

VISIO2K

**Wireless dual-technology detector
(IR + videoanalysis) for NG-TRX
intrusion detection systems**



Addressee for this information: User | Installer

1 DESCRIPTION

VISIO2K is a NG-TRX wireless dual technology detector. The device detects video alarm, tamper and masking attempts conditions by analysing movements on the collected images.

VISIO2K includes two sections (IR and video) operating in AND mode.

Infrared section (IR): digital PIR sensor with multi-focal lens with white light protection.

Video section: videocamera with anti-masking function. Automatic adjustment to light conditions with IR sensor and illuminator (day/night video mode).

The device can be powered

- by battery only: video analysis will be activated only upon an IR alarm;
- by battery and added external power supply: video analysis will always be active.

VISIO2K can be programmed using BrowserOne software.

2 COMPATIBILITY

VISIO2K is compatible with:

Control unit	Minimum firmware version
PREGIO series	3.0.4
VILLEGGIO NG-TRX series	8.6.7
PROXIMA series	1.0.2

The connection to Pregio, Proxima requires the use of GATEWAY2K.

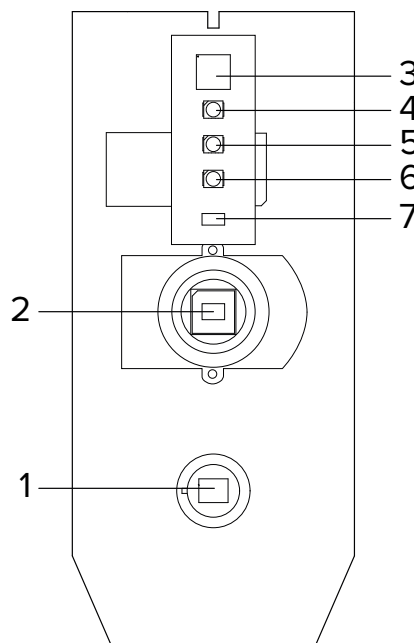
In order to ensure detector correct operation, the NG-TRX radio module of Villeggio NG-TRX control units and of GATEWAY2K has to be updated to version 4.8 or above.

The version of a Villeggio NG-TRX control unit's radio module can be checked entering the installer menu (after letter N, e.g. "V2.8.4 **N4.8.0**"), the version of GATEWAY2K's radio module can be checked using BrowserOne (page **Serial devices**, button **Read information**).

3 PCB

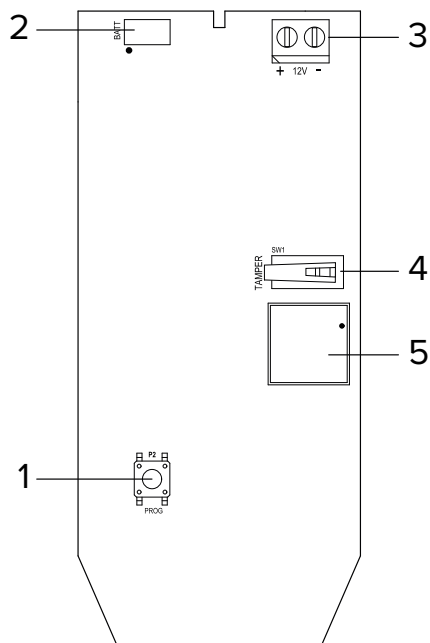


Front



- 1 PIR sensor
- 2 Videocamera
- 3 Illuminator
- 4 blue LED (video section)
- 5 Red LED
- 6 green LED (IR section)
- 7 Light detector

Rear



- 1 Learning button
- 2 Battery connector
- 3 External power supply connector
- 4 Button against opening and removal
- 5 Buzzer

4 TECHNICAL DATA



Model	VISIO2K	
Identification		
Technology	IR + video	
Coverage type	volumetric	
IR section		
PIR sensors number	1	
Opening	81°	
No. of IR sensitive zones	18 areas on 4 levels	
Max range	8	m
Min range	6	m
Pulse count	10	s
Pre-alarm time	5	s
Video section		
Video horizontal coverage	90°	°
Video vertical coverage	70°	°
Video analysis time	5	s
Video analysis pre-alarm time	6	s

Model	VISIO2K		
General features			
Operating voltage	Power supply	7,2	V
	Battery	7.2V 2Ah type 2ER14505M	
	Power from external source	12 (11 ÷ 15) (1)	V
Current consumption at 7.2 V	Inactive mode	13,0	µA
	Transmitting	23,0 (2)	mA
	Power consumption max.	188 (3)	mA
Power consumption at 12V	Idle mode	75	mA
	Transmitting	103,0	mA
	Power consumption max.	115 (3)	mA
Operating times	Walk test	8	min
	Post-alarm inhibition time	In walk test mode: 5 s; in system test mode: 5 s; in operating mode with system armed: 5 s; in operating mode with system disarmed: 5 min (4)	
	Supervision	5	min
	External power supply detection	15	s
Average battery life		1,5 (5)	years
Wireless range	nominal	500 (6)	m
	maximum	1000 (6)	m
Transmission frequencies		868.120; 868.820; 869.525	
Protection class		IP3X	
Working temperature		-10 / +55	°C
Conformity		EN50131-1, EN50131 2-2, EN50131-5-3: grade 2 (grade 1 if used with optional joint)	
Environmental class		II	
Dimensions and weight		W65 - H135 - D45 mm, 175 g	

- (1) optional, to be added to that of the battery
- (2) peak
- (3) alarm mode, total darkness
- (4) in operating mode with system armed, inhibition time is 5 seconds for the first 3 alarms, for the following alarms it will be 5 minutes
- (5) estimated duration with video masking disabled; if video masking is enabled, the duration depends on the solution used: it is advisable to use additional 12V power supply.
- (6) refer to the reception of 99% of transmitted packets, with devices installed in open field at 1,5m height, without antennas (nominal range) / with antennas (max range) oriented in the most favourable direction respectively

Parts supplied

Screws, inserts, technical manual, battery mod. 2ER14505M.

Accessories

Optional joint mod. SNDVISIO.

5 PRECAUTIONS BEFORE DEVICE MOUNTING



General warnings are at the end of this manual.

Before installing the product, please read the following indications carefully.

