ASC Global



MultiOne GSM/4G Cloud

GSM GATE OPENER AND REMOTE CONTROLLER

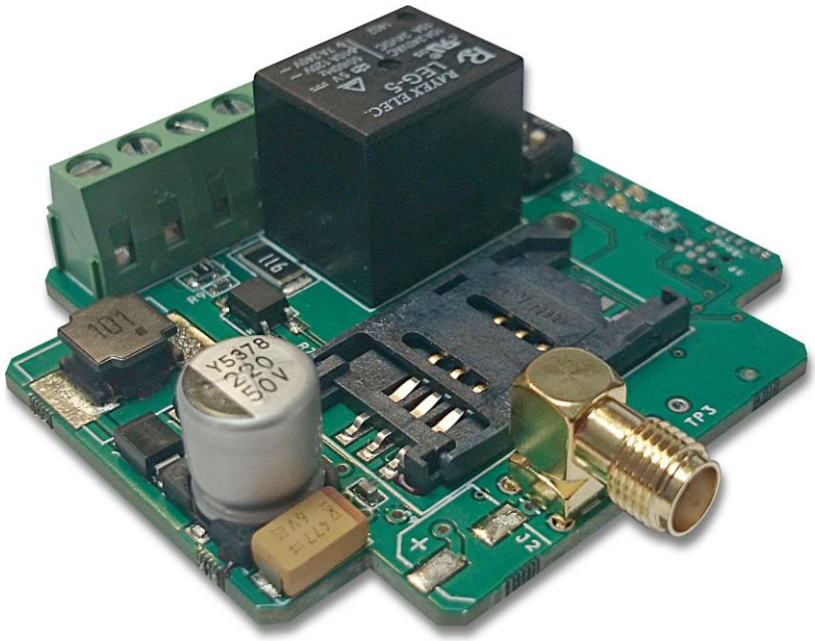


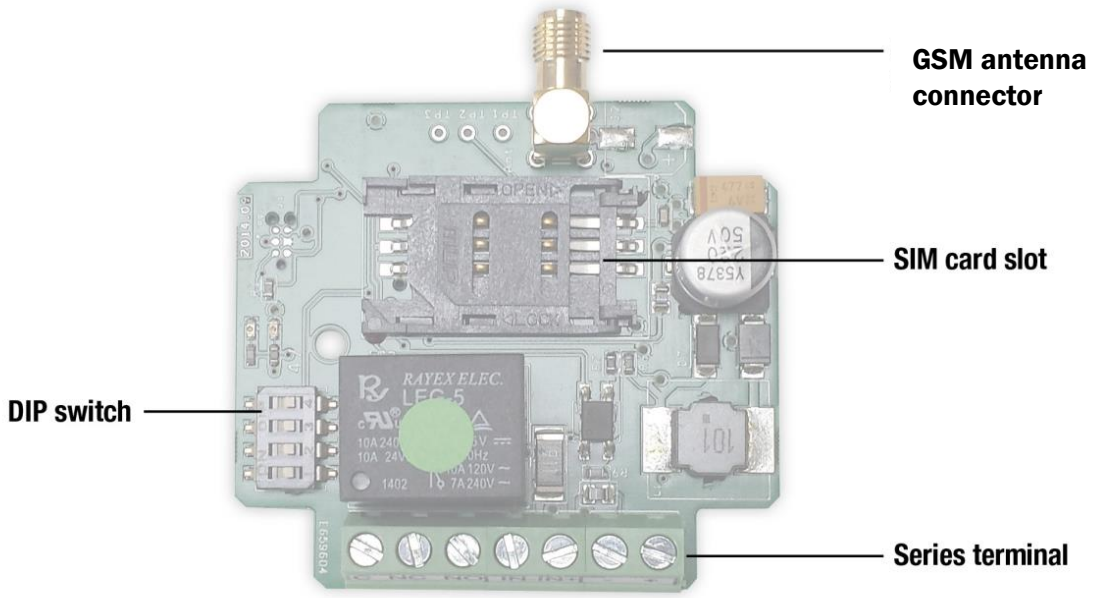
Table of Content

General description....3
Power Supply....3
Input....3
Contact wiring....4
NPN and PNP wiring....5
Controlwith AC/DC voltage....5
Output settings, wiring....5
Output control....5
Status check....6
Module restart....6
Password set....6
Forwarding SMSs arriving to the module....7
Configure SIM card....7
Reverting module settings back to factory default (RESET)....7
LED signs....7
Sending multiple commands in one SMS....8
MultiOne in Cloud....9
Device register with CLOUD MANAGER application....9
Add device....9
Cloud settings....11
APN settings....12
Create an Cloud control icon....13
Devices registration on ASCloud Manager website....14
Select language....15
Create your first cloud connection....15
Add registered device....17
Notifications....18
Notifications....18
Add an managing users....19
Create URL control icon....21
Event list....21
Settings....21
Information....22
Command send....22
Technical details....24

General description

MultiOne GSM is a GSM communicator that can be used for remote controlling and for notification sending. The device has an optocoupler input and a potential independent relayed output that has normally closed (NC) and normally open (NO) terminals as well. If there is a change on the input it will send only SMS or an SMS and a call to a phone number. Output control is achieved by calling the module. Depending on the setting controlling can be made with or without caller identification. Output can be set to switch to its other state when called or to switch for a given time to its other state from its default. Module settings can be adjusted by using DIP switches and SMSs.

The operation of the products is presented through the MultiOne GSM Cloud model, and the document also covers the differences between the MultiOne GSM Cloud and MultiOne 4G Cloud products.



Power Supply

GSM module requires 12-24 VAC or 10-35 VDC that has to be connected to the + and – terminals of the module. If the module is connected to the gate control unit directly, make sure that the power source is not over 24 VAC. In case of the power source is higher than 24 VAC, the module can be damaged.

Input

MultiOne GSM Cloud

The GSM module has an opto-isolated input, with connection points IN- and IN+. A maximum voltage of 24 VAC or 35 VDC can be applied to the input.
With DIP switch 2 in the OFF position, the module sends a notification when voltage is applied.
With DIP switch 2 in the ON position, the module sends a notification when the applied voltage is removed.
The notification method is determined by the position of DIP switch 3. If it is in the OFF position, the module sends only an SMS. If DIP switch 3 is in the ON position, it also calls the specified phone number.
The **phone number to be notified** is programmed using the SMSTEL command:
Format: **<Password>SMSTEL=<phone number>***
Example: 1234SMSTEL=+36701234567*
The **SMS text** is set using the SMSTEXT command:
Format: **<Password>SMSTEXT=<text>***
Example: 1234SMSTEXT=Alarm*
In the case of notification by phone call, acknowledgement is performed by answering the call. The call can be ended after 1 second. The module makes up to 50 attempts until the call is answered.

