Du-Pol

User and installation manual



4G INTERCOM

UP200-VoLTE M2

Intercom and access control unit operating on 4G mobile networks

Introduction

The **UP200-VoLTE M2** is an intercom unit which as a cell phone can call the owner's mobile or landline phone. By pressing the call button on the intercom, it makes the voice connection in a few seconds, just like when talking via a conventional intercom system. This way it makes possible for the owner to receive the visitor's calls and talk to them at anytime and anywhere, even when not at home.

Functions

- Wireless intercom with 1 or 2 pushbuttons (for 1 or 2 apartments)
- Even 2 phone numbers can be assigned to each pushbutton (set as primary and secondary)
- Gate control function by free call, 100 user phone numbers can be configured
- The electric strike can be controlled using the phone's keys during a conversation, or on the scene using an external pushbutton.
- SMS forwarding (e.g. to forward the balance information of pre-pay SIM card)
- Simple configuration via USB using the PC software
- Remote configuring by SMS message

Features

- 2-way speech communication
- Operating on any mobile networks: 2G/3G/4G
- Remote controllable relay output for gate opening
- USB port for PC configuration
- Wide operating temperature: -30°C / +60°C
- Wide power voltage range: 9-16 VDC
- Protection: IP44

Application area

- Modern solution for wireless intercom system (private homes, resorts, offices, premises)
- Remotely controllable access control unit
- Keyless door opening
- Garage door opening/closing by phone
- Emergency call unit
- Info columns

Advantages

- No missed clients or visitors, since the intercom unit calls the owner's mobile phone, no matter where the owner is
- On call, the owner can let in the guest, client or courier remotely
- In case of absence, burglary attempts can be prevented by imitating the apparent presence.
- Fast and easy installation, easy configuration using a PC
- Possibility for communication from any fixed place

1 Operation

Visitor mode

When the visitor pushes the call button, the device initiates a voice call to the configured phone number. If the called party accepts the call, the communication establishes for the configured duration. During the call, the connection cannot be interrupted nor by making a call to the device, nor by pressing the button again. The call is ended automatically when the configured communication time expires, or the called party can hang up the call at anytime on his/her phone. The call is ended automatically if the called party does not answer or is not available.
A new call is initiated only if the button is pressed again.

Listen-in mode

The intercom unit can be called from the telephone numbers assigned to the telephone's push buttons. If the call is initiated from any other telephone number, the intercom rejects it. In this case the unit accepts the call without ringing and the voice connection establishes. The call can be ended on the caller's phone or by pressing the call button on the unit.

If the call is initiated from a phone number which is configured in the unit as gate opener number, the device will consider the call as a gate opening call. In this case voice connection is not established, but the relay output is activated.

Controlling the relay output

The *RELAY* (normally open, NO) relay output can be controlled as follows, depending on the usage:

- **controlling by free call:**
  on incoming call, after identifying the caller ID, the unit rejects the call and activates the output
  e.g. garage door or barrier opening, for which max 100 user phone numbers can be configured
- **controlling by the pushbutton:**
  the relay activates when the call button is pushed
  e.g. possibility to connect an existing door bell
- **controlling by the phone's keys:**
  while in call by pressing **2#** of the phone's numbered keys the relay activates for the configured time period

Forwarding incoming SMS messages

The unit forwards the SMS messages received on its SIM card (e.g. balance information in case of a prepaid card) to the configured phone number. After forwarding, the received message is deleted from the SIM card. If there is no phone number configured, the unit deletes the incoming messages without forwarding.

