



## USER MANUAL

# Mobeye<sup>®</sup> CM2410 GSM fire alarm communicator

Accessory for Ei Electronics fire detector



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## **Attention! Very important**

This user manual contains important guidelines for the installation and usage of the Mobeye® device in combination with an Ei Electronics fire detector.

Please read the manual thoroughly before you start using the device. It contains vital information on unit operation and installation. If you are installing this device the manual must be given to the householder.

In case of damage caused by disregarding the guidelines, the warranty becomes void.

The user must regularly check the proper functioning of the device. The manufacturer cannot be held liable for any damage or loss caused by any incorrect use or incorrect functioning of the Mobeye® device.

## **Safety guidelines**

- The permitted ambient temperature during operation may not be exceeded (not lower than 0°C and not higher than 40°C).
- The device is intended for use in dry and clean places with a residential function.
- Protect the device from moisture, heat and water splashing.
- The guidelines for the battery usage must be regarded.
- Do not expose the device to strong vibrations.
- Do not let it fall from height.
- Do not use in an environment where any inflammable gases, vapors or dust are present or could be present.
- Repair of the device may only be carried out by people, trained for Mobeye® repair.
- If the device must be repaired, only original replacement components may be used.

## **Use in accordance with the regulations**

The purpose of this device in accordance with the regulations is sending messages and making telephone calls after an alarm situation. Other uses are not permitted and may invalidate the warranty.

## **Product and battery recycling**

When disposing of this product, separate the product and the CR123 batteries from other waste streams to ensure that it can be recycled in an environmentally sound manner. For more information on collection and proper disposal, please contact your local government office or the retailer where you purchased this product.

## 1. GENERAL DESCRIPTION

The Mobeye GSM fire alarm communicator CM2410 is a battery operated GSM module used to send out an alarm after the input is triggered by a Ei Electronics smoke or heat detector.

The Mobeye Smoke Detector CM2400 is a combination of the Ei Electronics Ei605TYC and the Mobeye CM2410. For other combinations please see paragraph 3.1.

The default settings for standard use are:

- In case the input 1 of the alarm module is activated by the Ei Electronics fire detector, the Mobeye GSM communicator (CM2410) sends an alarm message to the Mobeye Internet Portal and calls the phone numbers programmed in by the user. The Portal forwards the alarm as text message and/or e-mail.
- In case the batteries need to be replaced, the Mobeye GSM communicator (CM2410) sends a 'low battery' message to the Mobeye Internet Portal. The portal forwards this to the 'service' contacts.

Please refer to the manual of the Ei Electronics detector for installation instructions and the description of the behaviour of the fire detector.

Chapter 5 describes how to influence the standard behaviour.

For use of the stand-alone Mobeye CM2410 -without the Mobeye Internet Portal - please download the stand-alone manual from [www.mobeye.eu/EU/documentation/manuals](http://www.mobeye.eu/EU/documentation/manuals).

Manuals in other languages can be found on the website.  
Deutsch: [www.mobeye.eu/de/dokumentation/anleitungen](http://www.mobeye.eu/de/dokumentation/anleitungen)  
Nederlands: [www.mobeye.eu/nl/documentatie/handleidingen](http://www.mobeye.eu/nl/documentatie/handleidingen)

## 2. GETTING STARTED

To get started with the Mobeye CM2410 at least the following steps need to be taken in following order:

1. Sign up in the Mobeye Internet Portal
2. Activate the SIM card
3. Insert the Mobeye SIM card
4. Insert the batteries
5. Enter the program mode
6. Activate the device in the Mobeye Internet Portal
7. Program the settings Mount the GSM module housing to the ceiling
8. Connect the Ei Electronics detector and close the cover
9. Perform a test

These steps are further explained in this chapter.

### 2.1 SIGN UP IN THE MOBEYE INTERNET PORTAL

Go to [www.mymobeye.eu](http://www.mymobeye.eu) and sign up for a new account. Follow the instructions on the screen.



You will receive an e-mail to confirm the new account. After confirmation login to the portal.

If you do not receive this e-mail, check your spam box or ask Mobeye ([info@mobeye.eu](mailto:info@mobeye.eu)).

### 2.2 REGISTER THE MOBEYE SIM CARD

To activate the Mobeye SIM card in the Mobeye Internet Portal, choose 'activate new SIM card'.

activate new SIM card

Enter the SIM card number. This is the number written on the plastic SIM card. Only take the last 8 digits of the last two lines (incl. number after space, do not type the space).