MultiOne 4G Cloud:

The 4G module has an opto-isolated input, with connection points IN- and IN+. A maximum voltage of 24 VAC or 35 VDC can be applied to the input.
One of the important new features of the MultiOne 4G Cloud is the advanced input logic. With DIP 2=0, NO input operation is available. With DIP 2=1, the module provides NC input operation.
The notification method is determined by the position of DIP switch 3. If it is in the OFF position, the module sends only an SMS. If DIP switch 3 is in the ON position, it also calls the specified phone number.
The **phone number to be notified** is programmed using the SMSTEL command:
Format: **<Password>SMSTEL=<phone number>***
Example: 1234SMSTEL=+36701234567*
The **SMS text** is set using the SMSTEXT command:
Format: **<Password>SMSTEXT=<text>***
Example: 1234SMSTEXT=Alarm*
In the case of notification by phone call, acknowledgement is performed by answering the call. The call can be ended after 1 second. The module makes up to 50 attempts until the call is answered.

Contact wiring

If there is a potential independent contact the wiring has to be made by using the power voltage of the GSM module. Depending on the contact type which can be closer or opener Figure 1 or Figure 2 must be used. DIP 3 switch should be set according to the type of control.

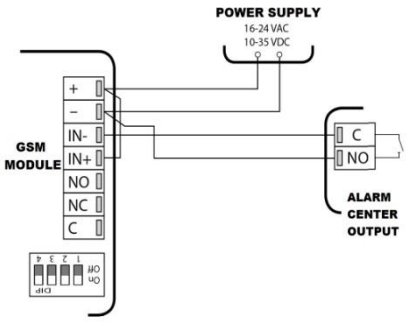


Figure 1.

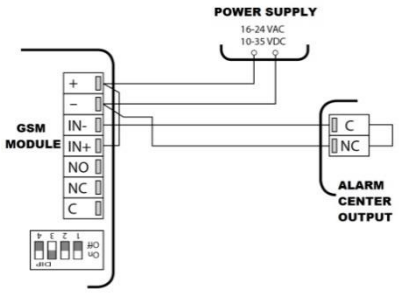


Figure 2.

NPN and PNP wiring

If there is an transistor „NPN" (Figure 3.) or „PNP" (Figure 4.) output the power voltage of the GSM module has to be used to power the opto input. In this case the power source of the module can have only direct DC voltage. DIP 2 switch should be set according to the type of control

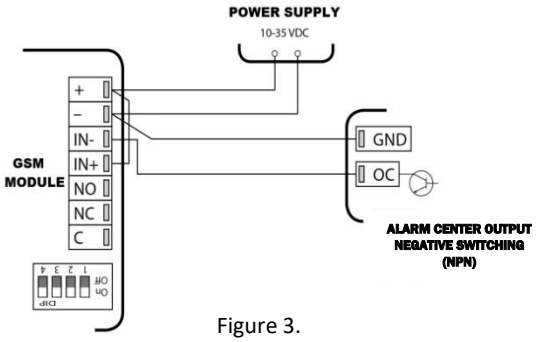


Figure 3.

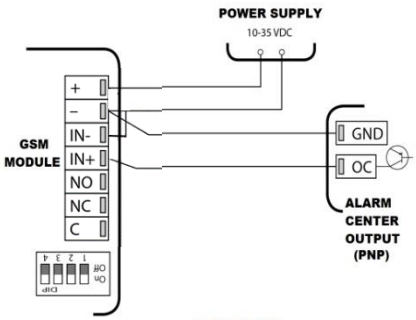
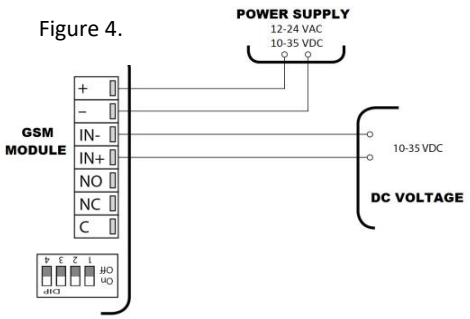


Figure 3.

Controlwith AC/DC voltage

Figure 4.



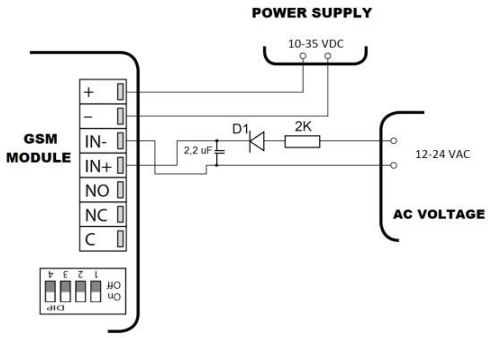


Figure 5.

The opto input can be controlled independently from the power supply of the module which cannot be greater than 24 VAC or 35 VDC. For AC voltage, electrical parts are necessary to connect. (not included in package)

Output settings, wiring

The device has a potential independent relayed output that has normally closed (NC) and normally open (NO) terminals as well. Its terminals are C, NC, NO. Output maximum load is 5A.
Output can be adjusted to switch from its current sate to its other state (bistable controlling) or to switch to the other state (monostable controlling) when called.
The **DIP 1** switch **OFF** state means **monostable** and the **ON** state means **bistable** controlling. The default monostable control time is 3 seconds. This can be modified with the MONOTIME command.

Format: **<password>MONOTIME=<time>**
Ex.: 1234MONOTIME=025
Time parameters: between 0001 and 65535 and always completed up to 3-4 or 5 digits.
Ex.: 8 seconds will be 008, 0008,00008; 45 seconds will be 045, 0045 or 00045

Output control

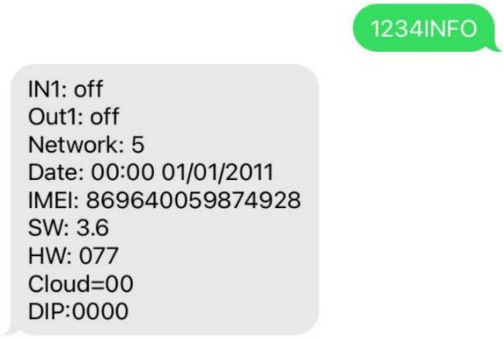
Output control is carried out by calling the module. Module only registers the call (not answering) and it controls the output.
If DIP 4 switch is in ON state any call is allowed to control the output. In its OFF state only the numbers saved on the SIM card are allowed for control.
If the incoming call is not identified, the module will immediately sound a busy tone.
Telephone number saving is achieved with the ADD command:
Format: **<password>ADD=<3 characters of the position>=<telephone number>***
Ex.: 1234ADD=001=+36701234567*
Position is the address of the telephone number and name stored on the SIM card.

Deleting telephone number from a position is carried out with the DEL command:
Format: **<password>DEL=<3 characters of the position >**
Ex.: 1234DEL=001

Status check

We can receive module information by using the INFO command:
Format: **<password>INFO**
Ex.: 1234INFO
The reply SMS contains the following details:

- input state of the module (IN1: off)
- output state of the module (Out1: off)
- gsm signal strength (5)
  („5" meaning is excellent. Signal quality table on page 7.)
- date and time of the module (Date: 00.00 01/01/2011)
- IMEI number (869640059874928)
- software version (SW:3.6)
- hardware version (HW:077)
- cloud login status (Cloud=00)
  01 – logged in, 00 – not logged in
- Position of DIP switches (DIP=0000)
  If DIP = 1000, DIP switch 1 is ON. (Bistable function)
  If DIP = 0001, caller ID is disabled.



