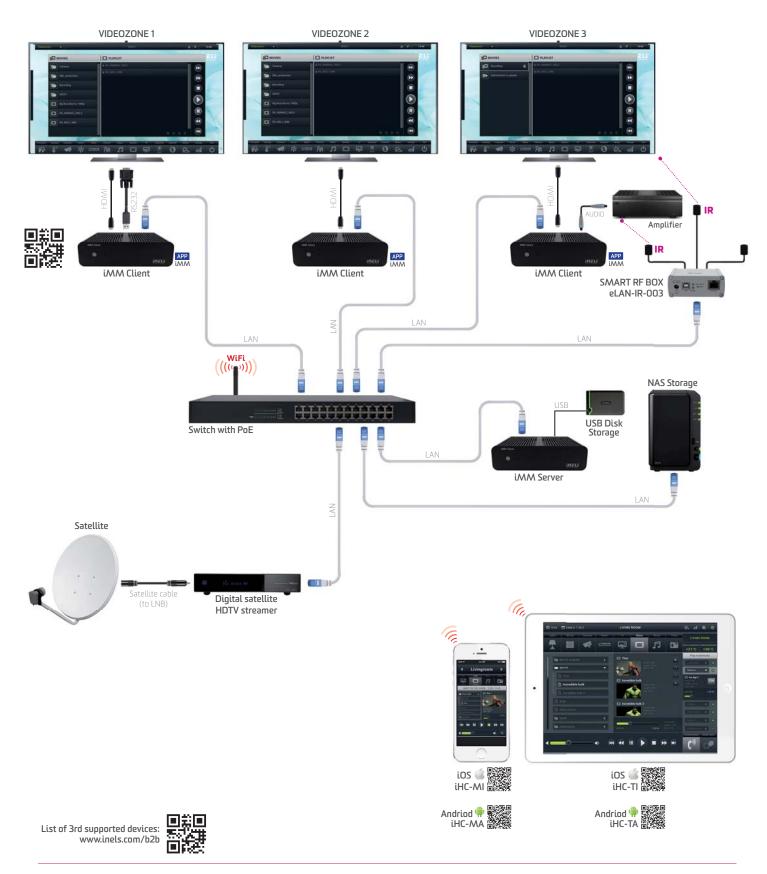
LARA Radio functions:

- Radio play a stream of internet radios
- Music play a music from iPhone, MP3 player etc.
- Audiozone play a music from NAS (stand-alone solution) or iMM (complex iNELS solution)

LARA audio outputs:

- \bullet Internal amplifier 2x10W/8 Ω
- Line output 2x1V





TV control options:

- LAN
- IR (via Smart box eLAN-IR)
- RS232* LG
 - SHARP
 - LOEWE

Amplifier control options:

- LAN
- IR (via Smart box eLAN-IR)
- RS232* NAD (connector RS232)
 - BOSE (connector 3,5mm stereo jack)
 - PIONEER (connector RS232)

Recommended satellite receiver:

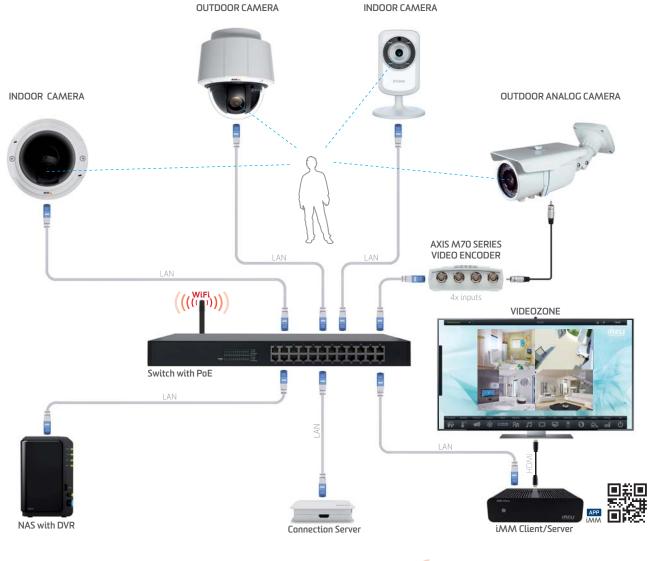
• Vu+SOLO 2 or similar

Recommended NAS

• Synology DiskStation DS214play or similar

IP Cameras





















VAPIX protocol:



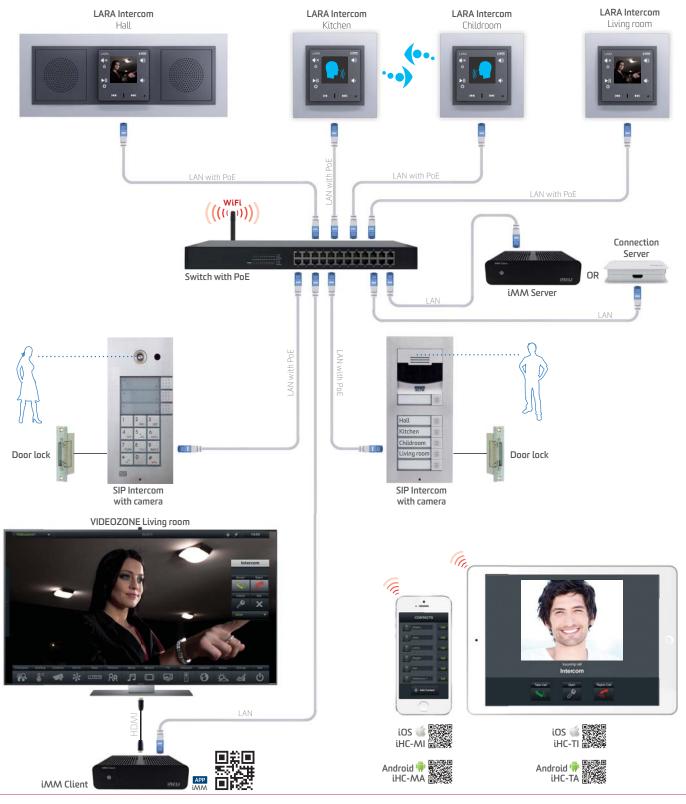






... and others ...





