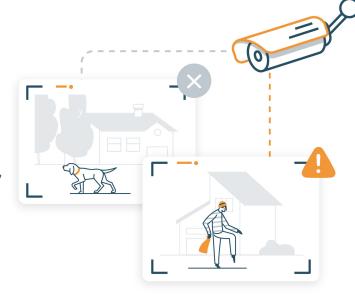


Secury360: Building the future of perimeter detection.



Introduction

By connecting a Secury360 box to any camera system, you'll unleash our revolutionary artificial intelligence on it. You'll upgrade it to a **99,998% accurate perimeter detection system** and say goodbye to false alarms forever.



Anyone familiar with **Secury360** knows that we are always one step ahead of the rest, thanks to our **revolutionary Edge & Cloud A.I. technology** that serves as the core of our patented outdoor detection solution.

Adding our A.I. to an (existing) camera detection system ensures that the **observed images are analysed in real-time and on the spot. This makes your systems more accurate, and false alarms are reduced to a minimum**. Not only will customers only be disturbed if there's actually a person on their property, but the system will cost them less.

Control rooms will love you as well, as less false alarms means less work for them, meaning their operators also have more time to prevent real threats.

In this paper we will discuss:

- The problem with classic camera detection set-ups
- How Secury 360 takes care of false alarms and ensures 99,998% detection accuracy
- Edge & Outdoor Detection: What are the advantages of analysis "at the edge"?



Secury360 links to camera detection systems and filters messages sent to the alarm centre



The problem with classic camera detection set-ups

CCTV with motion detection is probably the best known type of perimeter intrusion detection system on the market. They can either be freestanding or mounted on a barrier. **Their great advantage: visual verification of intruders.** Camera detection systems **work with a control room**; qualified personnel either on site or remotely monitoring the images continuously. This enables them to anticipate intruders.

These free-standing perimeter intrusion detection systems work by constantly analysing their field of vision, watching for movements that would indicate the presence of an intruder. Each frame is stored in the system and successive frames are compared. If the next frame shows a different change, an alarm is triggered to alert the security personnel.

However, standard CCTV with motion detection still has some drawbacks.

CCTV systems still have difficulty distinguishing people from objects or animals. Moreover, certain weather conditions are a challenge for motion detection CCTV. Lightning strikes can cause unwanted alarms. Rubbish cans and equipment on the premises may fall over.

Fog and heavy rain may obstruct the line of sight. Adaptations are also needed so that these systems also work in darkness. This can be done by installing a light source near the cameras, for example, or by opting for special (thermal) CCTV technology..

For the vast majority of sites and terrains, camera detection is the most suitable solution on the market. They allow for visual verification of reports, and intruders are also immediately captured on screen. This makes it possible to review images (useful if an intruder persists), although with most systems this is only possible if you remove the storage (e.g. a built-in SD card) from the camera. Thanks to the rise of cheap and high-quality digital (IP) cameras, most installations are now digital, and a lot cheaper too. Thus, camera detection actually has only one major disadvantage: false alarms.

PROS	CONS
Visual verification	May be sensitive to environmental factors such as rain, wind and snow
Versatile	False reports by animals
Terrain can be uneven and may contain bends and corners	Must have direct view
Relatively cheap (depending on model and options such as thermal)	



How Secury360 takes care of false alarms

The Secury 360 solution consists of the Secury 360 box, which connects to your camera systems (no cameras yet? No problem!) and releases innovative Edge and Cloud A.I. on the images.

The A.I. analyses and filters the images, and makes a distinction between humans, animals and objects. In this way, only human detections are forwarded, and the control room and end user are spared those annoying false alarms.

To understand whether an object is a vehicle, a human, an animal or anything else, we can "train" a camera system to detect and classify the object. This can give us insight into an almost unlimited number of object classes and contexts, and improves the accuracy of the system.

Standard analytics would detect that a vehicle has triggered an alarm. But thanks to an **intelligent Edge deep learning layer** on top of that, we can go into even more detail in the future: What kind of vehicle is it? Is it in an area that could cause problems, or is it on the side, and there is no immediate danger? Is it a truck with loose freight that could fall off?

The Secury360 box is installed locally, and can be updated remotely. This ensures that any Secury360 system stays up to date. Permanently. That's right, no more on-site visits to upgrade it.

Moreover, end users can use our handy app to keep an eye on the situation on your site live, and to review the images (without having to read a memory card!).



Our Numbers Don't Lie

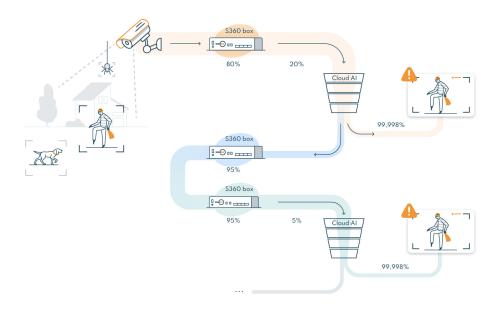






That's great, but how does Secury360 actually work?

The Edge A.I. gradually gets to know your terrain, learns, and gets better at recognising intruders. Thus, its accuracy increases over time, and the number of false alarms continuously decreases, until the Secury 360 box perfectly filters false alarms. Until then, our cloud A.I. comes to the rescue, filtering once more for all alerts that get past the box.



But wait... what is Edge Computing exactly?

When we talk about edge computing (versus cloud computing), we are talking about where your data resides, and where the actual processing and analysis of the data takes place.