5.1 General considerations

- Make sure the device operating field is free and devoid of zones darkened by obstacles.
- Avoid installation near heat sources or drafts.
- Avoid installation below or near light sources like lamps or spotlights.
- Do not touch PIR sensor silicon filter.
- In case of detector installation in places with high frequency of people passage with disarmed system, set inhibition time to 5 minutes to limit the number of transmissions and prevent premature battery depletion.
- Avoid pointing VISIO2K devices directly towards a window facing outdoor areas.
- VISIO2K alarm detection can sometimes be affected by light changes due to lights or illuminators or other devices switch on. As a consequence, it is not advisable to install VISIO2K when using presence simulation functions with lights switch on/off or with direct framing of other devices equipped with illuminators (included other VISIO2K devices).

The electronic board of the detector may be damaged by electrostatic discharges. The installer must completely avoid any presence of electrostatic discharges.

5.2 Environment limits

The use of some building materials may reduce the detector wireless signal strength.

Example:

- plywood and honeycomb walls: 90-100% of full strength;
- solid / hollow brick walls 65-95% of full strength;
- concrete walls or metal sheet and plaster: 0-70% of full strength.

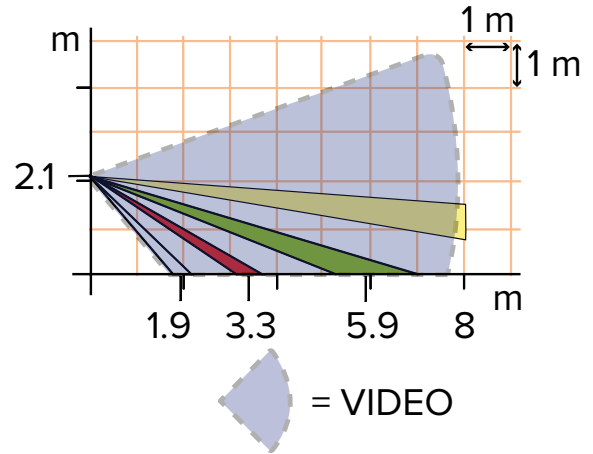
Metal grids, metal gates, and glasses may also affect (i.e. diminish) detector strength.

5.3 Definition of installation position

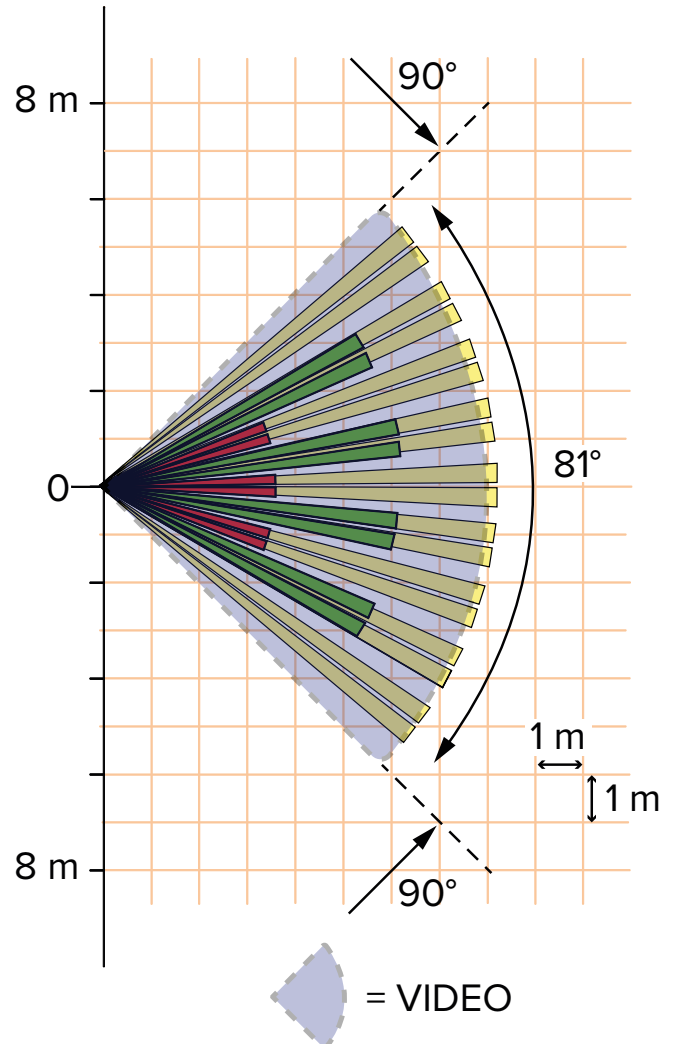
Choose installation position taking into account coverage

ranges shown in the following diagrams. The ideal height for installation is 2.1m.

Side view



Top view

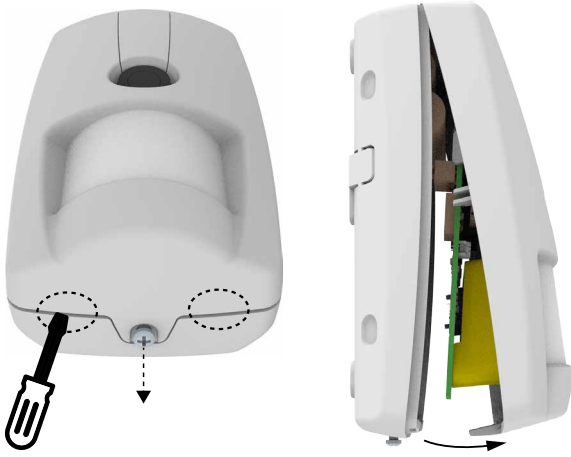


6 DEVICE MOUNTING



- fix the mounting plate to the wall using the supplied screws and inserts (use A holes)

• Opening the housing



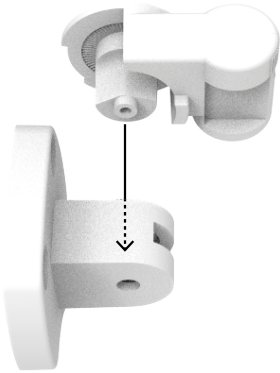
- loosen cover fixing screw
- insert the screwdriver flat tip between detector bottom and cover in the indicated areas
- gently leverage the cover up and remove it

