



**IRISITY**

# IRIS+™ Camera Filter

# IRIS+™ Camera Filter

**Dedicated to improve the efficiency of deployments with false alarms**

- Enterprise grade alarm filtering
- Reduce operator fatigue
- Increase operational efficiency
- Upgrade legacy systems with state-of-the-art detectors
- Faster reaction time to real incidents
- Increase trust in your system

# How does camera filter work?

When :

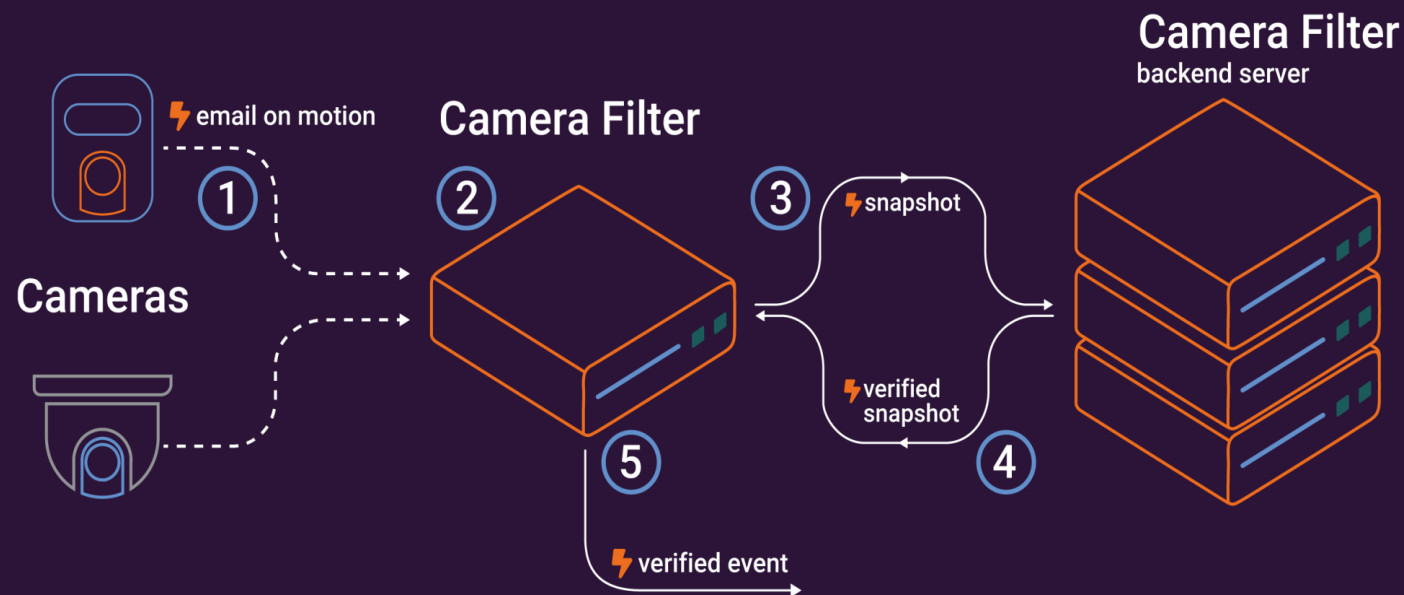
1. Lots of alarms
2. High rate of false alarms
3. Low bandwidth