Module restart

Module can be restarted:
Format: **<password>RESTART**
Ex.: 1234RESTART

Password set

The GSM module programming is protected by a 4 digit security code which is 1234 by default. This code can be modified with the SMSPIN command:
Format: **<old password>SMSPIN=<new password 4 characters>** Ex.: 1234SMSPIN=5678

Forwarding SMSs arriving to the module

Module might receive SMSs that are not containing information for the module (ex. credit balance notification). These SMSs can be redirected by the module to a telephone number with the REDIR command:
Format: **<password>REDIR=<telephone number>**
Ex.: 1234REDIR=+36301234567
Forwarding can be stopped by using the following REDIR command:
Format: **<password>REDIR=D**
Ex.: 1234REDIR=D

Configure SIM card

You must disable voicemail, PIN code request and call alert on your SIM card before you can use it.

Reverting module settings back to factory default (RESET)

When you restore to factory defaults, the cloud connection is also deleted.

1. Switch the module off (no power supply)
2. Switch the DIP 4 switch to ON state
3. Switch on (provide the power supply). Red LED starts to flash rapidly.
4. While red LED flashes rapidly, switch off the DIP 4 Switch (so its state will be off)
5. Red/green LED starts to flash in turns which is the feedback sign of the MASTER RESET

LED signs

There are 2 LEDs on the module, one for operational status (ACT, red) and one for GSM state (STATUS, green). At module power-up initiation is in progress and red LED is lit then it starts to establish a connection with the GSM network carrier. The whole process can be 30-60 seconds depending on the GSM network.
Thereafter red LED is not lit and depending on signal strength green LED starts to flash. If green LED is lit the connection did not succeed. If the red LED flashes briefly at the same time as the last green LED flashes as a function of the field strength, the MultiOne GSM module is connected to the cloud.

Numbers of flashes	Signal strength
1	Bad
2	
3	Decent
4	Good
5	Excellent
LED lit	GSM connection rejected
Green LED flashes at the end 1 short red LED flash together with the green LED	The GSM module is connected to the cloud. (www.ascloudmanager.com)

Example of a cloudy connection:
For field strength 3: green, green, green-red pause = THERE IS A CLOUD CONNECTION
green, green, green pause = NO CLOUD CONNECTION

If the module is already operating red LED flashes communicates an event

Flash type	Meaning
Short flash	Change in input state if SMS sending is not set
Light for long once	Received SMS successfully interpreted
	Sending notification SMS
Lit for long several times	Incoming SMS cannot be interpreted - In this case, in the smartphone message / text message settings, the text message type must be set to "Automatic" instead of "Accented".

If red and green LED flashes simultaneously an error occurred. Errors are enumerated in the following chart:

Numbers of flashes	Error code
1	Error during initiation
2	Faulty GSM module
3	SIM card is not inserted
4	SIM card protected with PIN code

Sending multiple commands in one SMS

The module can interpret if it receives multiple commands in one SMS. The SMS has to be started with the security code then followed by the commands separated with a space character. This way the module can be fully programmed with a single SMS. Divided SMSs cannot be joined together by the module.

Format:**<password><1st command><space><2nd command><space><3rd command>**
Ex.:1234SMSPIN4321 SMSTEL=+36701234567* SMSTEXT=Alarm* ADD=001=+36301234567* ADD=002=+367076543210* REDIR=+36301234567

INFO and RESTART command cannot be coupled in the same SMS.

MultiOne GSM Cloud Kit Eco/ MultiOne 4G Cloud Kit Eco



The MultiOne GSM Cloud Kit Eco and MultiOne 4G Cloud Kit Eco products are GSM and 4G gate controllers and communicators supplied in an IP65-rated plastic enclosure, pre-wired and ready for immediate installation on gates, garage doors and barriers, without the need for an additional housing.

MultiOne modules in Cloud

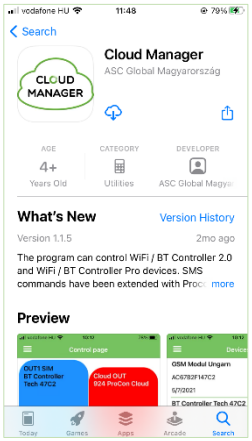
The MultiOne GSM module is now available in the cloud thanks to our latest developments. You can control the devices output in Cloud Manager Application with an control button as well as at www.asclodmanager.com, you just need to make registration.

Device register for cloud connection

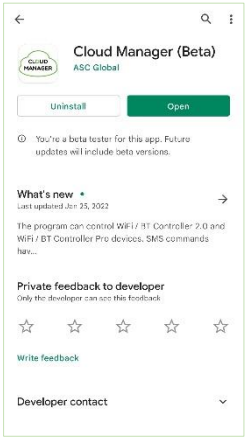
To be able to connect to the cloud, we need to register the MultiOne GSM module. Registration can be created in Cloud Manager Application or on the web at www.ascloudmanager.com.

Device register with CLOUD MANAGER application

Find the Cloud Manager app in the App Store or Google Play Store and download it to your iOS (Figure 1) or Android (Figure 2) device.



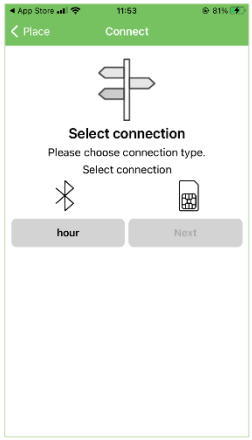
1.



2.

Add device



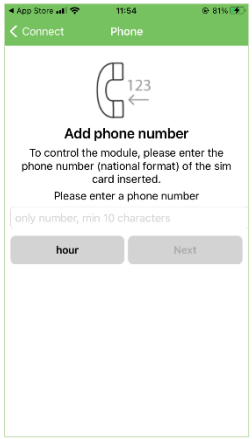


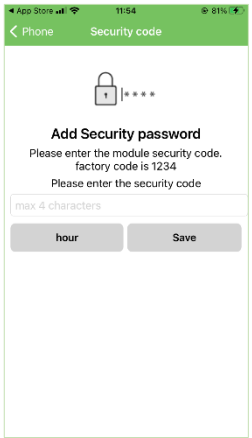
Press "+" to add a device, then name the location.

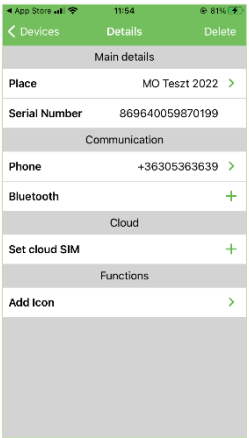
You can give a unique name to the location of the device to make it easier to identify the control device. (eg holiday home, gate)

Choose a connection channel to connect tot he device.

Select SIM for MultiOne GSM!







Enter the phone number of the inserted SIM card in international format (eg +36301234567).

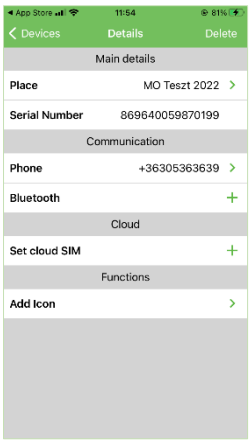
Enter the security code of the GSM module.