! *The electronic board and the cover cannot be separated.*

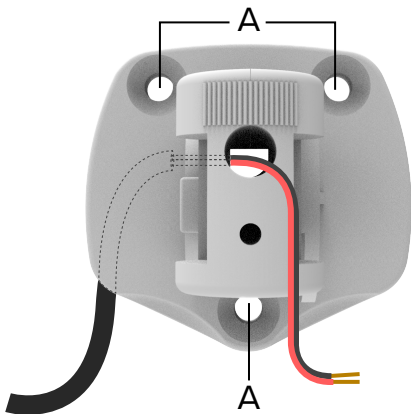
• Mounting of optional joint

If necessary, install the optional joint:

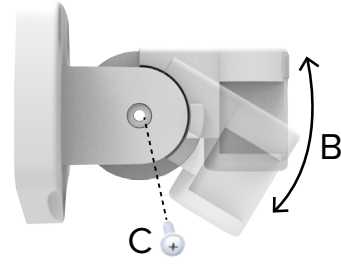
- remove the sheath from the end of the power cable (if present) to connect to the terminal board



- assemble the joint

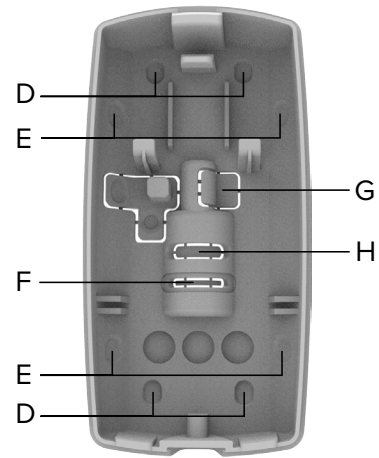


- feed the cable as illustrated



- tilt the joint as needed (B)
- fix the joint to the mounting plate using a pan head screw (C)

• Base wall mount

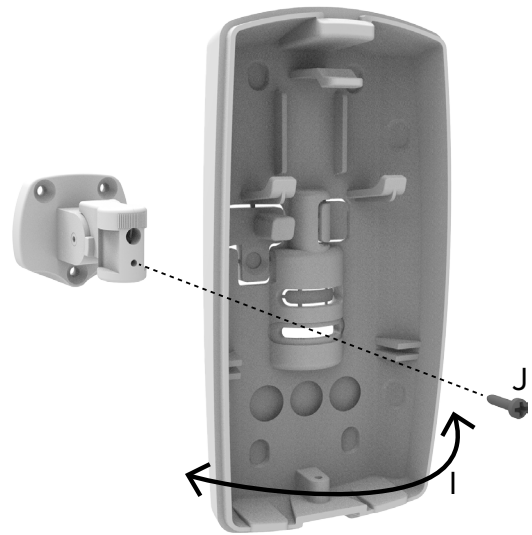


- using a screwdriver, open the pre-drilled areas of the base suitable for mounting on flat surface (D), on a corner (E) or on joint (F)
- using a screwdriver, open the pre-drilled areas of the base for the power cable (if necessary), in case of mounting on flat surface / on corner (G) or joint (H)
- feed the cable through the drilled hole

If the joint is not installed:

- fix the base to the surface using screws and dowels

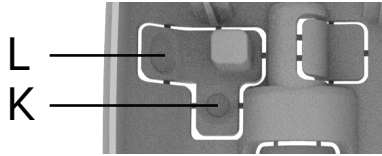
With optional joint:



- rotate the base on the joint as needed (I)

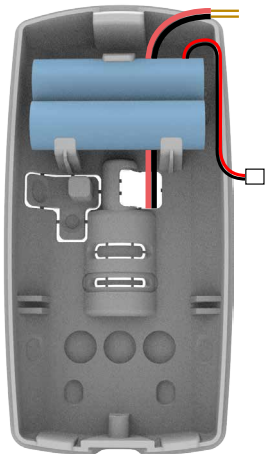
- fix the base to the joint using the supplied screw (J)

Protection against opening and removal



- in case of mounting on a flat surface, insert a screw with S4 dowel into the hole K
- in case of mounting on a corner, insert a screw with S4 dowel into the hole L

• Wirings



- feed the power cable (if used)
- connect the wires to 12V terminals
- fit the battery in the base slot

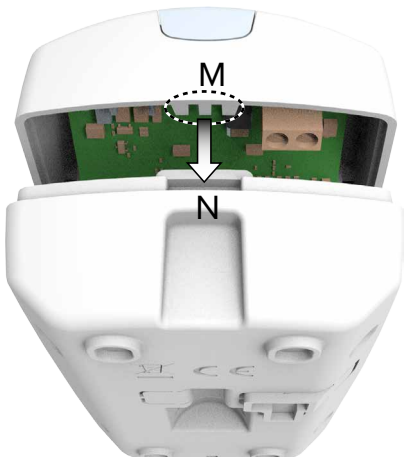
! Position the power cable under the battery.

- wire the battery to BATT connector on the board

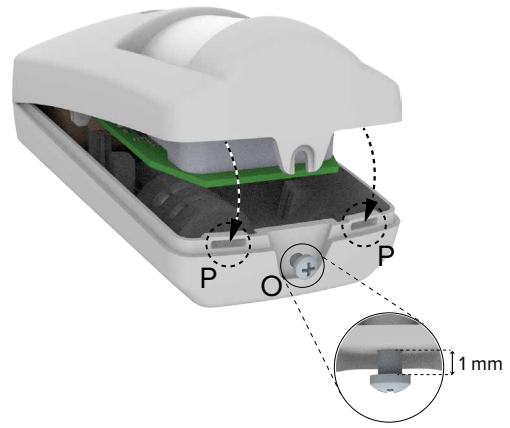
• Device setup

Now proceed with detector setup (see following chapter).

• Closing the housing



- insert hooks on the upper side of the cover (M) into the base slot (N)



- insert closing screw in hole O, leaving approximately 1 mm between the screw and the housing bottom
- lower the device cover until the hooks on the internal cover fit into the base slots (P)

! When closing the cover, position the cables in the space above the battery.

! Avoid the external power cable to be laid on top of the microswitch against removal.

- tighten closing screw

7 SETUP



7.1 Device learning to NG-TRX control unit

Before starting learning procedure, remove the front cover (as illustrated in mounting procedure) to be able to access Learning button.

