



Intrusion Detection Line

Vision2K

NG-TRX[®] sensor with advanced
video analysis functions



VISIO2K: The smart device keeping an ever-alert eye out for your security

VISIO2K is an NG-TRX wireless sensor with advanced video analysis functions. It breaks the mould of traditional intrusion-detection systems as it combines the potential of an IR sensor with “capture, real-time motion analysis and image transmission” functions. Essentially, with its built-in camera working in conjunction with the infrared sensor, it

can analyse the area to be protected and send an image in real time based on specific events (alarm, tampering and masking) only once they have been determined as threat events. This effectively minimizes the risk of false alarms and the user can determine immediately whether the situation poses an actual threat and act accordingly.

The sensor works in perfect synergy with e-Connect, the EL.MO. security system supervision platform, via which the user can look at images and receive push notifications, in addition to viewing the log of who has accessed the system.

“There is nothing quite like it in the marketplace: the reliability of the NG-TRX bidirectional wireless system paired with the speed of the e-Connect platform has resulted in a smart sensor with advanced video analysis functions”

Strengths



Wireless
range 1 km



Dual technology:
IR + Video Analysis



Anti-masking
function



Images uploaded
to e-Connect
server



Programming via
software, incl. re-
mote programming

Advantages of NG-TRX[®] connection:

- 📶 Sensor-control unit wireless range up to 1 km
- 🔒 Encrypted transmissions
- 💻 Remote programming
- 🛡️ Service continuity guaranteed
- 📶 Independence from Wi-Fi network

