caseCAM User's Manual – V0.3.1beta 28102020

caseCAM-PRO
Professional CCTV suitcase for remote live video monitoring, with LTE transmission and battery operation.

caseCAM-PRO has the following functionalities:

- **4G/LTE** – for high-speed video transmission and control of the entire CCTV suitcase.
- **3G GSM** for control and immediate alarm notifications via SMS.
- **Wi-Fi** – for quick download of recordings and for configuration.
- **Two PIR inputs** for automatically triggering motion detectors:
  - switching on the entire system and starting recording, disabling the energy-saving StandBy mode and switching on the full LTE transmission, notifications about the detection of the movement of larger objects (e.g. over 25kg), etc.
- **Micro camera MicroCAM-3M** with miniature dimensions of 36x26 [mm] and a resolution of up to 3Mpix (50% more than HD). On a 8m flexible, black cable, with image recording on the SD card up to 56 days back.
- **3 PoE ports** for other IP cameras of any manufacturer.
- **Up to 120 days recording of 4 images** with 4k resolution from any IP cameras.
- **The StandBy mode** remotely switching to save energy and extend battery life.
- **The battery set**, ensuring 16—30 days of operation with microCAM-3M. The batteries are very easy to replace, and the case has the ability to quickly mount any Li-Ion, AGM or gel batteries.
- Possibility to connect up to 4 automatic switching batteries or other 12V DC power sources, e.g. from a car.
- **Solar+** – optional SOLAR power support.
- **Live view** by iOS/Android smartphone, or laptop with Wi-Fi or LTE.
- **IP66** means full tightness and protection even when buried underground.
- **Very easy to use** – 99% of the settings are already pre-configured by CAMSAT. In addition, the customer receives factory settings in the SETTINGS file, thanks to which the user can restore the initial settings (from the day of purchase)..

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1. Safety and maintenance tips

To use our device safely, please read and follow the instructions in this manual.

1.1. Safety symbols

Warning about a possible risk of electric shock from high voltage inside the product's casing.

Attention: Important information

Warning: The device may operate in a range of frequencies and power that may not be allowed in certain countries.

The caseCAM system for trouble-free long-term operation requires regular maintenance and inspection. We recommend placing it on a solid structure and routing the power cables in such a way that they cannot be accidentally damaged by the operator or bystanders..

1.2. Safety and maintenance tips

The device has been designed and manufactured with the utmost care for the safety of installers and users. To ensure work safety, follow all indications contained in this manual as well as the manuals for accompanying devices (e.g. PC computer, IP cameras). Please read this manual carefully before installing the unit.
Safe working conditions for the device must be ensured. Any changes made by the user to the device will result in the loss of its legal use and loss of warranty. The device has undergone a mandatory conformity assessment and meets the essential requirements of the European New Approach directives. The product is CE marked.

The device is adapted to work in the European Union.

You should not stay closer than 30cm from the working device.

1.3. R&TTE Conformity Declaration

The device operates in accordance with the requirements of the European directive describing radio equipment, telecommunications terminals and their mutual recognition and compliance (Directive 1999/5/CE of the European Parliament and the Council of Europe, march 1999, on radio

equipment and telecommunication terminal equipment and the mutual recognition of their conformity).
The caseCAM system complies with the regulations regarding the safe use of electrical devices. Please observe the following instructions:

- the mains socket must be grounded in accordance with the regulations in force,
- before moving or performing other technical operations, disconnect the device from the power supply,
- do not use damaged or worn power cords, as they pose a significant threat to the user's safety,
- installation work must be performed by appropriately trained technical personnel,
- do not use the device in the presence of flammable substances,
- protect the device against access of children or unauthorized persons, make sure that the device is properly attached,
- the device is considered turned off only after disconnecting the power supply cables and cables connecting them with other devices,
- if the device is moved from a cool to a warm place, water vapor may condense inside it, preventing its proper operation (then wait for the moisture to evaporate).

1.4. Distances, interferences

- Transmission distance may vary depending on frequency, environment, radio wave conditions, buildings, weather conditions, etc.
- When the transmitter is placed near devices such as a TV, wireless R-LAN, another transmitter, or among other radio devices, the video image may not be transmitted correctly or the devices may lose connection. When this occurs, increase the distance between the interfering devices and other radio devices.
- Signal reception may vary depending on the height and angle of the transmitter. If the signal reception is not stable, optimize the antenna alignment.
- Meteorological radars operating in the frequency bands 5250-5350 MHz and 5650-5850 MHz are priority users. These radars can cause interference or prevent the device from operating properly.

Antennas used for transmission from this transmitter must be installed in accordance with the instructions and they should be placed at a distance of at least 30 cm from all persons. The transmitter cannot work in conjunction with any other antenna or transmitter.

2. Content

2.1. Basic information

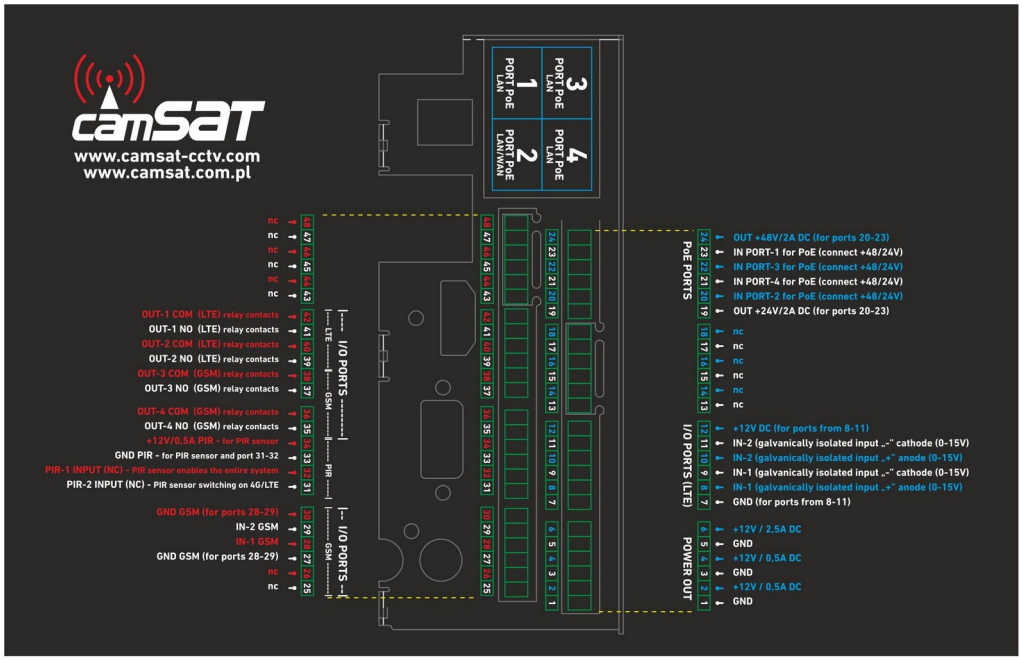
The caseCAM device is a rapid deployment system designed for remote video monitoring, enabling very quick installation of the device on site without carrying out complicated projects. It has an integrated LTE module, Wi-Fi connection for wireless communication with a Wi-Fi receiver or a phone / tablet and an autonomous NVR recorder for recording video materials. It is an perfect monitoring system for city guards, police, special services and forest guards.
The system has a built-in rechargeable battery that provides power for 16—30 days of camera operation.

