2N EasyGate IP+

Installation Manual

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Symbols and Terms Used

The following symbols and pictograms are used in the manual:

DANGER
Always abide by this information to prevent persons from injury.

WARNING
Always abide by this information to prevent damage to the device.

CAUTION
Important information for system functionality.

TIP
Useful information for quick and efficient functionality.

NOTE
Routines or advice for efficient use of the device.

Product Description

In this section, we introduce the **2N EasyGate IP+** product, outline its application options and highlight the advantages following from its use.

Basic Features

2N EasyGate IP+ is a gateway providing voice and data connection via a mobile network (4G, 3G, 2G) or a fixed data connection (WAN) with a connected terminal device with an FXO interface (PBX, phone, elevator communicator, answering machine, etc.). The solution is specifically designed for connecting 2N Lift1 devices as terminal devices.

When the gateway is connected to the 2N Elevator Center cloud service, the functionality is expanded to include remote management, auto provisioning, real-time monitoring of device status and more.

Basic Features **2N EasyGate IP+**:

- Calling (VoIP, VoLTE, CS)
- Data transfer interface
  - Wireless connection 4G, 3G, 2G
  - Ethernet (LAN/WLAN)
  - RS232
  - RS485
  - CAN
  - USB
- Reliable DTMF transmission
- Reliable DTMF transmission
- Remote management using 2N Elevator Center
  - automatic configuration
  - bulk update
  - bulk configuration
  - sending notifications by email
  - remote access
  - real-time monitoring

Product Versions

Part No.: 5025101AU

2N EasyGate IP+ Lift,LTE,VoIP,FXS port,modem,Aku+,9-30V/max 1A AU,cable-no plug

without plug

IP Voice Gateway with FXS interface

with EC25-AU module

Part No.: 5025101E

2N EasyGate IP+ Lift,LTE,VoIP,FXS port,modem,Aku+,9-30V/max 1A EU,cable-no plug

without plug

IP Voice Gateway with FXS interface

with EC25-E module

Part No.: 5025101US

2N EasyGate IP+ Lift,LTE,VoIP,FXS port,modem,Aku+,9-30V/max 1A US,cable-no plug

without plug

IP Voice Gateway with FXS interface

with EC25-US module

Accessories

External Antennas

Part No. 22041579

GSM/UMTS/LTE Antenna

SMA connector, 10m cable

9 dB, for higher signal quality

Power Supply

Part No. 5029001

2N EasyGate IP – RJ11 to FXS adapter

RJ11 to FXS adapter

Part No. 5029003E

Power Cable Adapter with EU plug

1.8 m length

Part No. 5029003UK

Power Cable Adapter with UK plug

1.8 m length

Part No. 5029003US

Power Cable Adapter with US Plug

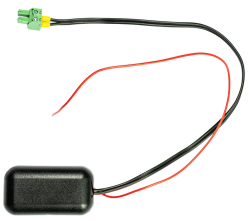
1.8 m length

Part No. 5029003AU

Power Cable Adapter with AU plug

1.8 m length

Other accessories



Part No. 5029010

2N EasyGate IP+ — Emergency lighting accessories

Allows the connection of external emergency lighting to the elevator cabin in case of power failure.

Powered by backup batteries **2N EasyGate IP+**

Supports emergency lighting up to a voltage of 12 V / 0.1 A.

Package Completeness Check

Please check the product delivery before installation. Contents:

1	**2N EasyGate IP+**
1	Wall or DIN rail mount
2	Dowel (6 mm) with screws (4.5 x 40 mm)
1	Screw for fitting the device in the holder
1	Antenna
1	FXS cable
1	Power source
1	Quick Start manual
4	AA size NiMH battery, 1,2 V / min. 2000 mAh

3×	2-pin terminal
2	3-pin terminal

Installation

This subsection provides the **2N EasyGate IP+** installation and connection instructions.

Installation Conditions

NOTE
Installation and setting of this device, including any handling thereof, should only be carried out by duly trained persons.

- The device is designed for indoor use. It may not be exposed to rain, flowing water, condensing moisture, fog, etc.
- The device is designed to be placed in a locked room to minimize the potential risk of unauthorized access and misuse by unauthorized persons.
- The device is designed to be placed on a vertical surface.

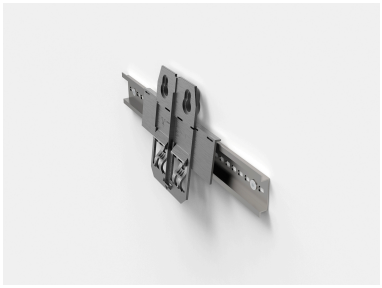
WARNING
Only the vertical installation position, with the connectors pointing downwards, guarantees the waterproofness of the device. Otherwise, water ingress and irreversible damage to the equipment may occur.

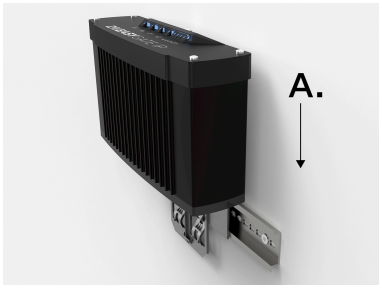
- Free space must be left above and below the device for cables and for air flow to dissipate the heat generated.
- The device must not be placed closer than 20 cm to the user for long periods of time.
- The installation site must be selected with regard to signal availability. This can be verified by the LED indicator or by checking the signal in the device configuration interface.
- There may be no strong electromagnetic radiation in the vicinity of the device.
- Inappropriate placement of the device or antenna near television, radio or other radio frequency sensitive equipment may adversely affect its operation.
- The device cannot be operated on places exposed to direct sunshine and near heat sources.
- Refer to Technical Parameters for the allowed range of working temperatures.
- The device may not be exposed to aggressive gas, acid vapors, solvents, etc.
- The device is not intended for environments with increased vibrations, such as vehicles, etc.
- The device may only be operated in a network that is separated from the Internet and protected against potential DDoS attacks.

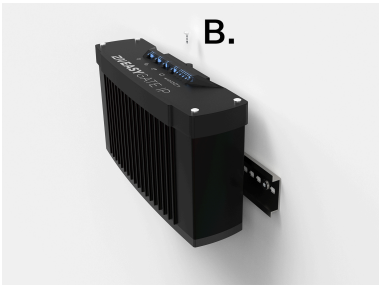
Mechanical Installation

The device is installed on a vertical surface by placing the bracket on a DIN rail (35 mm) or by anchoring the bracket directly to the wall using the screws provided.

DIN Rail Installation







No other tool is required for DIN rail installation. The DIN rail bracket has a standard size of 35 mm.

1. Place the upper inner side of the bracket profile on the DIN rail and press its lower side to snap in and secure the bracket to the DIN rail.
2. Insert the device from top to bottom in the bracket profile (A).
3. Tighten the screw (B) to secure the device position in the bracket.

Wall Installation

Using the included holder and two dowels with screws, install **2N EasyGate IP+** on the wall.

1. Drill a hole at the selected height and insert the dowels in it.
2. Thread the screws through the holder holes and screw them into the dowels in the wall.
3. Insert the device from top to bottom in the bracket profile (A).
4. Tighten the screw (B) to secure the device position in the bracket.

Electric Installation

To put it in operation, you need to connect **2N EasyGate IP+** to the power supply, connect the external antenna and insert a SIM card or connect to a network.

Device Power Connection

1. Connect the terminals of the included power supply to the POWER connector.
   When powering from another source, ensure the permitted voltage range and correct polarity according to the technical parameters.
2. Connect the power supply to the electrical power supply.
3. When **2N EasyGate IP+** is started for the first time or factory reset, several consecutive reboots may occur during which the VoLTE profile is set on the device module.
4. The device operation is indicated by status LEDs. The device is powered with 9–30 V / 1 A DC voltage via a power cable.

CAUTION

- A trouble-free operation of **2N EasyGate IP+** is only guaranteed when the adapters supplied by 2N are used. If other adapters are used, 2N cannot guarantee a trouble-free operation of the device.
- Before connecting to the mains supply, make sure that the mains voltage corresponds to the information on the mains adapter label.

Device Turn-Off

The O/I switch on the bottom of the device is used for turning the device off. Disconnecting the power supply does not turn off the device, but the device operation will be redirected to the backup battery power source.

Backup Power Supply

In the case of power disconnection or power failure, the backup batteries are automatically used for power supply.

Four AA NiMH rechargeable batteries (1.2 V / min. 2000 mAh) are stored inside the device. The batteries are located under a cover secured with a screw.

WARNING

- For backup, use only the recommended type of NiMH AA batteries with a minimum contact height of 1.7 mm. Only this type of rechargeable batteries is allowed! With other batteries, there is a risk of device damage and danger!
  We recommend that the Panasonic HHR-210AAB batteries included in the factory product delivery are used.

With the supplied batteries, the device may be operated in the range of 0 °C – 45 °C. Outside this range, the device has to be operated without the supplied batteries. Remember to use batteries with increased thermal resistance in order to make the backup function work. You can connect an external battery with increased thermal resistance or use an external battery placed under convenient temperature conditions. Make sure that the internal batteries are removed from the device before connecting external batteries.

At the end of their service life, the batteries must be disposed of as hazardous waste in accordance with the relevant provisions.

Ethernet Connection

CAUTION
The device may only be operated in a network that is separated from the Internet and protected against potential DDoS attacks.

There are three Ethernet ports on **2N EasyGate IP+**. One of the ports has a WAN function in the factory settings. Set the use of this port as a LAN port in the configuration in the Network / Routing section.

SIM Card Installation

CAUTION
To make **2N EasyGate IP+** work properly, you also need to verify the SIM card settings with your operator.

1. Such operator services as call forwarding, call restrictions, preferred networks, SMS centers, etc. must be set up before inserting the SIM card in **2N EasyGate IP+** in your mobile phone, for example.
2. Insert a SIM card (mini SIM size) into the selected SIM slots on the bottom of the device.
3. Push the SIM card in the SIM slot to secure its position. A correctly inserted SIM card protrudes gently from the slot. Check that the SIM card is inserted correctly; the SIM card position is indicated by the outline above the slot.

To remove the SIM card, press the SIM card again to release it from its position, the card slides out more and gets loose.

The device is equipped with two SIM slots. The second SIM slot is used for inserting a backup SIM card.

To unblock the SIM card, enter the PIN on the SIM card (SIM1 and SIM2) in the Network section of the configuration.

TIP
If you do not use the data services provided by this gateway (i.e. Elevator Center cloud or VoIP calling), we recommend deactivating the data services on the SIM card used.

Antenna Connection

Screw the supplied antenna into the SMA antenna connector. Tighten the antenna connector gently with your hand; never use a tool!

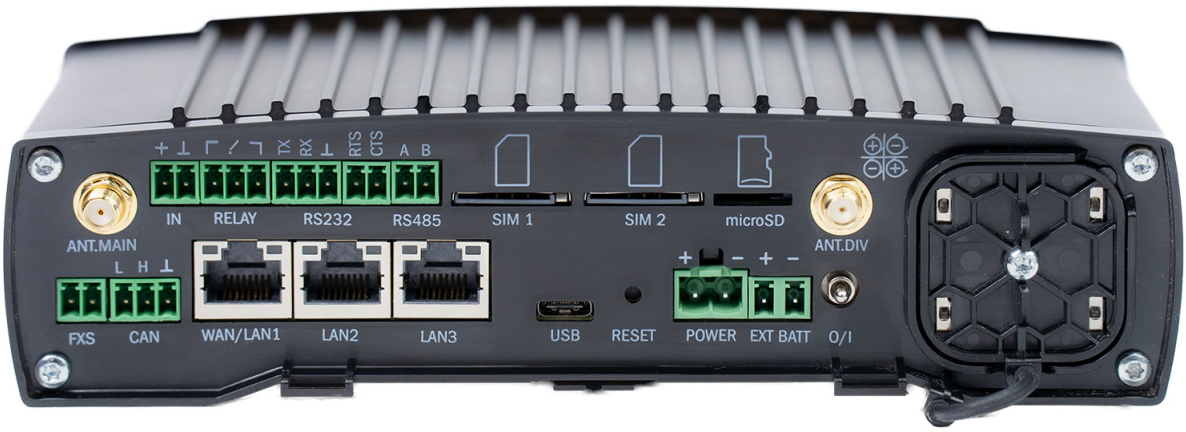
End Phone Device Connection

2N EasyGate IP+ is primarily used for connection of an emergency communicator in an elevator. **2N EasyGate IP+** has been specifically designed for connection of the 2N Lift1 terminal device and can also be connected to a standard phone, answering machine or any other terminal device with an FXO interface.