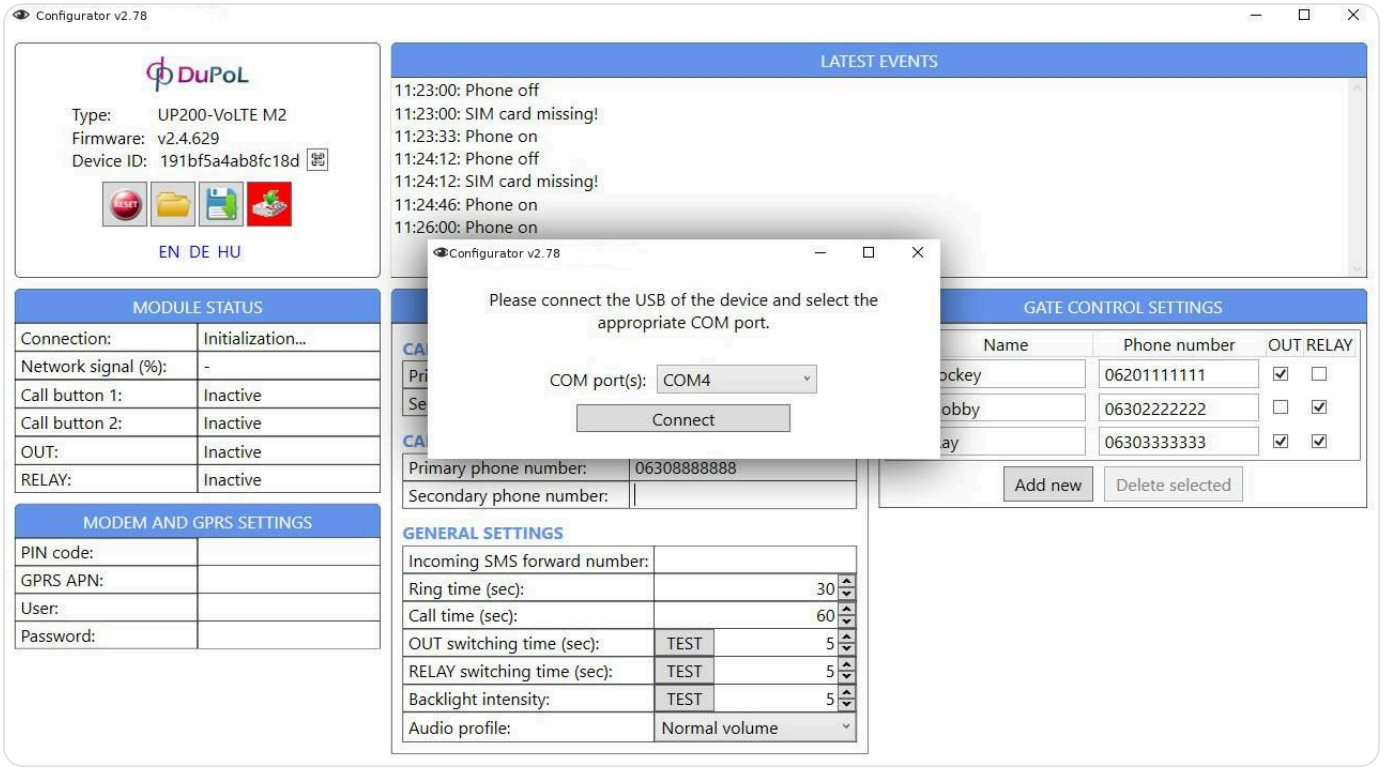
Status LED indications

LED	Color	
NET OK	green	Is lit after connecting to the mobile network and reaching the sufficient signal strength. The sufficient signal is: 10 (on 0-31 scale)
ERROR	red	Is lit continuously if the device cannot connect to the mobile network. Possible reasons: - the antenna is faulty or is not connected - the SIM card is not inserted, - or the PIN code request is not disabled, - or the SIM card is faulty.
CALL	green	Communication in progress. A call or conversation is in progress.
OUT	red	Voltage output activated
RELAY	red	Relay output activated

