



SMART - SAFE - INNOVATIVE

2N ELEVATOR SYSTEMS - Emergency communication devices for any lift.





An Axis company



“For 28 years 2N has been on the forefront of access control and telecommunications. We take care to stay on the leading edge with our products, the R&D behind them, and the way we service our customers. We are proud of our growth on global markets and growing number of key players in elevator market becoming our customers.”



MICHAL KRATOCHVÍL

CEO, 2N Telekomunikace a.s.

„AXIS Group including 2N have a common goal to contribute to a smarter and safer world. There is an increased customer demand for integrated solutions with open standards that deliver enhanced security. Together with 2N we can meet that demand.“



PETER LINDSTRÖM

Vice President New Business, Axis Communications

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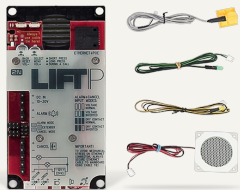
2N® LIFTIP

The 2N® LiftIP is a unique product on the lift communication systems market. It is using VoIP technology for transmitting call from a lift cabin. Therefore, you can install it anywhere where an IP infrastructure is available. What's more, installation requires no additional converters or other hardware. The 2N® LiftIP provides high quality transmission of sound and continuous online monitoring.

Quick installation

Full duplex audio

Future proof solution



2N® LiftIP
CABIN UNIT COP

COP version - fixed
ord. 920640E
COP version - wired
ord. 920640XE



2N® LiftIP
CABIN UNIT
FLUSH MOUNT

With button
ord. 920618BE
Without button
ord. 920618E



2N® LiftIP
CABIN UNIT TOC

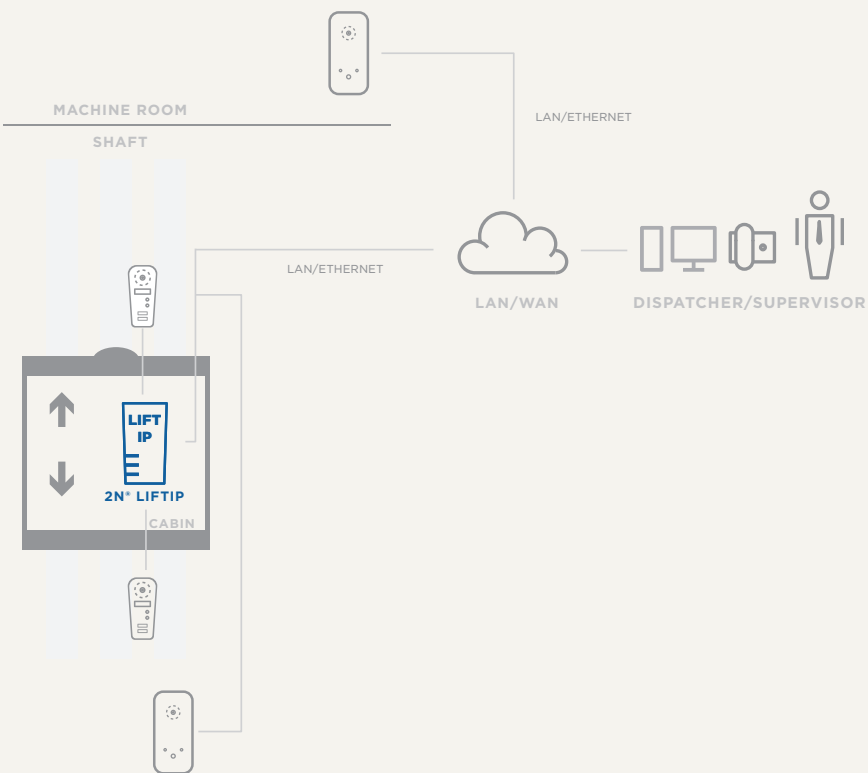
With Voice alarm station switch
ord. 920631E
Without Voice alarm station switch
ord. 920630E