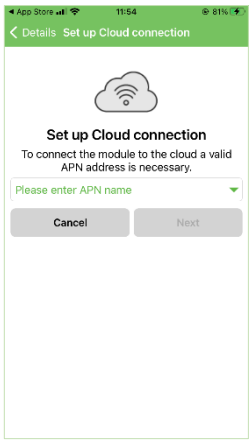
Factory code: 1234

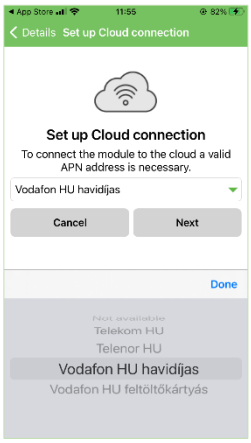
Press the save button and the device will appear in the list.

Cloud settings

Choose the **„Set cloud SIM”** menus.







Choose one of APN options from the list. The inserted SIM card's APN is available by the mobile network provider.

We can select the appropriate setting according to our subscription or tariff plan.

Example (at mobile network providers in Hungary):

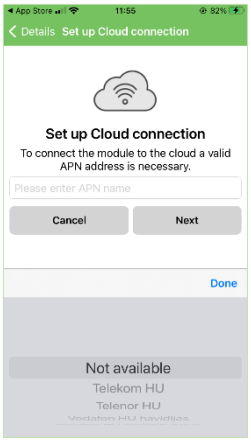
- **Telekom HU** (internet.telekom)
- **Telenor HU** (online)
- **Vodafone HU monthly fee** (internet.vodafone.net)
- **Vodafone HU top-up card** (vitamax.snet.vodafone.net)

APN: Access Point Name

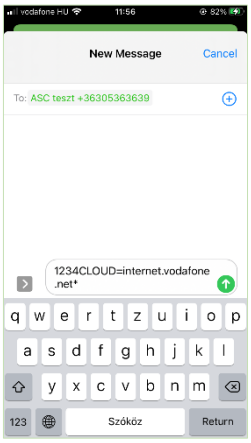
These addresses (APNs) can be used to connect to the Internet with SIM cards purchased from different providers. These addresses usually vary from service provider to service provider, depending on the current service plan offered by your service provider (prepaid or postpaid).

If you connect to a service provider in another country with a home SIM card, the APN option offered by the current service provider will not appear in the list, so you can select a custom field for the setting in the application. **"Not available"**

If you use a domestic SIM card outside the domestic network, the current foreign APN service provider may charge a fee depending on our choice!

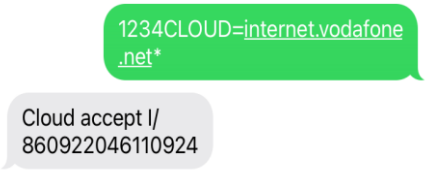


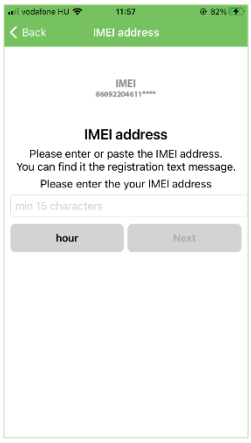
APN settings



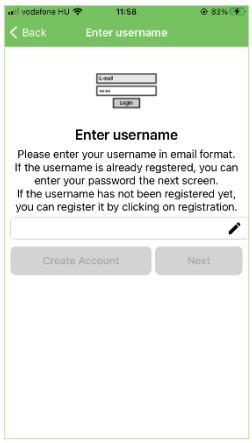
The application creates the SMS command required for the cloudy connection of the module as an SMS message to the number we have specified in the application. Press the send button.

After sending an SMS command, we will receive our IMEI number in a confirmation SMS. (860922046110924)

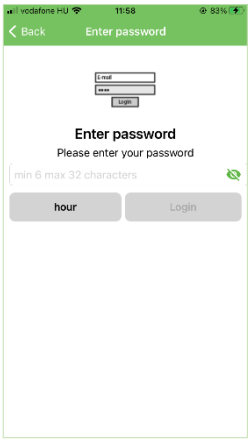




1.



2.



3.

1.Copy and paste the entire message into the Cloud Manager application box.

2.The application reads the required IMEI number from the message.

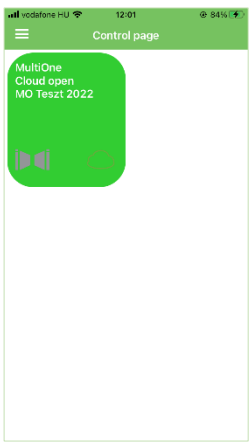
3.Enter your user email address …

… and the password.

You will be able to access the module in the cloud as an "admin" authorized user with this email address.

After a successful save, you can log in to the www.ascloudmanager.com website with your user account, where you will find your registered devices.

Create an Cloud control icon



After successful cloud registration, you can create a 'cloud' control icon in the Cloud Manager Application for remote access.

Make sure you're signed in with your email address in the **Devices** menu.

If there is no check mark,  log in to your email address and password.

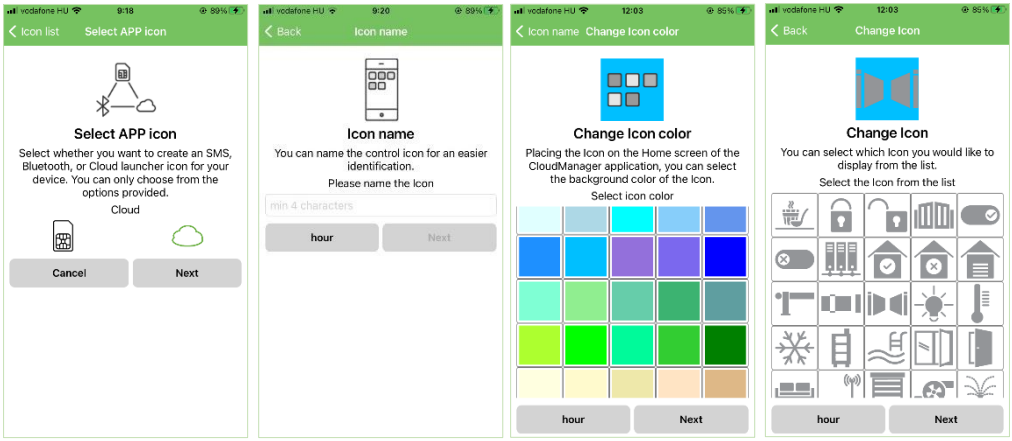


After a successful login, we can see our device or for multiple registered modules, all available devices are displayed in the list. You can see devices informations by clicking on the line of your device.

Choose the **„Add icon”** menus.



Use the „+” sign and select to create control button icon (Figure 1.)



1. **2.** **3.** **4.**

Named the control icon (Figure 2.) and then specify the background color of the control icon. (Figure 3.)

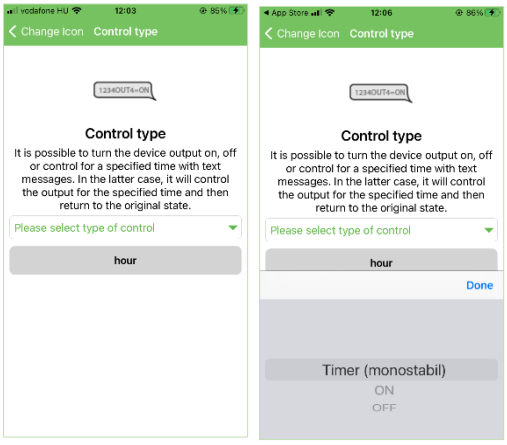
Select an personal icon from the list. (Figure 4.)