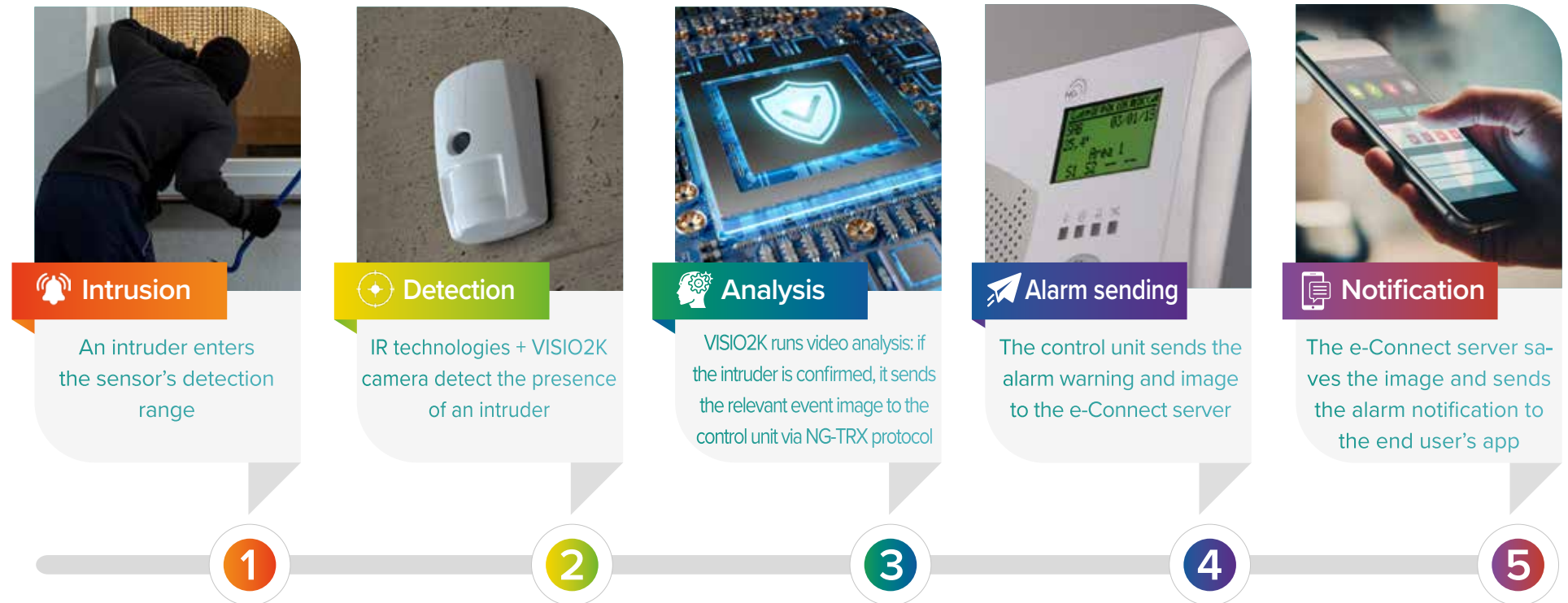


How does it work?

VISIO2K's principle of operation is as simple as it is effective. Unlike commercially available video verification systems, VISIO2K is for all intents and purposes a smart sensor that leverages 2 different detection technologies: infrared and Motion Video Analysis (IR + MVA). The alarm

is generated when both technologies are triggered in "AND" mode - in order to minimize the risk of false alarms - and sent to the control unit. Another fundamental aspect is the sensor's communication with the control unit via an NG-TRX encrypted protocol with a range of up to 1 km: the

unit will receive and send the alarm warning to the user, along with the relevant images, via the e-Connect platform according to the predetermined channels (GSM/LTE, LAN, Wi-Fi). All this adds up to guaranteed continuity of service and secure and effective communications at all times.