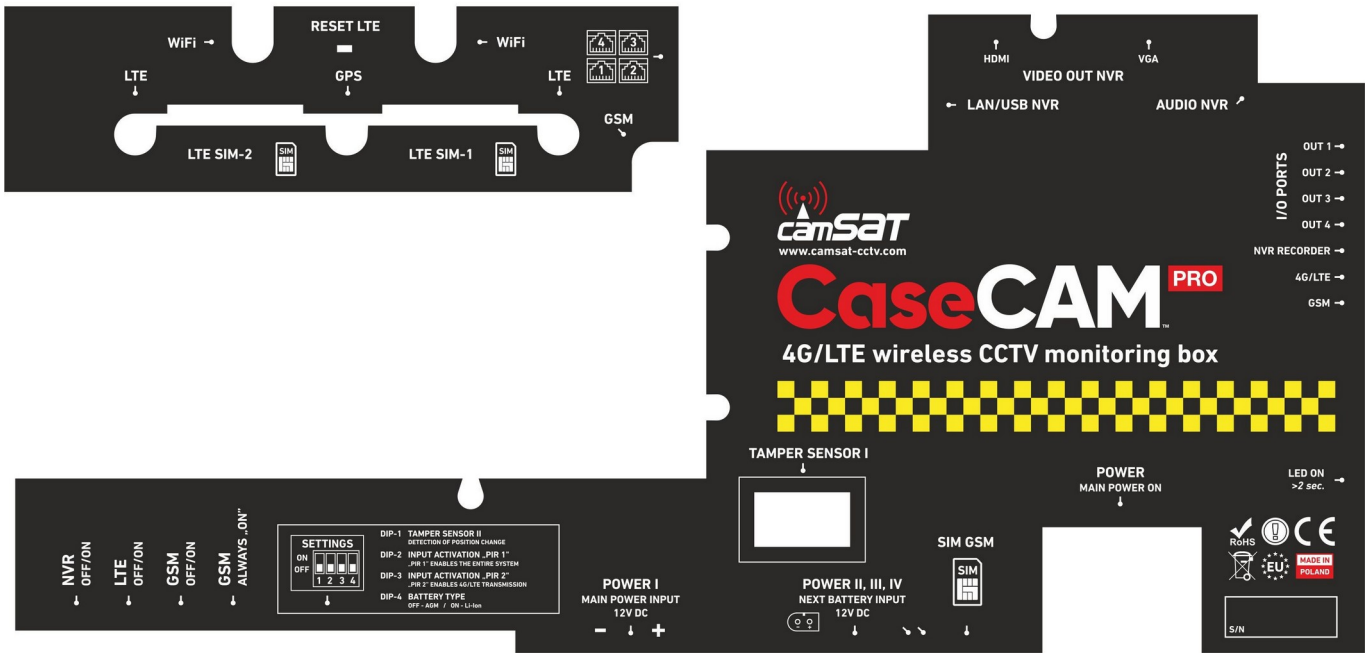
2.2. Package content for the caseCAM-PRO version

- caseCAM suitcase contains:
  - microCAM-3M(PH/T) – 3Mpix micro camera with 8m flexible cable
  - 4G/LTE transmission and GSM
  - Wi-Fi transmission
  - video registration SSD 500GB
  - batteries with a total capacity of 157Ah (depending on the version)
- double LTE antennas
- Wi-Fi antenna
- GSM antenna
- cable with external Wi-Fi antenna
- cable with external GPS/GLONAS antenna
- battery charger – 230V AC
- mounting accessories for microCAM-3M
- manual, CE declaration of conformity

2.3 Components

2.4 Connectors





2.5 Blocks

Block No. 1
The main microprocessor unit which is responsible for the management of energy, batteries and the most important alarm, tamper and security systems – always active.
Power consumption – only 0.15W (20mA).

Block No. 2 – LTE and Wi-Fi
The block responsible for image transmission, settings and control of all functions of the suitcase. The block can be turned on / off with a switch on the control panel, with a PIR detector or remotely via SMS. Maximum power consumption: 6W.

Block No. 3 – GSM controls, I/O
Enables remote management of individual blocks and functions of the suitcase using SMS commands sent from any phone saved in the memory. You can remotely connect other blocks and independent relay outputs to which you can connect and control any device. This block also has two inputs IN1 / IN2 informing the user about changes. The block can be turned off by a button on the suitcase control panel. Power consumption of Block No. 3 is less than 3W.

Block No. 4 – microCAM-3M camera
3Mpix resolution camera with high-sensitivity Starlight image sensor. The camera lens with the electronics is connected with an 8m long cable. The electronics take care of recording video on a microSD card with a capacity of up to 512GB. Possibility of remote activation / deactivation, e.g. via GSM / www or by means of motion detection in the PIR detector. The current consumption is only 3W (250mA).

Block No. 5 – 120-day recording of NVR images from IP cameras in SDD / HDD memory up to 6T.
The built-in NVR is compatible with any IP camera with a resolution of up to 4k 25fps. Supports advanced options for intelligent image analysis, motion detection, etc. The ability to turn on / off with a switch on the control panel of the suitcase or using a PIR sensor and remotely via SMS and via the website.

3. Power supply

caseCAM has 4 supply ports with automatic switching to the next port.
All inputs are located at the bottom of the device. The main power input is designed to screw the cord from the power supply or other power source. The next three ports are battery inputs with a plug.
caseCAM can be powered from any port. Lowering the input voltage to a critical level will switch the power supply to the next active port. After turning the power on with the main switch marked "POWER", the user will receive an SMS about the status of the entire device, with information about the voltage levels on all battery ports.

4. Starting

To turn on the device, set the "POWER" switch to position 1 (ON). The entire system will start up and report its readiness to work within 40 seconds. If the user's phone number was previously saved in the system, this user will receive an SMS with information about the status of individual blocks of the suitcase.

4.1 Connection, controls

The most convenient form of controlling the most important parameters are SMS commands. This function is available in cases with an active block No. 3.
In order to start the GSM transmission for receiving and sending SMS messages, insert the SIM card into the slot marked as "SIM GSM". It is located at the bottom of the suitcase. Before inserting it, it is recommended to first remove the PIN code from the SIM card. The SIM card should include the possibility of making calls and sending SMS messages.