LARA Intercom functions:

- Videphone communicate with door communicator (audio, video)
- Intercom communicate between several LARAs in different rooms
- Radio play a stream of internet radio
- Music play a music from iPhone, MP3 player etc.
- Audiozone play a music from NAS (stand-alone solution) or iMM (complex iNELS solution)

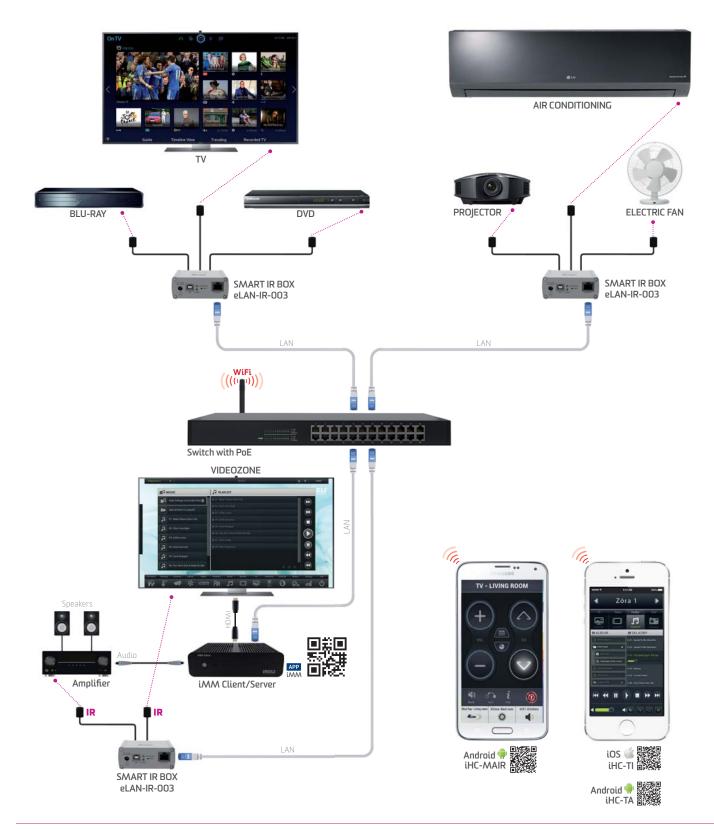
LARA audio outputs:

- Internal amplifier 2x10W/8ohms
- Line output 2x1V

iNELS VoIP solution:

- It is possible to communicate between:
 - LARAs
 - Intercoms
 - Videozones
 - iHC apps
 - Smartphone
 - Tablets

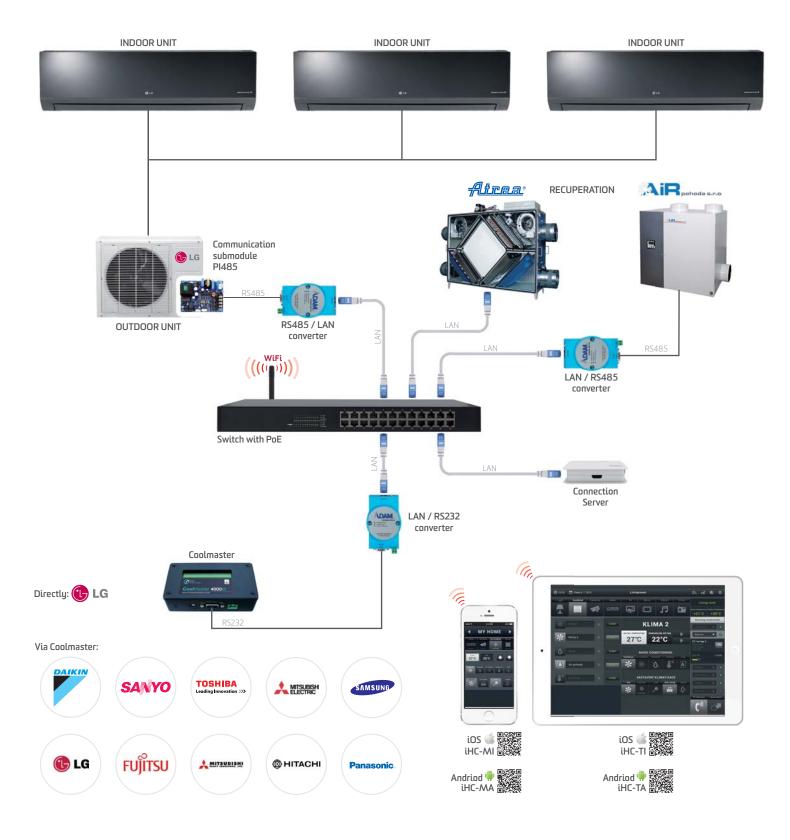




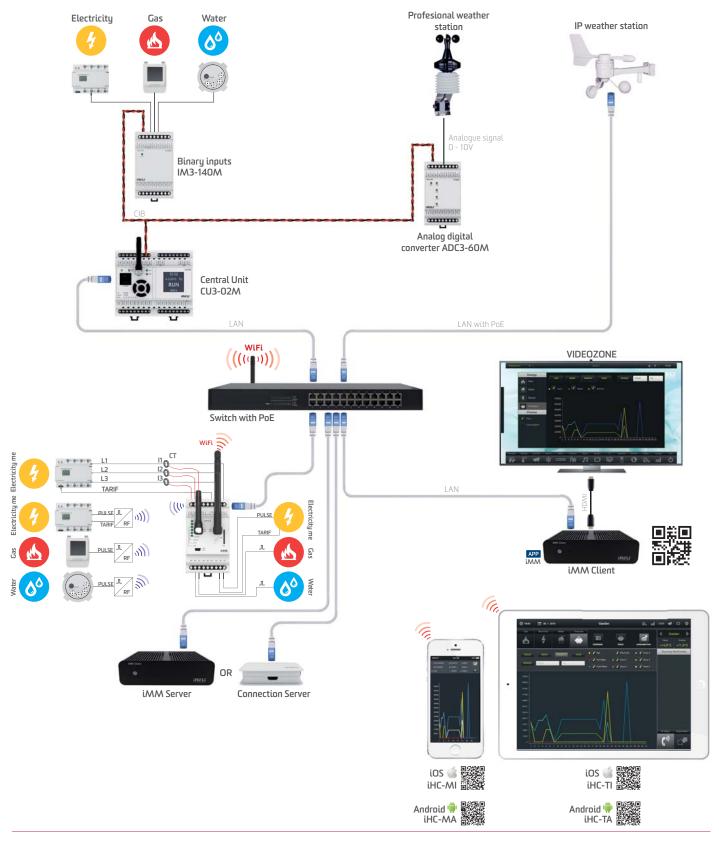
LARA control possibilities:

- It is possible to use Smart box eLAN-IR-003 in two ways: stand-alone solution when Smartbox integrates all IR
 - stand-alone solution when Smartbox integrates all IR remote controllers under one apps iHC-MAiR and iHC-MIR
 - system solution when Smart box is used for IR remote control of eg. TV and amplifiers from complex apps iHC-MA,iHC-TA, iHC-MI and iHC-TI (as multimedia solution)









Overview of the energy consumption:

• It is possible to display the amount of consumed energy, price for this quantity and visualize it all in a clear chart.

You can get this information:

- daily
- weekly
- monthly
- annually
- for a specific period

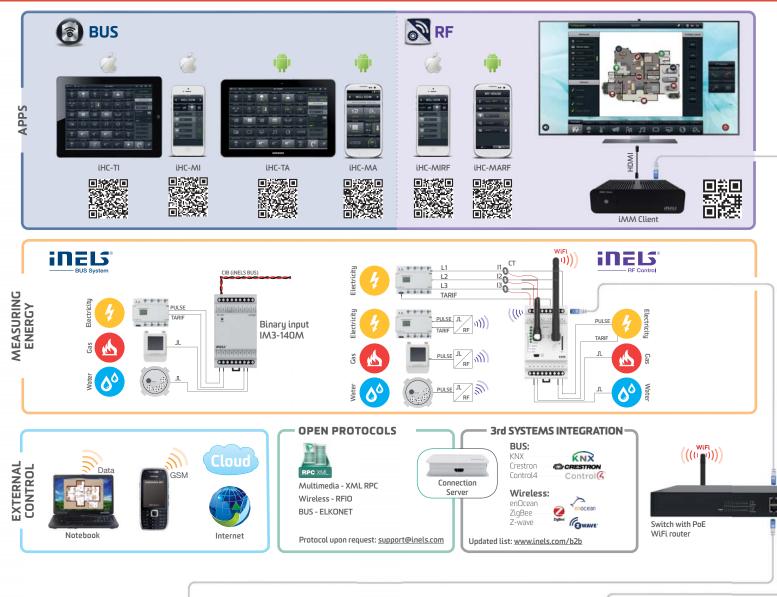
Clima sensor:

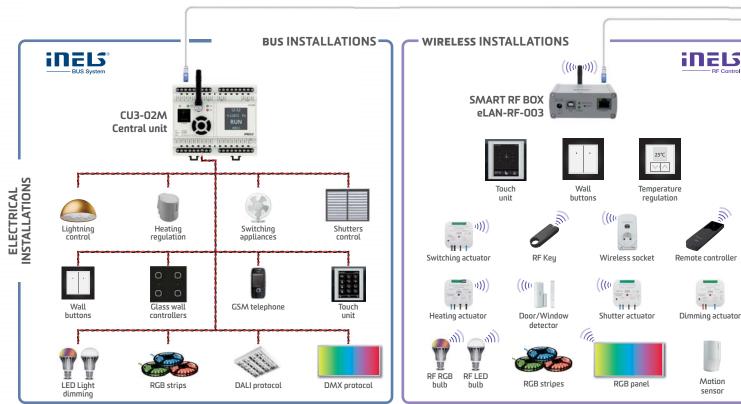
- Measured quantities:
 - wind
- precipitation
- brightness (for South, East, West)
- twilight
- temperature
- air humidity

IP weather station:

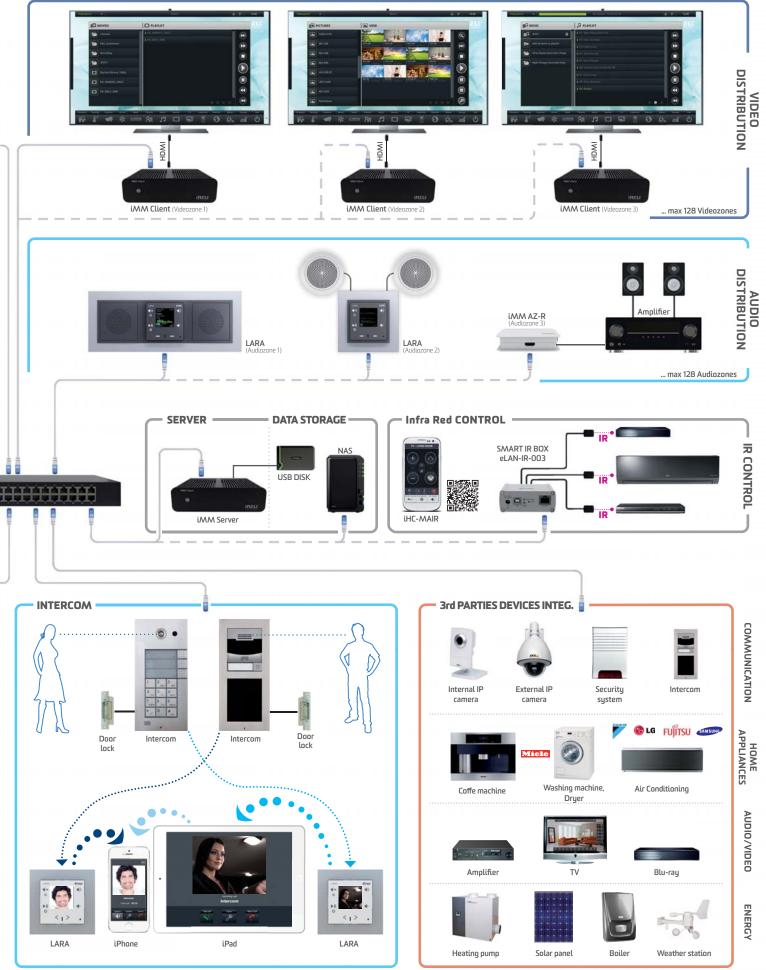
- Measured quantities:
- wind speed, wind direction
- pressure
- temperature
- windchill
- dew point
- barometric altitude
- relative humidity, absolute humidity

... if smart technology understood each other!