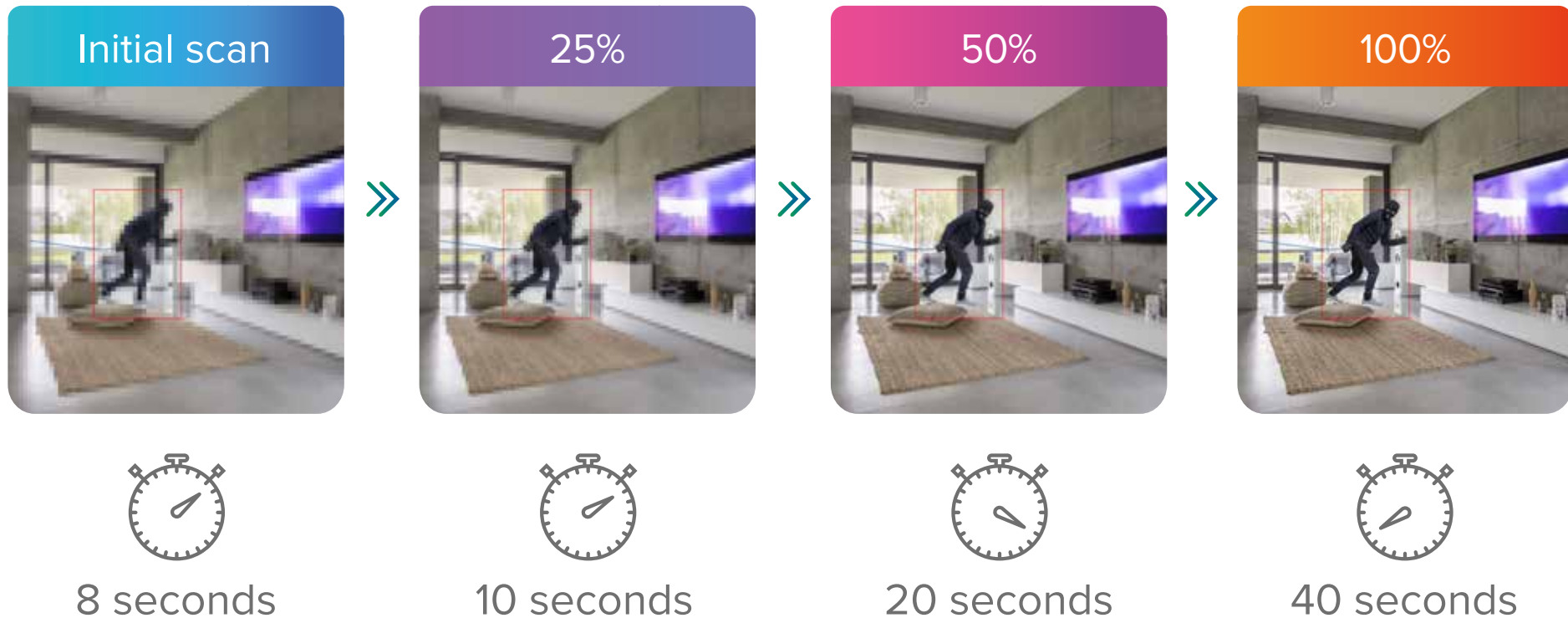


How are the images transmitted?

Images are sent from the sensor to the control unit and from the control unit to the user via the e-Connect platform by means of a process called Progressive Image Transfer. This process delivers

a decent-quality preview of the image straight away, more than good enough for the user to understand what is going on inside the protected area. The image's resolution continues to improve

progressively until, in a matter of seconds, the image is perfectly clear. The goal is to save time and make the system fast and, at the same time, reliable.



What does it look like?



GDPR compliance

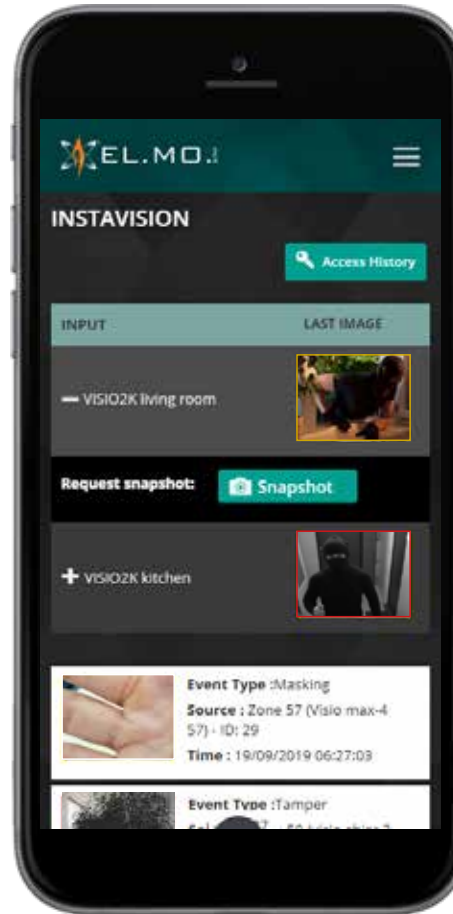


Push notifications on the e-Connect app



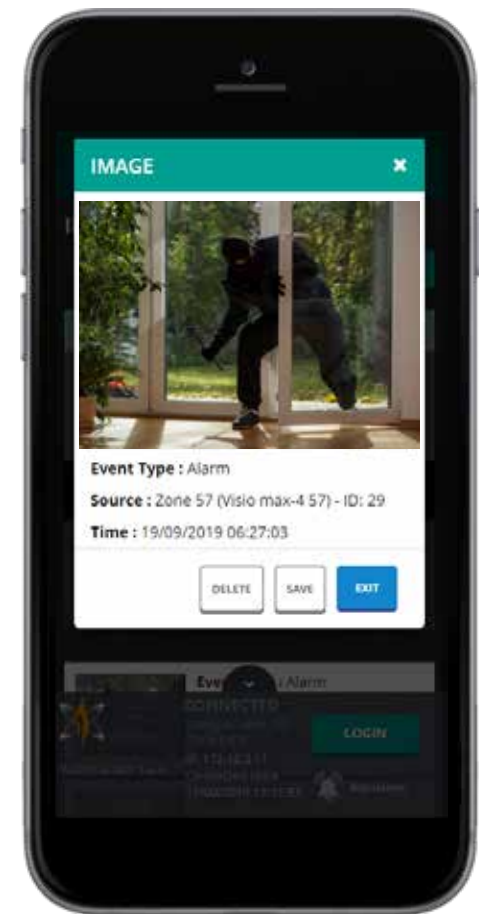
You receive the push notification straight to your smartphone in the event of an alarm