The screen leads you through several pop-ups where you choose your device type (search for "CM2410") and select the type of contract (for instance "CM2410 SIM + Portal Monitoring").

At the moment you accept the price and terms, you confirm the subscription. You will receive an invoice for the mentioned amount.

Before activating the device in the Mobeye Internet Portal, first prepare the unit (see next paragraphs).

### **2.3 INSERT THE MOBEYE SIM CARD**

Open the enclosure by removing the 4 screws and insert the Mobeye SIM card into the module. Push the black cover slightly outward to open the holder and close it afterwards. Make sure the SIM card is inserted before the batteries.

### **2.4 INSERT THE BATTERIES**

Insert the two batteries (CR123) in the module. Use the +/- indication for the correct placement. If you replace batteries the settings will not be deleted, since they are stored in the device memory.

### **2.5 ENTER THE PROGRAM MODE**

To activate the unit in the portal, the GSM module needs to be open and connected to the network.

As soon as the batteries are placed, the Mobeye GSM communicator (CM2410) switches to the program mode. First the GSM module establishes network connection. During this time the LED flashes green and red. Within 10-30 seconds the connection is established and the status LED starts flashing 1 sec. on/1 sec. off (or stays on continuously in case the first telephone number has been configured).

To get back to the program mode, reinsert the batteries.

## 2.6 ACTIVATE THE DEVICE

When the Mobeye GSM communicator (CM2410) is in initial (factory) status and the batteries are inserted (so the LED is flashing), you activate the device in the Mobeye Internet Portal by clicking 'Activate device', which is written behind the registered SIM card. The unit will receive a message from the portal and the data exchange is started. At the first pop-up window you are asked to enter the installation code. Type the factory code '1111'. The next screen will ask for a name and location of your device. These fields can be changed later.



Once the activation is completed, the new device is visible in the device list.

| My devices        |                                  |        |
|-------------------|----------------------------------|--------|
| Name              | Location                         | Status |
| Mobeye Alarm Unit | Main street 1, 1000AA, Amsterdam | OK     |

By clicking the name, the detail page will be opened.

## 2.7 CONFIGURATION AND SYNCHRONISATION

The device settings can be programmed in the Mobeye Internet Portal. In this way you prepare the settings, to be picked up by the device: since the Mobeye device is leading in the communication between the portal and the device, the data synchronisation is done after:

- 1) any message to the portal (e.g. alarm, test, low batteries)
- 2) reinserting the batteries



## 2.8 HOW TO USE THE MOBEYE INTERNET PORTAL

The device detail screen in the Mobeye Internet Portal shows several blocks:

### Contacts

The contacts are the contact persons that will receive alarm and service notifications, per SMS text message and/or e-mail. Service notification may be warnings about missed keep-alive (test) messages and low battery voltage.

To add a contact, please first create the contact person in the (blue) tab *Contact*.

Note: the telephone numbers that will be dialed directly from the unit, are configured in the Options.

### Status

The status block displays several values, important information about the unit.

The GSM status tells the network strength in the last communication session. If the values is lower than -95dB, please consider another location for the device).

If the 'Synchronised' status is 'No', new options are to be picked up by the device.

### Device

Open the device details to change the name and location of the device. These are copied into each SMS text message and e-mail and meant as identifier.

### Message texts

In the message texts are the event texts in the SMS text message and e-mails. These texts can be customized.

### History

All historical events and logs are displayed in the history. Click 'show' all.

### Options

The configuration options (settings) can be changed in the Mobeye Internet Portal. Click 'edit' to change the settings.

Options » edit

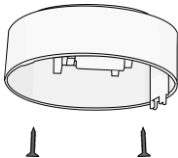
Type the installation code (factory setting is '1111') to open the pop-up.

Please see chapter 5 for the description of each setting.

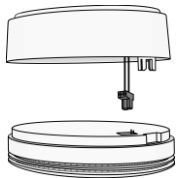
After saving new settings, they need to be picked-up by the device, i.e. synchronised. Please see 2.7 for more information about the synchronisation.

## 2.9 MOUNT THE GSM MODULE HOUSING TO THE CEILING

Mount the housing in which the module is fixed to the desired place to the ceiling, using the plugs and screws which can be found inside the Ei Electronics box. Please refer to the manual of the Ei Electronics detector for the ideal location and installation method.