2















Music Vide

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Audiozone

LARA

(X 102.00) (234

Badon

Son to the control of the control of

EAN code

LARA Radio white: 8595188148719

LARA Radio ivory: 8595188149242

LARA Radio ice: 8595188149228

LARA Radio pearl: 8595188149251

LARA Radio aluminium: 85951881492513

LARA Radio grey: 8595188149273

IR controller: 8595188149273

TECHNICAL PARAMETRES

INTERNET RADIO

Supported data transfer formats: mp3, ogg, acc

$\verb|CONTROL| / \verb|SETTINGS| \\$

Front panel: touchscreen buttons

Remote control: IR remote control (part of supply)

Communication Ethernet: via PC setting up and communicating

SW LARA Configurator

Button RESET: restart product / reset product to factory settings

INTERFACE ETHERNET

Communications interface: 10/100Mbps
Connector: RJ45
Max. cable length UTP with power: 50m

DISPLAY

Type: color OLED

Resolution: 128x128 pixels

Visible surface: 26 x 26 mm

$\begin{smallmatrix} P & O & W & E & R & & S & U & P & P & L & Y & & P & A & R & A & M & E & T & E & R & S \\ \end{smallmatrix}$

 Supply:
 POE 24 V DC/1.25 A

 Min. input:
 1.4 W

 Max. input:
 26W (peak at maximum playback performance)

AMPLIFIER PARAMETERS

Amplifier: stereophonic class D with digital output control Max. amplifier output: $2 \times 10 \text{ W/8 }\Omega$

Microphone: no
Audio input: 3.5 stereo jack
Audio output 1: terminals LINE OUT (used for external amplifier)*
Audio output 2: terminals OUT L/OUT R
(speaker output from int. amplifier)

CONNECTION

Terminal block: 0.5 - 1 mm²

OTHER DATA

Working temperature:	0 + 55 °C
Overvoltage category:	IP20
Pollution degree:	II.
Installation:	2
Dimensions:	in an installation box
Frame - plastic:	85 x 85 x 20 mm
Frame - metal, glass, wood, granite:	94 x 94 x 20 mm
Weight - plastic:	87 g (plastic frame)

- A music and Internet radio player all in the dimension of a switch and a luxurious LOGUS⁹⁰ design.
- In the range of WiFi connection, LARA can play music and stream the radio, which can be saved up to 40 channels. You can pick any radio station from all over the world which is providing the data for a proper connection
- LARA Radio can play the contents of external music source, which may be an iPhone, smart
 phone or eg. MP3 player. These devices are connected to the audio input 3.5mm stereo
 jack, which is located below the front panel
- LARA Radio also plays audio files from a central data repository, where Logitech Media Server is installed. You can also use LARA function can LARY within the complex iNELS iNELS or as a fully independent home automation device. When it's used within iNELS systém, then its being controlled by iHC applications, however, when you're using it as NAS, then LARA NAS App is available.
- Controlling is being done by touching the front panel (where six capacitive buttons are available) or an infrared remote control that is included with the product.
- The basic device settings, such as (the network connection, language or an audio output) is done using the display and a simple controlling menu from capacitive buttons on the front cover. Meanwhile other settings such as: (the station selection, the connection to the server, firmware updates, etc.) Is configured using a computer and software LARA Configurator.
- LARA Radio is equipped with an OLED colored screen with the size of 1.5" (where we can see basic information about playing music, orientation in the menu settings, etc.).
- LARA Radio has an integrated amplifier with an output of 2 x 10 W, which greatly simplifies the installation in areas where that power is sufficient. LARA can be used for example in the kitchen sound system, bathrooms, waiting rooms, offices, reception areas, lobbies, operating rooms and wellness areas.
- LARA Radio is powered through the PoE with a maximum voltage of 27 V DC / 1000 mA, where the advantage in this case is that only one (UTP) cable is used for power supply and communication.
- All the needed accessories for LARA Radio will found prepared (PoE adapters PoE switches), speakers (to the box or to the ceiling, wall) and the installation cables, boxes, etc.
- It works with IEEE 802.3u (100BASE-Tx) standards.
- Automatic detection of the ethernet cable crossover MDIX.

Example of installation

LARA can be installed into the wall or on the surface. To do so, you can use the setup boxes which are offered within the accessories





3 Boxes on the surface





^{*}The cable from the LINE OUT terminals must be shielded, max. length should not exceed 5m.













Videotelephone

Audiozone



EAN code

 LARA Intercom white:
 8595188149389

 LARA Intercom ivory:
 8595188149419

 LARA Intercom ice:
 8595188149396

 LARA Intercom pearl:
 8595188149426

 LARA Intercom aluminium:
 8595188149372

 LARA Intercom grey:
 8595188149402

 IR controller:
 8595188149472

TECHNICAL PARAMETRES

INTERNET RADIO

Supported data transfer formats: mp3, ogg, acc

CONTROL / SETTINGS

Front panel: touchscreen buttons

Remote control: IR remote control (part of supply)

Communication Ethernet: via PC setting up and communicating

SW LARA Configurator

Button RESET: restart product / reset product to factory settings

INTERFACE ETHERNET

Communications interface: 10/100Mbps

Connector: RJ45

Max.cable length UTP with power: 50m

DISPLAY

Type:color OLEDResolution:128x128 pixelsVisible surface:26 x 26 mm

POWER SUPPLY PARAMETERS

 Supply:
 POE 24 DC/1.25 A

 Min. input:
 1.4 W

 Max. input:
 26W (peak at maximum playback performance)

AMPLIFIER PARAMETERS

Amplifier: stereophonic class D with digital output control Max. amplifier output: $2 \times 10 \text{ W/8 }\Omega$