Control panel



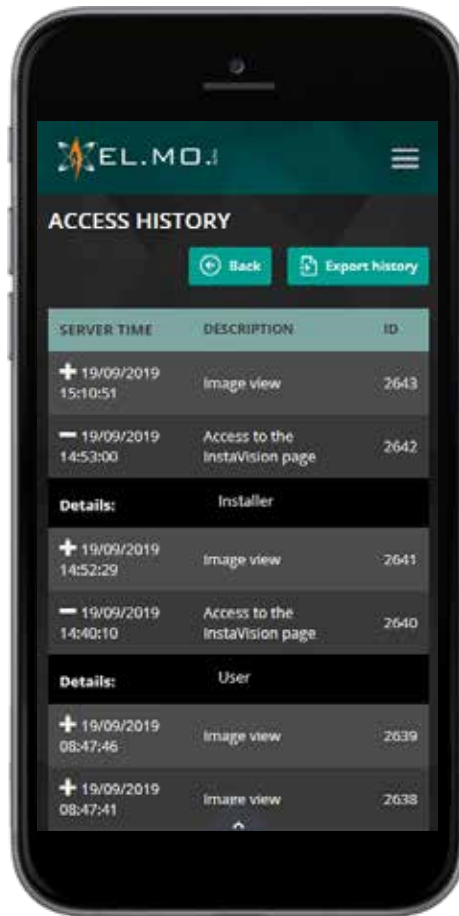
Control panel allowing you to view the list of your system's VISIO2K sensors and all the images taken, and take snapshots of the protected room

Images in XL format



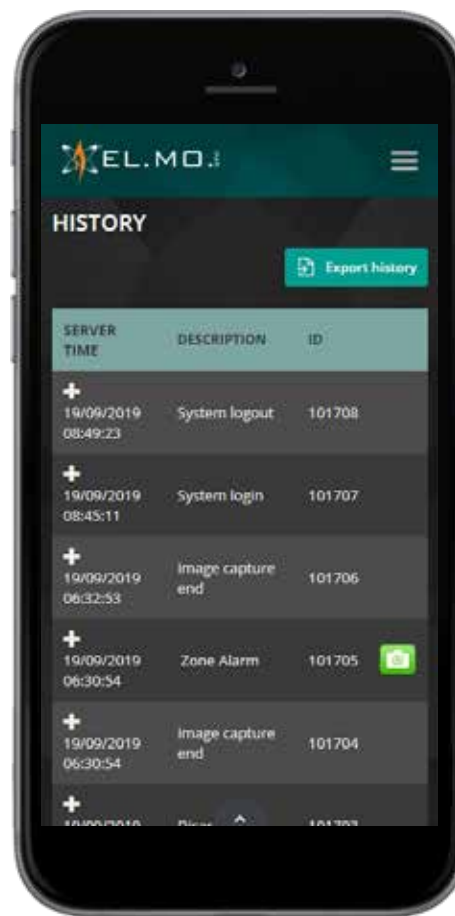
Images can be viewed in XL format with relevant information

Access log



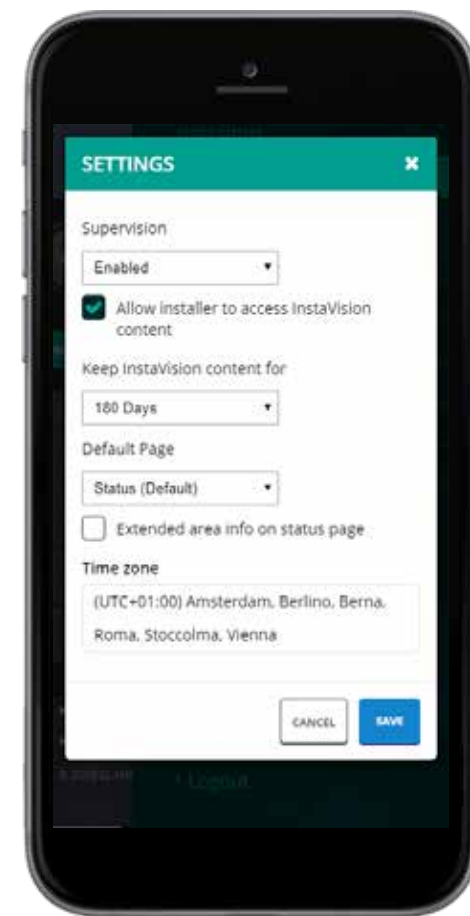
Consult the access log to check what images have been viewed, by whom and when