2N® Lift1/IP VOICE ALARM
STATION SET

For top and under cabin
ord. 913661ESET

Installation



Technical Specifications

Voltage	10 - 30V DC, PoE (48V)
Consumption	Maximum 6 W
Alarm/Cancel input	5-48 V DC
Speaker	Integrated 16Ω / 0.25W
Microphone	Integrated
Audio	Full duplex
Induction loop output	0,5V RMS / 75 Ω
Pictograms	12 - 24 V DC / 200mA
Dimensions	65x130x24 mm
Operating temperature	- 20 °C - +50°C

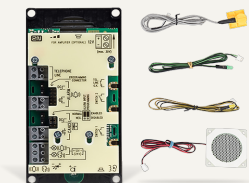
2N® LIFT1

The 2N® Lift1 communication solution is designed for two-way emergency communication in the lift. Its typical use is in elevators where communication is required between the cabin and the control centre or machine room.

A comprehensive solution
for single lift

Fully powered over phone line

Supports CPC and P100 protocols



2N® Lift1
CABIN UNIT COP

COP version - fixed
ord. 919640E
COP version - wired
ord. 919640XE



2N® Lift1
CABIN UNIT
SURFACE MOUNT

With button
ord. 919645E
Without button
ord. 919645WBE



2N® Lift1
CABIN UNIT
FLUSH MOUNT

With button
ord. 919618BE
Without button
ord. 919618E



2N® Lift1
CABIN UNIT TOC

With Voice alarm station switch
ord. 919631E
Without Voice alarm station switch
ord. 919630E