PBX Connection

Connect **2N EasyGate IP+** to a free external line of your PBX (FXO). Program the PBX in such a manner that outgoing GSM calls are routed to 2N EasyGate IP.

Device Connectors



ANT. MAIN	SMA antenna connector (main antenna)
IN	Short-circuit input. Not used for voltage connection.
RELAY	• **NO (Normally Open)**: the contact is disconnected from the COM contact in the idle state. The relay is deactivated. • **COM**: the contact switches between NO and NC when voltage is applied to the coil. • **NC (Normally Closed)**: the contact is connected to the COM contact in the idle state. The relay is activated. Refer to Services / Signaling
RS232	Used for device connection with a serial bus (some types of controllers, e.g.). • **TX**: data transmission output • **RX**: data reception input • **GND**: terminal for common wire and bus shield • **RTS**: terminal for common wire and bus shield • **CTS**: data flow control input

RS485	Used for device connection with the RS485 serial bus (some types of controllers, e.g.).
SIM 1	Primary SIM card slot.
SIM 2	Secondary SIM card slot for primary SIM card backup in the case of signal loss.
Micro SD	Micro SD card slot (not yet used)
ANT.DIV	SMA antenna connector
FXS	Interface for connecting terminal phone equipment (emergency communicator, analog telephone)
CAN	Used for device connection with the CAN serial bus (some types of controllers, e.g.).
WAN/LAN1	WAN connector, 10/100/1000BaseT, RJ-45; Cat5 or higher (recommended). WAN/LAN switching is done in the device configuration. Network / Data Routing (p. 30)
LAN 2 – LAN 3	LAN connectors, 10/100/1000BaseT, RJ-45; Cat5 or higher (recommended)
USB	USB-C port Used for local access to the device web interface settings using the 2N Web Configuration Utility.
RESET	A short press restarts the device. A long press (20 s) resets the device factory settings. This change is indicated by a red LED on the Signal indicator.
POWER	Power supply connector.
EXT BAT-TERY	Connector for remote connection of 4 NiMH batteries outside the device. In the event of power failure, power is automatically drawn from the external battery. Make sure that the internal batteries are removed from the device before connecting external batteries!
O/I	Switch for turning the device on/off.

Overview of LED Indicators

The **2N EasyGate IP+** status is indicated by the LED indicators on the top of the device. Refer to the table below for the states.

Indicator	Color	State	Meaning
⏻ Power Supply	Blue	Light on	Mains supply
	Green	Light on	Battery power supply
	Blue/Green	1.8 s, 0.2 s pause	2N Lift1 setup problem
	Yellow	Light on	Replace the battery, two years of use has been exceeded.
	Yellow	Flashes once in 1 s	Battery error
	Red	Light on	HW error If an HW error is indicated by the red LED, request a remedy or compensation from your distributor.
	None	No light signaling	Device off

Indicator	Color	State	Meaning
Network	Blue	Light on	Primary SIM card: Connected to the network
	Blue	Flashes once in 1 s	Primary SIM card: Not connected to the network, SIM card detected
	Blue	Flashes 4 times in 1 s, 1 s pause	Primary SIM card: PIN required for making SIM card available
	Blue	Flashes 8 times in 2 s, 1 s pause	Primary SIM card: SIM card blocked, PUK required
	Blue	Continuous flashing	Primary SIM card: There have been two unsuccessful PIN entering attempts. does not allow another attempt to prevent SIM blocking. **TIP** You can use your mobile phone to reenter your PIN again.
	Yellow	Light on	Secondary SIM card: Connected to the network
	Yellow	Flashes once in 1 s	Secondary SIM card: Not connected to the network, SIM card detected
	Yellow	Flashes 4 times in 1 s, 1 s pause	Secondary SIM card: PIN required for making SIM card available
	Yellow	Flashes 8 times in 2 s, 1 s pause	Secondary SIM card: SIM card blocked, PUK required

Indicator	Color	State	Meaning
Line	Blue	Light on	Active call SIP calling
	Blue	Flashes once in 1 s	Off-hook, dialing or incoming call (ringing) in progress. SIP calling
	Green	Light on	Active call VoLTE calling
	Green	Flashes once in 1 s	Off-hook, dialing or incoming call (ringing) in progress. VoLTE calling
	Yellow	Light on	Active call Calling using a mobile network voice channel
	Yellow	Flashes once in 1 s	Off-hook, dialing or incoming call (ringing) in progress. Calling using a mobile network voice channel
	White	Light on	Programming, information transfer to 2N Lift1, modem connection
	None	No light signaling	On-hook

Indicator	Color	State	Meaning
Data	Blue	Light on	**Data is available.** The device is added to the 2N Elevator Center account. SIP is registered.
	Blue	Pause once every 3 seconds	**Data is available** (backup link). Data is available. The device is added to the 2N Elevator Center account. SIP is registered.
	Blue	Flashes once every 3 seconds	**Data is not available.** IP address assigned. Check the APN settings in your device or data availability with your provider.
	Blue	Flashes once in 1 s	**Data is available.** The 2N Elevator Center service is not enabled or the device is not added to the 2N Elevator Center account. SIP is not registered.
	Blue	Flashes twice, 2 s pause	**Data is available.** The device is added to the 2N Elevator Center account. **Data is available.** Check the SIP settings.
	Yellow	Light on	**Data is available.** **Data is available.** SIP is not registered.
	Yellow	Pause once every 3 seconds	**Data is available** (backup link). The device is added to the 2N Elevator Center account. SIP is not registered.
	Yellow	Pause once every 3 seconds	**Data is available.**

Indicator	Color	State	Meaning
Signal	Blue	Signal strength indication (by the number of LEDs)	4G (−100, −90, −80, −70 dB)
	Green	Signal strength indication (by the number of LEDs)	3G (−106, −100, −90, −80 dB)
	Yellow	Signal strength indication (by the number of LEDs)	2G (−104, −98, −89, −80 dB)
	White	Light on	Unknown technology of connection to the operator's network.

The signal LEDs also serve as status LEDs for such actions as:

Factory Default Reset

Software Restart

Firmware Upgrade

RESET button function

The RESET button, located between the connectors on the bottom of the device, is used for resetting the factory defaults or restarting the device.

Device Restart

1. Briefly press the RESET button.
2. The button press is signaled by a short power LED flash.

Factory Default Reset

1. Press and hold the RESET button for approximately 20 seconds until the separate red LED in the first position of the signal strength display section of  lights up.
   While the RESET button is being pressed, the blue power LED is lit.
2. The device will be restored to factory settings.

Extending Module Connection

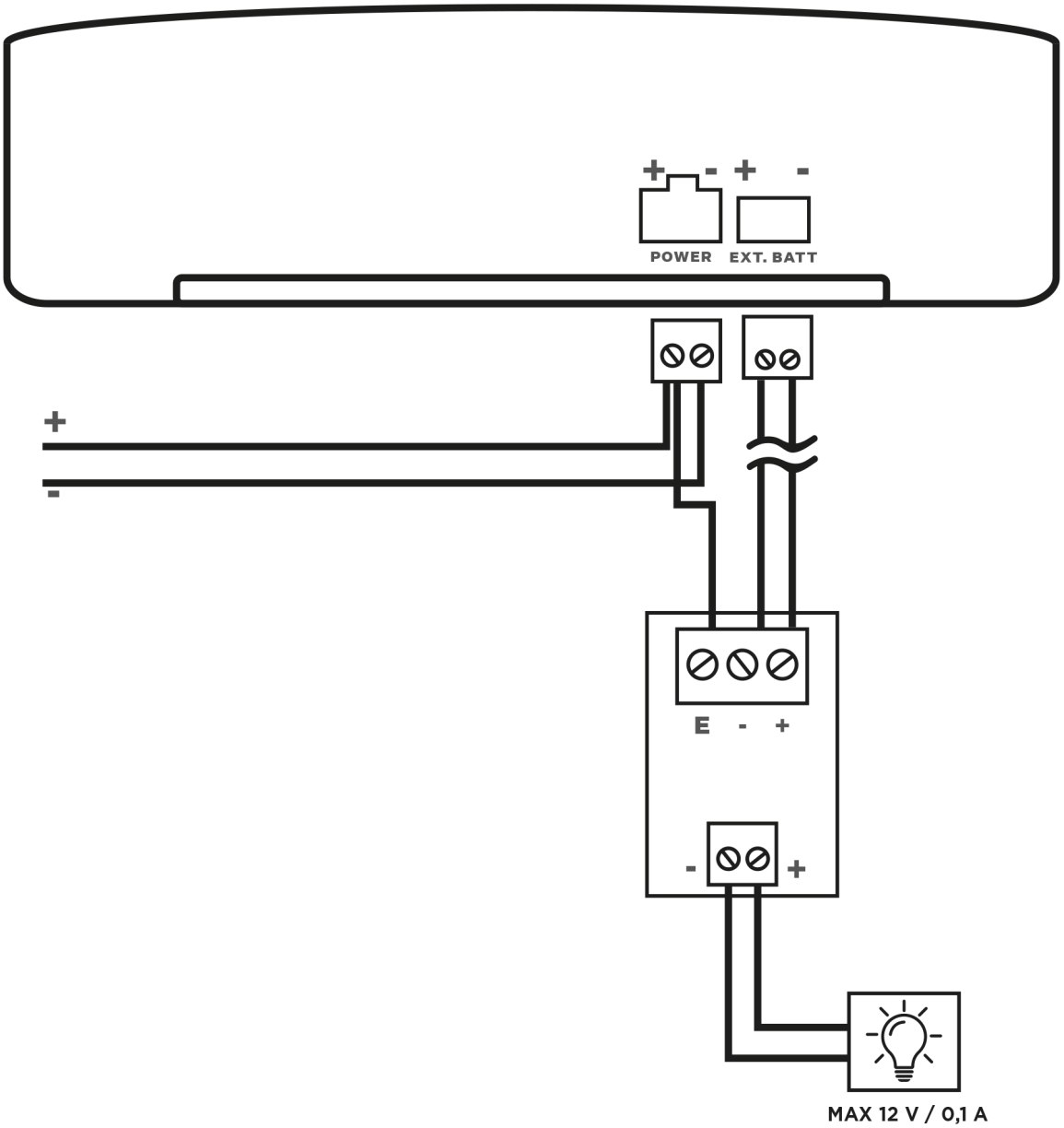
Emergency Lighting Accessory

The accessory is used for external emergency lighting connection to the elevator car. The external emergency lighting is switched on whenever the mains voltage fails. At this moment, it is powered from the **2N EasyGate IP+** backup batteries. The accessory supports the emergency lighting connection for up to 12 V / 0.1 A.

Mounting instructions:

1. Open the plastic cover of the emergency lighting accessory. Connect external emergency lighting to the OUT output terminal. Observe the polarity. Replace the plastic cover.
2. Plug the 2-wire terminal leading from the accessory into the EXT BATT connector on the back of **2N EasyGate IP+**.
3. Connect the red wire leading from the accessory to the positive (+) terminal of the power supply on the back of **2N EasyGate IP+**.

CAUTION
Connecting the red wire prevents the emergency lighting from illuminating when **2N EasyGate IP+** is powered from the power supply. This prevents the **2N EasyGate IP+** function providing batteries from being discharged as a result of mains power failure.


+
-
+
-
POWER
EXT. BATT
+
-
E
-
+
-
+
MAX 12 V / 0,1 A

Phone Line Tones – Operating Tones

2N EasyGate IP+ sends tones to the phone line to indicate its operational status:

TIP
Set the operating tones on the Telephony card in the configuration (refer to Telephony / Dialing).

- **Dial Tone**
  Continuous tone or according to the modulation setting.
  Sounds whenever the line is picked up to indicate that the device is able to make a call / modem connection.
- **Ringtone**
  
  or according to the modulation settings
  It is played back by the IP device if the IP device is called.
- **Busy Tone**
  
  or according to the modulation settings
  It is broadcast in the following cases:
  - the called party is busy
  - the called party has hung up (disconnection)

The tables below show the factory default values of the operating tones.