Person  
detection

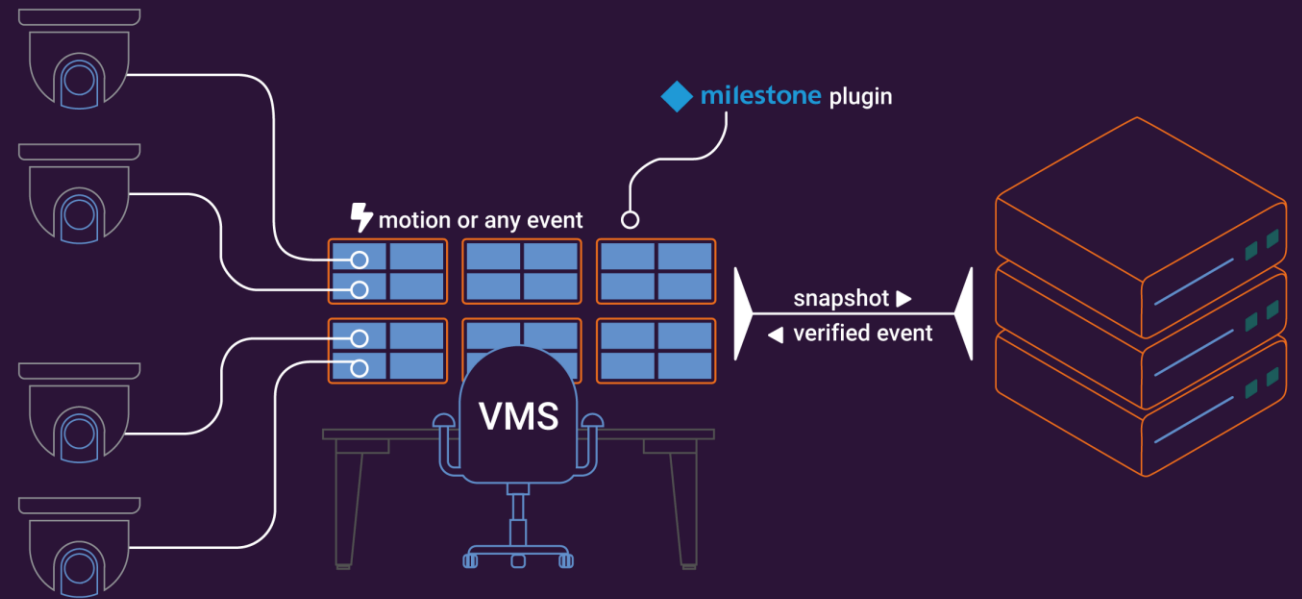


Vehicle  
detection  
(8 types)



# How does Camera filter work with Milestone

- Triggered by events which are recognised by Milestone XProtect, Camera Filter can literally filter these events in order to drastically reduce false alarm rate, turning primitive features to an infallible defence system.
- There are two ways of sending and managing alarms with Camera Filter:
  - A) through the *Alarm Manager*, or
  - B) alternatively, via e-mail, using the built-in e-mail notification feature of Milestone XProtect.
- Triggering can be :
  - *Motion start / Motion stopped* event detected by Milestone XProtect
  - *Intrusion detection* event triggered by the camera and *recognized* by Milestone XProtect
  - Any kind of *Person detection* or *Motion* which is manifested as an event in Milestone XProtect event server



Read more : [https://docs.ultinuous.com/ufilter/docs/u-filter/ufilter\\_milestone](https://docs.ultinuous.com/ufilter/docs/u-filter/ufilter_milestone)

# IRIS+™ Camera Filter

## Features :

- Object detection
- Milestone integration
- Motionless object filter : Turn on motionless to filter only moving objects
- Email based integration for Immix and WinGuard
- NX Witness, ROI, Size filter (set min and max object size (height))



**Nvidia Jetson® Xavier NX**  
Manufacturer: ADLINK

10 filtering requests per second

GPU: NVIDIA Volta with 384 NVIDIA CUDA cores and 48 Tensor Core, plus 2x NVIDIA

CPU: 6-core Carmel Arm 64-bit CPU, 6MB L2 + 4MB L3

Memory: 8GB 128-bit LPDDR4 Memory

Storage: 500GB SSD + 32GB eMMC 5.1



Local or cloud server



GPU is required

Performance was tested on  
Amazon G3S XLarge 15 requests per second  
Google V100 (2 GPU, 24 cores) 167 requests per second

# IRIS+™ Camera Filter

## Case story

# IRIS+™ Camera Filter

## for hunter/trail cameras

### Solution benefit

- Low bandwidth requirement - works with 4G or 3G coverage
- Picture based analytics
- No physical infrastructure necessary
- Integrated to VMSs - Operating center can monitor