The following pages contain the table of SMS control commands and responses. The factory access password is: camsat.com

No.	Command	Syntax	Description	Answer
1	Adding a phone number	*"password"* + tel1: + *"phone number"* + # *"password"* + tel2: + *„phone number"* + # *"password"* + tel3: + *"phone number"* + # *"password"* + tel4: + *"phone number"* + # Sample SMS: **camsat.com tel1:45123456789 #**	Adds a phone number to memory. The number must be between 11 and 15 digits, e.g. *4813456789* It must contain a 2 or 3 digit prefix (country code)	Phone no. 1: +xxxxxxxxxxx Phone no. 2: +xxxxxxxxxxx Phone no. 3: +xxxxxxxxxxx Phone no. 4: +xxxxxxxxxxx
2	Changing a password	*"current password"* + password + *"new password"* + # Sample SMS: **camsat.com password 1234567890 #**	Changes the default "camsat.com" password. Password must be 10 characters long, without diacritics and without #.	Password changed to: xxxxxxxxxx
3	Enabling LTE	*"password"* + lte_on + # Sample SMS: **camsat.com lte_on #**	Enables the LTE router If the router was previously turned on by PIR, it will not turn off after the time (20 minutes) has elapsed	LTE_ON
			If all is off	Function is not active – "ALL_OFF". Send "all_on" to turn on the suitcase and enable this function.
4	Disabling LTE	*"password"* + lte_off + # Sample SMS: **camsat.com lte_off #**	Disables LTE router	LTE_OFF
5	Enabling all	*"password"* + all_on + # Sample SMS:	Turns on all. If everything was previously turned on by PIR, it will not turn off after the time	ALL_ON

		camsat.com all_on #	(20 minutes) has elapsed	
			If the "DIP2" dipswitch is disabled, everything will be enabled	Function is not active
6	Disabling all	*"password"* + all_off + #	Turns off all.	ALL_OFF
		Sample SMS: **camsat.com all_off #**	If the "DIP2" dipswitch is disabled, everything will always be on.	Function is not active. Check the DIP switches.
			If everything was previously turned on by PIR, the function does not work	Function is not active. Function available in: xxx seconds
7	Provide the power status	*"password"* + power_supply + #	In response, it provides the battery status and the power source currently used by the suitcase	Power_supply: xxV from: Bat_3
		Sample SMS: **camsat.com power_supply #**		Master 0V Bat_1 39% Bat_2 0% Bat_3 29%
8	Activating the OUT-3 relay output	*"password"* + out3_on + #	Enables OUT-3 relay output	OUT: ON
		Sample SMS: **camsat.com out3_on #**	If was already active	Already active OUT3: ON
9	Disabling the GSM 1 relay output	*"password"* + out3_off + #	Disables the GSM relay output 1	OUT3: OFF
		Sample SMS: **camsat.com out3_off #**	If was already deactivated	Already deactivated OUT3: ON
10	Enabling the GSM 2 relay output	*"password"* + out4_on + #	Enables OUT-4 relay output	OUT4 GSM2 ON
		Sample SMS: **camsat.com out4_on #**	If was already active	Already active OUT4 GSM2 ON
11	Disabling the GSM 2 relay output	*"password"* + out4_off + #	It turns off the relay output out 4	OUT4 GSM2 OFF
			If the output was previously turned off	Already deactivated OUT4 GSM2 ON

		Sample SMS: **camsat.com out4_off #**		
12	Changing the control of LTE outputs	*"password"* + out_LTE_is_GSM + # Sample SMS: **camsat.com out_LTE_is_GSM #**	The OUT 1 and OUT 2 outputs can be controlled by SMS from the GSM module	OUT1 and OUT2 are now controlled by GSM
13	Changing the control of LTE outputs	*"password"* + out_LTE_is_LTE + # Sample SMS: **camsat.com out_LTE_is_LTE #**	The OUT 1 and OUT 2 outputs can only be controlled by the LTE modem	OUT1 i OUT2 are now controlled by LTE
14	Enabling the LTE 1 relay output	*"password"* + out1_on + #	Enables the relay output out1	OUT1 ON
			If was enabled already	Already active OUT1 ON
		Sample SMS: **camsat.com out1_on #**	If out_LTE_is_LTE was sent before (this is the default)	Output controlled by LTE
15	Disabling the LTE 1 relay output	*"password"* + out1_off + #	Disables the relay output out1	OUT1 OFF
			If was disabled already	Already deactivated OUT1 OFF
		Sample SMS: **camsat.com out1_off #**	If out_LTE_is_LTE was sent before (this is the default)	Output controlled by LTE
16	Enabling the LTE 2 relay output	*"password"* + out2_on + #	Enables the relay output out2	OUT2 ON
			If was enabled already	Already active OUT2 ON
		Sample SMS: **camsat.com out2_on #**	If out_LTE_is_LTE was sent before (this is the default)	Output controlled by LTE
17	Disabling the LTE 2 relay output	*"password"* + out2_off + #	Disables the relay output out2	OUT2 OFF
		Sample SMS:	If was disabled already	Already deactivated OUT2 LTE2 OFF

		camsat.com out2_off #	If out_LTE_is_LTE was sent before (this is the default)	Output controlled by LTE
18	Information about the signal strength	*„password”* + signal + # Sample SMS: **camsat.com signal #**	"very weak" - below -110dBm "weak" -110..-96dBm "average" -96..-72dBm "good" -96..-72dBm "very good" -66..-54dBm "perfect" above -54dBm "ERROR"	very weak - below -110dBm weak - -110..-96dBm average - -96..-72dBm good - -72..-66dBm very good - -66..-54dBm perfect - above -54dBm ERROR numeric range from 0 to 40
19	Status	*„password”* + status + # Sample SMS: **camsat.com status #**	Status of all settings and active functions as well as the status of inputs and outputs	Password: camsat.com Power_supply: 16V from: Bat_2 Power resources: Master 0V Bat_1 NONE Bat_2 91% Bat_3 NONE Signal GSM: 19 - average Number for call/SMS: no.1: +pppxxxxxxxxx no.2: +pppxxxxxxxxx Number for SMS: no.3: +pppxxxxxxxxx

				no.4: +pppxxxxxxxxx call when _1_: covr call when _2_: move Battery type LI-ION LTE: ON NVR: OFF Pir1 not active PIR1_NO Pir2 not active PIR2_NO delay PIR1: 5 minutes delay PIR2: 5 minutes DIP2 off – turning everything from PIR1/SMS not active DIP3 on – turning LTE from PIR2 active set time pir2: 1212 second status: LTE OFF in1 LTE: not active in2 LTE: not active in1 GSM: not active in2 GSM: not active OUT1 i OUT2 controlled by LTE OUT1: OFF OUT2: OFF OUT3: OFF OUT4: OFF Sabotage active Sensitive move: 6 cover standby