INPUTS / OUTPUTS

Microphone: yes
Audio input: 3.5 stereo jack
Audio output 1: terminals LINE OUT (used for external amplifier)*
Audio output 2: terminals OUT L/OUT R
(speaker output from int. amplifier)

C O N N E C T I O N

Terminal block: 0.5 - 1 mm²

OTHER DATA

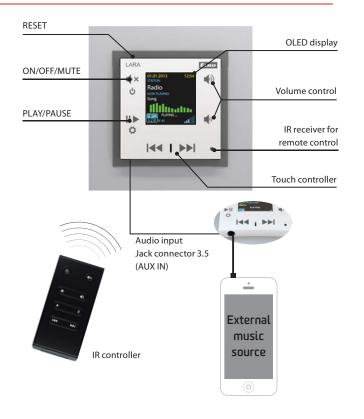
Working temperature:	0 + 55 °C
Overvoltage category:	IP20
Pollution degree:	II.
Installation:	2
Dimensions:	in an installation box
Frame - plastic:	85 x 85 x 20 mm
Frame - metal, glass, wood, granite:	94 x 94 x 20 mm
Weight - plastic:	87 g (plastic frame)

- LARA Intercom offers users 5 different functions and expands even more options to Lara Radio - music players and internet radio stations within the range of LOGUS⁹⁰ switch designs.
- LARA Intercom provides an extra functionality and videophone intercom.
- Thanks to videophone function, now it is possible to have a voice communication between Lara and the sound of the door (IP Intercom), so with someone visiting and standing in front of the house, we can see that on LARA display as part of this function which increases the security feeling and safety besides of course, the comfort for the user.
- LARA Intercom is equipped with an OLED colored display with the size of 1.5", which is used
 to transfer images and sounds from the door camera properly. The display also shows basic
 information about playing music, which also serves the orientation in the menu settings, etc.
- The intercom function can also be used for communications between all the family members throughout the whole house, thanks to two way voice communications possibilities between differnt Lara units.
- LARA intercom can also play music and stream the radio, which can be saved up to 40 channels. You can pick any radio station from all over the world which is providing the data for a proper connection
- LARA intercom can also play the contents of external music source, which may be an iPhone, smart phone or eg. MP3 player. These devices are connected to the audio input 3.5mm stereo jack, which is located below the front panel
- LARA intercom can also play audio files from a central data repository, where Logitech Media Server is installed. You can also use LARA function can LARY within the complex iNELS iNELS or as a fully independent home automation device. When it's used within iNELS systém, then its being controlled by iHC applications, however, when you're using it as NAS, then LARA NAS App is available.
- Controlling is being done by touching the front panel (where six capacitive buttons are available) or an infrared remote control that is included with the product.
- The basic device settings, such as (the network connection, language or an audio output) is done using the display and a simple controlling menu from capacitive buttons on the front cover. Meanwhile other settings such as: (the station selection, the connection to the server, firmware updates, etc.) Is configured using a computer and software LARA Configurator.
- LARA Radio is equipped with an OLED colored screen with the size of 1.5 "(where we can see basic information about playing music, orientation in the menu settings, etc.).
- LARA Radio has an integrated amplifier with an output of 2 x 10 W, which greatly simplifies
 the installation in areas where that power is sufficient. LARA can be used for example in the
 kitchen sound system, bathrooms, waiting rooms, offices, reception areas, lobbies, operating
 rooms and wellness areas.
- LARA Radio is powered through the PoE with a maximum voltage of 27 V DC / 1000 mA, where the advantage in this case is that only one (UTP) cable is used for power supply and communication.
- All the needed accessories for LARA Radio will found prepared (PoE adapters PoE switches), speakers (to the box or to the ceiling, wall) and the installation cables, boxes, etc.
- It works with IEEE 802.3u (100BASE-Tx) standards.
- Automatic detection of the ethernet cable crossover MDIX.

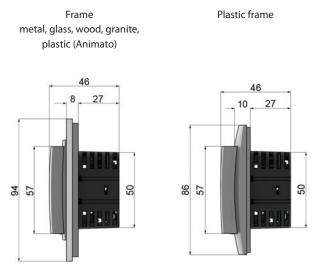
^{*} The cable from the LINE OUT terminals must be shielded, max. length should not exceed 5m.



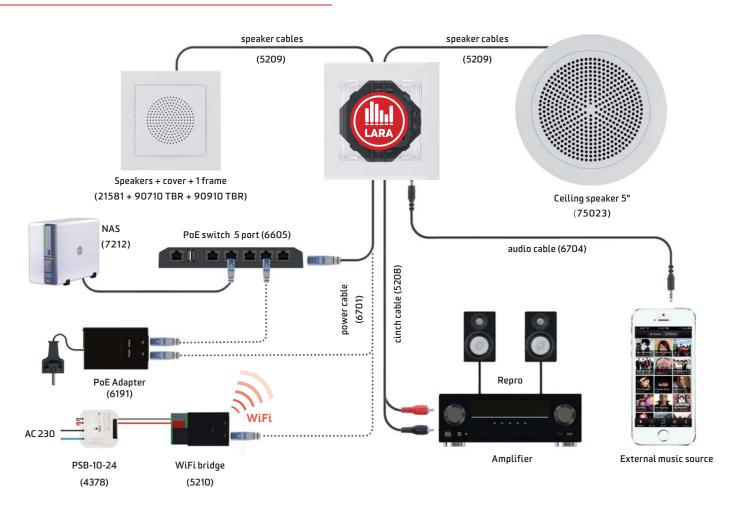
Description



Dimensions



Connection





POWER SUPPLY PoE + WiFi INTO OR THE BOX

WiFi bridge with PoE and power supply into an installation box. Power supply 230V.



The power set is designed for installation in existing buildings or apartments. It is used everywhere where it is not possible to apply construction work or in other way we can basically connect LARA to the internet LAN cable. The kit includes a power supply (which connect directly to the power cable) and an AirGateway for LARA wireless connection to the Internet. Installation is designed for standard profound installation box, also the set occupies two places in the installation box (beside LARA and the speakers).

POWER SUPPLY POE INTO A BOX

PoE injector with power supply intended for an installation box. Power supply 230 V.