! If the battery is discharged, devices will not be learnt, not even with the additional power supply. For device learning the device battery must be charge.

Device learning procedure:

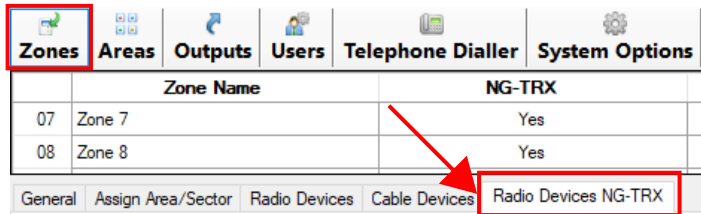
- on control unit keypad, enter installer code followed by **OK** to go to setup menu
- use arrow keys **↑** or **↓** to go to **LEARN RADIO DET.** option
- press **OK**
- use arrow keys to go to the zone to which learn the device
- press **OK**
- press key 1 (saved to control unit)
- go to the detector
- press and hold device learn key (P2) for 3 seconds
- in case of wrong learning procedure, the unit will not confirm the procedure, the detector will beep once to signal error and the device blue LED will remain OFF: restart the procedure
- in case of correct learning procedure, the unit and detector buzzers will beep twice and the device blue LED will switch on

- exit control unit setup menu; when required, press **OK** to save the setup

7.2 Setup via BrowserOne

The device can be set using BrowserOne 3.11.20 or above.

- load the latest module available for the control unit in use
- start control unit connection
- select **Read setup** key to read control unit setup
- select the grid row corresponding to the zone used to learn the device
- select tab **Radio Devices NG-TRX**



Use this tab to access device setup parameters, which will be described in the following paragraphs.

! Option **24H** (available on page **Zones** > tab **General** > pane **Zone Options**) is not compatible with **VISIO2K** images sending.

7.2.1 NG-TRX options

Detectors parameters common to all channels.
For detailed information, please see programming manual of the control unit in use.

Buzzer activation: Buzzer disabled

Performance tuner: Automatic

Supervision interval: 5 min

Delay supervision anomaly

Tx Boost

▼ Buzzer activation

Enable device buzzer for alarm/reset.

▼ Performance tuner

Adjust balance between consumption and power used for data transmission.

▼ Supervision interval

Regular interval for transmissions from the control unit to check the presence and the operating mode of the device.

Fixed 5 min, it cannot be changed.

▼ Delay supervision anomaly

If enabled, the anomaly caused by lack of supervision will be signalled with a delay equal to 6 times the supervision time.

▼ Tx Boost

Option increasing transmission range (by 10÷30%, effective increase); it may affect battery lifetime at the same time.

7.2.2 VISIO2K detector options

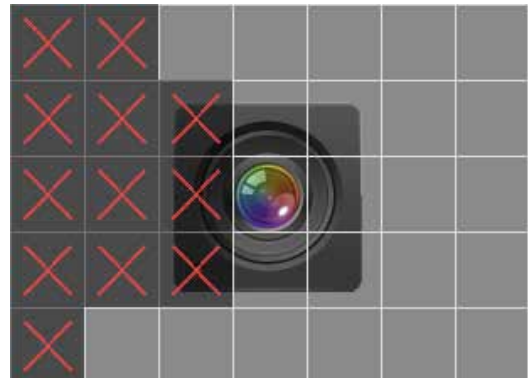
This pane allows configuring the region of interest and VISIO2K parameters.

Region of interest setup



On the right side of the panel there is the region of interest divided into 35 zones.

To exclude a zone from video analysis click on it.



An "X" will appear on each zone excluded. Motion in these zones will be ignored.

! When a zone is excluded, only the related video analysis will be disabled: such zone will still be monitored and will be shown among the alarm images downloaded. To hide the excluded zone completely, select **Enable privacy mode**.

Click again on a zone to re-enable it for video analysis or click on **Clean grid** to re-enable all zones excluded.

! In case of use of the region of interest to exclude from the detection some areas where people motion often occurs when the system is armed, we suggest that you use the optional external power supply in order to avoid battery fault.

Parameters setup

▼ Time inhibition

Select a time interval during which the detector will remain inhibited after the transmission of an alarm.

▼ Sensitivity

It sets the number of IR pulses to be detected by the device before entering the alarm condition (1, 2).

▼ Range

Select detection range of the device.

Max = 8 m; min. = 6 m.

▼ Enable Led

If disabled, LED indicators will be disabled. LED indicators will continue working in walk test or learning mode.

▼ Track motion

Select it to enable the function.

If enabled, in case of alarm a line of points on the image will indicate the movement detected.

Optional function for firmware version below 1.3.

▼ Signal external power

Function useful only when using an additional external power source.

If selected, in normal operating mode the signal of no external power to terminals will be sent after 24 hours from disconnection.


In walk test mode signals will be sent after 30 s.

The indication will be sent as a fault event.

▼ Image quality

Select a resolution value for images download from pull-down menu (QVGA LQ, QVGA HQ, VGA LQ, VGA HQ).

The resolution value selected will be applied to alarm images downloaded in BrowserOne or e-Connect and to the snapshots required by e-Connect.

 *The resolution selected will affect the images downloading time.*

▼ Sensitivity Video

Select a value for video sensitivity.

Average (default) = 750 pixels, 5 frames

Low = 750 pixels, 20 frames

High = 250 pixels, 5 frames

Custom = set **Blob dimension** and **Frame number** in the fields below.

▼ Blob dimension

Set here the minimum amount of pixels to be varied in each frame in order to have the motion detected.

▼ Frame number


Set here the minimum amount of frames that has to change in order to have the motion detected.

▼ Masking video

If selected, blinding attempts of the videocamera will be detected.

In standard operating mode, video masking events will be detected within 2 min 30 s, in walk test mode within 30 s.

Reset from masking condition will take place at the first useful alarm and/or within 30 s from the removal of the masking object.

 *It is not advisable to activate the function if the scene to be shot is too homogeneous (i.e. one wall with uniform colour): the number of false alarms may increase.*

▼ Masking sensibility

Select a value from the pull-down menu.

▼ Enable privacy mode

If selected, the grid frames excluded from video analysis will be darkened in all images.

Parameters setup for video functions

From firmware version 1.3, VISIO2K can attach a short video (duration: 3 s) to each alarm image and produce video snapshots.