				move- none
20	Activity time of all	*"password"* + pir1_time + *"time"* + # Sample SMS: **camsat.com pir1_time 1200 #**	The time for which the suitcase is to turn on when the PIR1 input has been activated Time in seconds From 0 to 9999 seconds	set time pir1: xxxx second
21	Activity time of LTE	*"password"* + pir2_time + *"time"* + # Sample SMS: **camsat.com pir2_time 1200 #**	The time for which LTE is to turn on when the PIR2 input is activated Time in seconds From 0 to 9999 seconds	set time pir2: xxxx second
22	Sensitivity of the motion sensor	*"password"* + sens_move + *"sensitivity"* + # Sample SMS: **camsat.com sens_move 6 #**	Sensitivity of the motion sensor Values from 0 to 9 The greater the value = the greater the sensitivity The default is 6	sensitive move: x
23	Setting the active state of PIR 1 as NO	*"password"* + pir1_no + # Sample SMS: **camsat.com pir1_no #**	Sets the active state of the PIR input 1 to "normally open" The input will be activated when it is shorted to ground	PIR1_NO
24	Setting the active state of PIR 1 as NC	*"password"* + pir1_nc + # Sample SMS: **camsat.com pir1_nc #**	Sets the active state of the PIR input 1 to "normally closed" The input will be activated when it is open to ground	PIR1_NC
25	Setting the active state of PIR 2 as NO	*"password"* + pir2_no + # Sample SMS:	Sets the active state of the PIR 2 input to "normally open" The input will be activated when it is shorted to ground	PIR2_NO

		camsat.com pir2_no #		
26	Setting the active state of PIR 2 as NC	*"password"* + pir2_nc + # Sample SMS: **camsat.com pir2_nc #**	Sets the active state of the PIR 2 input to "normally closed" The input will be activated when it is open to ground	PIR2_NC
27	Control of turning on LTE (PIR / SMS)	*"password"* + lte_pir + # Sample SMS: **camsat.com lte_pir #**	Allows you to control the enabling of the LTE using PIR (the appropriate dipswitch must also be set, i.e. DIP3 - ON)	DIP3 on – turning LTE on from PIR 2 active
28	Control of turning on LTE (SMS)	*"password"* + lte_sms + # Sample SMS: **camsat.com lte_sms #**	Activation control possible only by means of SMS commands	Controlling LTE only by SMS
29	PIR1 delay	*"password"* + pir1_del + *"time"* + # Sample SMS: **camsat.com pir1_del 5 #**	Setting the PIR1 delay for return to inactive state When the pir1 input is activated, an SMS will be sent to activate the input; if there is no reactivation within the set time, an SMS will be sent to deactivate the input. The time is counted each time from the last activation of the input. If there is another activation after 45 seconds, another SMS will be sent to activate the input. The time can be set: from 1 to 40 minutes	PIR1 delay: x min PIR2 delay: x min
30	PIR2 delay	*"password"* + pir2_del + *"time"* + # Sample SMS:	Setting the PIR2 delay for return to inactive state When the pir2 input is activated, an SMS will be sent to activate the input; if	PIR1 delay: x min PIR2 delay: x min

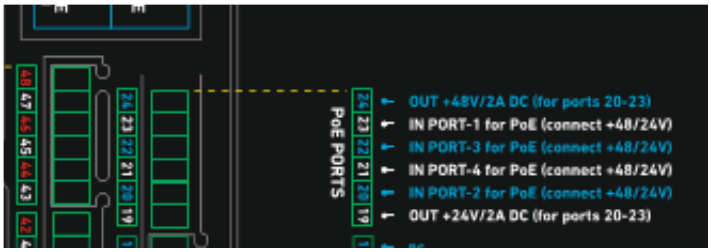
		camsat.com pir2_del 5 #	there is no reactivation within the set time, an SMS will be sent to deactivate the input. The time is counted each time from the last activation of the input. If there is another activation after 45 seconds, another SMS will be sent to activate the input. The time can be set: from 1 to 40 minutes	
31	Emergency calls 1	*"password"* + call_1_move + # or *"password"* + call_1_covr + # or *"password"* + call_1_pir1 + # or *"password"* + call_1_pir2 + # or *"password"* + call_1_none + # Sample SMS: **camsat.com call_1_move #**	Setting in which situation the suitcase is to call the number set as tel1 and after a minute to the number 2. call_1_move - when the motion sensor is activated call_1_covr - when the cover is opened For the above functions to work, DIP1 must be connected to ON call_1_pir1 – when the PIR1 input is activated call_1_pir2 – when PIR2 input is activated call_1_none – will not call	call when _1_: xxxx
32	Emergency call 2	*"password"* + call_2_move + # or *"password"* +	Similarly as in the above function, setting in which situation the suitcase is to call the number set as tel1 and after a minute to the number 2.	call when _2_: xxxx

		call_2_covr + # or *"password"* + call_2_pir1 + # or *"password"* + call_2_pir2 + # or *"password"* + call_2_nic0 + # Sample SMS: **camsat.com call_2_pir1 #**	Thanks to this, you can set two independent events for which the suitcase is to call.	

4.2. Wired connection to the computer

In order to connect to the caseCAM system, connect the computer with the case with a standard UTP LAN network cable, e.g. patch cord. Depending on the suitcase model, LAN ports are available at the top of the suitcase and marked as PORT PoE LAN-1 to PORT PoE LAN-4. The cable should be connected to a free port that does not have PoE voltage (see notes below and: Running PoE on LAN ports).

ATTENTION
There is +48V PoE+ voltage in the RJ-45 socket for the IP camera. Power is sent through free conductors 4/5 (blue pair 48V) and 7/8 (brown pair 0V). In order to connect the system to the computer, disconnect the 48V power supply from the terminal strip 20, 21, 22, 23.



In the computer, set the network card to a fixed IP address from the 192.168.1.x family, taking into account the reserved IP addresses for the suitcase itself: 192.168.1.168 – IP camera microCAM-3M; 192.168.1.1 – LTE module; 192.168.1.64 – NVR.
In order to administer individual blocks, start the IE or Chrome browser and enter the local IP addresses of individual blocks of the suitcase. Addresses and passwords are on a separate card and are supplied with the device.

4.3. Wireless connection via the Wi-Fi

Wi-Fi wireless connectivity is available in suitcases equipped with Block No. 2 or in Block No. 4 with Wi-Fi option.
In order to connect via Wi-Fi, search for a wireless network called caseCAM xxx and enter the password on the password card provided with the device (default: camsat.com). In case of problems with connectivity, please check if your computer's network card is set to DHCP service.

4.4. Remote connection via the Internet – applies to block no. 2

caseCAM equipped with Block No. 2 enables remote video preview, playback of recordings and management of security parameters such as VPN, firewall, access rights, etc.
In order to start transmission over the Internet, an active LTE card must be placed in the slot marked as “LTE SIM-1” or “LTE SIM-2”. It is recommended to remove the PIN code from the SIM card in advance.
Remote access to caseCAM via LTE is carried out in the same way as via Wi-Fi, with the difference that instead of the local IP address, we enter the public IP address of our LTE SIM card in the web browser. IE or Chrome browser recommended.