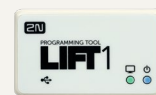
2N® Lift1 VOICE ALARM
STATION SET

For top and under cabin
ord. 913661ESET



2N® Lift1 MACHINE ROOM
STATION SET

Machine room unit
ord. 919654ESET



2N® Lift1 USB
PROGRAMMING TOOL

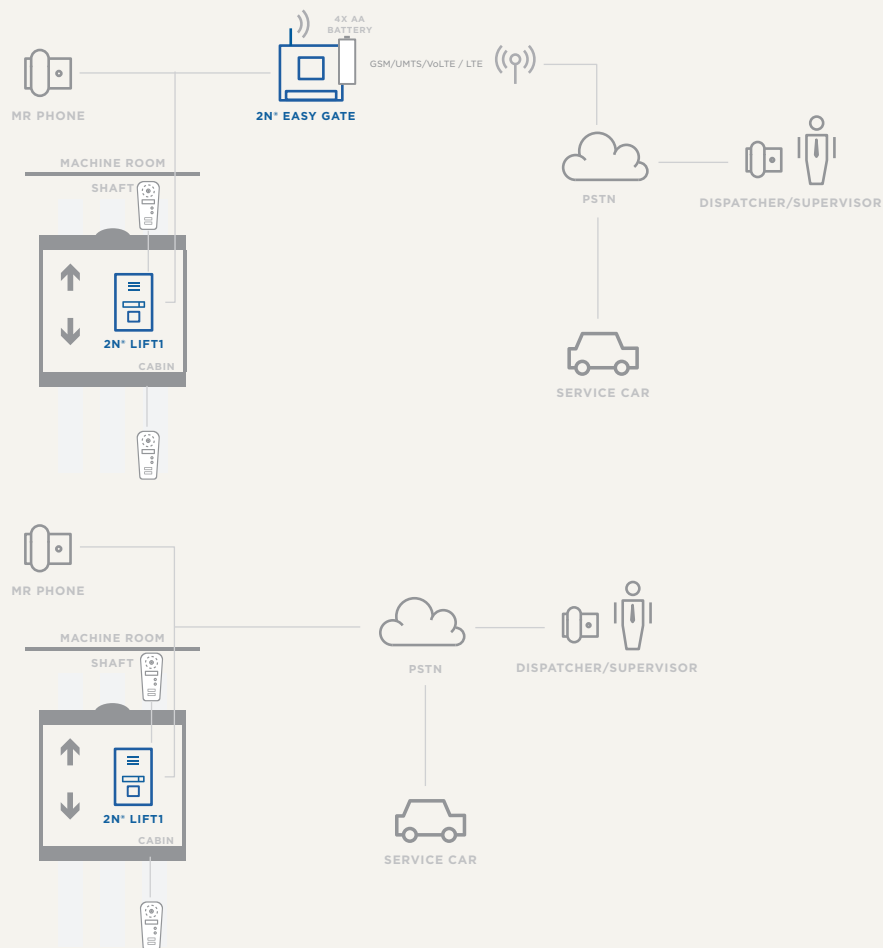
For easy PC programming
ord. 919680E

2N® Lift1 Switch module
ord. 913648E

2N® Lift1 Blocking module
ord. 913649E

2N® Lift1 Amplifier module
ord. 913650E

Installation



Technical Specifications

Electrical parameters

Minimum line current	15 mA, off the hook
Minimum line voltage	22 V, on the hook
DC voltage drop in the off the hook state	< 9 V, I = 20 mA, < 12 V, I = 50 mA
Resistance on the hook	1 M Ω >, U = 25..100 V
Impedance off the hook	220 Ω + 820 Ω paral. 115 nF, 15 to 60 mA
Attenuation	> 14 dB, 15 to 60 mA
Bandwidth	300 to 3500 Hz, 15 to 60 mA
Impedance while ringing	> 2 k Ω C = 0.47 μ F, 25 to 50 Hz
Ringtone detection sensitivity	10 to 20 V, 25 to 50 Hz
Pulse dialling	40 / 60 ms
Tone-dial levels	-9.0 +2.0/-2.5 dB and -11.0 dB +2.5/-2.0 dB, 15 to 60 mA
Power surge protection - differential between A, B leads	1000 V (8 / 20 μ s)

Note Any ringing sequence is acceptable

Switch parameters

Minimum voltage	9 V AC or DC
Minimum voltage	24 V AC or DC
Maximum current	1 A AC or DC
Resistance - open	min 400 k Ω
Resistance - closed	approx. 0.5 Ω
Fuse	resettable
Connection of external indicator elements	
Power supply voltage	12-24 V DC, external source
Maximum switching current	200 mA
Other parameters	
Dimensions of the Universal implementation	65×130×24 mm
Dimensions of the Compact implementation	100×185×16 mm
Operating temperature range	-20°C - 70°C



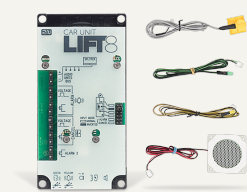
2N® LIFT8

A highly modular lift communication system, where the two-wire bus makes the 2N® Lift8 readily installable in any lift context. This means that when it comes to providing for emergency lift communications you won't have to trouble with putting in new cabling. 2N® Lift8 meets all the applicable EU standards.

2 wire bus in shaft including power

Comprehensive, modular, expandable

Wide range of communication interfaces



2N® Lift8
CABIN UNIT COP

COP version - fixed
ord. 918610E
COP version - wired
ord. 918610XE



2N® Lift8
CABIN UNIT
SURFACE MOUNT

With button
ord. 918613E
Without button
ord. 918613WBE



2N® Lift8
CABIN UNIT
FLUSH MOUNT

With button
ord. 918618BE
Without button
ord. 918618E



2N® Lift8
MACHINE ROOM PCB

For MRL elevators
ord. 918619E



2N® Lift8
MACHINE ROOM UNIT

MR unit + programming
ord. 918611E



2N® Lift8
SHAFT UNIT

Top, under cabin or pit
ord. 918612E



2N® Lift8
SHAFT UNIT
ANTIVANDAL

For heavy duty environment
ord. 918617E



2N® Lift8 SPLITTER

Shaft extender
ord. 918620E



2N® Lift8 I/O MODUL

For easy lift monitoring
ord. 918621E

2N® LIFT8



2N® Lift8
CAMERA MODULE

For visual alarm confirmation
ord. 918622E



2N® Lift8 FIREMAN

For fire fighter elevators
ord. 918615E



2N® Lift8 PICTOGRAM
CONTROLLER

External pictogram driver
ord. 918655E



2N® Lift8 VOICE ALARM
STATION SET

For top and under cabin
ord. 913662ESET



2N® Lift8
CENTRAL UNIT

ord. 918600E

Communication interface

Monitoring interface



2N® Lift8 PSTN

ord. 918652E



2N® Lift8 GSM/UMTS

ord. 918650E
ord. 918651E



2N® Lift8 LTE

Available 2020



2N® Lift8 VOIP

ord. 918653E



2N® Lift8 RS232

ord. 918654E



2N® Lift8 IP

ord. 918655E



2N® EASYGATE PRO

2N® EasyGate PRO is a full featured land-line replacement. An analogue GSM/UMTS/VoLTE gateway suited for a lift environment. Connect to it any lift emergency communication system, or use it as an instant replacement of fixed lines via mobile (cellular) solution. In addition, the gateway can make a call for transferring data and SMS messages. Also available as dual SIM.