The power set is designed for installation in new and existing homes (apartments). It requires two places where it's possible to bring a LAN cable to the installation box , or where the cable is already feed. The power supply is located in the installation box and for its connection the basic cable is only necessary. The set includes power supply and PoE injector, which connects the LAN cable with LARA unit. The PoE injector is designed for mounting into installation box.

PoE SUPPLY

Power injector with plug-in adapter 230V.



The power set is designed for installation in new and existing homes (apartments). It requires two places where it's possible to bring a LAN cable to the installation box, or where the cable is already feed, meanwhile, the installation box lacks any some power supply. The kit includes an adapter that should be plugged into the socket) and PoE injector which connects (LAN cable) with LARA. The PoE injector is designed for mounting into installation box.

POWER SUPPLY PoE + WiFi

WiFi bridge with PoE plug in adapter 230 V.



The power set is designed for installation in new as well as existing homes or apartments. It is used in everywhere where it is not possible to perform a construction work, or in any other way we can connect LARA to the internet LAN cable. The kit includes a power supply that should be plugged into the socket and an AirGateway for LARA wireless connection to the Internet.



LARA in **LOGUS⁹⁰** switch design

Choose from color combinations



Cover: white Frame: white (animato)



Cover: grey Frame: grey (animato)



Cover: ice Frame: green (animato)



Cover: aluminium Frame: aluminium(aquarella)



Cover: ice Frame: aluminium (aquarella) Frame: glass (crystal)



Cover: ice



Cover: ivory Frame: titan (metallo)



Cover: pearl Frame: cherry (arbore)

You cand all different types of color combinations including the ordering codes on our website www.elkoep.com/lara or in our e-shop on www.eshop.elkoep.com

Code	Name	EAN	Code	Name	EAN
LARA-R/BR	LARA Radio_white	8595188148719	LARA-IC/BR	LARA Intercom_white	8595188149389
LARA-R/AL	LARA Radio_aluminium	8595188149211	LARA-IC/AL	LARA Intercom_aluminium	8595188149372
LARA-R/GE	LARA Radio_ice	8595188149228	LARA-IC/GE	LARA Intercom_ice	8595188149396
LARA-R/PE	LARA Radio_pearl	8595188149259	LARA-IC/PE	LARA Intercom_pearl	8595188149426
LARA-R/MF	LARA Radio_ivory	8595188149242	LARA-IC/MF	LARA Intercom_ivory	8595188149419
LARA-R/IS	LARA Radio_grey	8595188149235	LARA-IC/IS	LARA Intercom_grey	8595188149402



	Speakers and cables		Installation material		
		order code			order code
1	AUX CABLE LARA(LARA CINCH CABLE) Used to connect LARA with exter. amplifier. Reduction 4pin from LARA LINE OUT to 2x CINCH plug into amplifier, length 2 x 20 cm.	5208		1-FRAME	90910 TBR
•	POWER SUPPLY (PSB-10-24)		00	2-FRAME	90920 TBR
1111	Switching stabilized power supplies with fixed output voltage, intended for mounting into an installation box (e.g. KU-68). PSB-10-24 - stabilized power supply 24V/10 W.	4378	000	3-FRAME	90930 TBR
	AUX CABLE LARA (LARA AUDIO CABLE)		0000	4-FRAME	90940 TBR
1	Used to connect LARA with external music source (smart phone mp3 player). The length is 20cm terminated with 2x stereo jack 3.5mm.	6704	00000	5-FRAME	90950 TBR
10	CEILING SPEAKER Speaker is suitable for the installation in suspended ceilings and ho-	75023	10	SURFACE MOUNT BOX	10976 ABR
	llow walls. Mounting hole diameter 143 mm, Power 15W, 32 $\!\Omega$ speaker impedance.	CMF		INSTALLATION BOX 1 GANG (KP 67/2)	6705
	SURFACE SPEAKER Two-way speaker intended for mounting in a ceiling or on the walls: Power 15W, 32 \Omega\) speaker impedance, dimensions 270x183x37 mm.	75106 CBR		INSTALLATION BOX 2 GANG (KP 64/2)	6706
	Color: White		033	INSTALLATION BOX 3 GANG (KP 64/3)	6707
Spr. 12	NAS EXTERNAL STORAGE Two-chamber NAS server with the function of hosting, sharing and data security.	7212	0333	INSTALLATION BOX 4 GANG (KP 64/4)	6708
	NETWORK CABLE, 0.2 M Flat white LAN cable CATS, length 20 cm, terminated with 2x RJ45	6702	CITTO	INSTALLATION BOX 5 GANG (KP 64/5)	6709
	plugs.			INSTALLATION BOX 1 GANG (KP 64/LD)	6710
	NETWORK CABLE, 1 M Flat white LAN cable CAT5, length 1 m, terminated with 2x RJ45 plugs.	6700		INSTALLATION BOX 2 GANG (KP 64/2L)	6711
	Power supply and network			INSTALLATION BOX 3 GANG (KP 64/3L)	6712
		order code	(I) Is	INSTALLATION BOX 4 GANG (KP 64/4L)	6713
	WiFi BRIDGE Used for LARA wireless connection via WiFi network.	5210	(13.12)	INSTALLATION BOX 5 GANG (KP 64/5L)	6714
				UNIVERSAL BOX 1068-02	6716
21+00000h	POE SWITCH Provides LAN connectivity and PoE power supply for up to 5 x LARA. Max. distance between LARA and switch is 10 m at the power supply 12 V, and approximately 20 m at the power supply 24 V. Power supply AC 230 V.	6605		UNIVERSAL BOX KUH 1/L NA	6717





EAN code iMM Client: 8595188149334

TECHNICAL PARAMETRES

Connection:	adapter 230 V (part of supply)
Video Output:	HDMI, display port
Audio Output:	3.5 mm stereo/optical JACK out, HDMI
Audio Input:	3.5 mm stereo JACK in
Communication Interface:	ethernet port 1Gbps (RJ45)
Connecting peripherals:	2x USB 2.0, 2x USB 3.0
Storage:	SSD 32 GB
Dimensions:	192 x 60 x 189 mm
Color:	black