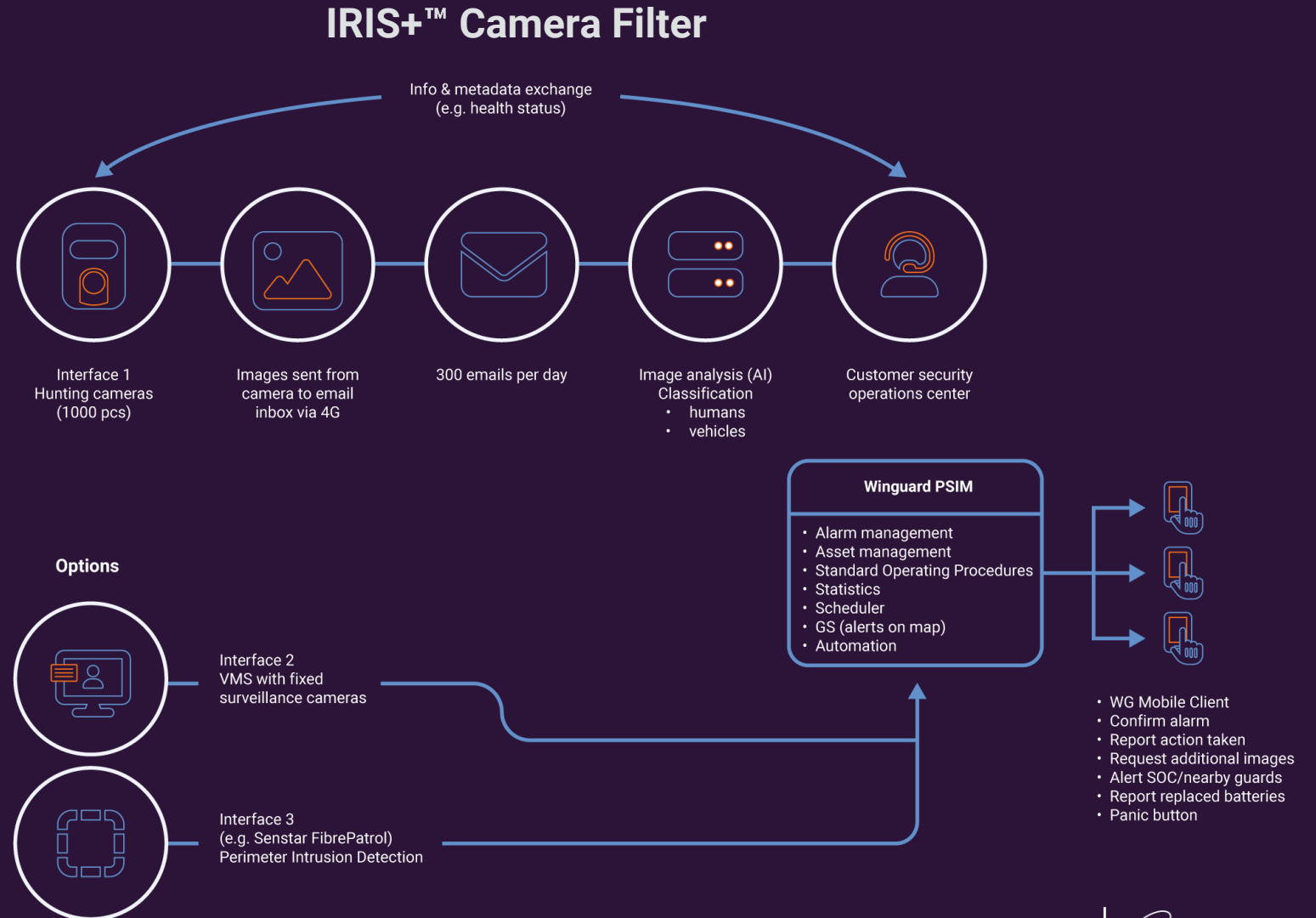


# IRIS+™ Camera Filter

## for hunter/trail cameras

### Existing Solution

1. Image device hunting cameras (approx. 1000 pcs)
2. Images sent from camera to email inbox via 4G
3. 300 emails per day
4. Manual handling, forwarding of info and delegation of tasks
5. Actions