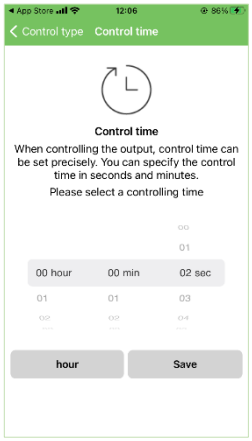
Set the control type and timer.

Control type can be:

Timing (Monostable)
Controls the output based ont he time set in device.

Switch (Bistable)
When an output is activated, the output switches over and remains in that state until it is controlled again.



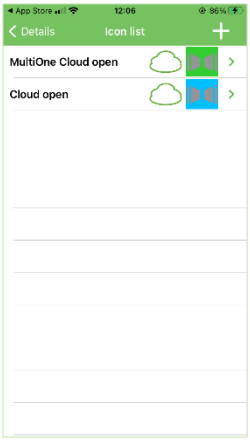


You can specify how long the control takes place in Monostable Control.

You can specify the control time by selecting hour / minute / second.

Maximum selectable control time:

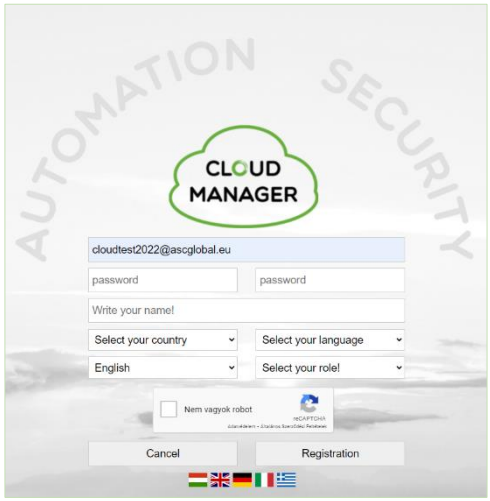
18 hours, 12 minutes and 15 seconds i.e. 65,535 seconds.



After setting, the control icon will appear in the icon list as well as on the Control Panel

You can activate the output of the MultiOne GSM module with the created control icon.

Devices registration on ASCloud Manager website

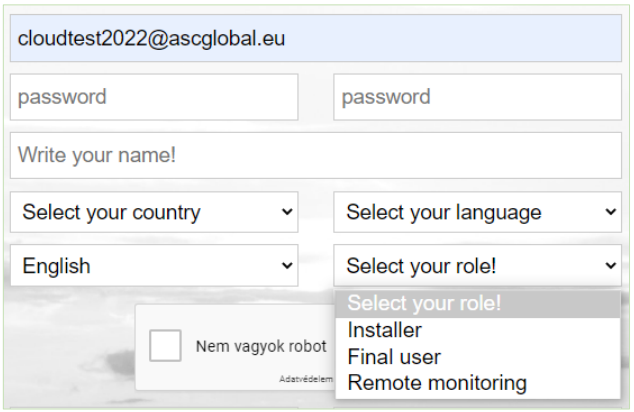


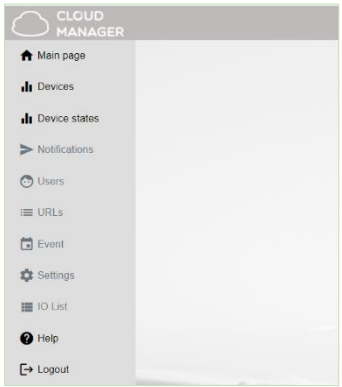
Create a user account on www.ascloudmanager.com website.

- Enter an email address to log in
- Enter the password that you want to use for the e-mail
- Confirm the password again
- Select your country, native language from the list. Next, select the language in which you want to see the website when you log in.

Select user type:

- Installer
- End user
- Remote Monitoring Station





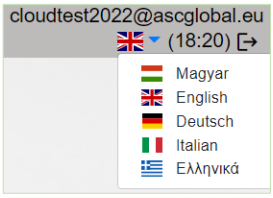
Use the registration button to enter the main page.

The page will automatically log out after 20 minutes of inactivity. You can see the current time in the upper right corner of the screen.



Select language

You can change the page language in the drop-down menu. The language of the page can be changed after logging in. The website languages currently available in 5 languages but constantly expanding.



Create your first cloud connection

To create your first cloud connection, follow these steps to register:

Insert a SIM card into the module and wait for the network connection.

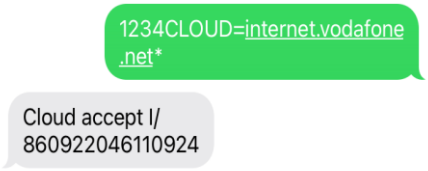
Successful registration is indicated by the green LED with 3-5 consecutive flashes.

NOTE! Make sure that the inserted SIM card has an active GPRS connection and enough balance to send any SMS. Make sure the PIN code request is turned OFF.

Send an SMS as follows:

<PASS>CLOUD=<APN>*

PASS: Security code of the GSM module (default:1234)
APN: SIM Network APN (e.g.:„internet", „net"… etc.)



After successful registration, we will receive the IMEI number of the registered device in a reply SMS.

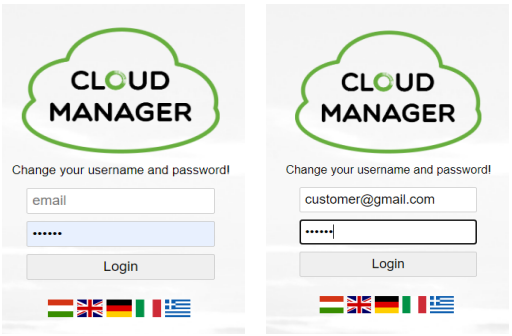
Open the www.ascloudmanager.com website and enter your IMEI number as follows:



E-mail: **<IMEI>@gsm0.eu** e.g.: 860922046110924@gsm0.eu

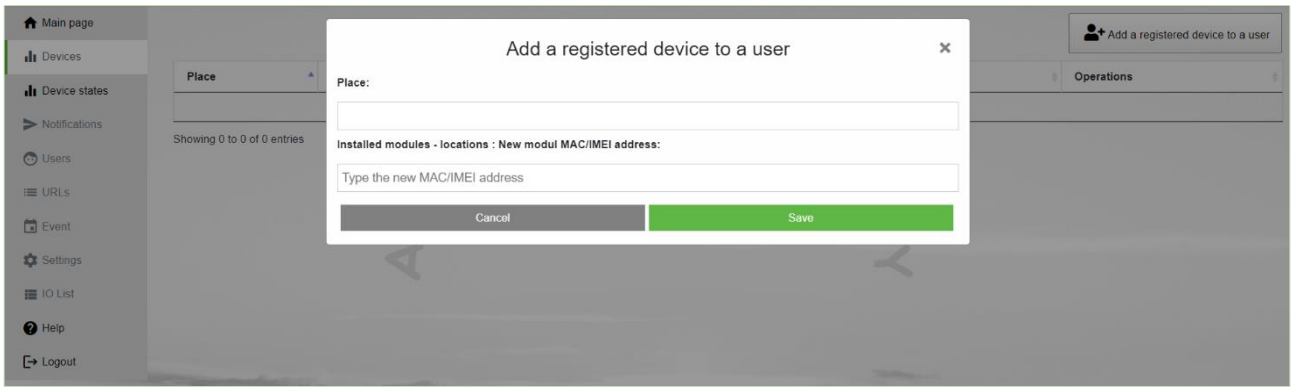
Password: **<IMEI>** e.g.: 860922046110924

Enter your login **email address** and **password** to register the device.