E versions (Part Nos. xxxxxxxE)

	Dial Tone	Busy Tone	Continuous Tone	Ringtone
Frequency 1 [Hz]	425	425	425	50
Frequency 2 [Hz]	0	0	–	0
Modulation [ms/ms]	continuous	330/330	–	2000/4000

US versions (Part Nos. xxxxxxxUS)

	Dial Tone	Busy Tone	Continuous Tone	Ringtone
Frequency 1 [Hz]	350	480	420	25
Frequency 2 [Hz]	0	620	0	0
Modulation [ms/ms]	continuous	375/375	–	2000/4000

AU versions (Part Nos. 5023001AU, 5023011AU, 5023101AU, 5023111AU)

	Dial Tone	Busy Tone	Continuous Tone	Ringtone
Frequency 1 [Hz]	413	400	425	25
Frequency 2 [Hz]	438	400	–	0
Modulation [ms/ms]	continuous	250/250	–	2000/4000

Web configuration interface

NOTE
Each configuration change requires saving or restarting the device. Fields with invalid values are marked in red. Changes with invalid values cannot be saved. A change will not be set unless saved.

Device Configuration Interface Access

There are two ways how to log in to **2N EasyGate IP+** as described below.

CAUTION

- We recommend using the 2N Elevator Center cloud service for the device security and data protection reasons.

2N Elevator Center

2N Elevator Center, a licensed cloud service, is used for remote management and access to the **2N EasyGate IP+** web interface. To create access data for the service, please contact your 2N sales representative or 2N distributor.

After the third unsuccessful login attempt, the user account will be blocked for one minute after the last attempt.

Never provide the 2N Elevator Center login credentials to other persons or services. Keep this information safe and do not enter it on unreliable websites.

Web Configuration Utility

You can configure **2N EasyGate IP+** without the use of the 2N Elevator Center cloud service by connecting the device to a PC via a USB cable using Easy Gate IP Web Configuration Utility, freely downloadable from 2N.com. EasyGate IP Web Configuration Utility is used for automatic opening of the web configuration page **2N EasyGate IP+**, which is connected via the local USB port.

CAUTION
Only one active USB connection is supported. If multiple devices are connected, leave only one **2N EasyGate IP+** device connected.

Installation

1. Double-click the 2N_EasyGate_IP_Web_Configuration_Utility_Setup (.exe) file.

2. Select the destination folder for installing the utility.
3. Select other possible tasks – create desktop shortcut (optional).
4. Confirm the installation.
5. Click Finish to complete the installation.

Use

1. Connect the power adapter to **2N EasyGate IP+**.
2. Turn on **2N EasyGate IP+**.
3. Connect **2N EasyGate IP+** to your computer using a USB cable (USB-A / USB-C).

> **CAUTION**
> Make sure the USB connection option is enabled, refer to System. Once the device is added to 2N Elevator Center, the USB connection option is automatically disabled.

4. Open the installed application 2N EasyGate IP – Web Configuration Utility.
   - If **2N EasyGate IP+** is already connected via USB, its web page will be displayed automatically.
   - If 2N EasyGate IP is not connected at the moment, nothing will happen. To reopen the configuration web page, after a new USB connection or after a **2N EasyGate IP+** reboot, for example, you need to close and reopen 2N EasyGate IP – Web Configuration Utility.
5. For your first login, enter “Admin” (admin is also accepted) for the username and “2n” for the password. After the third unsuccessful login attempt, the user account will be blocked for one minute from the last attempt.
6. After logging into the web interface, you will be prompted to change the default password, otherwise you will not be allowed to change the configuration.

> **CAUTION**
> - To be compliant, your new password must be at least 8 characters long and contain at least one lower case letter, one upper case letter and one digit.
> - The password change will be required again after the main unit is factory reset.

Status

The Status tab also serves as the Home screen after logging into the **2N EasyGate IP+** web interface. A list of 8 configurable sections is displayed on the left. You can reset the page settings, change the language, change the password and log out of the device web interface in the right-hand upper corner.

The Status menu provides clear status and other essential information on the device.

Firmware Version – indicates the firmware version number loaded on the device.

UTC Time – gives the current time for the location where the device is installed.

Time from Start – indicates the time for which the device has been in operation.

Network Name – indicates the network name of the active SIM card operator.

Data – provides information about the data connection availability(“connected, disconnected, SIM error”).

> **CAUTION**
> “Connected” can be displayed by some mobile operators even if the APN field is not filled in and the Internet is not working. In case APN is not completed correctly, the data will be displayed as “Disconnected” and **2N EasyGate IP+** will be automatically restarted in about 5 minutes.

2N My2N – provides information on the My2N connection.

SIP – provides information on SIP connection status.

Battery – provides information on the battery status.

NOTE
A SIM error is displayed if the SIM card is not inserted correctly or if a SIM card is inserted with the PIN code set. If the data status is displayed as “Disconnected”, it probably means that the SIM card data has been exhausted.

Status / LED s

The LEDs menu informs of the status of the device LED indicators and is used for remote control where it is impossible to check the device physically. Refer to Subs. Overview of LED Indicators (p. 16) for a detailed description of the LED indicators.

Power Supply – informs of the power supply method for the device.

Network – informs of the status of the mobile network.

Line – informs of the status of the line or the technology of the ongoing call.

Data – informs of the status of data connectivity, SIP registration and connection to My2N.

Signal – indicates the signal strength level (1–4).

Network / SIM1

This tab helps you set the SIM card inserted in the slot marked SIM 1, activate it and set the operator APN parameter. SIM 1 serves as the primary SIM card.

SIM Slot – allows you to enable/disable the SIM card functions.

PIN – PIN code for the secure SIM card.

APN – Internet access setting. Check with your operator for the correct APN for the setting.

Authentication Type – network authentication type.

Username – username for data connection.

Password – password for data connection.

CAUTION
To protect your data and ensure safe use of your SIM card, we recommend changing your PIN regularly.

You cannot connect data to the device without a correctly filled-in APN value.

Network / SIM2

Secondary SIM2 serves as a backup for the primary SIM1 card in the case of signal loss. If the SIM1 signal gets degraded or lost for more than 180 seconds (default value), all the calls will be automatically routed through the backup SIM2 if inserted. Refer to the Backup subsection for details.

SIM Slot – allows you to enable/disable the SIM card functions.

PIN – PIN code for the secure SIM card.

APN – Internet access setting. Check with your operator for the correct APN for the setting.

Authentication Type – network authentication type.

Username – username for data connection.

Password – password for data connection.

CAUTION
To automatically switch over and provide backup using SIM 2, you must enable the SIM slot function for SIM 2 and enable the backup service in **Network > WWAN > Backup**.

To protect your data and ensure safe use of your SIM card, we recommend changing your PIN regularly.

You cannot connect data to the device without a correctly filled-in APN value.

Network / WWAN

WWAN or Wireless Wide Area Network is a wireless broadband network. WWAN uses the network infrastructure of mobile operators to provide wireless connectivity to users in large areas. This tab allows you to select the operator's network technology over which calls should be routed and enables/disables data connectivity. The tab displays information on the currently active SIM card.

Network Name – indicates the operator network name.

MCC + MNC – gives the country code and network code of the operator.

IMSI – indicates the number assigned to the SIM card by the mobile operator.

ICCID – serial number of the SIM card.

Network Selection – select the desired network technology.

Network Technology – display the network technology in use.

Network Signal – strength of the network signal.

Signal Quality – will be implemented in the future.

Signal Quality – will be implemented in the future.

Primary SIM Slot – allows

Active SIM Slot – designates the SIM slot where the SIM card is inserted that currently enables the calling function.

SIM State – shows the current status of the active SIM card.

Turn on data – allows you to enable/disable mobile operator data.

NOTE
Mobile data is enabled by default to connect to the Elevator Center and enable VoIP calling.

Data Connection – shows the current status of the data connection.

Network / WWAN / Operator

Selection Mode – determines whether the operator selection will be automatic or will be guided by the settings of the optional parameters below.

State – displays the status of the operator selection.

Network Name – display the name of the current provider network.

Operator Code – enter the mobile country code (MCC) and the mobile network code (MNC), e.g. 999 + 999. The operator code must be entered in the manual selection mode.

Technology – helps select the technology that provides connection to the data network.

Confirmation Timeout – determines how long the device will attempt to establish connection with the operator according to the manual selection. If the connection is unsuccessful, the operator is selected in the automatic mode.

Network / WWAN / Data Connection

The Data Connection tab displays information and details about the WWAN wireless connection and is used for adding the preferred primary and backup Domain Name System (DNS).

NOTE
Mobile data is enabled by default to connect to the Elevator Center and enable VoIP calling.

Turn on data – allows you to enable/disable data connection.

Data Connection – displays the current status of the data connection.

IP – indicates the current IP address.

Network Gateway – shows the network gateway address.

Preferred DNS1 – fill in the IP address of the preferred DNS1. If the preferred DNS1 is not filled in, the DNS1 supplied by the operator will be used.

Preferred DNS2 – fill in the IP address of the preferred DNS2. If the preferred DNS2 is not filled in, the DNS2 supplied by the operator will be used.

DNS1 – indicates the DNS address supplied by the operator.

DNS2 – indicates the DNS address supplied by the operator.

Network / WWAN / Backup

The Backup tab allows you to set the primary SIM1 card backup if the signal gets degraded or lost for more than 180 seconds (default value). If the signal value drops below the minimum required signal, all the calls will be automatically routed via the backup SIM2 if inserted.

If the backup SIM2 signal gets degraded, the device switches back to the primary SIM1 and, if SIM1 allows switching to another operator's network, it starts searching for it. The network search method can be set in the Enable Network Search parameter.

Enable Service – allows you to enable/disable the primary SIM backup function when the signal is poor or lost.

Enable Network Search – the device starts searching all available networks based on signal strength and connects to the one that provides sufficient data connection to connect to My2N. If the parameter is disabled, the device connects to the network with the strongest signal.

State – displays the status of the operator selection.

Network Name – indicates the network name of the active SIM card operator.

Min Required Signal – set the minimum required value for signal strength. If the signal deteriorates below the minimum required value, the backup SIM2 is switched on.

Time Limit – set a time value that determines how long the backup connection will be used using the backup SIM2.

Switch Repetition – set the time value that determines the time since the last switching from SIM2 to SIM1, when it is allowed to back up the unsatisfactory SIM1 signal by switching to the backup SIM2. This parameter prevents frequent switching between SIM cards.

Switch Delay – set the time value that determines the signal degradation or loss period after which the switchover to the backup SIM2 will occur.

NOTE
By default, if the secondary SIM2 connection values are better than those of the primary SIM1 card, **2N EasyGate IP+** stays connected to the secondary SIM2 card for 24 hours until it tries to connect to the primary SIM1 card again. If the secondary SIM2 connection values are the same or worse than those of the primary SIM1 card, **2N EasyGate IP+** reverts to the mobile network of the primary SIM1 card operator. The next check of the connection values will take place in 24 hours.

Network / Data Routing

Routing Mode – determine the destination for routing data packets from **2N EasyGate IP+**. If you choose the backup mode, set the ping request sending parameters in Network / Data Routing / Monitor (p. 31). Without the ping request check, the routing mode will only be reset to WAN or WWAN upon the device restart.

Use WAN Port as LAN Port – determine the mode of the WAN/LAN1 port. If this option is enabled, the WAN/LAN1 port will function as an additional LAN port.

Active Interface – display the interface (WAN / WWAN) currently designated for data routing.

Network / Data Routing / Monitor

Ping Transmission Period of Default Interface [s] – set the interval at which the device sends ping requests to verify network connection availability.

Default Interface Reception Timeout [ms] – specify the maximum time for which the device shall wait for a response to its ping request.

Default Interface Failure Tolerance [pings] – determine how many consecutive unsuccessful ping requests are accepted before the connection is considered failed.

Default Interface Success Criterion [pings] – define how many successful responses are required for the connection to be considered functional after a previous failure.

Ping Server 1/2 for Connection Verification – set the IP address / domain name of the servers to which ping requests will be sent periodically to verify network connection availability.

Ping Server 1/2 Availability – display the availability status of the ping servers.

NOTE
2N EasyGate IP+ sends ping requests to both the defined ping servers simultaneously and requires a successful response from at least one of them.