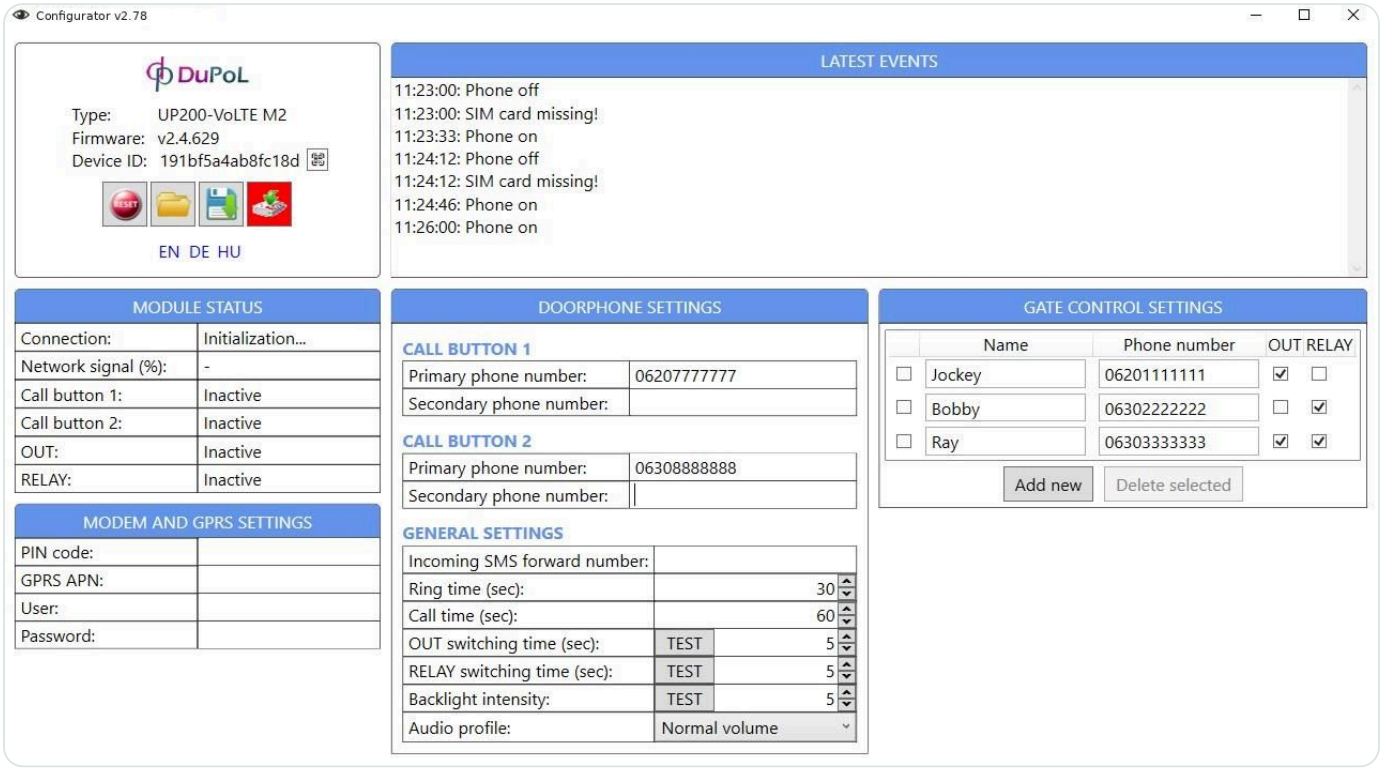
ATTENTION:
The *RELAY* and *OUT* outputs is activated in parallel and independently from each other by both menu items, the *Control of outputs* and the *Gate control*. Please take this into consideration when planning the usage!

2 Settings

The device settings must be made on Configurator program, which is downloadable from this link:
https://dupol.eu/downloads/configurator-v3-09-setup.exe
After downloading and running the program, connect the device to the computer through the USB port and click on connect.



Setup starts by configuring the device's network connection.



Buttons



The intercom unit calls the phone numbers entered here when the appropriate button is pressed. If both phone numbers are set to any button, the unit calls the primary phone number first, and if the call is successful, it ignores the secondary telephone number. In case of an unsuccessful call (e.g. if the called number is not available or the call is not accepted), calling the secondary phone number can be done by pushing the button again (within 60 seconds).