These selections allow to set the parameters concerning videos.

Note: the following options are available from BrowserOne version 3.15.8, using:

- Villeggio 8.14.2 module or higher;
- Proxima 1.4.12 module or higher;
- Pregio 3.3.2 module or higher.

▼ Download animation and alarm

When checked, a short video (duration: 3 s) will be attached to the alarm image.


▼ High quality animation

When selected, the video will be captured in high quality.

This selection does not affect the image quality, that can be set using **Image quality** drop-down menu.

▼ Video snapshot interval

Select a value for video snapshot duration (10 s or 5 s).

 *Option **High quality animation** is not valid if **Video snapshot interval** is set to 10 s. The option will still be valid for alarm videos.*

Complete the setup, write it to the control unit by selecting

 **Write setup.**

Click on **Read image...** to open **Image Viewer** page.

This window allows to:

- capturing snapshots and downloading the last alarm image captured by the detector;
- in addition, starting from firmware version 1.3, take video snapshots and download alarm videos captured by the detector.

▼ Input

Set the zone to which the detector to be queried has been learned.

▼ Read alarm image/video

Click to download the image of the latest alarm.

From firmware version 1.3, it also allows to download the video concerning the latest alarm.


▼ Snapshot

Click to capture a real time image from the detector.

The quality of the image downloaded will be the one set in **Quality** pull-down menu.

Snapshots cannot be captured as long as an alarm image is being downloaded.

Note: if the detector is also supplied by an external power supply source, any snapshot request is immediately processed: the detector will immediately capture the snapshot, without waiting the next supervision cycle (this may require up to 5 minutes in normal conditions). This function requires VISIO2K to be updated to version 1.1 and specific control unit firmware versions (8.6.10 or above for VILLEGGIO NG-TRX, 3.0.7 or above for PREGIO, 1.0.7 or above for PROXIMA).


 *Images download from BrowserOne takes priority over images download from e-Connect.*

▼ Snapshot video

Function available from firmware version 1.3.

Click to capture a real time video from the detector.

The video duration can be set using **Video snapshot interval** drop-down menu, outside the window.

 *Taking a high number of video snapshots may affect battery duration.*

7.2.2.1 Images features (firmware version below 1.3)

The time required to download an image depends on connection mode, resolution set and control unit used.

Once the process is finished, the image downloaded will be displayed.

Above there are some data: event type, image quality and DSP firmware version.

The image is a colour or b/w image according to environment light: the adjustment will be automatic.

If tracking mode is on, in case of alarm the image will show a line of points (blue in "day" mode, black in "night" mode) corresponding to the movement detected.



On alarm images taken when the system is armed, zones excluded will be transparent.



If **Enable privacy mode** is selected, the zones excluded will be darkened on each type of image (alarm image or snapshot).



7.2.2.2 Images features (firmware version 1.3 or above)

The time required to download an image, the related video or a video snapshot (if enabled) depend on the connection mode, the set resolution and the control unit in use.

Once the process is finished, the single image will be displayed first, then the video.

Three buttons are available.



Click to display the image only.



Click to display the image with motion tracking. The image features a red box around the target and a line of dots indicating motion direction. Tracking is automatically added.



Click to display the 3 s alarm video (if enabled).



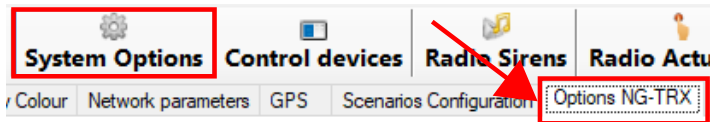
On alarm images and videos when the system is armed, any excluded area will be transparent.

If **Enable privacy mode** is selected, the zones excluded will be darkened on each type of image or video (alarm or snapshot ones).

7.2.3 Options for communication to control unit

To configure communication between NG-TRX devices and control unit:

- on BrowserOne main page, select **System Options**
- select tab **Options NG-TRX**



▼ Receiving multichannel

When active, the control unit receives on the three channels simultaneously.

The multi-channel reception cannot be disabled with at least one VISIO2K device.

▼ Default channel


This is the channel used by the control unit to receive data in case of no interference (default: channel 1). In case of interference, the unit defines a channel (even different from the preset one) according to interference level and uses it for data reception.

▼ Supervision interval

It defines supervision time interval common to all system devices: such interval will be valid for all devices that has no specific interval selected (default).

Select **Enable detection RF interference** to allow the control unit to detect any interference on the three radio channels.

For further information about this option and other in this menu, please see programming manual of the control unit in use.

 *Once all changes have been done, write the new setup to the control unit. It will be sent to the device at the first valid transmission to the unit.*

8 OPERATING MODE

The device detects motion inside the covered area.

8.1 Operating sequence

1. Device power on

The device power on will take around 15 seconds.

2. Walk test

The device remains in walk test mode for 8 minutes.

Its operating mode varies according to the type of power supply: battery only or battery+external power supply.

- **Battery power only:** video section is OFF, IR section ON. When the first IR signal is received, the video analysis will be enabled; if the function detects motion within 5 seconds the device will send an alarm event, otherwise it goes back to standby mode.
- **Battery+external power supply:** video analysis and IR sections are always ON. Video analysis is always ON regardless of IR section.

The green LED indicates IR activity, the blue LED indicates Video section activity.

With power supplied from battery only the blue LED will blink to indicate video analysis in progress. With external power supply, such indication will not be provided: the blue LED will light on (fixed) in case of video pre-alarm event.

3. Standard operating mode

When walk test is finished (8 minutes) the device enters operating mode.

Its operating mode varies according to the type of power supply: battery only or battery+external power supply.

Battery power only

If the system is disarmed, only IR section is active and its activity is indicated by the green LED. After an IR alarm, the device will remain inhibited for the set time (default 5 min). If the system is armed, only the general alarm triggered by the combined action of IR and video section (AND mode) will be signalled: the blue LED will blink in case of alarm event. The device will stay inhibited for 5 s after the three former alarms, for the time set for alarms following the fourth one.

Battery and external power supply

Both IR and video sections are always ON, both when the system is armed and when it is disarmed.

The respective LEDs signal their activity.

The green and the blue LEDs will turn on after each technology detects motion, nevertheless the alarm condition will be

managed by the control unit only if the control unit is armed.