With cloud computing, data collected on a computer or device is uploaded to the cloud, where it is stored and processed. Think of Google Drive, Dropbox or iCloud.

The cloud can therefore be viewed as a centralised data collection point to which all connected IoT devices send their data.

In Edge computing, that same processing takes place at or near the source of the data, rather than transmitting it through the cloud. In IoT, this means processing takes place at the "thing" level - the connected device.

If your IoT peripheral contains A.I., we talk about Edge A.I., and the algorithms that control your AI. are processed locally on a hardware device, using the data collected by your IoT sensors. For this reason, Edge A.I. does not need a network connection to do its work (as with our Secury 360 module).

In the world of video surveillance, one of the main advantages of edge computing is the ability to perform advanced analysis using artificial intelligence and deep learning in or near the cameras themselves.

This is also how our Secury 360 module works; connecting the module to a camera detection system therefore provides an instant upgrade!



To the edge: How is edge computing transforming the way we approach video surveillance?

The number of devices at the edge of our security networks is growing, and they play an increasingly critical role in our safety and security. The advantage of edge computing is that more capacity is built into the connected device itself, so the information processing power is as close to the source as possible.

For a video surveillance network, this means more actions can be performed on the cameras themselves. The role of A.I., machine learning and deep learning in video surveillance is growing, so we can 'teach' our cameras to be much more intuitive about what they are filming and analysing in real time. For example, is the vehicle in view of the camera a car, a bus or a truck? Is it an animal or a human being heading towards your building? Is it an object in the path, or just a shadow?

These insights will alleviate the human input needed to analyse data and make decisions. Ultimately, this should speed up response times - potentially saving lives - and provide valuable insights that can shape the future of our buildings, cities and transport systems.



Thanks to Edge, your detection system learns continuously

At first, the edge analysis of surveillance camera images only shows that something or someone is moving. After further analysis by video management systems on centralised servers (at Secury360 this is done by our Cloud A.I.), a human being is (for the time being) needed to interpret what it is exactly, and whether it poses a threat or security risk. **This role is taken up by a local alarm centre.**



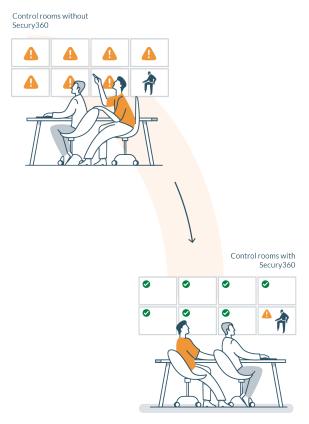


Edge & Outdoor Detection: What are the advantages of analysis "at the edge"?

The increased accuracy of Edge A.I. - and its ability to distinguish between multiple object classes - immediately reduces the number of false positives.

This means that less time and resources are needed to investigate these false positives. Not insignificant, since 98% of the alarms a monitoring centre receives are false, and every false alarm that slips through their hands costs them money. And more importantly, the more false alarms there are, the greater the chance that the control room will respond too late or not at all to a real burglary attempt.

Edge A.I also allows your outdoor detection system (like Secury360!) to be **proactive**. Intruders are detected immediately upon entering the premises, and a faster and appropriate response is provided (than similar systems without Edge A.I).



Another important advantage of Edge analytics we have already mentioned is that the **analysis takes place on the highest quality video**, as close to the source as possible. In a traditional model - when the analysis takes place on a server - video is often compressed before it is transmitted, so the analysis is performed on lower quality video. In the case of an actual break-in, and the subsequent report to the police, this can make the difference between useful evidence - or just not.

In addition, when analytics is centralised - i.e. takes place on a server (on the cloud) - and more cameras are added to the solution, more data is transferred, requiring more servers to perform the analytics. By implementing powerful analytics at the edge of the network, **only the most relevant information** is sent across the network, reducing the load on bandwidth and storage.

Choosing outdoor detection with Edge A.I. delivers results from the moment of installation, and that is just the beginning. As the A.I. continually learns, your outdoor detection system will only become more accurate, and security-related costs will only decrease. The possibilities are truly endless.



Conclusion

As you can see, the Secury360 solution has a number of benefits for every stakeholder. End users might not care about the superior processing or analysis capabilities that our Edge & cloud A.I. technology provides. But they will be thankful for the absence of false alarms, and the ability to detect and deter intruders before they cause damage. By offering Secury360, you'll become a preferred partner for any control room, giving them the breathing room to focus on what truly matters - identifying threats as soon as possible.

This revolutionary technology allows our Secury 360box to transform any camera detection system into a proactive perimeter security system. Because the Edge A.I. keeps learning, any property is effectively "future-proofed". And the cherry on top: a price tag that other perimeter detection solutions can only dream of.

Don't believe us? We're more than happy to set up a demo.

Then give us a call, or scan the QR-code to book a meeting! -->



Advantages of Secury360:



High Accuracy



Cost Saving



Easy to use



Next-gen tech

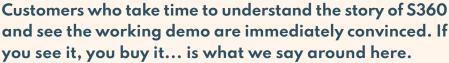


Mobile App



Businesses & homes





Jan de Wilder, CCO GDW Security





Our Partners

We believe that the right security is supported by an ecosystem of stakeholders committed to excellence. And that is why we are building a network of selected partners in each country.

Discover some of them here!



Scan & discover all partners in our partner center!

Technology partners:

















Control rooms:

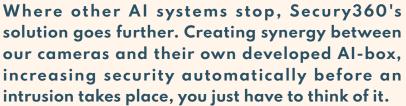












Manuel Lambrechts, Key Account teamleader BeLux Hikvision