After successful registration, our GSM module is available in ASCloud Manager.

Add registered device



On this page, you can add a new device to your account to send a registration SMS, or add an already registered module to your list.

Location: Enter a name for the new module (street, building, other ID to easily find your device later)
Installation locations: If you have more than one module, the names of the devices used so far will appear here. This is important because when you type a new name, you will be warned if you want to create a module with the same name, but it can also help if you want to connect a new device next to another to create a similar name.
New module IMEI number: enter the IMEI number of your new device here.
Clicking the Save button will bring up your device in the **„Devices"** menu.



You can give your device an personal name for easier identification. You can make custom settings by clicking on the module row.

Device setting (rename): you can name the module for esier identification

Device replacement: we use this feature if we want to completely replace our device with a new module. In this case, the entire memory of the old device will be copied, practically everything will be 100% identical to the old one, only the identification IMEI number will change.

NOTE!
After cloning, the new device will replace the old device, so the old module will not be available !!!

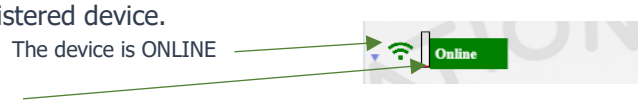
Delete device: We can delete our device if we no longer need it. The device will only be available after re-registration.

Device status



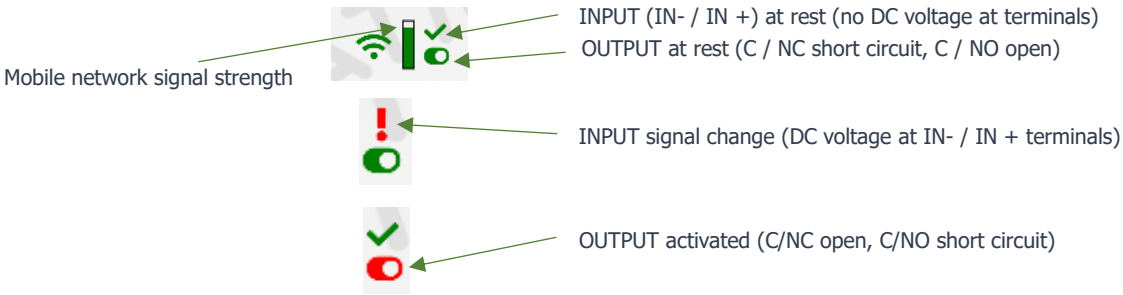
You can view the current status of the outputs or inputs of your device.

Green indicates the cloud connection status of our registered device.



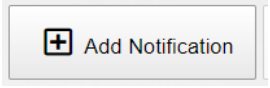
Green means dormancy. Approaching your cursor displays the name you entered.
If the color changes to red, you will see an "Offline" message. The device is OFFLINE.

You can monitor output or input signal states on your device.

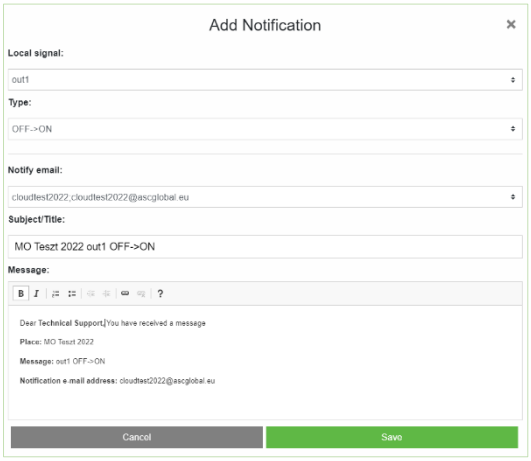


Notifications

There are two types of notifications:
- **system notifications**, which usually contain important messages about the server, development, or any system
- **status notifications**, where we receive e-mail notifications about the controls and conditions we have selected to the e-mail address we have also chosen.



Notifications



Push the „**Add notification**" button

Local signal

You can select the output or input of the MultiOne GSM module depending on which one changes you want to be notified about.

Types you can specify the direction of the output change

OFF->ON Send a notification when turned ON

ON->OFF Send a notification when turned OFF

Notified e-mail address

Select the e-mail address to which you want to send the notification. You can also personalize the message and subject field.

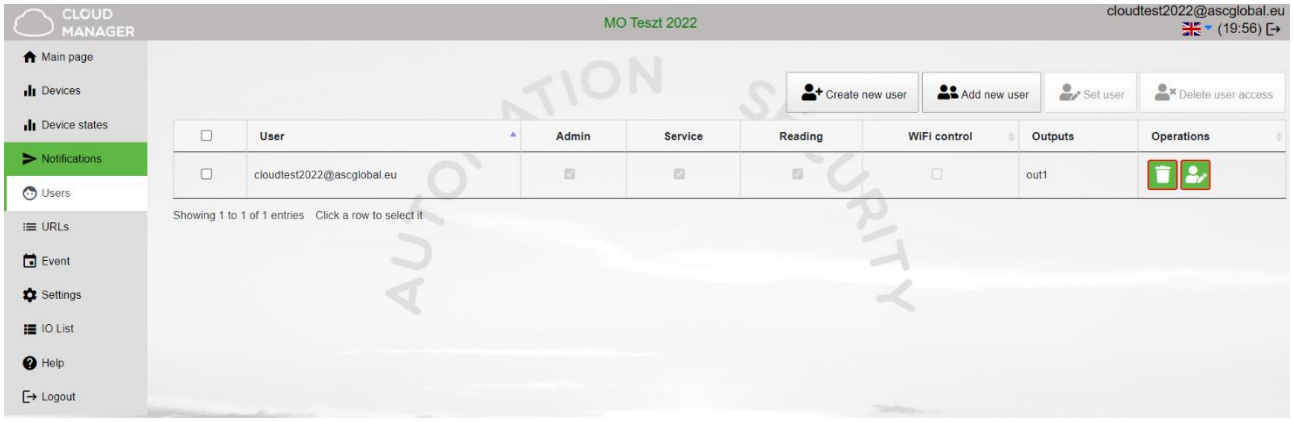
NOTE!

Depending on the user and e-mail address with which the module is registered, you may not see an e-mail address or the e-mail address to which you want to be notified. In this case, select the desired e-mail address from the Users menu and add the one to be notified for e-mail setup. After saving, log out and log back in at www.ascloudmanager.com.

Continue setting the notification to the desired email address.

Add an managing users

After registration, the e-mail address provided during registration will be displayed in the device.
(admin email address)

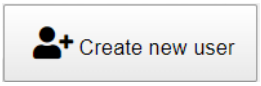


NOTES!