Land-line replacement

Trouble-free installation

Lift monitoring by SMS report



2N® Lift GATEWAY
GSM

ord. 5013331LE



2N® Lift GATEWAY
UMTS

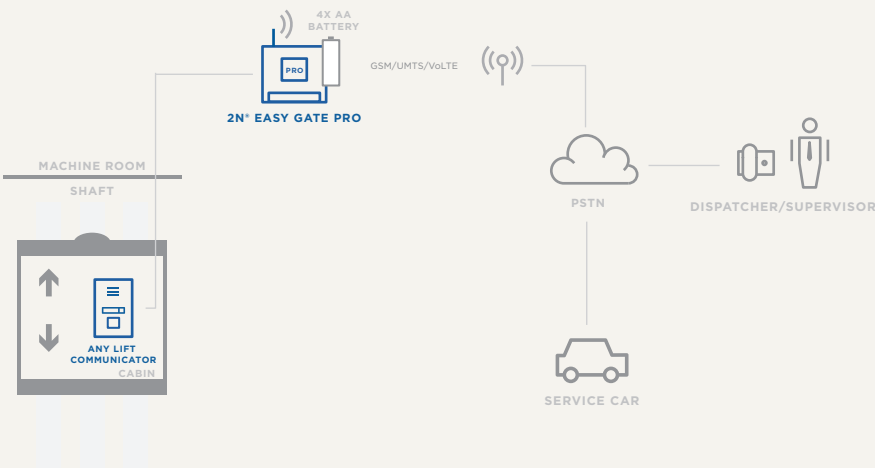
ord. 5013381LE



2N® Lift GATEWAY
VoLTE

ord. 5013391LE

Installation



Technical Specifications

GSM model

GSM networks	850/900/1800/1900 Mhz
GSM modules	Cinterion MC55i-w
Data	CSD (up to 14.4 kbit/s), GPRS Class 10
SIM card	3 V and 1.8 V

GSM/UMTS model

GSM networks	850/900/1800/1900 Mhz
UMTS networks	900/2100 MHz (EU version), 850/1900 MHz (US version), 850/2100 MHz (Japanese version)
Data	HSDPA 3.6 Mbps, WCDMA, EDGE, GPRS
SIM card	3 V and 1.8 V

Antenna

Connector type	SMA
Impedance	50 Ohms

Line interface

Interface type	Two-wire, FXS for phone or external PBX line
Connector type	RJ12, 6/2, or terminal
Supported modes	DTMF and pulse

Power source

Power unit supplied with the gateway	(12 V/1 A)
Option to connect an external 10 to 16 V DC power source	DTMF and pulse
Backup power using 4×AA batteries	16/12 kHz

USB Interface

Configuration and upgrade using 2N® PC Manager UNI	200 mA
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Other

Dimensions	163×157×38 mm
Operating temperature	0°C – 45°C
Operational status signalling	4×LED (on, GSM network, line, data), LED indicator – signal strength/battery status
Operational status signalling	4×LED (on, GSM network, line, data)
LED indicator	signal strength/battery status

2N® EASYGATE IP

New generation of analogue GSM/UMTS/VoLTE/LTE gateway embodies our long term experience in the lift and telecommunication field. It supports SIP protocol to provide reliable transmission of DTMF codes to the dispatching centre. Device management can be done either locally, or via cloud which becomes handy in case of big number of monitored devices. Durable industrial mechanics is suitable for demanding and humid environment. Monitored in-built battery backup fully complies with the latest elevator norms for emergency communication.