# IRIS+™ Camera Filter

## for hunter/trail cameras

Classified object

The screenshot displays the IRIS+ operator GUI. On the left is a sidebar with a tree view of the system hierarchy. The main area is divided into three panes: a top-left pane showing a camera feed of a forest with a red bounding box around a person; a top-right pane showing a map with a red dashed circle around a sensor; and a bottom pane showing a table of events. An 'Alert' panel is open on the right side of the main area. Arrows point from labels to specific elements: 'Classified object' points to the person in the camera feed; 'Image event' points to a row in the event table; 'Geolocated sensor' points to a sensor on the map; and 'Guard instructions (SOP)' points to the 'Alert' panel.

Alert panel

Image event

Geolocated sensor

Guard instructions (SOP)

Note: several features of the operator GUI is not shown in the above screenshot, such as scheduler, statistics etc.

# IRIS+™ Camera Filter

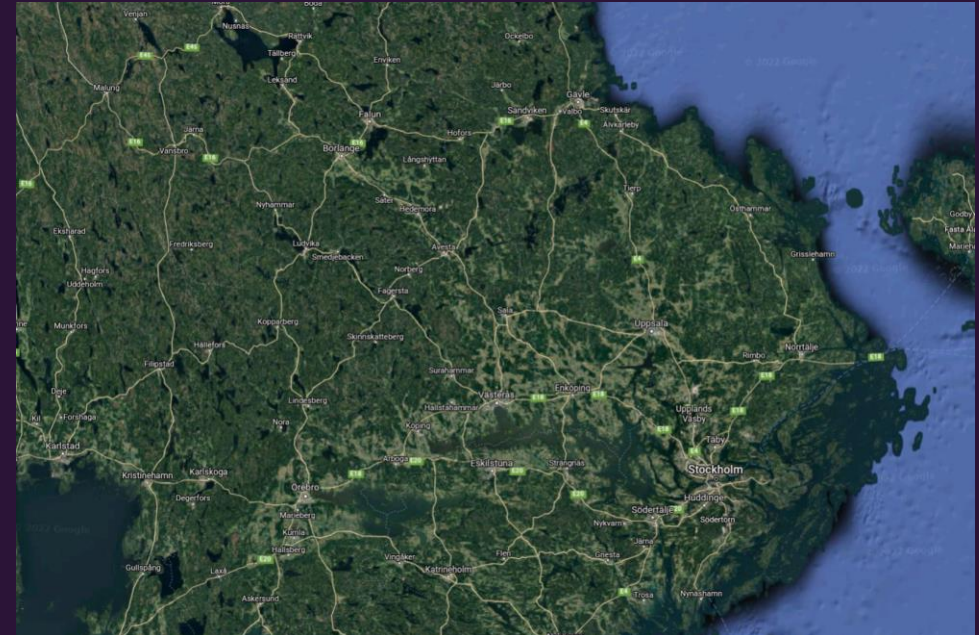
for hunter/trail cameras

## Test scenario

- Test accuracy
- Test local appliance & cloud solution
- Test with low bandwidth

## Field test result

- 26000 snapshots converted to less than 360 events (24h)
- 22x less false alarms compared to a motion detector
- Scalable solution depending on the load
- Local appliance or in the cloud (EC2)