The public IP address is supplied with the SIM card from the operator. Remote access to individual blocks of the suitcase is possible through the following ports:
Block no. 2 – LTE and Wi-Fi transmission settings: SIM.CARD.IP.ADDRESS:83 e.g. 30.0.110.21:83
Block no.4 – Video from the microCAM-3M camera: SIM.CARD.IP.ADDRESS:80
Block no.5 – Videos from the NVR: SIM.CARD.IP.ADDRESS:81

4.5. Connection and live view with microCAM camera – applies to block no. 4

In order to view the image from the microCAM camera, connect to the suitcase using one of the above methods: wired, Wi-Fi or remotely via the Internet.
Access to the camera is possible remotely via port 80 (SIM.CARD.IP.ADDRESS:80) or locally at the address 192.168.1.168 (see the current list of passwords supplied with the device). In order to display the image, run the IE web browser and enter the IP address. ATTENTION: Recommended browser is IE (Internet Explorer). After logging in, we will get access to live view, playback of camera recordings, all camera settings. For more information, see the microCAM Camera Manual.

4.6. iOS and Android applications for the microCAM-3M – applies to block no. 4

The microCAM-3M camera from the caseCAM suitcase works perfectly with the BITVision application available in the AppStore (iOS) and Google PLAY (Android). The application supports all cameras with H264, H265 and H265 + compression, which means that a low Internet speed is enough to get a live view. Thanks to very fast operation and intuitive operation, it enables many operating modes:

- **Live view** – video with audio (from the audio IN)
- **Video recording** or saving the photos on the phone
- **Playing** recorded movies and photos
- **Saving a screenshot** of the video live view
- **Remote voice messages** from the phone to the camera's live audio output

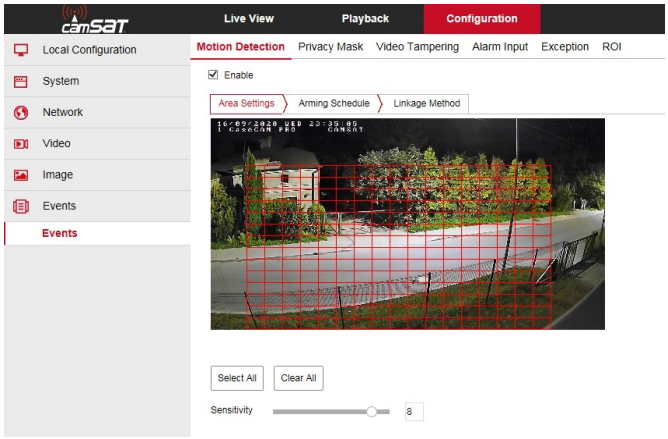
The camera can be accessed in a number of ways:

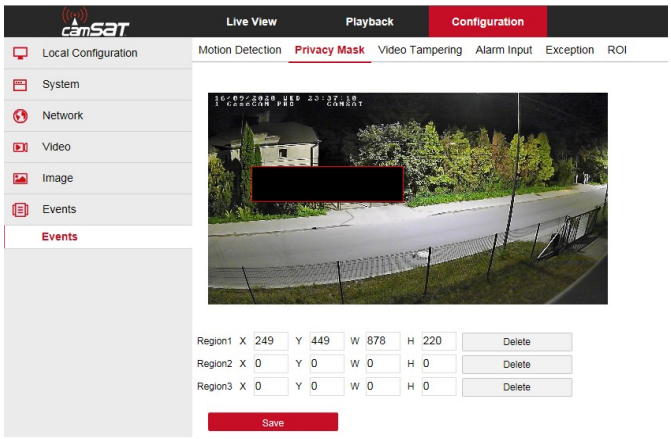
- via the Wi-Fi or LAN cable
- remotely via the Internet or via the P2P clouds.

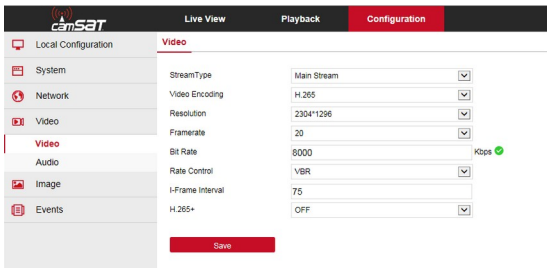
Photo of GUI

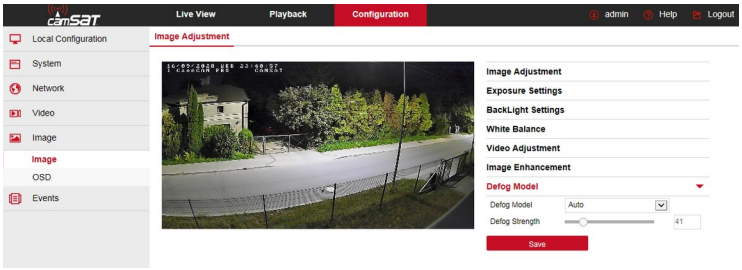
camSAT

Specjaliści od transmisji bezprzewodowych









RZETELNA Firma

Pracodawcy Pomorza i Kujaw

PRZEDSIĘBIORSTWO FAIR PLAY

camSAT 24/7 POMOC TECHNICZNA TEL. 505 272 224

CAMSAT - Polski producent mobilnych kamer bezprzewodowych

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camsat@camsat.com.pl

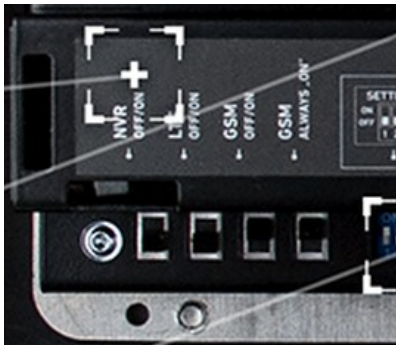
www.camsat.com.pl

4.7. Connection with the NVR and playing the recordings – applies to block no. 5

In order to view the images recorded on the NVR, log in the same as above, but with the appropriate IP addresses:
Via the Internet: SIM.CARD.IP.ADDRESS:81
Locally: 192.168.1.64