Event log



View the intrusion detection system's event log with the distinctive VISIO2K sensor alarm icon







System settings



Option of enabling installer supervision and access to images. Image storage time setting

Local and remote programming and setup

What can the installer do directly via BrowserOne?

-  Set the sensitivity of the IR component and video component separately
-  Set disabling times and range for the IR section
-  Set the number of frames, blob size* and image quality
-  Set privacy mode and video masking function
-  Enable the sensor's built-in LEDs and buzzer
-  Enable motion tracking, i.e. the trail of dots in the image that show the motion detected.

* Minimum number of pixels that must vary in each frame for motion to be detected.

“Area of Interest” function and Privacy mode

VISIO2K offers an important feature that is very useful for restricting the sensor's coverage area to certain specific areas while blocking out others: “areas of interest” selection. You can work on a grid of 5 rows by 7 columns directly via the BrowserOne configuration software and select which squares you want to exclude

from detection. Essentially, any motion inside those squares does not generate an alarm (grey area in the image below). Blocking out an area allows you to disable only the relevant video analysis: video will still be taken in this area, which will be shown in the alarm images taken.

To fully black out a blocked-out area, you can activate privacy mode (black area in the image below). These features are ideal for blocking out areas where the risk of false alarms is very high (for instance, because animals pass through them) or where the generation of images is not allowed.

Areas of interest



Motion within this area will not be detected, but the image will still be visible

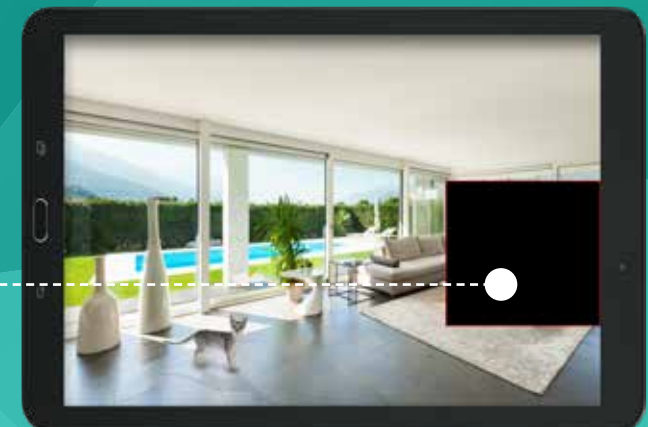
Final result



Privacy mode



Motion within this area will not be detected and the image will not be visible either



IR illuminator

The dark is not an issue for VISIO2K. Unlike most devices in the marketplace, it actually has an infrared illuminator that allows vision in any light conditions, even the most challenging.

When ambient light is extremely low, the sensor automatically turns on the IR illuminator and switches to black and white vision. In this mode, it will continue to perform its security duties non-stop.

Actual situation



Image picked up



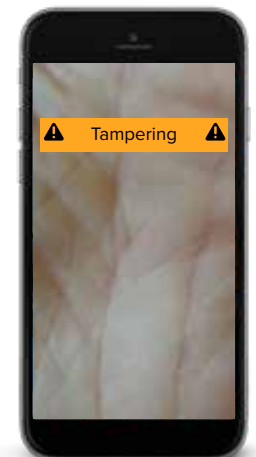
Anti-masking

In addition to not being afraid of the dark, VISIO2K takes tampering and acts of vandalism in its stride. It can actually detect attempts to obscure the unit's vision, generating a specific alarm. Essentially, when a suspicious character places his hand or a box over the camera lens, VISIO2K realizes what is happening and promptly sends a tamper alert to the control unit and then to the end user's e-Connect app.