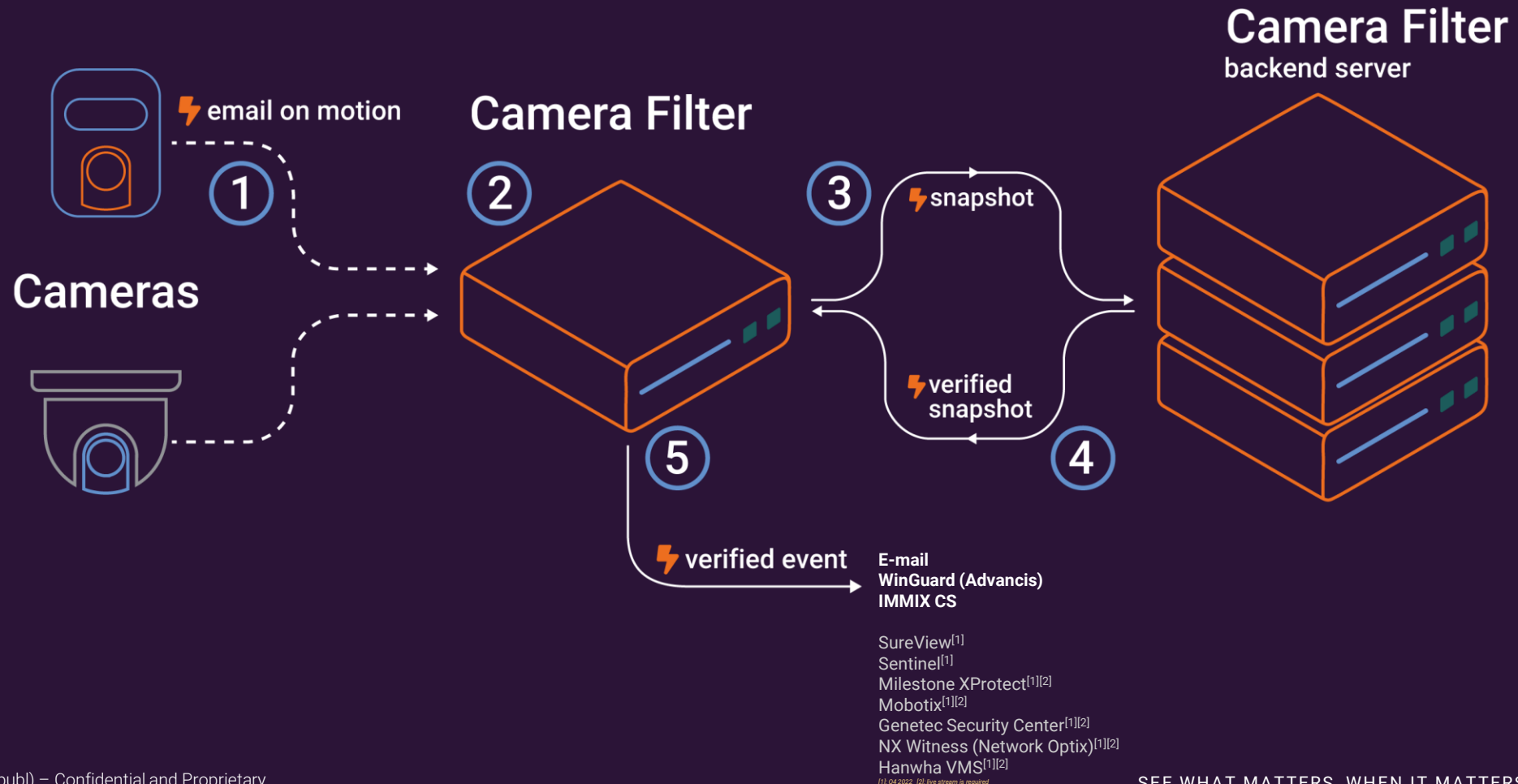


# IRISITY



# IRIS+™ Camera Filter

## Remote Service



# IRIS+™ Camera Filter

## Intrusion detection



### Nvidia Jetson® Xavier NX

Manufacturer: ADLINK

10 filtering requests per second

GPU: NVIDIA Volta with 384 NVIDIA CUDA cores and 48 Tensor Core, plus 2x NVIDIA

CPU: 6-core Carmel Arm 64-bit CPU, 6MB L2 + 4MB L3

Memory: 8GB 128-bit LPDDR4 Memory

Storage: 500GB SSD + 32GB eMMC 5.1



### Local or cloud server



GPU is required

Performance was tested on  
Amazon G3S XLarge 15 requests per second  
Google V100 (2 GPU, 24 cores) 167 requests per second