SIP over LTE

Auto configuration

Online monitoring



2N® EasyGate
IP



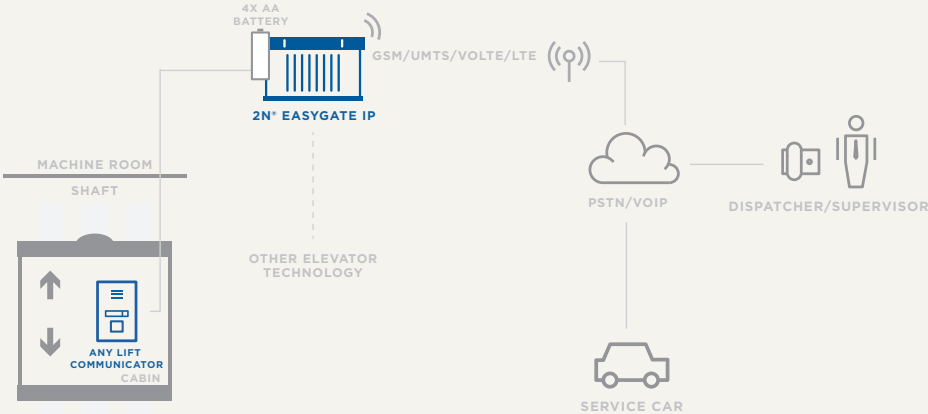
2N® EasyGate
IP+

With Modem
ord. 5023101E
Without Modem
ord. 5023001E

ord. 5023301E

Avialable in 2021

Installation



Technical Specifications

Voice

GSM networks	850/900/1800/1900 Mhz
UMTS networks	900/2100 MHz (EU)
	850/1900 MHz (US)
	850/2100 MHz (JPN)
LTE networks (EU/NA/AU)	LTE FDD: B1/B3/B5/B7/B8/B20
	WCDMA: B1/B5/B8
	GSM: B3/B8
	LTE FDD: B2/B4/B12
	WCDMA: B2/B4/B5
	LTE FDD: B1/B2 /B3/B4/B5/B7/B8/B28
	LTE TDD: B40
	WCDMA: B1/B2/B5/B8
	GSM: B2/B3/B5/B8

Data

LTE	LTE FDD: Max 10Mbps (DL)/Max 5Mbps (UL)
	LTE TDD: Max 8.96Mbps (DL)/Max 3.1Mbps (UL)
UMTS	DC-HSDPA: Max 42Mbps (DL)
	HSUPA: Max 5.76Mbps (UL)
	WCDMA: Max 384Kbps (DL)/Max 384Kbps (UL)
GSM	EDGE: Max 296Kbps (DL)/Max 236.8Kbps (UL)
	GPRS: Max 107Kbps (DL)/Max 85.6Kbps (UL)
	RS232
	3 V and 1.8 V

Antenna

Connector type	SMA
Impedance	50 Ohms

Line interface

Interface type	Two-wire, FXS for phone or external PBX line
Connector type	Terminal
Supported modes	DTMF

Power source

Power unit supplied with the gateway	(12 V/1 A),
Backup power using 4xAA batteries	Option to connect an external 10 to 16 V DC power source
	16/12 kHz

USB Interface

Configuration and upgrade	Web GUI, or My2N for lifts cloud
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Other

Dimensions	195 × 119 × 61 mm
IP coverage	IP43
Operating temperature	-40°C to +85°C
Operational status signalling	4xLED (ON, GSM network, line, data), LED indicator – signal strength/battery status

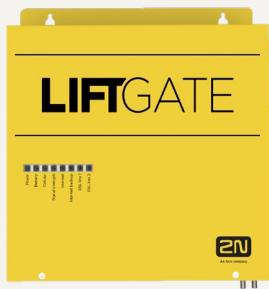
2N® LIFTGATE

A LTE router which is designed to provide connectivity to elevator IP devices via 2 wire in travelling cable. This provides cost effective modernization possibility without need to replace travelling cable. It supports SIP protocol and methods of reliable transmission of DTMF codes to the dispatching centre. Device management can be done either locally, or via cloud which becomes handy in case of big number of monitored devices. Monitored in-built battery backup fully complies with the new elevator norms for emergency communication.