- The iMM device can operate in three diffent modes (the choice depends only on the SW configuration, HW is identical) and it can be used as part of a complex system of intelligent electrical installations iNELS or as an independent device for managing the multimedia in the house such as audio, video, photo, TV.
- In the iMM server mode, the iMM can be used to link almost all the different technologies in the house together and it enables us to control them all from one application which is called iNELS Home Control "iHC" which can be installed in any smart phone or tablet.
- The iMM server for the "iHC" application provides communication with the iNELS bus system, for example light control, heating, security, screening techniques and so on, even air conditionting; for example: an LG unit or a Coolmaster unit control, Daikin, Sanyo, Toshiba, Mitsubishi, Fujitsu and Hitachi. Recovery as well, such as Atrea or AirPohoda, webcameras (thanks to the ONVIF protocol, which is supported by nearly 300 brands), house hold appliances such as Miele,the entrance syllables (SIP protocol support), multimedia (audio, video, TV, photo), a weather station or the measurement of energy consumption (electricity, water, qas).
- In the iMM mode the client severs as any device such as Video zone player.
- Video zones means television, from which you can watch TV programs, view photos, play music or movies from a central data repository. To control all TVs and also amplifiers at home you only need one controller, a smart phone or tablet with the "iHC" application, possibly also a gyroscopic controller.
- Not only all the multimedia content is stored in once place, but it's also available within the whole house without having to transfer the multimedia files on CDs for example. With this central data repository the data can be played or displayed directly to any iMM server or also any NAS "Network Attached Storage" for example. Synology.
- Additionally, we can control the whole electrical installations system iNELS from the TV screen, this also serves the other icons which are arranged on the image that contains the floor plan for example. that is a copy of the ground plan of the house.
- The third mode is iMM Client / Server, which is mainly used in installations with one Video zone, where devices also simultaneously fuilfill the server function.
- By connecting and combining all these technologies, we can create different scenes, for instanse; when the fim starts playing by switching the projector the elevator starts moving, also when we expand the the screen projection we turn the lamps on, pull up the shutters and adjust the lighting scene. That can all be one with one touch.
- The video and audio transmission to your TV is running through the HDMI cable. Controlling the TV is then being done via the IP address, RS232 or an IR, which can be used with the eLAN-IR.
- The Audio 3.5 mm input can be used as a stereo jack for analog signal or an optical jack for digital output of the optical cable.

Description connector panel







EAN code Connection Server: 8595188149204

TECHNICAL PARAMETRES

Connection:	MicroUSB 5V/1A
Video Output:	HDMI
Audio Output:	3.5 mm stereo JACK out
Communication Interface:	ethernet port 10/100 Mbps (RJ45)
Connecting peripherals:	2x USB 2.0
Dimensions:	100.6 x 73.5 x 26.5 mm

- The connection server is providing a communication environment between iNELS BUS System with the third party devices, for which their protocols are also translated and submitted.
- The iHC appliction's environment enables us to control all these technologies from just one app.
- The inclusion Connection Server to the system can be controlled from the application iHC except bus units (lighting, blinds, heating, etc.) also IP cameras, air conditioning, recuperation or domestic appliances Miele.
- It also allows the communication with the domestic voice intercom 2N. It can also arrange the information from the weather station Giom or data from energy meters (electricity, water, gas), which is visualized in clear graphs.
- The device connection server uses the Raspberry Pi hardware and the apps requires a license relative to the MAC address of the device.
- While connecting with the devices connection server, it's recommended to use an uninterruptible power supply (UPS), which ensures that, there will be no power outage.
- As a part of the package, we also included an SD card where we previously installed Linux OS
 on it and its needed software equipment.
- The configuratution is happening on its own web interface, where the default IP address is not fixed. (The IP address is assigned from the DHCP server and it's needed to be known when we're connected to the network)

These protocols are being translated:

- XML RPC (for communication with iHC applications, Connection Server controls access to the central unit of iHC applications and allows access to it from multiple devices).
- ELKONET (for communication with the iNELS central unit).
- Miele@home 2.0 (for the communication with Miele Gateway and the domestic needs).
- VAPIX2, VAPIX3, ONVIF for cameras (which enables streaming up to 9 camera pictures together, PTZ controlling, recording on a network drive).
- Coolmaster (for communication with AC Daikin VRV, Sanyo VRF, Toshiba VRF, Mitsubishi Electric VRF, LG VRF, Fujistsu VRF, Mitsubishi Heavy VRF, Hitachi VRF).
- Atrea, AirPohoda (recuperation).
- SIP for domestic voice communication, for example: 2N (a communication between the iHC app or between individual iHC apps - VoIP).
- Giom3000 (displaying values from the weather station in the iHC app and using the information about the temperature, humidity and wind speed to an subsequent event, for example removing the shutters).

Comparing the function of the iMM Server to the Connection Server

	iNELS BUS System	iNELS RF Control	XML RPC (application iHC)	Videozones	Audiozones	eLAN-IR	Miele	IP cameras	Air- conditioning	Weather station GIOM3000	Weather station Clima sensor	Visualization of energy	Central Storage
iMM Server	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	√
Connection Server	✓	✓	√	Х	Х	X	✓	✓	✓	✓	✓	✓	Х





EAN code iMM Audio Zone-R: 8595188150125

TECHNICAL PARAMETRES

Connection:	MicroUSB 5V/1A
Video Output:	HDMI
Audio Output:	3.5 mm stereo JACK out
Communication Interface:	Ethernet port 10/100 Mbps (RJ45)
Connecting peripherals:	2x USB 2.0
Dimensions:	100.6 x 73.5 x 26.5 mm

Infrastructure example

- The iMM Audio zone-R serves as a player for the other Audio zones where we also can integrate the iMM server to the iNELS system.
- The iMM Audio zone-R allows us to play music which is stored on the network storge, which by itself could be an iMM server or NAS (Network Attached Storage), for example: Synology.
- The music is being played through the Logitech Media Server.
- We can control every iMM Audio zone-R in the system using the iHC application in any smart phone or a tablet, possibly from the iMM application TV picture, 'Video zone,'
- The Audio zone is equipped with a stereo jack of 3.5mm output for supplying to the amplifier or active speakers.
- The Audio zone can be connected via an HDMI to a TV or a monitor with speakers and play music within these devices.
- An HDMI output for the connection of the monitor to determine the IP address service (see the instructions).
- 2x USB ports, for example for connecting a keyboard during the IP address determination process
- 1xRJ45 for the connection to the computer or to an Ethernet Network.
- The configuration is done on their own web interface with the default IP address 192.168.1.220 (see separate manual, which is available on the product packaging and www. elkoep.cz and www.inels.cz).
- The actual configuration of the iNELS system takes place on the web interface of the iMM server (iMM Control Center), more info on the iMM construction.
- As a part of the package, we also included an SD card where we previously installed Linux OS on it and its needed software equipment.