5. Suitcase settings and energy saving

5.1. Turning on the individual blocks of the suitcase.

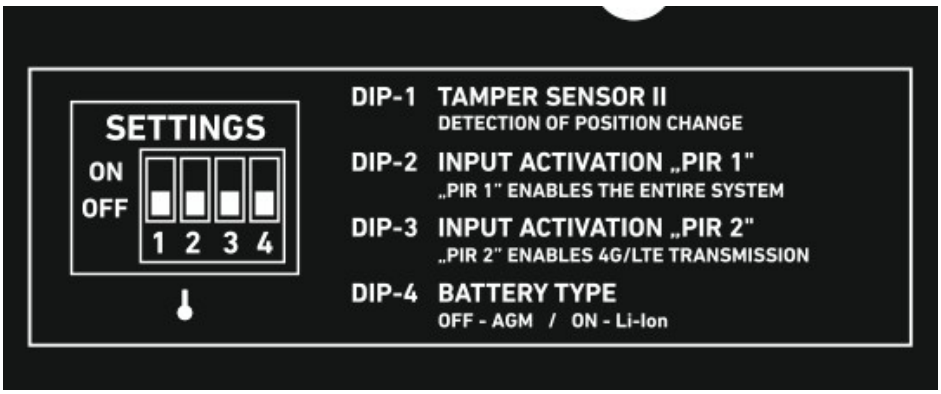


The length of operation time of the entire system, as well as the time of operation on batteries, depends on the running blocks of the suitcase. Individual blocks can be turned off using mechanical switches located in the lower-left part of the suitcase. Setting the switch to the OFF position completely disables the block from work. Active blocks are indicated on the device panel. The LEDs are activated after pressing the button on the right side of the device for 2 seconds, marked "LED ON". After a few seconds, the lights will turn off again.
WARNING: Holding the button for more than 40 seconds will reset all settings of the GSM module.

ATTENTION: Enabling the LTE block with the switch prevents it from being remotely disabled via SMS. In order to remotely control the LTE block, leave the switch in the OFF position.

5.2. DIP switches settings

Micro DIP switches are used to control the operation of the system:



DIP-1 Tamper sensor – it is used to activate the protection of the case. It activates built-in sensors that inform about the detection of the suitcase movement, opening the suitcase and changing its

position. A slight movement of the suitcase will trigger a tamper alarm. To activate the sensors, set the switch to the ON position.

DIP-2 Function activation: Turning on the whole suitcase after motion detection by PIR 1 – it is used to activate the entire suitcase and all blocks of the suitcase after motion is detected by the PIR detector connected to the PIR-1 port. Shorting terminals 32 with 33 will start the entire suitcase for about 20 minutes. After the end of the movement and the expiry of 20 minutes, the suitcase will turn off. Setting it to ON enables this function. IMPORTANT: Working time can be set by SMS commands in the range from 60 to 9999 seconds.

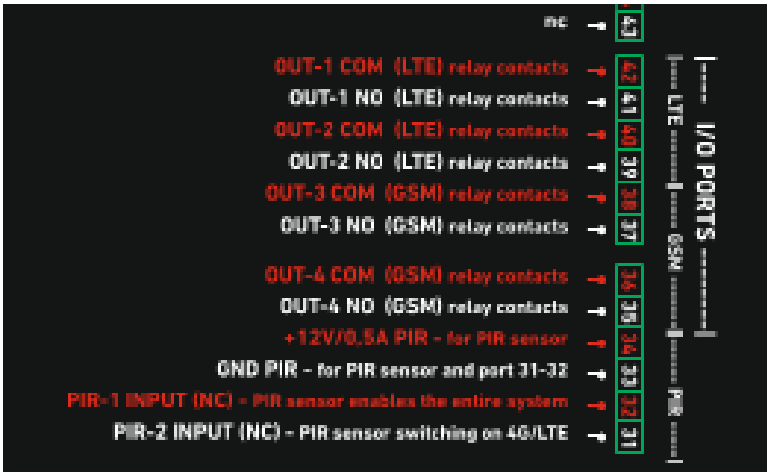
DIP-3 Function activation: Enabling LTE PIR transmission 2 – in everyday work there is no need to use continuous LTE transmission which consumes a lot of electricity. In order to protect the batteries, we can start the LTE transmission only after detecting motion or after detecting another signal. A short circuit on terminals 31-33 will start LTE transmission for about 20 minutes. The time is counted from the last shorting of the terminals. Setting it to ON enables the function. IMPORTANT: Working time can be set by SMS commands in the range from 60 to 9999 seconds.

DIP-4 Selecting the battery type – DIP No. 4 is used to indicate the type of batteries connected to the case. Each type of battery has different discharge characteristics. Through DIP-4, the system correctly identifies the voltage levels and can select appropriate alarms about the battery close to discharge. The selection applies to all battery inputs.

5.3. Setting the I/O output relay ports up

Remote control via SMS – applies to Block no. 3

caseCAM has been equipped with a number of output ports that allow any control of individual blocks or external devices, e.g. switching on the speaker, halogen or activating other cameras. There are 4 output ports (relay, potential-free). It is possible to use SMS (block no. 3) to control all four ports.



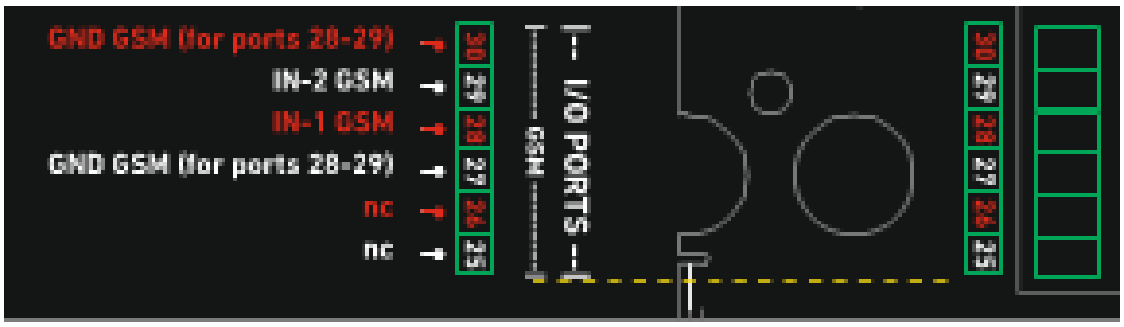
Remote control via WWW (LTE) – applies to Block no. 2

It is also possible to switch the first two outputs to control via the website. For this purpose, an appropriate SMS command switching the function should be sent. Then log in to the LTE module (Block No.2) and on the appropriate

page you will be able to manually and automatically change the outputs. This function can be used for advanced automation and autonomous suitcase control.
EXAMPLE: Switching on the lighting according to the calendar, switching on the output port after the loss of 4G / LTE signal or after loss of communication, which will cause another module to work, etc.

5.4. Setting the input I/O ports up

Sending an SMS after shorting the input port



Block No.3 enables automatic sending of SMS to the user in case of detection of control signals on ports IN-1 and IN-2. Shorting 28 or 29 to GND (27) will send an SMS. External control signals can be connected to these ports.