Pure IP solution

2 wires in travelling cable

Auto configuration



2N® LiftGate

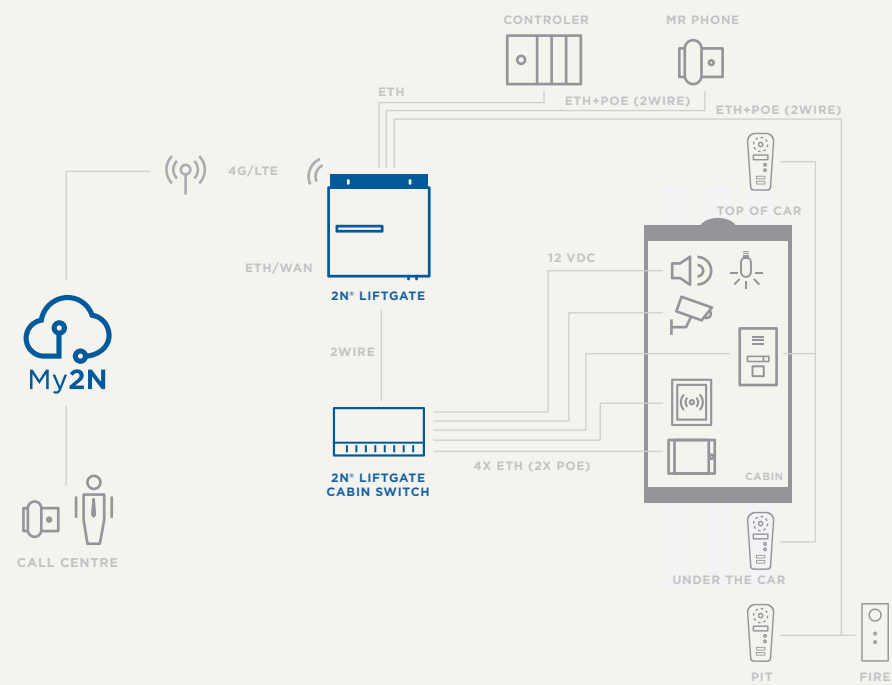
For 1 or 2 shafts
ord. 5024101E



2N® LiftGate Cabin Switch

ord. 502460E

Installation



Technical Specifications

Data

LTE

LTE FDD: Max 10Mbps (DL)/Max 5Mbps (UL)
LTE TDD: Max 8.96Mbps (DL)/Max 3.1Mbps (UL)

UMTS

DC-HSDPA: Max 42Mbps (DL)
HSUPA: Max 5.76Mbps (UL)
WCDMA: Max 384Kbps (DL)/Max 384Kbps (UL)
EDGE: Max 296Kbps (DL)/Max 236.8Kbps (UL)
GPRS: Max 107Kbps (DL)/Max 85.6Kbps (UL)

GSM

WAN

1Gbps

SIM card

3 V and 1.8 V

Router

Network protocols

PPP, PPPoE, TCP, UDP, DHCP, ICMP, NAT, HTTP, HTTPs, DNS, ARP, RIP, OSPF, NTP, SMTP, Telnet, VLAN, SSH2, etc.

LiftGate cabin switch

Number of ports

4x 10/100 Mbps (2x PoE)

DSL

IEEE B1901

Output voltage

12V

Antenna

Connector type

SMA

Impedance

50 Ohms

Power source

Backup power

internal 12 V 9Ah, external battery optionally

USB Interface

Configuration and upgrade

none

Web GUI, or My2N for lifts cloud

Other

Dimensions

240 × 268 × 72 mm

IP coverage

IP30

Operating temperature

0°C to +45°C

Operational status signalling

8 LEDs (Power, Battery, Cellular, Signal, Internet, Internet backup, DSL line 1, DSL line 2)

2N® MY2N FOR LIFTS

In order to overcome knowledge gap in implementation of IP technologies, we are coming up with My2N cloud which helps elevator companies to install and operate IP devices without special skills and in minimal time. My2N cloud allows to connect and configure audio units and gateways with 1 click installation formula.

Monitored elevators are organized in a well-arranged structure, and only authorized administrators and technicians can make changes in device settings.