When in operation, there are two ways to restart walk test:

- switching the detector off and on, waiting until it is stabilized
- on control unit keypad, enter installer code and select **SYSTEM TEST > ZONES TEST**

8.2 LED indications

The following indications are valid both if the device is powered with battery only and with additional external power source.

Condition		Red LED	Green LED	Blue LED
Power on				ON 2 s
Stabilisation		ON 15 s		
Tamper		Blinks		
IR fault			Fast blinking	
Video masking				Fast blinking
Walk test	IR pulse		Single blinking	
	Pre-alarm IR		Steady light	
	Video analysis in progress (*)			Blinking for 5 s
	Video pre-alarm			Steady light
	Video transmission in progress	Blinking for 1 s		Blinking for 1 s
	Alarm transmission		ON 1.5 s	ON 1.5 s

(*) indication not provided if external power supply is present

Indications provided in normal operating mode will vary according to the device power supply: battery only or with additional power source too.

Operating mode with battery only

Video section will be active **with system armed only**.

Condition		Red LED	Green LED	Blue LED
Operating mode with system disarmed	IR pulse		Single blinking	
	Pre-alarm IR		Steady light	
	Snapshot in progress	Blinking for 1 s		Blinking for 1 s
Operating mode with armed system	Alarm transmission			Blinks

Operating mode with additional external power supply

Video section is **always** activated.

Condition		Red LED	Green LED	Blue LED
Operating mode with system disarmed	IR pulse		Single blinking	
	Pre-alarm IR		Steady light	
	Video pre-alarm			Steady light
	Video/snapshot transmission in progress	Blinking for 1 s		Blinking for 1 s
	Alarm transmission		ON 1.5 s	ON 1.5 s
Operating mode with armed system	IR pulse		Single blinking	
	Pre-alarm IR		Steady light	
	Video pre-alarm			Steady light
	Alarm transmission		ON 1.5 s	ON 1.5 s

9 IMAGES STORED

The device will log:

- the images captured upon alarm, tamper or masking events (from firmware version 1.3, also short videos);
- snapshots taken via e-Connect or BrowserOne (from firmware version 1.3, also video snapshots).

Images are stored with the following details:

Image type	Triggering event	Images per event	Resolution
Snapshot	-	1	Adjustable
Tamper image	Tamper	1	QVGA-LQ
Masking image	Masking	1	QVGA-LQ
Alarm image	Alarm	1	The image set in BrowserOne (QVGA-LQ / QVGA-HQ / VGA-LQ / VGA-HQ)

If the alarm event occurs during the walk test, the image related to it will overwrite the previous one.

In operating mode with system armed, in each arming cycle only the images referring to the **first 3 alarms** will be saved. No image referring to alarms following the third in the same arming cycle will be saved (only the alarm state will be sent). Images will be saved on the device non-volatile memory.

Images will be cancelled automatically:

- 24hrs after they have been saved;
- 24hrs after the device has been switched on;
- when exiting system test;

- when the device is learned again.


9.1 Privacy settings

The device implements some features to comply with current privacy standards.

- Only users can access by default the storage containing all images of alarm/tamper events using e-Connect software. Users can also capture snapshots after system login.
- The installer can access images only if authorised by users. Users shall authorise the installer as illustrated in paragraph 9.3 p. 13.
- Use BrowserOne software to darken areas in the video detector field of view that you don't want to appear in images. See paragraph 7.2.2 p. 6 (**Enable privacy mode** option).
- The device will save images for 24hrs from their capture. When such interval runs out, images will be cancelled automatically.
- Images downloaded with e-Connect will be available for 24 hours (default). To change such interval, select a different value from **Keep InstaVision content for** menu (see paragraph 9.2.5 p. 13).

9.2 Users access to images

Images can be viewed on control unit page in e-Connect.

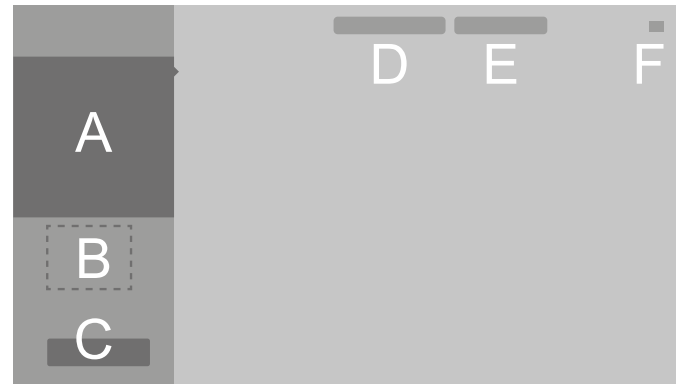
 *To enter e-Connect you have to set a profile first: see the software user manual.*

- go to <https://connect.elmospa.com>




- enter login data to access control unit page
- click on **Login**

e-Connect pages layout



- A** Navigation menu
- B** Control panel information
- C** "Login" button
- D** Quick link to other accounts
- E** Change language
- F** Account options


- on the menu on the left (A) click on  **InstaVision**
- Some functions on this page require to access to the control unit:
- click on **Login** (C)
 - key in user code
 - press OK





The area above (G) of **InstaVision** page shows VISIO2K devices learned to the control unit zones. The preview of the last image downloaded will be displayed for each device.

Some images will be downloaded automatically (no commands needed):

- alarm images when the system is armed (not in walk test mode, nor with system disarmed);
- tamper and masking attempts images (always).

To capture real time snapshots from the device: click on  **Snapshot** button to start capturing images. From firmware version 1.3, it will also be possible to capture video snapshots: see paragraph 9.2.2 p. 12.

 icon indicates that an image is being captured.

 *The download of an alarm image will be interrupted. It will be resumed after the snapshot capture.*

Note: the download of images from BrowserOne will take

precedence over images download from e-Connect. If you start downloading an image from BrowserOne, the download of images from e-Connect will be stopped and will not be resumed. In addition, as long as an image is being downloaded from BrowserOne, it will not be possible to capture snapshots with e-Connect.