6. ACCESSORIES

6.1. Wireless PIR sensors

CaseCAM suitcase can be equipped with wireless motion sensors with a radio range of 500m in a covered area. CAMSAT sensors with a range of motion up to 12m and an angle of 90 degrees are used for this purpose. The entire transmission takes place wirelessly, and the sensors are powered by miniature 3.6V batteries. The working time depends on the frequency of motion detection. By the national road, detecting several thousand cars a day, the detector will work for a minimum of 2 months. In forest conditions, the detector will operate on one battery for a minimum of 6 months. More about wireless detectors in a separate manual.

6.2. Wireless IR illuminators – use invisible infrared 940nm

The case can be equipped with remotely controlled IR illuminators. The illuminators are powered by an independent battery and switched on remotely by a suitcase or by the user. The wireless illuminators are not connected to the suitcase with a cable, and they perfectly protect the camera and the suitcase. Detecting the IR sensor will not lead the potential thief to the suitcase and the

camera, which may be hidden several hundred meters away. The range of the IR illuminator is 50m, and the angle is 120 degrees. 500m radio range. More information in a separate manual for the IR illuminator.

6.3. Battery case – 100, 150 and 300Ah

In order to extend the operation of the caseCAM suitcase, an additional battery can be connected via the hermetic socket. The offer includes battery cases with a capacity of 100Ah, 157Ah and 300Ah. The suitcases are connected very quickly with a special cable with a hermetic connector resistant to difficult working conditions. The connector is compatible with other CAMSAT devices, e.g. iCAM-Battery230, iCAM-Battery.

6.4. Power from the street lamo at night, from the battery during the day

In order to extend the working time, an external iCAM-Battery230 battery can be connected to the suitcase, which will charge its batteries during the day and provide power to the suitcase at night. This combination allows the use of large IP cameras with high power consumption in the case itself and ensures continuity of power without the need to replace the batteries.

microCAM-3M DATASHEET

Micro camera	
Sensor	1/2.8 Starlight Back-Illuminated CMOS
Lens	2,8mm M12 (microCAM-3MT), PinHole 2mm (microCAM-3MPH)
View angle	115° (MT) or 65° (MPH)
Identification of license plates	50—300m (depends on the lens / tele lens used)
Optional lenses	From 2.8mm (wide angle) to 200mm (300m zoom)
Minimum lighting	Color: 0.005 Lux @(F1.2, AGC ON), 0.014 Lux @(F2.0, AGC ON) B/W: 0.0001 Lux @(F1.2, AGC ON), 0.0003 Lux @(F2.0, AGC ON)
WDR	120 dB
Memory for video recording	MicroSD slot, supports cards up to 512GB
Lens / main unit	8m, thin, flexible cable between the lens and the main electronics unit with an RJ45 connector.
Video	
Compression	Main stream: H.265+/H.265/H.264 Second stream: H.265/H.264/MJPEG Third stream: H.265/H.264
Bitrate	32 Kbps to 16,8 Mbps
Resolution	2304x1296px@20fps 1920x1080px@25fps
Video streaming	Onvif 2.4, RTSP, RTP, RTCP

Image options	Rotation mode, saturation, brightness, contrast, focus adjustable by client software or web browser
ROI	Supported
Defog	Supported
Day / night	Digital
Captions	Date, time, own text
Audio	
Audio streaming	Bidirectional, Full Duplex
Audio compression	G.711U/G.711A
Audio input / output	1/1
Sampling	48K max
Network	
Security	Password, IP address filtering
Alarm triggers	Motion detection, tamper covering the camera, IP address conflict, LAN disconnection
Protocols	ONVIF 2.4, RTSP, SMTP
Wi-Fi	2.4GHz
Network protocols	TCP/IP, ICMP, HTTP, HTTPS, FTP, DHCP, DNS, DDNS, RTP, RTSP, RTCP, NTP, SMTP
Live view	Up to 6 users simultaneously
Web browsers	IE8-11, Google Chrome (< Ver44), Firefox (< Ver53), Mac Safari (< version 12)
Option: Wi-Fi – wireless transmision	
Technology	802.11n

Radio band	2.4GHz
Channels amount	13
Encryptions	The newest PSK2K
Interfaces	
Communication	1xRJ45 10M/100M Ethernet PoE
Alarm input / output	1/1
Audio input / output	1/1 (3.5mm mini Jack)
Wi-Fi antenna connector	SMA (female)
SD socket	microSD /SDHC/SDXC up to 512GB
Other	
Power consumption	<3W

Working temperature	-20°C — +60°C , <H85%
DC power	12V DC/500mA
PoE power	PoE: (802.3af, 37V-57V), <3,4W
microCAM-3M**PH** dimensions	36x26x24mm (cube)
microCAM-3M**T** dimensions	51x26mm (tube)
Main unit dimensions	104(L) x 78(W) x 25.8(H) mm
Weight	805g
Materials	Camera: metal / glass Main unit: metal

The micro camera set includes

microCAM-3MT set:

- Main unit
- Optical module with lens and 8m cable
- Ceiling and wall mounting with ball adjustment
- Mounting to the wall or glass (by screws or glue)
- Mounting to the main unit's DIN rail
- Option: Wi-Fi magnetic antenna with 1m cable

microCAM-3MPH set:

- Main unit
- Optical module with lens and 8m cable
- Mounting to the main unit's DIN rail
- Option: Wi-Fi magnetic antenna with 1m cable

caseCAM-PRO DATASHEET

Batteries	
Available options:	Gel 54Ah / 12V, Li-Ion 100Ah / 12V, Li-Ion 157Ah / 12V
Total working time	16—30 days of video recording by microCAM-3M (with disabled Wi-Fi and LTE)
Power supply	
Main power input	12V DC (e.g. from an external battery, from a car, from a generator, from a DC power supply, from an iCAM-Battery)
Battery power input	3 ports with XT60-L socket (3 power inputs with automatic voltage measurement and automatic, uninterrupted switching to the next battery, suitable for Li-ION and AGM batteries)
Power outputs	
DC	1x12V / 3A 2x12V / 0.5A (e.g. for any cameras, PIR sensors or other accessories)
PoE	4x PoE+ (30W/port) e.g. for 4 IP cameras.
Transmission	
LTE	4G/LTE – 2x miniSIM (transmission of video, sound, control, downloading recordings, reading GPS positioning, viewing all parameters of the suitcase, VPN, etc.)
GSM SMS	3G – 1x miniSIM (remote turning the suitcase on / off, StandBy mode, alarms, notifications, low energy mode, battery discharge, …)
Wi-Fi	2.4GHz 802.11n, omnidirectional, 50m range
I/O interfaces	
PIR sensor input / alarm input	Two NC / NO ports for connecting PIR motion detectors or other NC / NO control signals (normally closed / open): **1x NO/NC** – shorting port 1 activates: power supply for the entire suitcase, activates LTE, GSM, Wi-Fi transmissions, PoE ports, activates recording in the NVR recorder for a minimum of 20 minutes, 20 minutes after stopping motion detection, turns off the entire suitcase. **1x NO/NC** – shorting port 2 starts LTE transmission only
RJ45	4x LAN/PoE
Relay outputs controlled via GSM SMS	2x NO (3A DC/AC)
Relay outputs	2x NO (3A DC/AC)