General settings

SMS forward

Forwards the SMS messages received on the unit's SIM card to the specified phone number, e.g. balance information received from the GSM service provider. It is recommended to configure this in case of using a pre-pay type SIM card.

Ring time (10-120 sec)

The maximum time allowed for ringing from pushing the call button. This function is useful to avoid switching to voicemail.

Call time (10-600 sec)

The maximum time allowed for a call initiated from the intercom.

OUT active time (1-120 sec, monostable)

The voltage output activation time.

RELAY active time (1-120 sec, monostable)

The relay contact output activation time.

Volume (low, normal, high), default value: normal

the change in settings become valid in next call progress

Backlight brightness

light (0-10), default value: 5

Gate control

The two outputs of the unit can be controlled by multiple configured events. You can choose the activation event according to the usage.



OUT

The voltage output, e.g. for direct control of an electric lock.

RELAY

The relay contact output, e.g. for garage door control.

Setting:

To enable control, it is necessary to tick the chosen output or outputs.
When calling the intercom from the phone numbers specified here, control of the output or outputs assigned to the given phone number is performed. The incoming call is not accepted, thereby this function works with free calls. Maximum 100 user phone numbers can be added.

Status information



Displays information about the switching state of the peripheries and the actual status of the mobile network.

Intercom information

Displays the module type and the firmware version.

GSM network

Displays the GSM provider and the value of the GSM signal (0-31) The appropriate GSM signal is minimum 12

Outputs

Displays the state of the relay and voltage output control

State messages



The messages shown in this window give information about the internal operation of the unit. This helps in identifying an internal process, an incorrect configuration or other malfunction.

3 Setting with SMS commands

Configuration of the unit is possible by sending the appropriate commands in SMS to the module's phone number. It is possible to send more commands (settings) in the same SMS, but the length of the message must not exceed 140 characters! Each message must begin with the password using the **PWD=*password*#** command and each command must end with **#** character, else the module does not apply the modifications. The following table contains the configuring and query commands:

Configuration commands	
PWD=1234#	Password for programming, default setting:1234
PWDC=*new password*#	Changing the password. The password is a 4-digit number.
RESET#	Resetting the settings and the password to default.
UPTEL1=*phone number*#	Primary phone number for upper pushbutton.
UPTEL2=*phone number*#	Secondary phone number for upper pushbutton.
LOWTEL1=*phone number*#	Primary phone number for lower pushbutton.
LOWTEL2=*phone number*#	Secondary phone number for lower pushbutton.
RINGTIME=*duration*#	Ringing time of the telephone to restrict the reach of voice mail. (10-120sec)
CALLTIME=*duration*#	Maximum duration of the conversation. (10-600 sec)
RTIME=*durationNO# or NC**	Duration and idle mode of the relay output activation. (1-120 sec) NO=off, NC=on
OUTTIME=*durationNO# or NC**	Duration and idle mode of the voltage output activation. (1-120 sec) NO=off, NC=on
RTEL=*phone numberREL*OUT#**	Setting the phone numbers for relay or voltage output activation. For output activation the suffix after the phone number is necessary. *REL: switch the relay, *OUT: switch the voltage out, *REL*OUT switch both. Up to 100 users.
RTELDEL=*phone number*#	Delete the selected phone number from the RTEL list.
STATUS?#	Query of the settings, except for the RTEL list.
INFOSMS=*phone number*#	Forwards the balance information of the GSM provider to the given telephone number.