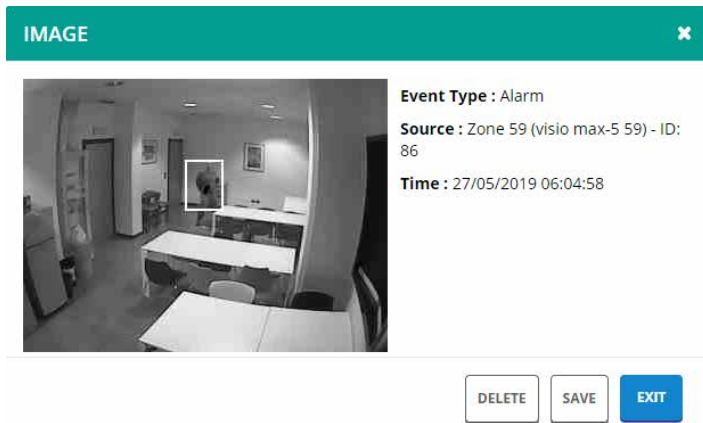
Note: if the detector is also supplied by an external power supply source, any snapshot request is immediately processed: the detector will immediately capture the snapshot, without waiting the next supervision cycle (this may require up to 5 minutes in normal conditions). This function requires VISIO2K to be updated to version 1.1 and specific control unit firmware versions (8.6.10 or above for VILLEGGIO NG-TRX, 3.0.7 or above for PREGIO, 1.0.7 or above for PROXIMA).

The area below (H) of **InstaVision** page shows images downloaded by each device.

The time required to download an image depends on connection type and resolution set.

9.2.1 Visualisation with firmware version below 1.3

Click on an image to display its information.



- event type: event that triggered the image creation or "snapshot".
- source: device that has captured the image
- time: date and time of image creation

To the images (or image areas) a frame of various colours and size will be added according to the triggering event:

Event	Frame size	Frame colour	
		“day” mode (colour)	“night” mode (B/W)
Alarm	areas where motion is detected	green	white
Tamper	whole image	red	white
Masking	whole image	yellow	grey
Snapshot	no frame	-	-

If tracking mode is on, in case of alarm the image will show a line of points (blue in "day" mode, black in "night" mode) corresponding to the movement detected.

Buttons function:

▼ Delete

Click to delete the image.


▼ Save

Click to save the image to the PC.

▼ Exit

Click to close the window.

All operations (view, save, delete) will be saved: click on

 **Access History** to open images log.

9.2.2 Visualisation with firmware 1.3 or above

From firmware version 1.3, it is also possible to take alarm videos and video snapshots.

To make e-Connect detect the video functions for a VISIO2K with firmware version 1.3 or above:

– take at least one snapshot clicking on button

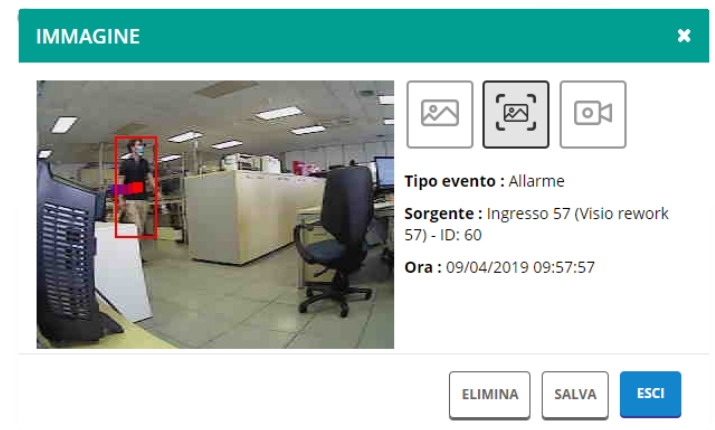
 **Snapshot**

– reload page **InstaVision**

In addition to button  **Snapshot**, button

 **Snapshot video**. will also appear.

Click on an image to display its information.



- event type: event that triggered the image creation or "snapshot".
- source: device that has captured the image
- time: date and time of image creation



Click to display the image only.



Click to display the image with motion tracking. The image features a red box around the target and a line of dots indicating motion direction. Tracking is automatically added.



Click to display the 3 s alarm video (if enabled).

Buttons function:

▼ Delete

Click to delete the image.

▼ Save

Click to save the image to the PC.

▼ Exit

Click to close the window.

All operations (view, save, delete) will be saved: click on




Access History to open images log.

9.2.3 Access to the History page

– on the menu on the left (A) click on  **History**

This page displays all control unit events.

The icon  indicates that a VISIO2K detector has generated an alarm upon the occurrence of a defined event: click on the icon to open the image.

9.2.4 Image authenticity

The captured images are digitally marked in order to guarantee their genuineness.

To check image authenticity:

- save the image to the PC
- open the following web page

<https://connect.elmospa.com/checkimage>

- click on **Load image**
- select the image then click on **Open**

If the image is authentic, the message "Genuine" will appear in the **Immagine** field; user name and capture time will be displayed as well.

In case the image is not authentic, the message "Not genuine" will appear.

9.2.5 Settings

To go to **Settings** menu:

- click on icon  on top right (F)
- click on **Settings**

In detail, in this menu are available:

▼ Allow installer to access InstaVision content

If selected, the installer will have access to such user's images.

▼ Keep InstaVision content for

Select an interval from drop-down menu.

All images will be saved for such interval (default 24hrs); after that time, images will be cancelled automatically.

When finished, select **Save** to save changes and exit.

9.3 Installer access to images




The installer can view the images and videos only if he/she has been granted permissions.

Images can be viewed using e-Connect or BrowserOne.

Users shall authorise the installer as follows:

Authorisation to content access in e-Connect:

- go to user page on e-Connect
- click on  icon (top right)

– click on **Settings**

– select

Allow installer to access InstaVision content

Authorisation to content access in BrowserOne:

- on control unit keypad, enter a user code followed by " * " to access the maintenance menu
- use arrow keys ↑ or ↓ to go to **INSTALLER AUTH.** option
- press **OK**
- press key **2 (=Image)** repeatedly to set the desired option:

▼ NONE

The installer cannot view the contents.

▼ LOCAL

The installer can view the contents only via USB connection (default).

▼ ALWAYS



The installer can view the content only via any type of connection.

- press **STOP** to save and exit the menu

9.3.1 Images access

Once authorised, the installer can access the content (images and videos).