controlled via LTE/ WWW or via SMS GSM	
Audio IN	1x AUDIO IN (0.7V line input for audio recording in the internal NVR)
Audio OUT	1x AUDIO OUT (0.7V line output, audio output from the internal NVR recorder, the ability to generate audible alerts from a remote operator, etc.)
Video registration for the IP cameras	
Number of recording channels	4 streams from any IP cameras with a resolution of up to 4k, e.g. Hikvision, Dahua, and RTSP or ONVIF from Axis, Bosch, etc.
Video resolution	Up to 4K(3840x2160), e.g. 8MP / 6MP / 5MP / 4MP / 3MP / 1080p / UXGA / 720p / VGA / 4CIF / DCIF / 2CIF / CIF / QCIF
Space for recordings	1x SATA interface for HDD / SDD up to 6T
Registration time	120 days
Streams from cameras	Up to 40Mb/s
Playing back recordings	HDMI, VGA, WWW, iOS/ Android application
Compression	H.265+, H.265, H.264
Live view access	4G/LTE (GSM), Wi-Fi, application
Access to recordings	Przez 4G/LTE, Wi-Fi, LAN, WWW, VMS, directly from the microSD card,

	iOS / Android application
Supported mobile devices	Windows mobile / Android / iOS
Event notifications	Email, SMS, save to FTP
Identification of license plates	10—500m (depending on the connected IP camera and lens).
Notifications about:	
Motion detection in the PIR detector / activation of the PIR-1 / PIR-2 input	SMS, mail, FTP
Battery status	Warning SMS at the last 15%, 10% and 5% of the battery capacity
Turning the suitcase on	SMS with information about the status of the entire device
Sabotage	SMS with information about the detection of movement, location and opening of the suitcase
Input activation	SMS
Other	
Outer dimensions of the suitcase	360x320x210 mm
The dimensions of the microCAM-3M camera	36x26x24 mm (PH) cube, 51x26 mm (T) tube, 104x78x25.8 mm main unit
Weight	3.4—3.8 kg + battery
Tightness	IP66
Temperature of reliable operation	-25°C—55°C

General warranty terms

The device is supplied with a standard warranty card. The manufacturer declines all other warranties. In no case the producer is liable for any damages (including, without limitation, consequential, special, or incidental damages, or damages for loss of profits, business interruption, loss of business information or other financial loss) arising out of the use or inability to use this product, even if the manufacturer has been advised of the possibility of such damages.

Camsat grants a 24 months warranty for the caseCAM-PRO, excluding SD memory card, SSD, HDD and battery, D,SSD, HDD oraz akumulatora, for which there is 12 months warranty.
1. If the device is not operating properly, make sure, before returning the device to the service, that everything was done according to the operational manual.
2. If the device is returned or send for repairs, a thorough written description of the signs of the device's faulrt operation, including the operating environment and the manner in which they appear, should be enclosed.
3. The prerequisite for exercising the warranty rights is enclosing the proof of purchase, including the purchase date and description of damage, with the faulty device.
4. Warranty repairs cover only faults occurring due to the reasons inherent to the sold device.
5. Warranty repairs will be carried out in the shortest possible amount of time not exceeding 14 days, counting from the moment of accepting the device to the service. If parts need to be imported, the repair deadline may be extended. After the repairs have been carried out, the warranty period will be extended by the repair time.
6. The warrantor is not responsible for the loss of the device configuration settings resulting from the device repair or malfunction.
7. The warrantor may refuse to carry out the repairs or terminate the warranty if it is determined that the deals placed on the devices or components are damaged.
8. All repair services resulting from the warranty are performed only in Camsat service.

The warranty does not cover

1. Mechanical damage of devices and failures occurring due to fortuitous events, such as: fire, power grid overvoltage, electrical discharge, power supply, effects of chemical substances.
2. Damage occurring due to: improper handling of the device, using the device against its intended use or the operating manual, customer's negligence, improper use (temperature, humidity, flooding, dust, sanding up, improper power supply voltage).
3. Claims on account of the technical parameters, if they are consistent with those indicated by the manufacturer.
4. Marks created during usage and wear.

Device disposal

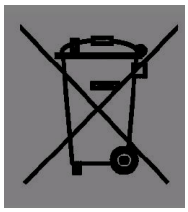
Information for users about disposing of electrical and electronic equipment (for households).

The symbol presented to the left informs that this electrical or electronic device, after its use has ended, cannot be thrown together with household refuse. The device should be delivered to a specialised collection point. Detailed information about the closest collection point is available from local authorities.

The proper disposal of this device allows for preserving precious resources and avoiding the negative impact on health and environment, which may be endangered if the waste is handled improperly. Improper waste disposal is subject to penalties provided for in the appropriate regulations.

Battery disposal

Information for users about getting rid of cell packages and batteries (for households).



The symbol presented to the left informs that this cell pacage, after its use has ended, cannot be thrown together with household refuse. The device should be delivered to a specialised collection point. Detailed information about the closest collection point is available from local authorities..

The proper disposal of this device allows for preserving precious resources and avoiding the negative impact on health and environment, which may be endangered if the waste is handled improperly. Improper waste disposal is subject to penalties provided for in the appropriate regulations.

Declaration of conformity

DEKLARACJA ZGODNOŚCI
DECLARATION OF CONFORMITY

Niżej podpisany, reprezentujący firmę:
The undersigned representing the manufacturer:

CAMSAT Przemysław Gralak
ul. Ogrodowa 2a, 86-050 Solec Kujawski
Polska/Poland

niniejszym deklaruję z pełną odpowiedzialnością, że urządzenie:
herewith declares under our sole responsibility that the product:

Nazwa urządzenia: **Miniaturowa kamera HD**
Product name: Mini HD camera

Typ: **microCAM-3MPH**
Model: **microCAM-3MT**

Jest zgodny z wymaganiami dyrektyw:
It complies with:

EMC directive 2014/30/EU

oraz spełnia wymagania następujących norm
to which this declaration relates is in conformity with the following harmonized standards

Wymagania ochronne dotyczące kompatybilności elektromagnetycznej artykuł 3.1b
Electromagnetic compatibility (article 3.1b)

EN 55032:2015
EN 55035:2017
EN 61000-3-2:2014
EN 61000-3-3:2013

CE

Miejscowość i data / *Place and date*
Solec Kujawski 30.09.2020

Osoba odpowiedzialna:
Name of responsible person
Stanowisko:
Position
Podpis/Signature

Przemysław Gralak
właściciel/owner

Manufacturer:
CAMSAT
Ogrodowa 2a
86-050 Solec Kujawski
Poland

Offer and information: www.camsat-cctv.com
Service: serwis@camsat.com.pl