Actual situation



Image picked up



VISIO2K technical features

Technology	IR + Motion Video Analysis
Wireless range	1 km with clear line of sight
Compatible lines	NG-TRX Villeggio and GATEWAY2K series (the NG-TRX Villeggio and GATEWAY2K NG-TRX wireless module must be updated to version 4.8 or higher)
Use	Indoor. It can also be installed with SNDVISIO 3D adjustable joint (optional)
Detection range	Max. 8 m
Operating mode	Battery powered: video analysis comes on after IR pre-alert Combination battery and 12V dc powered: video analysis always on in conjunction with IR
IR detection zones	18 zones arranged over 4 floors
IR coverage area	Volumetric with 81° coverage pattern
Video coverage area	90° horizontally, 70° vertically
Video anti-masking	Yes
Day/night video operation	IR filter + IR illuminator turned on automatically based on the light levels detected by the light sensor
Motion video analysis	Through processing of images relating to alarm/tampering/video masking
Supervision time	Set time of 5 minutes
Settable parameters	IR sensitivity, IR range, Video sensitivity, Video quality (4 options), Areas of interest (35 squares), Video tracking enable, Masking enable, Masking sensitivity
Image viewing	Via e-Connect (push notifications, log viewing and snapshots) Via BrowserOne for diagnostics and installation (last alarm or snapshot)
Access to images	End user Installer (with end user's permission)
Snapshot function	Yes
Image display	Images with borders in different colours depending on the event (Alarm/tampering/video masking)
Protection rating	IP3X
Dimensions and weight	W 65 x H 135 x D 45 mm, weight 175 g
Power source	2ER14505M battery provided and option of 12V dc power supply (range 11-15 V) with terminal connection
Power consumption	Running on 7.2 V: 13 µA (on standby), 23 mA (while transmitting), 188 mA (max.) Running on 12 V: 75 mA (on standby), 103 mA (while transmitting), 115 mA (max.)
Battery life	1.5 years (with video masking not switched on)
Compliance	EN50131-1, EN50131 2-2, EN50131-5-3, grade 2, environmental class II

To sum up VISIO2K's key concepts:



What is VISIO2K?

VISIO2K is a sensor with advanced video analysis functions. It leverages 2 detection technologies (IR and Motion Video Analysis) that work in synergy. Unlike third-party video sensors, VISIO2K is a smart sensor that performs true video analysis.



Where do I receive the images?

When the control unit receives the images from the sensor, it sends them straight to the e-Connect server, which will forward them to the e-Connect app on your smartphone or tablet. You can also view images on your PC via your e-Connect account webpage.



Does VISIO2K use a Wi-Fi connection?

No, VISIO2K uses NG-TRX bidirectional wireless technology to communicate with the control unit. This keeps it safe from any malfunctioning in the Wi-Fi line, exploiting an encrypted, unhackable protocol and achieving ranges of 2 km.



What happens when it's dark?

When it's dark, VISIO2K makes use of an IR illuminator (a special type of illuminator that exploits infrared rays) that makes vision possible even in total darkness.



Does VISIO2K send images or video clips?

VISIO2K sends images, not videos. This is because its internal video analysis detects anything that moves and only shows the image of that - in the form of a single photo - graphically identifying the moving subject and its direction.



Who accesses the images captured by VISIO2K?

By default, only the user can access the images and decide how long they are stored for. Only if he wants, he can enable the installer for supervision purposes and allow the installer to view the images. In addition, he can access the log at any time and check to see who has accessed the images.





Via Pontarola, 70 | 35011 Campodarsego (PD) - IT
Tel: +39.049.9203333 | Fax: +39.049.9200306
e-Mail: international@elmospa.com | www.elmospa.com