If you delete this email address from the list of users, we will not see the device the next time you log in!

If no users are saved to the device, the device will be automatically deleted from the database in a few days.

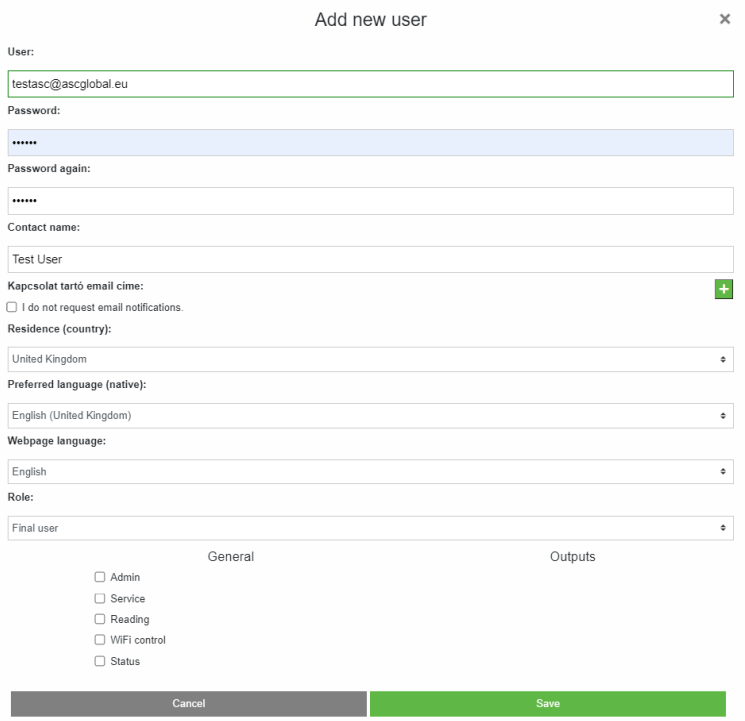
You can assign users to your device by entering a user email and password, you can make personal privileges to them.



The **number of users is unlimited**, so you can give access as you wish by entering an email address.
Each user can control the output of the MultiOne GSM module with privileges e-mail address.

Create new user

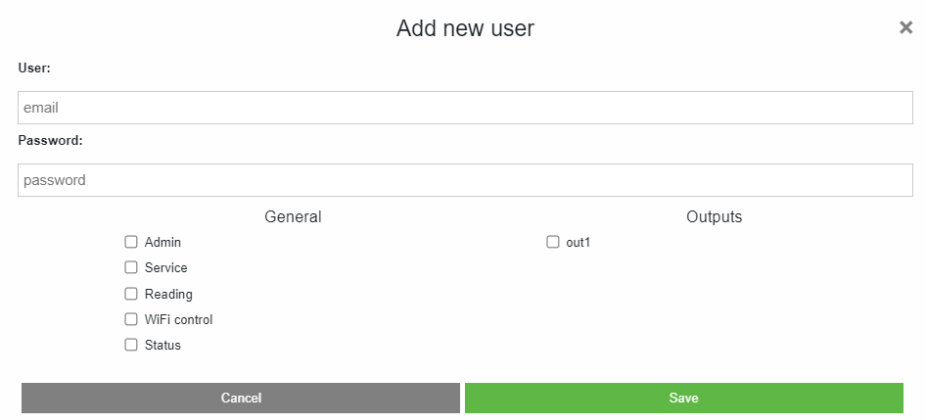
To create a new user, you may want to enter a daily email address to be notified of the status change. You can enable or restrict notifications.We have the ability to specify the language used to log in, so all users can easily and conveniently manage the device.



User:	login email address to www.ascloudmanager.com website
Password:	new user login password
Password again:	password confirmation
Contact name:	name for email address (fr identification, greeting)
Email of contact person:	You can receive notifications at the user's notification email address. If you do not want to be notified, select "I do not want to be notified".
Residence (country):	Select the country where you live
Preferred language (native):	Select your native language
Webpage language:	Select the language of the website. When opened, all functions can be read in this language. Our service is constantly expanding, currently available in 5 languages. The language of the page can be changed after logging in.
Role:	Select you user status (Enduser, Installer)

Give additional users access. You can give users individual permissions.

Add more users

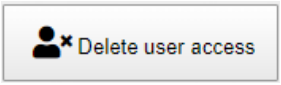


User: new user email address
Password: new user login password
Admin: Administrator access
You have all permissions except to delete the user who created the permission.
Service: Reading permission, allows access to service data related to the operation of the module.
Reading: Reading permission
WIFI control: Here we can define what area of use we provide to our user. If selected, the user can only control the output within the local WIFI network.
out1: Assign user output to control.
After saving, the settings can be used immediately.

Modify user information

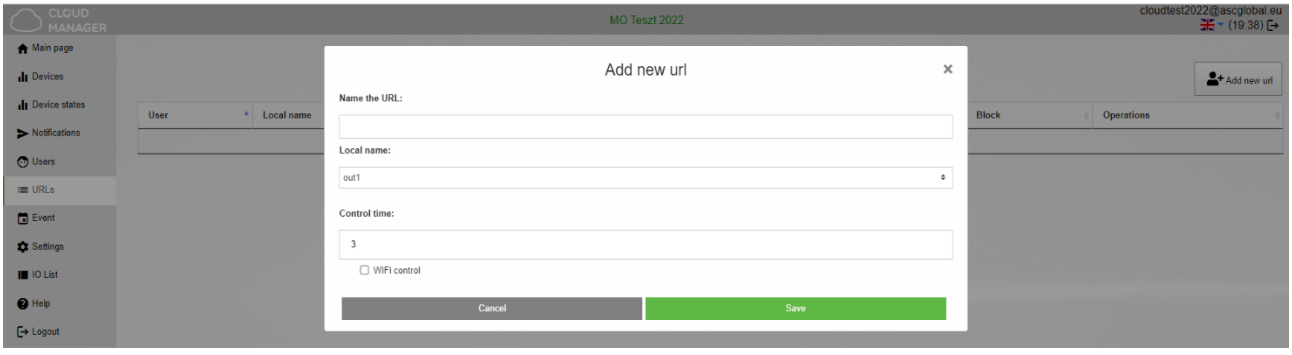


By clicking on the "Set user" button, all user data can be changed. You can change your own or other users' login passwords. If you no longer need access, you can delete it.



NOTE!
Just as we have created a user, we can delete it. Pay special attention to deleting the email address created as an admin from the users queue, no longer seeing the device the next time you log in, and if no users have been saved to the device, the device will be automatically deleted from the database.

Create URL control icon



In URL menu, you can use the "Add new URL" button to create a control icon for your desktop PC or laptop. Name the control icon that can be controlled from the PC.
Here you can also specify whether to check the local WIFI availability for control. If the WIFI limit is enabled, their control icon will only be used within the scope of the local WIFI network. Turning this off will allow you to control the output from anywhere with an Internet connection. An excellent service for allocating rights.