Network / LAN

Web Configuration –

MAC address – display the currently valid MAC address of the device.

Gateway IP address – set the IP address to be used as the **2N EasyGate IP+** address for the LAN.

Subnet (CIDR) – define a local network subnet using CIDR notation.

DHCP server – enable / disable the DHCP server function, which allows the gateway to dynamically assign network parameters to devices in the LAN.

DHCP server state – current DHCP server status.

IP Address Assignment Time – set a time value in minutes for which the network parameters shall be assigned to the device in the LAN.

First Assigned IP Address – specify the starting address for the range of IP addresses assigned to the devices.

Last Assigned IP Address – specify the last address for the range of IP addresses assigned to the devices.

IP Address Allocation Period [m] – determine how long individual IP addresses shall be allocated.

Network / WAN

Web configuration – for connection to the web configuration interface via the IP address and port 8080.

MAC address – MAC address of the **2N EasyGate IP+** interface. Used for communication within the network.

DHCP client – enable / disable the DHCP client function, which allows **2N EasyGate IP+** to obtain dynamic network parameters from a DHCP server.

DHCP client state – display the current status of the DHCP client.

Obtained IP address – display the IP address that **2N EasyGate IP+** received from the DHCP server.

Obtained subnet – display the subnet that **2N EasyGate IP+** received from the DHCP server.

Received DNS 1/2 IP address – display the IP addresses of the DNS server that **2N EasyGate IP+** received from the DHCP server.

User DNS 1/2 address – enter your own DNS server IP addresses. The user-specified DNS servers take precedence over the DNS addresses received from the DHCP server.

Static IP address – set a static IP address to be used if the DHCP client is disabled.

Static gateway IP address – set a static IP address to be used as the default IP address for communicating with the Internet if the DHCP client is disabled.

Static subnet (CIDR) – define a subnet using CIDR notation to be used if the DHCP client is disabled.

2N My2N / Basic Settings

The 2N My2N / Basic Settings tab informs of the connection to the My2N cloud service, which manages 2N Elevator Center enabling bulk device management **2N EasyGate IP+**.

Service – allows you to enable/disable device management using the 2N Elevator Center service via 2N My2N.

State – indicates the status of the 2N My2N cloud service connection.

Device Identifier – displays the identifier assigned to the Company created in 2N My2N.

Device Type – indicates the device type of **2N EasyGate IP+** in the 2N My2N internal database.

Tunnel Server – lists the tunnel tribble URL for connection to 2N My2N.

Tunnel Port – lists the tribble tunnel port.

Certification Server – gives the address of the knocker used for connection to 2N Elevator Center via 2N My2N.

Certification Port – specifies the certification port number.

Extended Protocol – provides more detailed information in the log on the device communication with 2N Elevator Center via 2N My2N.

2N My2N / Security

The My2N Security tab helps download certificates for secure communication of **2N EasyGate IP+** with the My2N cloud service running 2N Elevator Center.

CA Certificate – allows you to download a certificate from the My2N certificate authority.

Device Certificate – allows you to download the device certificate.

Certificate Fingerprint – indicates the device certificate identifier stored in the My2N database.

Delete Certificate – removes the My2N certificate from **2N EasyGate IP+**. Once the device connects to My2N, a new certificate is automatically generated.

SIP / Basic Settings

The SIP/Basic Settings tab helps you set up all necessary SIP credentials, including certificates for secure SIP.

SIP Registration

CAUTION
SIP registration in GSM (2G) will not be performed due to the inability to ensure call quality over this type of network.

1. Enable the SIP service and save the setting.
2. Fill in your phone number and authorization ID.
3. Enter the password and pay attention to lower/upper case.
4. Fill in the SIP server address.
5. This is how SIP is registered. You can check the SIP status on this tab or on the Status tab, where general information on the device are displayed.

Service – allows you to enable/disable SIP calls.

State – indicates the SIP status.

Phone Number – allows you to fill in a number that will uniquely identify the device in calls.

Authorization ID – allows you to set an ID that will uniquely identify the device.

Password – allows you to set a password for registration.

Server – allows you to set the SIP Proxy server URL.

Domain – set the domain name of the service with which the device is registered. Typically, it is equivalent to the SIP Proxy or Registrar address.

Server Port – allows you to set the server port. 0 is used for automatic selection for the connection with the counterparty.

Local Port – *will be implemented in the future.*

Proxy – IP address or domain name of the SIP Proxy.

Proxy Port – set the SIP Proxy port.

Registration Permission – to be implemented in the future.

Registration Validity – allows you to set a time limit for re-registration.

Transport Type – allows you to select the SIP signaling method:

- “UDP” – the most commonly used insecure transport protocol.
- “TLS” – a secure protocol where SIP calls and SIP signaling are secured against eavesdropping and third-party modification.

SIP / SIP Security

The SIP Security tab helps you download security certificates for SIP calls using TLS.

CA Certificate – allows you to download a certificate from the certification authority.

Device Certificate – allows you to download the device certificate.

Certificate Fingerprint – lists the device certificate identifier.

Common Name (CN) – allows you to fill in a name to identify the SIP account of the device.

CSR GENERATOR – generates a certificate signing request.

DELETE CERTIFICATE – deletes all certificate data (CA certificate, device certificate and certificate fingerprint).

PKI State – indicates the status of the CSR public key generator.

Device CSR – allows you to download a certificate signing request.

New CA Certificate – allows you to upload a new CA certificate.

New Device Certificate – allows you to upload a new device certificate.

SIP / Others

The SIP / Others tab sets other tone dialing properties.

DTMF Transmission – sets the tone dialing transmission method:

- “inBand”
- “RTP DTMF”
- “info (RFC(2976)”

Sound Delay – set the time value in ms for audio delay in the range from 0 to 2000 ms. It is used for suppressing DTMF in the voice channel. The minimum time value for DTMF suppression is 1 ms. 0 ms disables the audio delay function.

NTP

The NTP tab helps you set up the NTP server that 2N EasyGate IP will use for time synchronization. By default, the NTP server service is enabled and the time is synchronized according to the URLs listed, which can be changed. If time synchronization from the NTP server is disabled, 2N EasyGate IP will obtain time from the operator of the active SIM card.

Enable – allows you to enable/disable time synchronization from the NTP server.

Server 1 – allows you to fill in URL of the selected primary NTP server.

Server 2 – allows you to fill in the backup URL of the NTP server in case Server 1 is unavailable.

Server 3 – allows you to fill in the backup URL of the NTP server in case Servers 1 and 2 are unavailable.

LIFT1

The LIFT1 menu helps you set up 2N Lift1, with which **2N EasyGate IP+** is interconnected.

Any 2N Lift1 configuration error is signaled by the blue power LED flashing for 1.8 s, followed by a 0.2 s pause.

Device Status – displays information on communication between 2N Lift1 and **2N EasyGate IP+**.

- “OK” – the connection was OK.
- “Ringing Error” – 2N Lift1 fails to answer an incoming call.
- “Connection Error” – 2N Lift1 picks up an incoming call but fails to switch to the programming mode.
- “Communication Error” – CRC does not match.
- “Unknown Password” – the password set for 2N Lift1 does not match.
- “Invalid Profile” – the set profile has not been uploaded to Lift1.

Debug – allows you to disable/enable logging of CPC communication (DTMF) in the log.

LIFT1 / Device Info

The Info tab displays information on 2N Lift1.

The Update button starts loading information on 2N Lift1.

State – shows the current status of information from 2N Lift1.

- “OK” – the request has been executed.
- “Busy” – the FXS line has been picked up and is communicating with 2N Lift1.
- “Error” – an error occurred while loading information from 2N Lift1.
- “Unknown” – information has not been downloaded from 2N Lift1 yet or 2N Lift1 is not connected.

Serial Number – shows the 2N Lift1 serial number.

Hardware Version – displays the hardware version.

Customer Parameter – classic 2N Lift1: 1

Application Version – shows the 2N Lift1 FW version.

Bootloader Version – shows the current Bootloader version.

Voice Menu – displays the language in which the voice menu is recorded and the version number.

LIFT1 / Battery Status

The Battery Status tab displays battery information for **2N EasyGate IP+** if the service is enabled.

Enable Service – allows you to enable **2N EasyGate IP+** to pass battery status information to 2N Lift1.

- “No” – **2N EasyGate IP+** will not pass battery error information to 2N Lift1.
- “Yes” – in the event of a battery fault, **2N EasyGate IP+** will pass the information to 2N Lift1 to set up an operational call.

Status – shows the battery information transfer status of **2N EasyGate IP+** to 2N Lift1.

- “OK” – currently OK.
- “Busy” – **2N EasyGate IP+** picked up the line and relayed the battery error information to 2N Lift1.
- “Error” – an error occurred during communication (refer to 2N Lift1 Status for error type).
- “Unknown” – sync has not occurred yet.

Battery Status – displays the current battery status.

- “Ready” – the battery is fine.
- “Failure” – a battery failure has occurred.

Transferred Battery Status – shows what battery status information has been transferred to 2N Lift1.

- “Ready” – the battery is fine.
- “Failure” – a battery failure has occurred.

The Transmission button generates the **2N EasyGate IP+** battery info transfer to 2N Lift1. The Save Changes button saves the enabling/disabling of the battery status information transfer service.

LIFT1 / Parameters

The Parameters tab is used for changing the intercom identification number or the profile in 2N Lift1.

CAUTION
If the value is changed as part of a required setting change, first press the Save Changes and then perform further actions.

Status – shows the status of communication between 2N Lift1 and **2N EasyGate IP+**.

- "OK" – there is no communication between **2N EasyGate IP+** and 2N Lift1.
- "Busy" – there is ongoing communication between **2N EasyGate IP+** and 2N Lift1.
- "Error" – an error occurred during communication between **2N EasyGate IP+** and 2N Lift1.

Intercom Identification Number – numerical identification of the lift (identical to parameter 974, refer to Overview of All Programming Functions in the 2N Lift1 User Manual).

Profile Number – the user profile number (1–19) to be set in 2N Lift1.

Submitted Profile Number – shows the user profile number currently uploaded to 2N Lift1.

The Update button checks if the **Profile Number** differs from the **Profile Number Sent**. If the numbers match, the profile will not be set, only the **Intercom ID** will be reset. If they are different, the profile and **Intercom ID Number** will be set.

The Preset and Update button always sets **Profile Number** (no check for match with **Profile Number Sent** will be made) and then **Intercom ID**.

The Save changes button will save the changes.

LIFT1 / Password

The Password tab displays and helps set the password for the 2N Lift1.

CAUTION
If the value is changed as part of a required setting change, first press the Save Changes and then perform further actions.

Status – shows the 2N Lift1 password status.

- "OK" – the password is OK.
- "Busy" – communication is ongoing between 2N Lift1 and **2N EasyGate IP+**.
- "Incorrect Password" – neither the Current Password nor the Factory Default Password can be used – both are incorrect passwords.
- "Not Ready" – the password change cannot be made at this moment, because the necessary information has not been loaded (SIM, for example).
- "Ready" – **2N EasyGate IP+** is ready for a password change, but the change has not been made yet.

Factory Default Password – backup password of the factory settings (to be used, for example, when replacing 2N Lift1 with a new one).

Manual Password – manually completed password (limited to 19 digits).

Password Selection – allows you to choose which password to use.

- “Manual (Not Recommended)” – uses the Manual password.
- “Random (Strong)” – randomly generated password.
- “IMSI #1 Ending Numbers (Weak)” – uses the last 5 digits of SIM1 IMSI.
- “IMSI #1 Hash – SIM 1 IMSI Hash (Strong)” – uses an encrypted short string of letters and digits based on SIM1 IMSI.
- “IMSI #2 Ending Numbers (Weak)” – uses the last 5 digits of SIM2 IMSI.
- “IMSI #1 Hash – SIM 2 IMSI Hash (Strong)” – uses an encrypted short string of letters and digits based on SIM2 IMSI.
- “IMEI Hash (Strong)” – uses an encrypted short string of letters and digits based on IMEI.
- “SN Ending Numbers (Weak)” – uses the last 5 digits of the SN. SN Hash (Strong) – uses an encrypted short string of letters and digits based on the SN.

New Password – displays the password to be set for 2N Lift1 according to the Password Selection option.

Current Password – displays the current 2N Lift1 password. It is used for all communication with 2N Lift1.