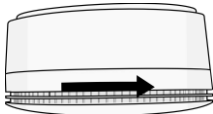
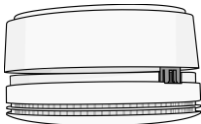
## 2.10 CONNECT THE EI DETECTOR AND CLOSE THE COVER



Remove the back cover from the Ei Electronics detector. The GSM communicator (CM2410) will be used as back cover. Press the green cabled connector to the pins of the Ei Electronics detector. Next to the pins the text 1 2 is written. Be sure that the (in most situations) grey connector in the Ei Electronics detector was removed.

**Hold the EI detector to prevent tension on the wires!**

Bring the Ei Electronics detector and the back cover with GSM module to each other at the correct position and turn the detector gently clockwise until it is closed and locked. In the Ei detector a red light will flash regularly.



## **2.11 PERFORM A TEST**

After the previous steps, the GSM fire detector is operational.

In order to execute a test, press the TEST & HUSH (or TEST & STUMM) button of the EI detector during a few seconds (this can take up to 5 seconds). The siren will sound and the GSM module will establish network connection in order to send the SMS messages and call the contact persons.

**Note:** make sure the cover is closed, so that the fire detector and the GSM module are locked.

## **2.12 CONFIRMATION OF THE ALARM MESSAGE**

When the system is triggered it will send alarm notifications. First the message to the portal is sent, followed by the phone call directly from the unit. When you pick up the phone, you will hear beeps. It is possible to confirm the phone call by answering the phone and pressing any key. The other alarm numbers will not be called afterwards.

### **3. COMBINE OTHER EI DETECTORS AND A WIRELESS NETWORK**

#### **3.1 COMBINATIONS OF EI ELECTRONICS DETECTORS**

The CM2410 can be applied in various combinations:

- A stand-alone GSM smoke or heat detector can be the combination of the Mobeye CM2410 and the Ei605C, Ei605TYC, Ei603C or Ei603TYC (smoke or hear) detector, or any other detector in the Ei600 and Ei650-series.
- If applied in a network of several detectors (cabled or using RF modules), the detector with the CM2410 GSM module must be of the type Ei605C, Ei605TYC, Ei603C or Ei603TYC. The other detectors in the network can be any detector in the 600- and 650-series.

#### **3.2 SEVERAL DETECTORS IN A WIRELESS NETWORK**

Although the Ei Electronics fire detector is a stand-alone unit, it is also possible to form a wireless network with several smoke and heat detectors. For this purpose each Ei Electronics detector needs to be equipped with an RF module. This module can be integrated in the Ei Electronics detector. Before the detectors are operational, the detectors need to be enrolled, in order to know each other.

Please refer to the Ei Electronics manuals for the steps to follow.

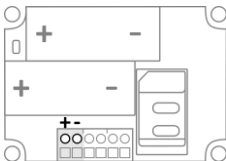
#### 4. USE OF EXTERNAL POWER SUPPLY

Although the Mobeye CM2410 is designed to run on batteries, it is possible to use an external power supply. In this mode the module is always in connection with the GSM network and therefore always in program mode. In case the power fails, the batteries take over the functioning and a message is sent via the portal. The module continues operating albeit in the low power mode. This means the GSM module switches off and only establishes network connection in case it needs to send out an alarm, test message or low battery alert.

Connect the external power adapter (or any other regulated 12VDC power supply) to the power input of the connector (press on the green pins for connecting the wires):

- V+ to “+”
- Ground (black lead) to “-“

If Mobeye accessory 10027 is used:  
V+ is the black lead with white stripe.



## **5. POSSIBLE SETTINGS**

The Mobeye CM2410 settings are prepared in the portal, in the "Options" block, and then retrieved by the device during a synchronization session. The factory setting for the security code is '1111'. All settings are saved and stored in the unit, even when the unit is not powered or the batteries have been removed.

### **5.1 INSTALLATION CODE**

For configuration activities the installation code of the Mobeye CM2410 must be used. The initial (security) code is '1111'. The code can be changed in the options. Note: the code is only visible when changing the settings.

### **5.2 ALARM PHONE NUMBERS**

The Mobeye CM2410 is able to directly call to up to 5 phone numbers. These may be different numbers than the (unlimited number of) contacts who will receive SMS text messages and/or e-mails. It is not required to enter phone numbers.

### **5.3 CALL ON/OFF**

Even if the alarm telephone numbers are set in the options, the calling process can be suppressed. By turning off the CALL, the unit will only send the notification via the Mobeye Internet Portal. The default value is set to ON.