EAN code eLAN-IR-003: 8595188132831

TECHNICAL PARAMETRES

IR SENSOR -	LEARNING MODE
Senzor IR:	Infrared sensor for learning IR codes
The carrier IR frequency:	20 - 455 kHz
Learning distance:	till 1m

O U T P U T S

Output:	3 x IR transmitter
Connection:	3 x 3.5 Jack connector, cable length 3 m
Output indication:	3x LED green status IR1-IR3
Range:	Up to 1m from the device

ETHERNET COMMUNICATION

Indication of ETH operating status:	Green LED
Indications of ETH communication:	Yellow LED
Communication Interface:	10/100 Mbps (RJ45)
Default IP address:	192.168.1.1

POWER SUPPLY

Voltage supply / jm. current:	10-27 V DC / 200 mA (safe low voltage)
Connection:	Jack connector Ø 2.1 mm
Voltage supply indication:	Green LED

OTHE R DATA

Other possibilities of wiring:	USB-B connector
Indication:	Yellow USB LED status
Reset button:	settings to their default values
Power supply:	230 VAC / 12 V DC supplied with the data logger

OPERATING CONDITIONS

Operating temperature:	-20 +55 °C
Storage temperature:	-25 +70 °C
Protection degree:	IP 30
Pollution degree:	2
Operation position:	arbitrary
Installation:	free
Provedení:	design box

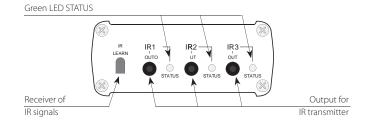
DIMENSIONS AND WEIGHT

Dimensions:	90 x 52 x 65 mm
Weight:	136 g

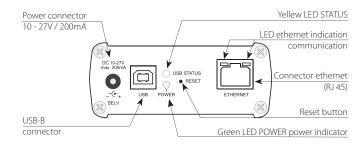
- The smart box can be nicely used in two different basic ways, such as:
 - A part of the iNELS intelligent electrical installation system withing the range of playing
 multimedia from the iHC app or when an iMM shows an IR signal, it can control the TV,
 an amplifier and smart phone (or a tablet and gyroscopic mouse) and it serves as the
 sole driver of the entire system.
 - An independent facility or (an IR terror drivers), which unites all drivers under one and replacing it with a smart phone "without having to use iNELS complex system".
- eLAN-IR-003 converter Ethernet commands from the infrared (IR) code.
- The Smart box can control the devices, which are controlled by the IR controller, for example: TV, VCR, satellite receiver, DVD player, amplifier, hi-fi, air conditioning, fans and others.
- In case of integrating a smart box to the iNELS system for controlling, we should use:
 - The complex iHC application for intended iNELS system and its iMM mulimedia superstructure. The application is available for smart phones and tablets with an Android OS and also for an iPhone and an iPAD.
 - The iMM application for TV screening "Video zone".
- In case of the usage as an independent device, we can use iHC-MAIR app (for Android smart phones) and iHC-MIIR (for an iPhone) , also the app allows us to control more smart boxes (for example one in every place).
- We can control the device remotely , for example you can switch you AC on from work, without even seeing it.
- There is a possibility to control up to 100 IR codes.
- It supports IR codes with the frequency between 20 455 KHz.

Example of connection

The front panel of eLAN-IR-003



The back panel of eLAN-IR-003







- The iNELS Home Control App enables us to control the lightning, appliances, shading technology and garage doors and in return the smart TV.
- Simple installations steps:
 - Chooe the elements of iNELS RF Control for controlling the lightning, appliances, shutters and so on.
 - Get yourself one of the smart boxes eLAN-RF and connect it to the router.
 - Install the smart TV app.
 - Add elements to the application and create the scenes of your dreams.
 - Control everything using the smart TV controller.

Description













Coming soon Not supported











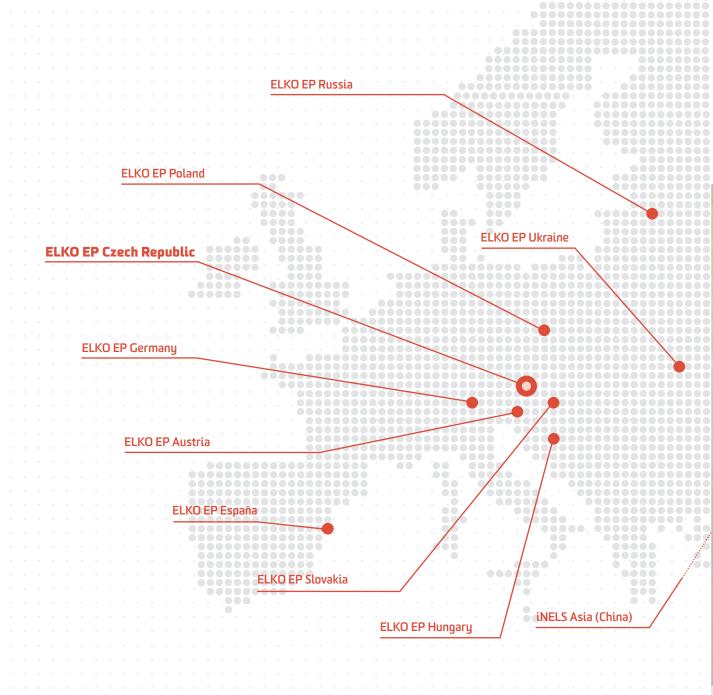
Applications are **FREE** to download at





Google play and are supported by Android OS 2.3 or later and iOS

www.inels.com





ELKO EP, s.r.o.