Access via e-Connect

- enter installer's profile on <https://connect.elmospa.com/> site
- on **Users** page, identify the desired user
- click on  to connect to the user's control unit
- click on  **InstaVision** on the left of the browsing menu

Elements in this page are similar to those described in paragraph 9.2 p. 11.

The installer will be able to view all content.

Images will be displayed only if the installer has been granted permissions.

To capture snapshots, enter control unit user code.

Access via BrowserOne

- click on **Radio Devices NG-TRX** tab as indicated in chapter 7.2 p. 6
 - in **Options sensor VISIO2K** pane, click on **Read image...**
- The window **Image Viewer** will open: see paragraph 7.2.2 p. 6 for details.

The installer will be able to view only the last alarm image.

10 MAINTENANCE




10.1 System test mode

To start this function, go to unit menu **SYSTEM TEST > ZONE TEST**.

Device operating mode is the same as in walk test, except that device buzzer is activated upon any alarm.

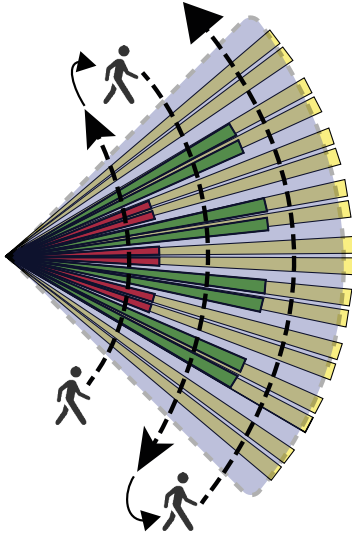
The detector will pass to "detector test" mode only after the first correct transmission has been performed; it could take

up to 5 min (default) from ZONES TEST start.

 *A long permanence in zones test mode may reduce battery lifetime.*

10.2 Periodic test

Carry out a simple test regularly to verify the functionality and the coverage limits of the detector.



- set the device in system test mode (see above)
- walk within the device coverage area
- read the last alarm image with BrowserOne both to check the coverage and to select zones to be darkened.

Detector LED indicators shall respond as shown in the table of 8.2 p. 10 paragraph.

10.3 Parts cleaning


Clean the lens with a soft cloth regularly, especially if the device is installed in dusty or smoky environments (i.e. kitchens).

10.4 Battery replacement

Replace the battery with a new one of the same type only.

Follow this procedure:

- open the housing (see mounting procedure)
- disconnect external power source if present
- remove the discharged battery
- wait 30 s
- press and release the Tamper button 3-4 times in order to discharge any charged capacitors
- position the new battery (see mounting procedure)
- once the new battery has been inserted, check the device accurately starts up: its LEDs have to respond as indicated in the table on paragraph 8.2 p. 10

 *if the startup procedure does not properly take place: remove the battery, insert it again and repeat the previous step*

- connect external power source, if previously present

- close detector case
- reset any discharged battery memory on control unit or compatible receiving device

Discharged batteries shall be disposed of according to current laws and using specific containers.

Materials used are very harmful and polluting if dispersed in the environment.

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EU DECLARATION OF CONFORMITY

Hereby, EL.MO. Spa declares that the radio equipment VISIO2K is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: www.elmospa.com – registration is quick and easy.



GENERAL WARNINGS



This device has been designed, built and tested with the utmost care and attention, adopting test and inspection procedures in compliance with current legislation. Full compliance of the working specifications is only achieved in the event the device is used solely for its intended purpose, namely:

Wireless dual-technology detector (IR + videoanalysis) for NG-TRX intrusion detection systems.

The device is not intended for any use other than the above and hence its correct functioning in such cases cannot be assured. Consequently, any use of the manual in your possession for any purpose other than those for which it was compiled - namely for the purpose of explaining the product's technical features and operating procedures - is strictly prohibited.

Production processes are closely monitored in order to prevent faults and malfunctions. However, the components adopted are subject to an extremely modest percentage of faults, which is nonetheless the case with any electronic or mechanical product.

Given the intended use of this item (protection of property and people), we invite you to adapt the level of protection offered by the system to suit the actual situation of risk (allowing for the possibility of impaired system operation due to faults or other problems), while reminding you that there are specific standards for the design and production of systems intended for this kind of application.

We hereby advise you (the system's operator) to see that the system receives regular routine maintenance, at least in accordance with the provisions of current legislation, and also check on as regular a basis as the risk involved requires that the system in question is operating properly, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. You must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply.

If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

INSTALLER WARNINGS



Comply strictly with current standards governing the installation of electrical systems and security systems, and with the manufacturer's directions given in the manuals supplied with the products.

Provide the user with full information on using the system installed and

on its limitations, pointing out that there are different levels of security performance that will need to suit the user's requirements within the constraints of the specific applicable standards. See that the user looks through the warnings given herein.

Work involved in the design, installation and maintenance of systems incorporating this product should be performed only by personnel with suitable skills and knowledge required to work safely so as to prevent any accidents. It is vital that systems be installed in accordance with current legislation. The internal parts of certain equipment are connected to the mains and therefore there is a risk of electrocution when maintenance work is performed inside without first disconnecting the primary and emergency power supplies. Certain products include batteries, rechargeable or otherwise, as an emergency backup power supply. If connected incorrectly, they may cause damage to the product or property, and may endanger the operator (explosion and fire).

USER WARNINGS



Check the system's operation thoroughly at regular intervals, making sure the equipment can be armed and disarmed properly.

Make sure the system receives proper routine maintenance, employing the services of specialist personnel who meet the requirements prescribed by current regulations.

Ask your installer to check that the system suits changing operating conditions (e.g. changes in the extent of the areas to be protected, change in access methods, etc...)

MAIN SAFETY RULES

The use of the device is forbidden for children and unassisted disabled individuals.

Do not touch the device when bare footed, or with wet body parts. Do not directly spray or throw water on the device.

Do not pull, remove or twist the electric cables protruding from the device even if the same is disconnected from the power source.

DISPOSAL WARNINGS



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In accordance with Directive 2012/19/EU on waste electrical and electronic equipment (WEEE), please be advised that the EEE was placed on the market after 13 August 2005 and must be disposed of separately from normal household waste.

This product needs batteries for correct functioning. Exhausted batteries have to be delivered to dumping grounds authorized for battery collection. The materials used for this product are very harmful and polluting if dispersed in the environment.