LIFT1 / Sync

Enable Service – allows you to enable synchronization.

- “Yes” – every time **2N EasyGate IP+** is powered on, the configuration (password, battery and parameters) is synchronized depending on the **Enable State Saving** setting.
- “No” – synchronization is disabled.

Enable State Saving

- “Yes” – when enabled, **2N EasyGate IP+** only synchronizes the settings that have been changed.
- “No” – when disabled, **2N EasyGate IP+** does not remember the settings and synchronization (if enabled) is done completely.

CAUTION
If 2N Lift1 synchronization is enabled and **2N EasyGate IP+** has been removed from 2N Elevator Center, 2N Lift1 will be deleted and reset to factory defaults at the same time. However, if 2N Lift1 is in a call when **2N EasyGate IP+** is removed from 2N Elevator Center, the factory reset will not occur until the call is completed. 2N Lift1 must have **Synchronization Status** displayed as “Success”, otherwise it will not restore the factory settings.

State – informs about the current status of 2N Lift1 synchronization with **2N EasyGate IP+**.

- “Password Maintenance” – password setup is in progress.
- “Parameter Maintenance” – parameter settings are in progress.
- “Battery Status Transfer” – battery information is being set.
- “Success” – the setup was successful.
- “Error” – an error occurred during synchronization (refer to the Lift1 Status for error type).

Saved State – displays the saved state of synchronization of 2N Lift1 with **2N EasyGate IP+**.

- “Success” – synchronization was OK, status saved successfully.
- “Error” – synchronization failed, status not saved.

The Run button starts 2N Lift1 synchronization with **2N EasyGate IP+**.

LIFT1 / Reset

The Factory Settings tab helps you reset the 2N Lift1 factory settings.

State – informs of the current status of restoring 2N Lift1 factory settings.

- “Ready” – the FXS line is at relax and the factory reset function can be performed for 2N Lift1.
- “Busy” – the FXS line has been picked up and is communicating with 2N Lift1.
- “Error” – 2N Lift1 factory reset cannot be performed (refer to 2N Lift1 Status for error type).

The Run button starts the 2N Lift1 factory reset.

LIFT1 / SMS

The SMS tab helps you enable and set the programming of the connected 2N Lift1 communicator via SMS. After receiving an SMS with a programming request, **2N EasyGate IP+** establishes connection with 2N Lift1 over the phone line and programs it using the CPC protocol.

CAUTION
If the value is changed as part of a required setting change, first press the Save Changes and then perform further actions.

Enable Service – allows you to enable/disable the 2N Lift1 programming service via SMS. When you disable SMS reception, **2N EasyGate IP+** does not respond to SMS (does not send a reply).

Pre-Authorization – verify EGIP or Lift1 password before processing SMS command. The EGIP password matches the **2N EasyGate IP+** password (serial number or security code). The default LIFT1 password for preauthorization is 12345.

- “Strong” – the EGIP password is verified before the SMS command is processed.
- “Weak (default setting)” – the LIFT1 password is verified before the SMS command is processed.
- “No” – there is no password verification before the SMS command is processed.

Last Response

- “None” – nothing was set up after boot either by SMS or Configuration, see below.
- “Successful” – communication is fine.
- “Communication Error” – there was an error in communication with 2N Lift1.
- “Invalid Parameters” – an incorrect parameter/value has been entered.

Configuration **– allows you to configure 2N Lift1 in the same way as via SMS by entering the necessary parameters (e.g. by entering “011=xxxxxxxxxxxxxxxx 012=xxxxxxxxxxxxx 111=2 112=4”**configuration is possible even if the service is switched off; switched on is only valid for incoming SMS).

The Upload Configuration button uploads the set configuration to 2N Lift1.

TIP
We recommend pre-authorization with the EGIP or LIFT1 password, which is verified by **2N EasyGate IP+** itself. If no pre-authorization is required, authentication will take place on the 2N Lift1 side, which will cause the line to be called and occupied for a short time.

Building LIFT1 Commands

CAUTION

- You cannot combine multiple commands in one SMS message.
- The maximum SMS length is 140–160 characters, if a setting outside the allowed range is requested or there is another error in the message, the setting change will not be performed.

TIP
A list of the 2N Lift1 programmable functions can be found in the 2N Lift1 User Manual.

Command	Command Format
Configuration (CNF)	L1 CNF <pwr> <p1>=<v1> [<p2>=<v2>[<p3>=<v3>...]]
Factory Default Reset (DEF)	L1 DEF <pwd>
Profile Selection (SET)	L1 SET <pwd> <profile>
Restart (RST)	L1 RST <pwd>
Setup Information (INF)	L1 INF <pwd>
Response (OK / ERR)	L1 [OK|ER] msg=<msg> cmd=<cmd> seq=<seq>

The following example programs the 2N Lift1 ALARM 1 and 2 buttons 1 and 2 to the phone numbers listed.

“SMS in the format: L1 CNF 12345 011=00420222222222 012=00420111111111”

Parameters must be separated with a space.

Parameter	Description
<pwd>	Authorization password

Parameter	Description
<profile>	Profile number (0–19)
<pn>	Parameter number
<vn>	Numeric value or text value in brackets
<msg>	• Successful • Busy • Invalid password (EGIP) • nesprávně zadané heslo (LIFT1) • Invalid password (LIFT1) • Invalid parameters • Invalid syntax • Communication error • Does not respond
<cmd>	Command that responds (CNF, DEF, SET, RST, INF)
<seq>	Sequential counter
<num>	Numeric value

Setting parameter 100 to 0.

“L1 CNF <pwd> 100=0”

Feedback messages for commands	
L1 CNF OK	The setting was successful
L1 DEF OK	The setting was successful
L1 SET OK	The setting was successful
L1 RST OK	The setting was successful
L1 ERR Invalid Message	Prefix L1 was not entered correctly

Feedback messages for commands	
L1 ERR Unknown Command	Wrong command other than CNF, DEF, SET and RST
L1 ERR Invalid Password	Invalid password
L1 ERR Invalid Parameters	Invalid CNF and SET command parameters
L1 ERR Invalid Syntax	Non-compliance with characters (spaces, equal signs, etc.)
L1 ERR Does not Respond	• 2N Lift1 does not go off-hook even after 60 s ringing • 2N Lift1 goes off-hook, but does not respond to the CPC programming command • 2N Lift1 hangs up during programming • 2N Lift1 does not respond to the communication commands (WRITE_START, WRITE_CONFIRM, CRC_REQUEST).
L1 INF sn="<s/n>" hw="<version no.>" cust="<n>" app="<fw no.>" bl="<bl no.>" vm="<voice menu>"	Setting Information: • sn – serial number • hw – hardware type • cust – user profile (1–19) • app – firmware version • bl – bootloader version • vm – voice menu

SMS / Settings

The SMS / Setting tab helps you enable the SMS function and its general settings.

Turn on – allows you to enable/disable the SMS sending function.

Device Identification – allows you to set a description that can be used for device identification in the SMS.

Event Recipient Phone Number – phone number to which an SMS will be sent after the event.

Initial Password – select the parameter whose value will serve as the first password to be entered in the SMS command as the authorization password.

CAUTION
The specific wording of the initial password can be set using the SMS command, refer to the subsection SMS / Commands (p. 42). When the initial password has been changed by an SMS command, further changes can only be made by an SMS command.

Time Limit (DEF & RST) – after restarting the device and the set timeout, it is possible to send commands again.

INF Message Period – set the info message sending period in minutes.

INF Message Format – fill in the numerical identifiers of the requested space-separated parameters to modify the content of the INF command response. Refer to the Parameter List subsection for an overview of the identifiers.

SMS / Commands

The Commands tab helps you enable individual commands sent via SMS. The user must be logged in.

Information Reading (INF) – command for sending an SMS containing basic information (signal, mobile network technology used, operator code and name, battery status).

Parameter Reading (GET) – command for sending SMS containing information of selected parameters.

Parameter Change (SET) – command for changing parameters in the settings.

Password Change (PWD) – command for changing the device password.

Factory Defaults (DEF) – command for restoring the device factory settings.

Restart (RST) – command for restarting the device.

Setting up SMS commands

CAUTION

- The commands are only valid with upper case letters.
- You can only enter one type of command at a time using SMS.
- The maximum SMS length is 140–160 characters, if a setting outside the allowed range is requested or there is another error in the message, the setting change will not be performed.

TIP

Refer to Subs. List of Parameters (p. 46) for an overview of parameters and their identifiers.

Command	SMS format	Example	Note
Reading Information (INF)	EG INF <pwd>	EG INF initial_password	The command response includes information on the device serial number, FW version, IMEI and IMSI, roaming, signal strength, mains power status, battery status and time to battery replacement. The content of the response can be set using the INF Message Format parameter. In case 2 SIM cards are used in the device, both IMSI versions will be sent in the SMS reply, the other information only refers to the active SIM card.
Parameter Reading (GET)	EG GET <pwd> <p1> [<p2> [<p3> …]]	“EG GET initial_password 150 swg_enable sim1_pin” A command for getting information on the My2N settings, SMS function on the device and the PIN code	For the GET and SET commands it is possible to use multiple parameters at once, the separating character of each parameter is a space. Parameters are entered with a numerical / text identifier and can be combined. We recommend using numerical identifiers, which contain fewer characters.
Parameter Change (SET)	EG SET <pwd> <p1>=<v1> [<p2>=<v2> [<p3>=<v3> …]]	“EG SET initial_password 150=1 sgw_period=60 sim1=1234 243=(internet.t-mobile.cz)” Command for enabling the My2N service, setting the INF message period to every 60 minutes, changing SIM 1 PIN to 1234 and setting APN):	For the GET and SET commands it is possible to use multiple parameters at once, the separating character of each parameter is a space. Parameters are entered with a numerical / text identifier and can be combined. We recommend using numerical identifiers, which contain fewer characters. This command allows you to change parameter values; configurable parameters must be assigned numbers. If entered as a text, the parameter must be enclosed in round brackets.

Command	SMS format	Example	Note
Password Change (PWD)	EG PWD <pwd> <new_pwd>	“EG PWD initial_password amber” The new version of the initial password will be set as amber.	
Factory Defaults (DEF)	EG DEF <pwd>	“EG DEF initial_password” Sending the command will restore the device factory settings and reboot the device.	
Device Restart (RST)	EG RST <pwd>	“EG RST initial_password” The device is restarted.	
Response (OK / ERR)	EG [OK|ERR] msg=<msg> cmd=<cmd> seq=<seq>		
Response with setpoint (VAL / INF)	EG [VAL|INF] <p1>=<v1> [<p2>=<v2> …]		
Events (EVT)	• EG EVT power=[charge|backup|fully|error] • EG EVT start • EG EVT slot=[1|2] • EG EVT input=[0|1] missed=<num>		

Feedback messages for commands (shape)	Feedback messages for commands (description)
EG SET OK	The setting was successful

Feedback messages for commands (shape)	Feedback messages for commands (description)
EG ERR Unknown Command	Command other than SET, GET, DEF, RST, INF used
EG ERR Password	Invalid password
EG ERR Invalid Parameters	Invalid parameter in command
EG ERR Invalid Syntax	Non-compliance with characters (spaces, equal signs, etc.)

Parameters

TIP
Refer to the List of Parameters subsection for an overview of parameters and their identifiers.

Parameter	Description
<pwd>	Authorization password
<new_pwd>	New password for authorization
<pn>	Parameter number
<vn>	Numeric value or text value in brackets
<msg>	• Successful • Unknown command • Invalid password • Invalid parameters • Invalid syntax • Not allowed • Time limit • Error

Parameter	Description
<cmd>	Command that responds (CNF, DEF, SET, RST, INF)
<seq>	Sequential counter
<num>	Numeric value

- Set parameter 100 (sgw_enable) to 0 and parameter 101 (sgw_ident) to “EGIP 1”:
  “EG SET pwd 100=0 sgw_ident=(EGIP 1)”
- Example of reading parameter 100:
  “EG GET pwd 100 sgw_ident”

List of Parameters

The table shows an overview of all available parameters, their numeric and text identifiers, which are used for configuring the device using SMS commands.