This scenario shows the setup for the following requirements: adding 2 phone number only to upper pushbutton, auto switch to the secondary phone, VOUT control (for electric lock) by phone and input contact, duration is 10sec, both phone numbers are able to control the gate control's relay by a free call, relay activation time is 5sec.
Other call parameters: Ringing time=25sec; maximum duration of the conversation=120sec; forwarding prepaid card information to primary phone number

SMS message:

```
PWD=1234#UPTEL1=0036309999999#UPTEL2=0036201111111#UPAUTO=ON#OUT=PHONE#OUTTIME=10*NO#RTEL=0036309999999*REL#RTEL=00
36201111111*REL#RTIME=5*NO#RINGTIME=25#CALLTIME=120#INFOSMS=0036201111111#
```

4 Installation

Preparation

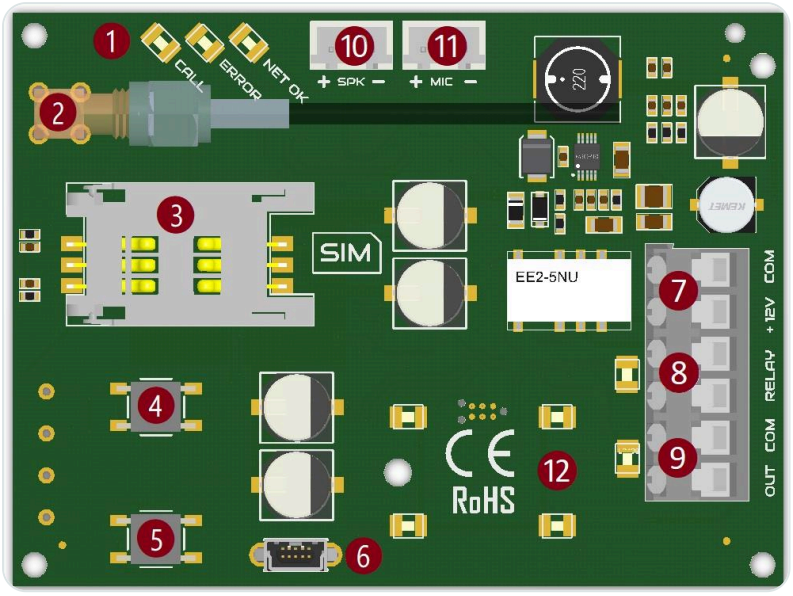
- Disable PIN code request on the SIM card, for which a mobile telephone is necessary.
- Make sure the SIM card is inserted properly into its case.
- Insert the SIM card into the slot so that its contact surface should point towards the contact pins of the card case when turned down, as well as the cut corner of the card should fit into the plastic case.
- Make sure the antenna is fixed properly into the SMA connector.
- Make sure the wires are connected as shown in the connection diagram.
- Make sure the power supply is sufficient for the operation of the unit! If it is, and all connections are done, the unit can be powered up.

When operated with an electric lock, the minimum power requirement is 15VA!

Mounting

- Do not mount the unit where it could be affected by strong electromagnetic disturbances.
- Antenna: the external antenna supplied with the unit provides good transmission under normal reception circumstances. In case of having signal strength problems and/or noisy communication, use other type of higher gain antenna or find a more suitable place for the antenna.

Connection diagram



1. Status LEDs
2. 4G antenna connector
3. SIM card holder
4. Upper call pushbutton
5. Lower call pushbutton
6. USB port
7. Power supply input
8. Relay contact output
9. Controllable voltage output
10. Speaker output
11. Microphone input
12. Name plate back lighting

5 Technical specification

Name	Other conditions	Minimum	Typical	Maximum	Unit
Power supply (+12V)		9	12	16	VDC
Current consumption	in case of 12VDC	30	40	400	mA
Relay output load				30 2	V A
Voltage output	in case of 12VDC		11	 1	V A
Operating temperature		-30		+60	°C
Outdoor protection				IP44	

Other data

Network operation	VoLTE / UMTS / GSM
Dimensions	height: 165mm width: 122mm depth: 40mm

Package contents

- UP200-VoLTE M2 intercom unit
- 4G antenna
- USB A / B5 mini cable
- Antenna bracket + fixing screws

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Du-Pol Kft. · Debrecen, Hungary · **dupol.eu**
Sales: office@dupol.eu · Technical support: support@dupol.eu