All devices constantly provide operational data like signal strength, battery status, network registration, etc. Error states and outages are reported to system administrators immediately. Possibility to access device remotely reduces maintenance cost and simplifies troubleshooting, implementation of new features or configuration changes.

My2N cloud offers several security mechanisms which protect devices against various cyberattacks. Devices can communicate with the cloud service even if they are hidden behind firewall without being exposed to the public internet.

Emergency communication system can be easily integrated with any 3rd party system by partner API.

KEY CHARACTERISTICS:

- Auto configuration
- Device status monitoring
- Remote management
- VPN
- Reliable DTMF transmission
- Cloud PBX (SIP proxy)
- Partner API for easy integration

Complete device management

Integration with 3rd party systems

Cloud PBX



TRANSITION TO 4G (LTE) NETWORKS

Soon, the whole elevator industry will face a technological change due to transition of mobile networks from GSM and UMTS to LTE (4G). As a result, vast majority of installed gateways are going to stop working, so elevators will lose connectivity to call centers with all legal consequences. In reaction to that a 4G gateway will be necessary.

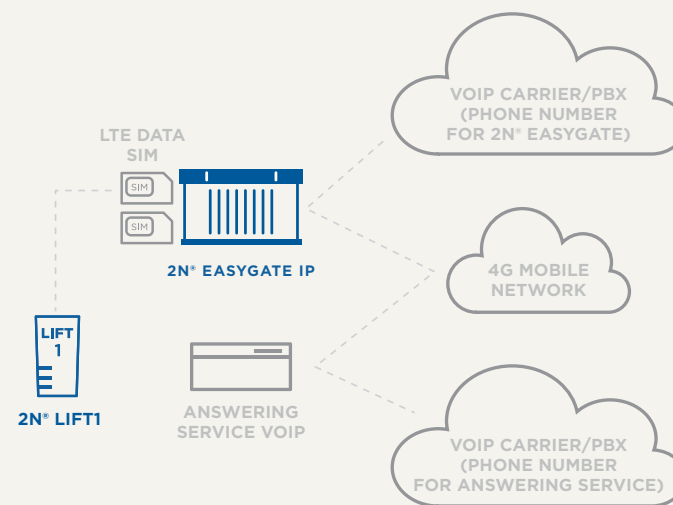
However replacement with VoLTE gateways has some essential drawbacks:

- At present no roaming within the networks
- DTMF distortion – this a crucial problem for elevator signalling protocols (CPC, P100)

IS THERE ANY SOLUTION HOW TO ENSURE RELIABLE TRANSMISSION OF DTMF CODES?

Yes. The LTE network is used as a data transfer technology through which voice is transferred using the SIP protocol. A SIP client is implemented in the LTE gateway and registered centrally to a VoIP provider, or cloud PBX in My2N cloud.

Elevator companies have to take action and begin with replacement process. Ongoing changes are perfect opportunity to approach emergency communication in more professional, effective and modern way.



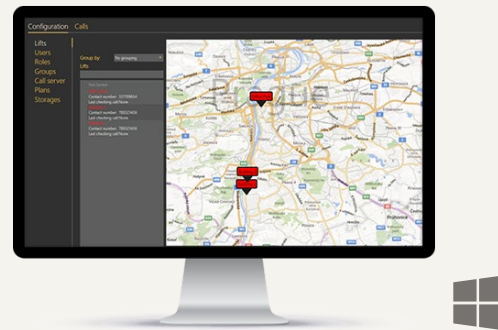
2N LIFT SOFTWARE

Call Centre for Lifts is a software solution for the comprehensive management of emergency lift communicators. The software will even allow you to handle alarms and control calls. You get not only a detailed overview of all your calls from the lift, but the option to archive them or export the data e.g. for customer reports preparation.