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
100	sgw_enable	0	1	0 / 1	false / true	No / Yes	MS/ Settings/ Enable
101	sgw_ident			string			SMS/ Settings/ Device Identification
102	sgw_phone						SMS/ Settings/ Event Recipient Phone Number

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
103	sgw_pwd	0	4	0	SC	Security Code	SMS/ Settings/ Initial Password
				1	SN	Serial Number	
				2	IMSI	IMSI	
				3	ICCID	ICCID	
				4	IMEI	IMEI	
104	sgw_time_limit	0	1440				SMS/ Settings/ Time Limit (DEF & RST)
105	sgw_info_period	0	10080				SMS/ Settings/INF Message Period
106	sgw_info_format			string			SMS/ Settings/INF Message Format
120	sgw_event_power	0	1	0 / 1	false / true	No / Yes	SMS/ Events/ Power Changes
121	sgw_event_supervisor	0	1	0 / 1	false / true	No / Yes	SMS/ Events/ Supervisor Events

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
122	sgw_event_start	0	1	0 / 1	false / true	No / Yes	SMS/ Events/ Device Startup
123	sgw_event_slot	0	1	0 / 1	false / true	No / Yes	SMS/ Events/SIM Change
130	sgw_input_trigger	0	3	0	OFF	OFF	SMS/Digital input/Trigger Mode
				1	POS	By closing	
				2	NEG	By opening	
				3	BOTH	Both	
131	sgw_input_threshold	100	10000				SMS/Digital input/Time to Activation
132	sgw_input_timeout	1	86400				SMS/Digital entry/Time to Next Event
140	sgw_allow_inf	0	1	0 / 1	false / true	No / Yes	SMS/ Commands/ Information Reading (INF)

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
141	sgw_allow_get	0	1	0 / 1	false / true	No / Yes	SMS/ Commands/ Parameter Reading (GET)
142	sgw_allow_set	0	1	0 / 1	false / true	No / Yes	SMS/ Commands/ Parameter Change (SET)
143	sgw_allow_pwd	0	1	0 / 1	false / true	No / Yes	SMS/ Commands/ Password Change (PWD)
144	sgw_allow_def	0	1	0 / 1	false / true	No / Yes	SMS/ Commands/ Factory Settings (DEF)
145	sgw_allow_rst	0	1	0 / 1	false / true	No / Yes	SMS/ Commands/ Restart (RST)
150	my2n_enable	0	1	0 / 1	false / true	Off / On	2N My2N/ Basic Settings/Service

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
151	my2n_id						2N My2N/ Basic Settings/ Device Identifier
152	my2n_tun_server						2N My2N/ Basic Settings/ Tunnel Server
153	my2n_crt_server						2N My2N/ Basic Settings/Certification Server
154	my2n_tun_port						2N My2N/ Basic settings/ Tunnel Port
155	my2n_crt_port						2N My2N/ Basic Settings/Certification Port
156	my2n_debug	0	1	0 / 1	false / true	No / Yes	2N My2N/ Basic Settings/Extended Protocol

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
157	my2n_state	0	7	0	RELAX	Pause	2N My2N / Basic Settings/Status
				1	IDLE	Not set	
				2	STOPPING	Stopping	
				3	STOPPED	Stopped	
				4	RESTART	Restarting	
				5	READY	Ready	
				6	CRT	Certificate initialization	
				7	TUN	Tunnel opened	
158	my2n_device_type						2N My2N/ Basic settings/ Device Type
163	my2n_crt_sha1						2N My2N/ Security/ Certificate Fingerprint
165	my2n_pki_delete			1			2N My2N/ Security/ Delete Certificate

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
200	wwan_data_enable	0	1	0 / 1	false / true	No / Yes	Network/ WWAN/ Data Connection/ Switch on Data
201	wwan_data_usr_dns1						Network/ WWAN/ Data Connection/ Preferred DNS1
202	wwan_data_usr_dns2						Network/ WWAN/ Data Connection/ Preferred DNS2
203	wwan_data_ip						Network/ WWAN/ Data Connection/IP
204	wwan_data_gw						Network/ WWAN/ Data Connection/ Network Gateway
205	wwan_data_dns1						Network/ WWAN/ Data Connection/ DNS1

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
206	wwan_data_dns2						Network/ WWAN/ Data Connection/ DNS2
220	sim1_enable	0	1	0 / 1	false / true	Disabled / Enabled	Network/ SIM1/SIM Slot
222	sim1_pin						Síť/ SIM1/PIN
223	sim1_apn_name						Síť/ SIM1/APN
224	sim1_apn_auth_type	0	3	0	NONE	Není	Network/ SIM1/ Authentication Type
				1	PAP	PAP	
				2	CHAP	CHAP	
				3	PAP-CHAP	PAP, CHAP	
225	sim1_apn_username						Network/ SIM1/Username
226	sim1_apn_password						Network/ SIM1/Password
240	sim2_enable	0	1	0 / 1	false / true	Disabled / Enabled	Network/ SIM2/SIM Slot

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
242	sim2_pin						Network/ SIM2/PIN
243	sim2_apn_name						Network/ SIM2/APN
224	sim1_apn_auth_type	0	3	0	NONE	Není	Network/ SIM2/ Authentication Type
				1	PAP	PAP	
				2	CHAP	CHAP	
				3	PAP-CHAP	PAP, CHAP	
245	sim2_apn_username						Network/ SIM2/Username
246	sim2_apn_password						Network/ SIM2/Password
300	io_input						Tester/I/O/ External Input
301	io_relay_on			1			Tester/I/O/ Switch Relay
302	io_relay_off			1			Tester/I/O/ Release Relay

Numeric identifier	Text identifier	Min. value	Max. value	Value	Value description	Value importance	Parameter location
303	io_relay_state						Tester/I/O/ Relay Status

SMS / Events

The Events tab helps you enable sending SMS during various events.

Power Supply Changes – possibility to send SMS with information on power supply change.

SIM Change – possibility to send SMS with information on the active SIM card change.

Supervisor Events – possibility to send SMS with information on the detection of a non-standard device system behavior. Non-standard behavior makes the software restart.

Device Turn-on – possibility to send SMS with information on switching on the device.

NOTE
The device continuously monitors the status of its battery. When the battery capacity drops to the level that allows 1 hour of operation and 15 minutes of calling, the device automatically sends an information SMS message.

SMS / Digital Input

The Digital Input tab helps you set up sending SMS whenever a change is detected on the **2N EasyGate IP+** input.

Starting Mode – select the change mode on the digital output after which an SMS will be sent.

Activation time – set the time in milliseconds for which the digital input must be in a changed state for an event to occur and an SMS to be sent.

Next Event Time – set the time in seconds during which the next event will not occur and no SMS will be sent. No new event and SMS sending can happen until this timeout has elapsed. This limits repeated SMS sending whenever a change is made on the digital input.

The switches of the device to be connected to **2N EasyGate IP+** are connected via a 2-pin terminal to the connector marked INPUT.

Information SMS messages about changes on the device input are sent to the phone number of the event recipient.

Telephony / Dialing

The Telephony / Dialing tab helps you set parameters for dialing calls and outgoing calls.

Time to dial – allows you to set the amount of time for which the device waits for the next dialing. When this timeout has elapsed, the device will begin to set up a call.

Outgoing Calls – allows you to set the outgoing call type:

- “Disabled” – outgoing calls are barred.
- “SIP, Voice” – a combination of outgoing SIP and voice calls is allowed. Primarily, SIP call connections are used. If the device is not registered with SIP, it is possible to make voice calls.
- “Voice” – outgoing voice calls are only allowed.
- “SIP” – outgoing SIP calls are only allowed.

NOTE
Voice calls are transmitted using VoLTE if available and enabled. If VoLTE is unavailable or disabled, voice calls are transmitted using the GSM technology (as CS calls).

Telephony / Babycall

The Babycall tab helps you set up automatic calls. If the Babycall function is enabled, a defined time is counted down from the time the phone is picked up (the default value is 5000 ms). If you do not start dialing before this timeout expires, **2N EasyGate IP+** signals the timeout expiry by signaling the end of the dialing process and starts automatically setting up a call to the preset phone number – from this point on, the behavior of **2N EasyGate IP+** is the same as after the end of the dialing process in a normal outgoing call. Any dialing during the Babycall countdown cancels this function and a normal outgoing call is made.

Turn on – allows you to enable/disable the Babycall function, automatic calling without dialing.

Time – set the time value of the interval between the line off-hook and the automatic call start.

Phone Number – set the phone number of the automatic call destination. For international calls, you need to enter a valid international phone code.

Telephony / Pulse Dialing

The Pulse Dialing tab helps you set the pulse dialing parameters.

Delay between digits – allows you to set the time value for the delay between pulses. The default setting is 100 ms.

Minimum Pulse Width – set the time value for the minimum pulse width. The default setting is 30 ms.

Maximum Pulse Width – set the time value for the maximum pulse width. The default setting is 60 ms.

Minimum Delay – set the time value for the minimum delay between pulses. The default setting is 10 ms.

Maximum Delay – set the time value for the maximum delay between pulses. The default setting is 80 ms.

Dialing Reset Timeout – set the timeout value for the dialing reset. That is the line break time, which is considered hang-up and cancels the previous dialing.

Telephony / Dial Tone

The Dial Tone tab helps you set the dial tone parameters.

Frequency 1 – allows you to set the dial tone frequency.

Frequency 2 – allows you to set the dial tone frequency.

Modulation – set the dial tone modulation:

- “Continuously”

- “320/320/640/640”

Refer to Subs. Phone Line Tones – Operating Tones (p. 23) for the factory default values.

Telephony / Busy Tone

The Busy Tone tab helps you set the busy tone parameters.

Frequency 1 – allows you to set the busy tone frequency. The default value is 452 kHz.

Frequency 2 – allows you to set the busy tone frequency.

Modulation – set the busy tone modulation in ms.

- 330/330
- 200/200
- 250/250
- 375/375
- 500/500

Refer to Subs. Phone Line Tones – Operating Tones (p. 23) for the factory default values.

Telephony / Ringing Tone

The Ringtone tab helps you set the ringtone parameters.

Frequency – allows you to set the ringtone frequency. The default value is 50 Hz.

Modulation – set the ringtone modulation in ms.

- 2000/4000
- 1000/4000
- 400/200/400/2000
- 1500/3500

Voltage – set the ringtone voltage. The default value is 42 Vrms.

Refer to Subs. Phone Line Tones – Operating Tones (p. 23) for the factory default values.

Telephony / CLI

Calling Line Identification (CLI) is a feature that allows you to identify the caller's number during a phone call. The following parameters set the processing of numbers and information from the calling party.

Transmission Mode – enable the “On-Hook” mode for phone calls. In this mode, the device simulates the handset on-hook state while you are waiting for an incoming call.

Frequency – determine the frequency of the DTMF tones sent from the phone keypad.

Plus Symbol Replacement – replace the “+” symbol with another symbol when sending a number.

Telephony / AMR Codec

Helps you set preference for all or individual AMR codecs. When disabled, **2N EasyGate IP+** informs the network that it does not want to use the codec. The network can still request the codec if necessary.

TIP
It is recommended that the AMR codecs are forbidden for a more reliable DTMF transmission.

Telephony / VoLTE

IMS – enable IMS (IP Multimedia Subsystem) to transmit voice and video calls over the LTE network.

IMS State – current status of the IMS connection.

User Agent – define the name of the device to be used for registration into the IMS network.

Active MBN Profile – the currently used MBN profile.

Telephony / VoLTE / DTMF

Incoming DTMF Mode – select a DTMF mode – either fixed or network based.

Tone Length – determine the length for each DTMF code in milliseconds.

Volume – set the DTMF tone volume. Proper volume settings are important to ensure that the tones are loud enough to be detected correctly, but not so loud to cause interference.

Telephony / Others

The Others tab helps you set other telephony parameters.

RX Gain – allows you to set the line gain while receiving. The default value is –2 dB.

TX Gain – allows you to set the gain of the line gain during transmission. The default value is –2 dB.

Line Impedance – allows you to set the FXS line impedance value.

Line current limit – allows you to set a selectable line current value in the range of 15–40 mA.

Tone Volume – allows you to set the volume of DTMF tones.

Enable AGC – allows you to enable/disable automatic gain control of the signal level on the line.

DTMF Muting Time – allows you to set the tone dial muting. The mute time is only supported for DTMF of the type RFC and SIP info.

Calling Party Control – allows you to set the end of call signaling by CPC (Calling Party Control), during which the line current is momentarily interrupted.