### **5.4 TEST MESSAGE**

The Mobeye CM2410 can send regular test messages (*keep alive*) to the Mobeye Internet Portal, to ensure the proper functioning of the unit. The test message will also be sent if the unit is disarmed. The Mobeye Internet Portal expects the test message and checks the timely receipt. The monitoring of the test messages follow the 'management by exception' rule: only if the message was not received, the 'service' contacts will receive a notification.

The timing of the test message can be programmed. Since new settings (options) will be synchronised after the test message, setting a specific time of the test message can help the process of remote programming. Example: if you force a daily test

message at 17.30 hrs, you can prepare new settings and be sure they are loaded into the device before the evening.

The interval between the test messages can be set between 0 days (no test message) and 30 days. The default test interval is set to 7 (weekly test message).

## 5.5 SYSTEM RESET

To reset the Mobeye CM2410 to its factory settings two steps are necessary:

1. Reset the Mobeye CM2410
2. Delete the Mobeye CM2410 from the Mobeye Internet Portal

### 1. To reset the Mobeye CM2410 to its factory settings

1. Be sure the GSM module is in program mode (see chapter 2 step 5).
2. Send following SMS text message to the telephone number in the unit (without CODE)

SMS command Reset:                      **RESET**

3. The green LED blinks 3x to indicate a successful command. In case of an incorrect command the LED flashes 5x green.

After a successful reset, the LED will blink green to indicate that the module is not configured. The security code is back to factory settings as well.

### 2. To delete the Mobeye CM2410 from the Mobeye Internet Portal

Delete the device from the Mobeye Internet Portal. The SIM card could be then reused for another Mobeye device, or the same device can be connected again.

In the device list, click the name of the device to go to the details screen. Next choose 'Device'. Click 'delete' to delete the device and confirm the option.

The SIM card will be disconnected from the device and visible on the first screen.

After a successful reset, the status LED on the keypad will blink green to indicate that the module is not configured. The security code is back to factory settings as well.

## 6. STATUS FEEDBACK

| LED pattern                                | Status   | Required action                                   |
|--|--|---|
| Blinking green, 1 second on / 1 second off | Module not configured                                | Configure at least one telephone number.          |
| 1 green flash every 3 seconds              | Module is switched on, powered by batteries          | No action required.                               |
| Green LED stays on continuously            | Module is switched on, powered by an external source | No action required.                               |
| Flashing red/ green every second           | Module establishes network connection                | Wait until the network connection is established. |
| 2 flashes red, every 3 seconds             | No GSM connection                                    | Try the module at another location.               |
| 3 flashes red, every 3 seconds             | No valid SIM card or wrong PIN                       | SIM card failure.                                 |
| Blinking 3 times green                     | Successful programming action                        | No action required.                               |
| Blinking 5 times red                       | Faulty programming action                            | Check SMS command.                                |
| 4 red flashes every 3 seconds              | Low batteries  | Replace both batteries.                           |
| Blinking green rapidly                     | Data exchange with portal                            | No action required.                               |





## Technical specifications

|                             |   |
|-----------------------------|---|
| GSM                         | : Quad band EGSM,<br>850/900/1800/1900 MHz    |
| Batteries                   | : 2* CR123 (lithium)                          |
| Battery life in normal mode | : >1 year                                     |
| Power consumption low power | : ca. 50 $\mu$ A stand-by / max. ca. 500 mA   |
| Ext. power connection       | : 12 VDC (+/- 2 VDC) / min. 500 mA (optional) |
| Power consumption 12V       | : ca. 50 mA stand-by / max. ca. 500 mA        |
| Ambient temperature         | : 0 °C until +40 °C                           |

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## Declaration of Conformity

Herewith we, Mobeye, declare that the

**Mobeye CM21 telemetry module**

And the derived products

CM2000, CM2100, CM2200, CM2300, CM2300-FS, CM2410, CM2500, CM2600,  
CML2015, CML2025, CML2055, CML2255, CML2275, CML2285, CMVXI-R

are in compliance with the essential requirements of the following European standards / EU Directives:

**Directive 73/23/EEC** (low voltage directive)

**Directive IEC/EN 50130** (Electromagnetic compatibility)

**Directive 2014/53/EU (RED)**

The conformity with the essential requirements set out in Art.3 of the 2014/53/EU has been demonstrated against the following harmonized standards:

EN 60950-1: 2006 + A11 : 2009 + A1: 2010 + A12: 2011 + A2: 2013  
EN 62311 :2008  
EN 301 489-1 V2.1.1, Draft EN 301 489-52 V1.1.0  
EN 301 511 V12.5.1

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