Management of control and alarm calls

No extra hardware required

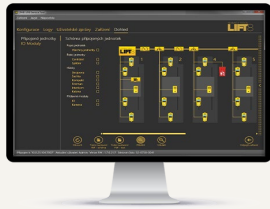
Support for CPC and P100 protocols



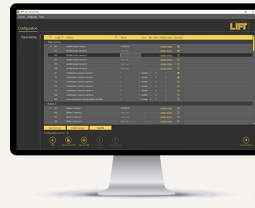
2N® CALL CENTRE FOR LIFTS

ord. 918700E

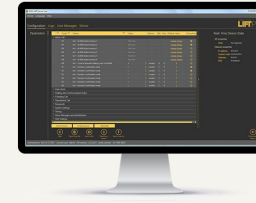
2N LIFT SOFTWARE



2N® Lift8 SERVICE TOOL



2N® Lift1 SERVICE TOOL



2N® LiftIP SERVICE TOOL

The 2N® Lift8 Service Tool is software used for local (USB) or remote (IP) configuration of one complete 2N® Lift8 communication system (audio messages, additional modules, splitters and I/O modules).

With the aid of 2N® Lift1 Service Tool software, you will be able to completely set up the 2N® Lift1 communicator. In addition to this, the software application can, apart from configuration, also be used to perform an upgrade and to change the language version.

With the 2N® LiftIP Service Tool, you will be able to fully configure the 2N® LiftIP lift communicator yourself. The tool will also help you update the software or switch between languages for audio announcements played back in the lift cabin or used during configuration.



LIFT ACCESSORIES



2N® 2Wire – Ethernet 2 wire convertor	9159014E
2N® Emergency button under/or top of the cabin	918690E
2N® Floor annunciator	913305E
2N® External microphone 1 m	913627E
2N® External microphone 3 m	9136273E
2N® External speaker 1 m	913625E
2N® External speaker 3 m	9136253E
2N® External LED's 1 m	913620E
2N® External LED's 3 m	9136203E
2N® High gain antenna 9dB 10 m	22041567
2N® Induction Loop Amplifier with Antenna	919622E



TÜV SÜD Certified

All emergency communication products are certified by TÜV SÜD Czech. The TÜV certificates confirm compliance with EN81-28, EN 81-70, EN81-72 and EN81-80.



NGN Ready

The world is switching from analog lines to IP technologies, particularly among fixed-line operators, who are upgrading their original analog lines. Always striving to provide the most reliable services, our 2N® Lift1, 2N® Lift8 and 2N® LiftIP elevator communicators comply with this trend. We tested the 2N® Lift1, 2N® Lift8 a 2N® LiftIP on these new connections in a special Deutsche Telekom laboratory in Bonn.

ELEVATOR NORMS

EN

81-28

EN 81-28 – Emergency calls. The purpose of this standard is to improve communication in emergency situations in elevators. It eliminates the risk of passengers being entrapped due to malfunctions in elevator installation. This is accomplished by fitting all elevators with an emergency call system, which connects lift cabin with remote emergency service.

EN

81-70

EN 81-70 – Barrier free elevators. This standard allows people with reduced mobility (pushchairs, wheelchairs, walking aids, etc.) or other disabilities (mental disability, sight and hearing impairment, etc.) to enter elevator cabins easily and operate elevators without limitations.

EN

81-72

EN 81-72 – Firefighting elevator. The standard deals with the significant hazards, hazardous situations and events relevant to firefighter elevators installed mostly in new buildings. They are primarily intended for use by passengers and thus may be used for firefighting and evacuation purposes under direct control of firefighters.

EN

81-20

EN 81-20 – Requirements for construction. This standard replaces the EN 81-1 standard and specifies the emergency call system requirements in greater detail. Lifts must now be equipped with additional communication units that must be installed with the ALARM system under the EN 81-28 standard to allow a person trapped in the shaft to place an emergency call.

EN

81-71

EN 81-71 – Vandal resistant elevators. The EN 81-71 standard defines the testing methodology and classification of elevators according to their vandal resistance. Furthermore, this standard provides guidance to building designers, customers, etc., and requirements for design in projects requiring additional security in order to protect against the risk of vandalism.

EN

81-80

EN 81-80 – Elevator modernization / hazard analysis. EN81-80 SNEL (Safety Norm for Existing Lifts) improves the security of existing passenger and goods passenger elevators. This standard defines rules for improving safety of existing elevators based on risk assessment and categorises various hazards and hazardous situations.

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