Services / Signaling

The Signaling tab helps you activate the battery check and connect **2N EasyGate IP+** to the mobile network.

Relay Function – indicates if and when the relay will be activated.

- “Inactive” – in the case of a power supply or wireless network error, the relay is deactivated.
- “Power supply error” – in the case of a battery power supply error, the relay is switched on (in about 120 s).
- “Wireless network error” – in the case of the mobile operator’s network connection failure, the relay is switched on (in about 120 s).
- “Power supply / wireless network error” – in the case of a power supply or wireless network error, the relay is switched on (in about 120 s).

Relay Inversion – reverses the relay activation logic. When the relay is reversed, the relay contact opens whenever the events above occur (default value: Not reversed).

Relay State – shows the relay status according to the relay function. Deactivated / activated values.

FXS Line Break Function – indicates if and when the FXS line will be disconnected.

- “Disabled” – in the case of a power or wireless network error, the FXS link is not disconnected.

- “Power supply error” – in the case of a battery power supply error, the FXS line is disconnected (in about 120 s).
- “Wireless network error” – in the case of the mobile operator's network connection failure, the FXS line is disconnected (in about 120 s).
- “Power supply / wireless network error” – in the case of a power supply or wireless network error, the FXS line is disconnected (in about 120 s).

FXS Line Break State – indicates the relay status. Inactive/active values.

Services / Modem over TCP

The Modem over TCP tab helps you set up data connection from the modem to the server using TCP.

Service – allows you to enable/disable data connection transfer via a modem using TCP.

State – display the current TCP connection status.

Idle Time – set the timeout value after which the connection to the TCP server is terminated if no data is transferred during the process.

FIFO Queue Size – set the queue size according to the FIFO rule (first in, first out).

Transmission Debugging – enable data transmission from both directions into the log to monitor the entire modem–server communication.

Services / Modem over TCP / TCP

State – display the current TCP status.

Server Name – set the TCP server name.

Server Port – set the TCP server port.

TCP no delay – enable sending of data immediately when the device receives it. Enabling the function forces immediate sending of data to the TCP server.

Connection Timeout – set how long **2N EasyGate IP+** shall attempt to establish connection with the TCP server.

Reconnect – enable this option to make **2N EasyGate IP+** attempt to reconnect if the socket fails. The device will repeat the attempts until the connection times out.

Continuous connection – enable this parameter to set that once established connection to the TCP server will remain established permanently. After enabling the parameter, an attempt to establish the TCP server connection is automatically started.

Services / Modem over TCP / Modem

State – a list of connection states.

Dialed Number Prefix – set the DTMF sequence that activates modem negotiation.

Services / RS232 via TCP

The RS-232 over TCP tab helps you set up data connection from RS232 to the server using TCP.

State – display the current TCP connection status.

Idle Time – set the timeout value after which the connection to the TCP server is terminated if no data is transferred during the process.

FIFO Queue Size – set the queue size according to the FIFO rule (first in, first out).

Transmission Debugging – enable data transmission from both directions into the log to monitor the entire RS232–server communication.

Services / RS-232 via TCP / TCP

State – display the current TCP status.

Server Name – set the TCP server name. Server Port – set the TCP server port.

TCP no delay – enable sending of data immediately when the device receives it. Enabling the function forces immediate sending of data to the TCP server.

Connection Timeout – set how long **2N EasyGate IP+** shall attempt to establish connection with the TCP server.

Reconnect – enable this option to make **2N EasyGate IP+** attempt to reconnect if the socket fails. The device will repeat the attempts until the connection times out.

Continuous Connection – enable this parameter to set that once established connection to the TCP server will remain established permanently. After enabling the parameter, an attempt to establish the TCP server connection is automatically started.

Services / RS-232 via TCP / RS-232

RS-232 State – communication statuses.

- “Closed” – the serial line is not functional.
- “Open” – the device listens to the serial line.
- “Active” – the server connection is active.

Baud Rate – set the serial communication rate.

Services / Ping

The Ping tab serves as a basic diagnostic element that allows you to test functionality in TCP/IP networks. Ping sends a query to the specified IP address or domain and waits for the device to respond.

Enable – allows you to enable/disable the ping function.

Transmission Period – set the period of sending ping queries in ms.

Reception Time Limit – set the timeout for receiving responses to ping queries.

Time to reboot (0=off) – set the time value after which the device reboots.

Unknown Frames – indicates the number of unknown frames captured.

Services / Ping / Main

The Primary tab sets the primary ping server and displays a summary of the requests sent and responses received.

ICMP Echo Server – address of the main ping server.

Min Latency – minimum round trip time of returned responses.

Average Latency – average round trip time of returned responses.

Max Latency – maximum round trip time of returned responses.

Late Frames – indicates the number of frames that arrived after the time limit for receipt. The limit is set in the Ping tab (Services / Ping (p. 60)).

Lost Frames – indicates the number of frames that did not arrive back to **2N EasyGate IP+**. Late responses that do not fit within the time limit are logged as late in the device log.

TX Frame – indicates the number of ping requests sent.

RX Frames – indicates the number of responses received.

Services / Ping / Backup

The Backup tab sets up a backup ping server and displays a summary of requests sent and responses received when the main server is unavailable.

ICMP Echo Server – address of the backup ping server.

Min Latency – minimum round trip time of returned responses.

Average Latency – average round trip time of returned responses.

Max Latency – maximum round trip time of returned responses.

Lost Frames – indicates the number of frames that did not arrive back to **2N EasyGate IP+**. Late responses that do not fit within the time limit are logged as late in the device log.

TX Frame – indicates the number of ping requests sent.

RX Frames – indicates the number of responses received.

Maintenance / Configuration

The Maintenance/Configuration tab helps you configure **2N EasyGate IP+** with file downloads and system and battery management and obtain system information.

CAUTION
To minimize the risk of data loss in the event of unexpected events, we recommend that you back up your configuration regularly.

Default Values – specifies the **2N EasyGate IP+** type. E – Europe, US – America, AU – Australia.

Configuration Download – allows you to download the current device configuration, which can be used as a backup.

Configuration Upload – allows you to upload a configuration file to the device.

Save Counter – indicates the number of configuration changes made.

SAVE CONFIG – aplikuje staženou konfiguraci do zařízení.

FACTORY RESET – umožňuje uvést zařízení do výchozího továrního nastavení.

Maintenance / MBN

Automatic MBN Selection – allows you to automatically set the operator profile. The list of profiles is displayed in the log after the device boots.

MBN Profile Name – operator profile name for the VoLTE feature if Automatic MBN Selection is disabled.

Active MBN Profile – the currently used MBN profile.

Internal MBN Database – enable the use of the 2N database for updating profiles, which is part of the firmware.

MBN Database – before uploading, the MBN file supplied by the operator must be sent to 2N for addition to the secure database of accepted MBN databases.

Reinstallation – after selecting the “Yes” option and subsequent saving the changes, the device will reboot, during which the MBN profiles will be deleted and re-uploaded. After restarting the device, the value is automatically set back to “No”.

MBN Database Version – display the version of the uploaded MBN database.

MD5 MBN Database – display the MD5 hash (Message-Digest Algorithm 5) of the uploaded MBN database.

Maintenance / Firmware

The Firmware tab helps you manage the firmware in **2N EasyGate IP+**.

CAUTION
For device security and access management, it is recommended that you always maintain the most up-to-date FW version to access the latest security corrections and enhancements. Ignoring updates can increase the risk of security issues.

Firmware Version – firmware version loaded in the device.

Radio Firmware – module firmware designation for certification.

URL for Download – fill in the URL for downloading the FW.

Upload File – select a file to be downloaded to your device.

File Size – specify the size of the file to be uploaded.

Status – indicates the FW upload status in the device.

CAUTION

- Do not turn off the device during the upgrade. The firmware integrity could be compromised.
- During the upgrade, the connection to the device is temporarily interrupted. After the upgrade, the device reboots. On restart, all the parameters are reset. After the upgrade, you can reboot multiple times. Firmware upgrade and device restart are signaled by the LED signal indicators, see Overview of LED Indicators (p. 16).
- After the firmware update, it is recommended that a hard refresh of the web browser window be performed using the Ctrl+F5 keyboard shortcut after logging into the device web interface. This will completely load all the changes made.

Maintenance / Firmware / Detail

Firmware Version – firmware version loaded in the device.

Module Firmware – module firmware designation for certification.

Date in GIT – indicates the date when the last change was made to the FW version being used.

GIT Hash – specifies the identifier for the repository of the FW version being used.

Build Date – indicates the FW version creation date.

License Agreement – view the license agreement – EULA.

Third Party Software Licenses – a list of third party opensource libraries used in 2N EasyGate IP.

Maintenance / Batteries

The Battery tab helps you set the capacities and lifetimes of the backup batteries.

Nominal Capacity – fill in the value of the rated capacity of the batteries.

Actual Capacity – fill in the value of the actual battery capacity.

Installation Date – fill in the date on which the backup batteries were inserted.

If the device has a valid time and date (from the operator's network or NTP), the automatic setting of the battery installation date will occur if the following conditions are met:

- the device has received a valid certificate from 2N Elevator Center and connects to 2N Elevator Center,
- any phone call or modem connection has been made,
- SIP registration has been successful,
- an attempt has been made to log the user into the web interface.

Battery Lifespan – set the battery lifespan. The default value is 730 days, i.e. 2 years.

CAUTION
Only rechargeable batteries can be used:

AA size NiMH battery, 1,2 V / min. 2000 mAh

The package contains 4 pcs.

Power Source – displays information on the possible power source.

Status – shows the current battery status.

Voltage – shows the current battery voltage.

Charging Current – indicates the charging current value when the power adapter is used.

Charging up – indicates the current consumption during the device operation.

Replacement Time – indicates the time remaining until battery replacement.

NOTE
The device continuously monitors the status of its battery. When the battery capacity drops to the level that allows 1 hour of operation and 15 minutes of calling, the device automatically sends an information SMS message.

Maintenance / Temperature Monitor

The Temperature Monitor tab informs of the temperature status of **2N EasyGate IP+**.

Service – allows you to enable/disable sending device temperature information to My2N.

Temperature – shows the current temperature of the device. Status – shows the device status within the set limits.

Lower limit – allows you to set the lower temperature limit.

Upper limit – allows you to set the upper temperature limit value.

Hysteresis – allows you to set the difference by which the device temperature must exceed the limits when returning to the allowed temperatures in order for the status to be displayed as OK again.

Maintenance / System

The System menu displays system information on the device and helps you set up the USB connection for **2N EasyGate IP+**.

Product Number – indicates the Product / Part number of the device.

Serial Number – gives the serial number of the device.

Security Code – provides the text of the code used for registering the device with 2N My2N.

IMEI – IMEI number of the device.

USB Connection – allows you to enable/disable the possibility to connect to the device via USB. The default value is set to temporarily enabled.

CAUTION
After the first registration of **2N EasyGate IP+** to 2N Elevator Center7 using My2N, the USB connection parameter is automatically disabled.

Internal Baud Rate – set the serial baud rate between the hardware modem and the TCP channel.

RESTART – SW restart of the device. The SW restart is indicated by the status LEDs for device signaling.

Maintenance / Softmodem

This section allows for the use of a software modem.

Enable SW Modem – allows you to enable/disable the SW modem. The SW modem takes precedence over the HW modem.

State – shows the SW modem status.

- “Stopped”
- “Connecting”
- “Connected”

Log verbosity – set the logging levels of the SW modem into the log.

Capture – used for debugging. Specifies how many seconds shall be recorded (0 = off).

V42 – allows you to enable/disable optional security of transmitted data using V42.

Maintenance / Logs

The Logs tab helps you download log files from **2N EasyGate IP+**, which can be useful for troubleshooting.

CAUTION
To ensure the highest level of data and device security, we strongly recommend that you regularly check the device logs. Logs are an important tool for identifying and resolving security issues.

Temporary Protocol – allows you to download the current logs since the last start of the 2N EasyGate IP system.

Archiving – allows you to enable/disable the log archiving feature.

NOTE
Permanently enabling the archiving logs is not recommended. Enabling this feature is useful for troubleshooting, as there is a risk of device memory damage if used for a long time.

Archive Quota – set the storage size (0 to 100 MB). When the set limit is exceeded, the oldest logs will be automatically deleted to free up the archive capacity.