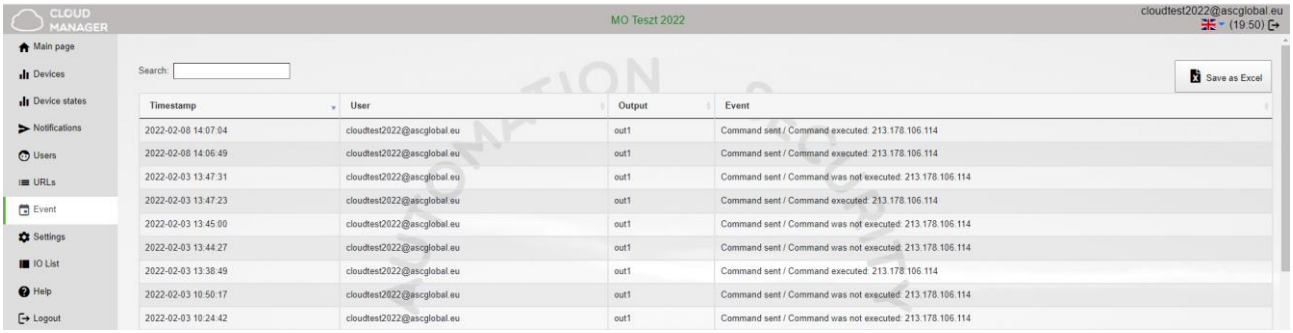
Drag to the screen with the left mouse button and the URL will already operate the device connected to the output.



You can edit your existing URL connection. You can change your settings or disable them.
If you no longer want to use it, simply delete it with the appropriate symbol.

Event list

In the event log, you can list the user activity used with the Internet connection.
We can list when and which user controlled the output. You can save the event log to an Excel file.

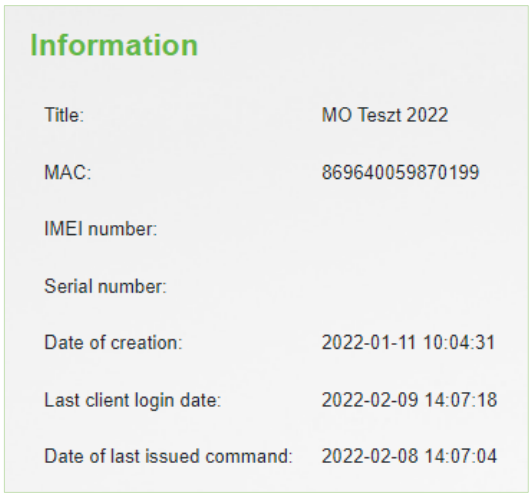


Settings

You will receive information about your device in the settings menu.

Information

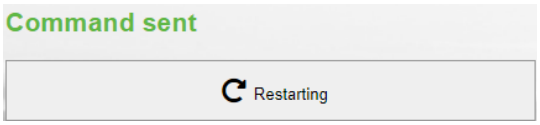
In this menu you will receive information about your device depending on your authorization.



Title: device name
MAC: MAC identifier
IMEI: IMEI identifier of the device
Serial number: unique serial number of differentiated devices - this is not the case with MultiOne GSM
Date of creation: date of registration
Last client login date:
last login date
Date of last issued command:
date of last output control

Command send

You can restart our module. After restarting, wait for the device to reconnect to the mobile network.



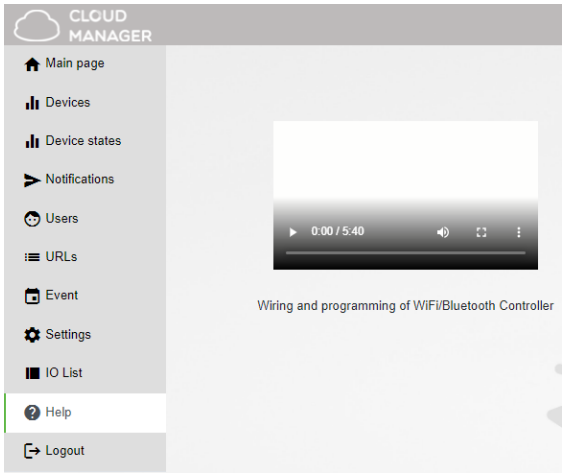
IO List

In the IO list we can change the output and input names, we can control the output and we can specify the output opening time in seconds. Maximum time that can be set: 65,535 seconds. This menu item can be used to control multi-output devices and IP modules, but of course it can also be used to configure the MultiOne GSM module.

Help

Help is available in the form of a video.

Our videos are constantly being updated and expanded.



SMS commands

Command	Format	Function	Example	Reply SMS
INFO	<password>INFO	State check	1234INFO	IN1: On Out1: off Network: 5 Date: 11.45 31/01/2022 IMEI: 862950024571179 SW: 03.4 HW: 077
SMSTEL	< password >SMSTEL=<phone number>*	Notification telephone number setup	1234SMSTEL=+36701234567*	Stored: 1 Error: 0 V3.1
SMSTEXT	< password >SMSTEXT=<text>*	Setup notification text	1234SMSTEXT=The door is open*	Stored: 1 Error: 0 V3.1
ADD	< password >ADD =<3 characters of the position> =< phone number >*	Controlling telephone number setup	1234ADD=001=+36301234567*	Stored: 1 Error: 0 V3.1
DEL	< password >DEL =<3 characters of the position >	Deleting controlling telephone number	1234DEL=001	Stored: 1 Error: 0 V3.1
SMSPIN	< password >SMSPIN=<new password>	Modifying security code	1234SMSPIN=5678	Stored: 1 Error: 0 V3.1
REDIR	< password >REDIR=<telephone number>	Forwarding SMS to the given number	1234REDIR=+36301234567	Stored: 1 Error: 0 V3.1
	Cancelling SMS forwarding	1234REDIR=D	1234REDIR=D	Stored: 1 Error: 0 V3.1
MONOTIME	< password >MONOTIME=<time>	Setting monostable time	1234MONOTIME=010	Stored: 1 Error: 0 V3.1
RESTART	< password >RESTART	Module restart	1234RESTART	Stored: 1 Error: 0 V3.1
CLOUD	<password>CLOUD=<APN>*	Module cloud registration	1234CLOUD=internet.vodafone.net*	Cloud accept I/869640059868170
CLOUD	<password>CLOUD=*	Delete module cloud registration	1234CLOUD=*	No messages

If module receives multiple commands in one SMS in its reply after Stored it will count the executed commands, after Error it will count the unexecuted commands. INFO and RESTART command cannot be coupled in the same SMS.

At module cloud registration you need to use your SIM card network providers APN settings. You can only see example in the table.

DIP switch allocations

Switch	ON	OFF
1.	Output is bistable	Output is monostable
2.	Input is NC as default	Input is NO as default
3.	At input event voice call enabled	At input event voice call disabled
4.	Output control without caller identification	Output control with caller identification

Technical details

Power supply of the GSM module	12-24 V VAC or 10-35VDC
Current consumption	12V@25mA/700mA
	24V@15mA/350mA
Operating range	-20 - +50 °C
Output relay load capacity	max. 230V@5A
GSM module	SIMCOM 800C (2G)
Antenna connection	SMA nut connection
GSM frequencies	GSM 850 / EGSM 900 / DCS 1800 / PCS 1900 (Multi-Band)
GSM modul measures	59 x 53 x 21 mm
Packaging measures	132 x 128 x 32 mm