Archived Protocol – allows you to download all the logs historically since the archiving feature was enabled.

Application State – indicates the number of SW resets during the system when an unexpected problem occurs.

Maintenance / Logs / Logcat

State – displays the status of the Logcat logging process.

Enable – enable logging from LogCAT to log summary records.

Maintenance / Logs / Diagnostics

The interface allows you to capture diagnostic logs to be downloaded and sent to the Technical support subsequently. The diagnostic logs help identify and solve reported troubles.

State – displays the capture status.

Enable – enable the capture of diagnostic logs.

Advanced Log – enable writing to log summary records.

Quota – maximum archive size for diagnostic logs.

FIFO Size – size of the write buffer (64–2048 kB).

Permanent Storage – set the storing of diagnostic logs via device restart. If Permanent Storage is disabled, the diagnostic logs are deleted with a reboot.

Mask Selection – select a mask from a predefined database. The mask determines what values the diagnostics should record.

Mask Database – allows you to download masks and upload more.

Tester / I/O

The I/O tab helps you test the connected relay using the web interface.

External Input – displays the occupancy of the input:

- 0 – unoccupied
- 1 – occupied

Relay State – displays the relay status (on/off).

- “Activated”
- “Deactivated”

Activate Relay – close the connected relay.

Deactivate Relay – open the connected relay.

Tester / LED

The LED tab helps you test the functionality of the LEDs from the device web interface.

Red / Blue / Green – all the LEDs of the selected color are illuminated.

Turn Off Test – turns off the lit LEDs.

Tester / Test Call

The Test Calls tab helps you make a call for testing purposes from the device web interface.

State – test call status.

Phone Number – the phone number to which the test call will be made.

Dial/On-Hook – starts/ends a test call.

Record/Stop – allows you to record a short message (up to 10 seconds) / stops recording a test call.

Play/Stop – plays the recorded message.

DTMF Sequence – tone dial text.

DTMF Playback – plays the text of the filled-in tone dialing.

The Save changes button will save the changes.

CAUTION

- The test call feature only works when the 2G, 3G or LTE phone technology is used.
- The device at the other end must not use the VoLTE technology, no DTMF tones are transmitted.
- The test call feature is not supported for SIP calls.

Tester / EMC

The EMC setting enables the measurement of electromagnetic radiation emitted by the device and its components.

Function and Use

This subsection describes the basic and advanced features of **2N EasyGate IP+**.

Phone Calls

The procedure for setting up outgoing and incoming calls is described for the connected analog telephone for illustrative purposes. When connecting **2N EasyGate IP+** to a PBX, the principle is the same, but you need to program the call access to the network to the line with **2N EasyGate IP+** correctly.

Outgoing Call

1. Put the phone off-hook, you can hear the dial tone and the Line LED starts flashing.
2. Dial the subscriber number. During dialing, the delay between digits may not be longer than 5 s (programmable parameter). After this period, the number is considered complete and is dialed into the GSM network.
3. After the last digit is dialed, there is a short delay, **2N EasyGate IP+** waits for the next dialing if any and then the end of dialing signaling and the actual connection setup follow.
4. If the called party is available, you will hear the ringtone. When the called party is busy, you will hear the busy tone or one of the GSM network operator's announcements.
5. When the called party picks up, the call is established. The Line indicator lights up steadily throughout the call.
6. Hang up the phone to end the call. The Line LED goes out. If the called party is the first to hang up and you hear the busy tone in the handset, hang up the phone.

Incoming Call

1. An incoming call is signaled by phone ringing. The Line indicator is flashing during the ringing.
2. Put the phone off-hook to establish the call. The Line LED is permanently on throughout the call.
3. Hang up the phone to end the call. The Line LED goes out. If the called party is the first to hang up and you hear the busy tone in the handset, hang up the phone.

Automatic Call (Babycall)

If the Babycall is programmed, a defined time value is counted down from the phone pick up. If you do not start dialing before this timeout expires, a call to the preset number will start automatically – from this point on, the behavior of **2N EasyGate IP+** is the same as if you stop dialing during a normal outgoing call. Any dialing during the Babycall countdown cancels this function and a normal outgoing call is made.

SIP Calls

SIP is a service that provides calls over the Internet network. Data must be enabled for SIP calls.

CAUTION
To make calls using SIP, **2N EasyGate IP+** must be registered. This means that peer to peer calls will not be possible.

SIP Registration

The following procedure leads to SIP registration. Check the SIP status on the SIP/Basic Settings tab or on the Status tab, which displays general information on the device.

1. Enable SIP calling in the SIP/Basic Settings menu by turning on the service and filling in the settings. Domain, Proxy and Proxy port are optional parameters.
   If the Server Port and Proxy Port parameters are set to 0, the port numbers are obtained from the service record on the DNS server (i.e. assigned by the network). If the Local Port is set to 0, port 5060 is used.
2. Mind the upper/lower case while entering your password.

VoLTE Calls

The VoLTE service provides top quality calls over the LTE network. The service is available wherever there is an LTE signal.

Enable the IMS function on the Network/VoLTE tab to activate the VoLTE calling function on the device. The data is enabled by default on the device and can be changed on the Network/WWAN tab. For VoLTE calls, the value of the Network Technology parameter on the WWAN card must always be LTE, which indicates the LTE connection. VoLTE calls are also available with automatic network selection if the LTE network is available.

GSM / UMTS Calls

For GSM/UMTS calls, change the value of outgoing calls from SIP, Voice to Voice only in the Telephony / Dialing (p. 55) tab and turn off IMS in the Network / VoLTE tab.

Device Disposal

WARNING
Before disposal, make sure that all sensitive data has been removed by factory reset to prevent unauthorized access to information.

If disposal of the device is necessary, follow the appropriate procedures to maintain safety and environmental protection. Disposal must be carried out in accordance with applicable legislation and waste management standards in order to protect the environment and minimize potential risks associated with the disposal of electronic equipment.

Functionality Tests in Accordance with EN 81-28

6.2.2 ALARM Emergency Signaling Information (4.1.2)

The device only provides connection. Check the indication and course at the audio unit in the elevator cabin and in the control room.

6.2.3 ALARM Emergency Signaling End (4.1.3)

The device only provides connection. Check the indication and course at the audio unit in the elevator cabin and in the control room.

6.2.4 Emergency Power Supply (4.1.4)

1. Disconnect the power cable from the POWER connector on the back of the device.
2. Check the ALARM signaling functionality on the audio unit in the elevator car.
3. Disconnect the backup power supply (remove the batteries from the device).
   Four AA NiMH rechargeable batteries (1.2 V / min. 2000 mAh) are stored inside the device. The batteries are located under a cover secured with a screw.
4. Reconnect the power cable to the POWER connector on the back of the device.

5. Check the status of the LED indicators - the power indicator ⏻ flashes yellow (once per second).
6. When the test is complete, reconnect the backup power supply (insert the emergency power supply batteries).
7. Verify that the power LED ⏻ is blue.

6.2.5 Visual and Acoustic Signals in Elevator Cage (4.1.5)

The device only provides connection. Check the indication and course at the audio unit in the elevator cabin and in the control room.

6.2.6 Communication (4.1.8), ALARM Emergency Signaling Verification (4.1.6), Identification (4.1.7)

The device only provides connection. Check the indication and course at the audio unit in the elevator cabin and in the control room.

Accessibility and Reliability (4.2.1)

The device only provides connection. Check the indication and course at the audio unit in the elevator cabin and in the control room.

Technical Parameters

Power Supply	
Mains power supply	100–240 V / 12 V adapter; 1A
DC power supply	9 to 30 V DC
Internal batteries	4x AA type NiMH, 1.2 V / min. 2000 mAh

CAUTION
2N provides a quality guarantee for **2N EasyGate IP+** only if the adapters supplied by 2N are used. If other adapters are used, 2N cannot guarantee a trouble-free operation of the device.

Consumption				
	Battery power		**12 V external power supply (adapter)***	
Mode	Typical consumption [mA]	Maximum consumption [mA]	Typical consumption [mA]	Maximum consumption [mA]
Standby	220	270	110	140
Voice call (2G, 3G)	530	570	260	290
VoLTE/SIP call (4G)	640	720	310	350
Data transfer via LAN	500	700	250	350

* The consumption increases by approx. 100 mA while the batteries are being charged.

Configuration and Upgrade	
Local	WEB UI via USB
Cloud service	2N Elevator Center

Antenna	
Connector type	SMA
Impedance	50 Ω

Line interface	
Interface type	2-wire analog, FXS
Call impedance	selectable – 600 Ω, Zr EU, Zr Australia
Loop voltage	48 V DC
Loop current	15–40 mA
Loop resistance	up to 800 Ω
Ring voltage	adjustable, 35–60 V RMS
Ringing frequency	adjustable, 10–60 Hz

Data interface	
Interface type	3x LAN or 2x LAN + WAN
Protocol	IPv4

Data interface	
The technology	10/100/1000BaseT, RJ-45
Recommended cabling	Cat5e or higher

Input	
Short-circuit input	
Contacts	switching, voltage-free

Output	
Relay Output	
Contacts	switching, NO and NC
Switched voltage DC	max 30 V; 1 A
Switched voltage AC	max. 125 V; 0.3 A
Load	Resistance

Serial line	
Type	RS232 RS485 CAN

Telephone network	EU version	US version	AU version
GSM	B3/B8	–	B2/B3/B5/B8

Telephone network	EU version	US version	AU version
UMTS	B1/B5/B8	B2/B4/B5	B1/B2/B5/B8/
LTE	B1/B3/B5/B7/B8/B20/B38/B40/B41	B2/B4/B5/B12/B13/B14/B66/B71	B1/B2/B3/B4/B5/B7/B8/B28/B40

VoIP	
Protocols	SIP (RFC3261) over UDP, SIPs, SRTP, TLS
DTMF	• In-band Analogy of the traditional DTMF signal where tones are merged with speech into a single voice channel. • SIP INFO (RFC 2976) The DTMF signal is sent separately in the SIP message body • RTP Event (RFC 2833) as part of the RTP stream in separate packets

Mechanical Parameters	
Dimensions	
Weight	
Relative humidity	up to 90 %, non-condensing
IP Protection	IP43
Operating temperature	• Without batteries: –40 °C to +85 °C • With batteries: 0°C to +45°C
Storing temperature	−20°C to +45°C
Recommended altitude	up to 2000 m

Mechanical Parameters	
LED Statuses	• power supply • mobile network • FXS line • data • signal level

Troubleshooting

No signaling LED is illuminated on 2N EasyGate IP+.

- Check that the switch is in position 0/**I**.
- Check the power supply and battery status

All signaling LEDs are lit on 2N EasyGate IP+, no call is in progress on the line.

The data LED is lit according to the SIP settings.

- Switch off and on again, the signaling LEDs should go off in 3 seconds to indicate the current device status.

2N EasyGate IP+ is not logging into the network.

- Make sure that the SIM card is inserted.
- Check that the inserted SIM card is not secured with a PIN code.
- Check the antenna connection.
- Choose a location with a good network signal.

No tone is heard when the line is picked up

- Check the phone line connection.
- The device is not initialized after start-up (about 20 seconds after switching on).
- Check the settings for power and wireless network errors in Services / Signaling.

2N EasyGate IP+ fails to communicate with the PC via USB.

- Check that the switch is in position 0/**I**.
- Check the power supply and battery status.
- Press the RESET button to unlock the USB if the **2N EasyGate IP+** settings allow so. Otherwise, you must restore the factory settings.
- To log in to the device, use 2N Elevator Center.

2N EasyGate IP+ fails to communicate with the PC using 2N Elevator Center

- Use USB to log in to the device.

Refer to faq.2n.com for the most frequently solved problems.

Directives, Laws and Regulations

2N EasyGate IP+ conforms to the following directives and regulations:

- 2014/53/EU for radio equipment
- 2014/33/EU for lifts and safety components for lifts
- 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment
- 2012/19/EU on waste electrical and electronic equipment

General Instructions and Cautions

Please read this User Manual carefully before using the product and follow the instructions and recommendations included therein.

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

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

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

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

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

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

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

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

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

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

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

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

The manufacturer also assumes no responsibility for additional costs incurred by the consumer as a result of making calls to increased tariff lines.

Electric Waste and Used Battery Pack Handling

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

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

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

2N EasyGate IP+ – Installation Manual

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