

eocortex   4.5

# Built for the greater

opportunities, advantages and  
prospects



EVOLUTION  
of performance for large-  
scale systems

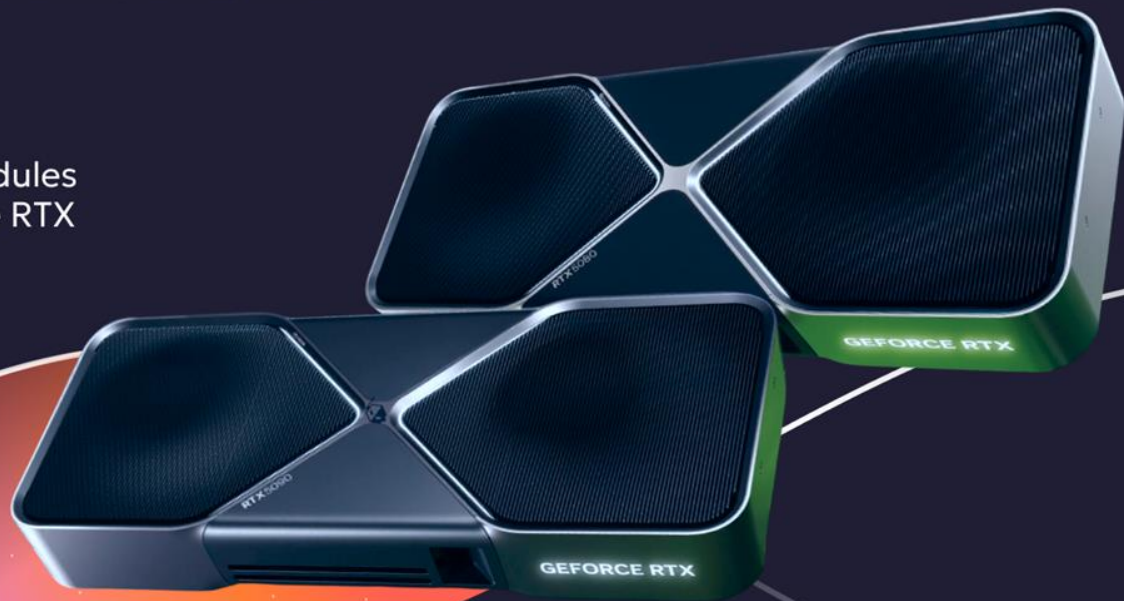


4.5

Evolution of performance for large-scale systems

## Whats new in 4.5?

Neural network analytics modules now support NVIDIA GeForce RTX 50xx series graphics cards



PTZ control integration for Panasonic WV-SPN-631 cameras with an external pan-tilt mechanism

Motion detection is now integrated for Uniview cameras

## Whats new in 4.5?

Video analytics module optimization

### Performance improvements

- Now, the same hardware can process more cameras with active modules
- The GPU load treshhold at which frame drops begin in the module (accuracy degradation) has been increased from 60-70% to 90-100% (provided the CPU is also maxed out)

License plate recognition



Object classification and counting



### License plate recognition improvements

#### 1. New vehicle brand detection method

The method for determining a vehicle's brand has changed - it is now identified by both emblem and silhouette (previously only by silhouette). This approach significantly reduces the number of false brand recognitions

#### 2. New brands

Two new brands have been added: Daihatsu and Tesla

#### 3. Recognition without a brand

Vehicles of a specific color/type can now be recognized without identifying their brand - if the brand could not be recognized

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Evolution of performance for large-scale systems

## Significant changes 4.2 4.5

### Software usability

1. Added Linux Flatpak client
2. Complete overhaul of the camera tree and views layout
3. Expanded capabilities of the configurator when working with cameras



## Evolution of the Interface

### New Camera Tree in the Configurator

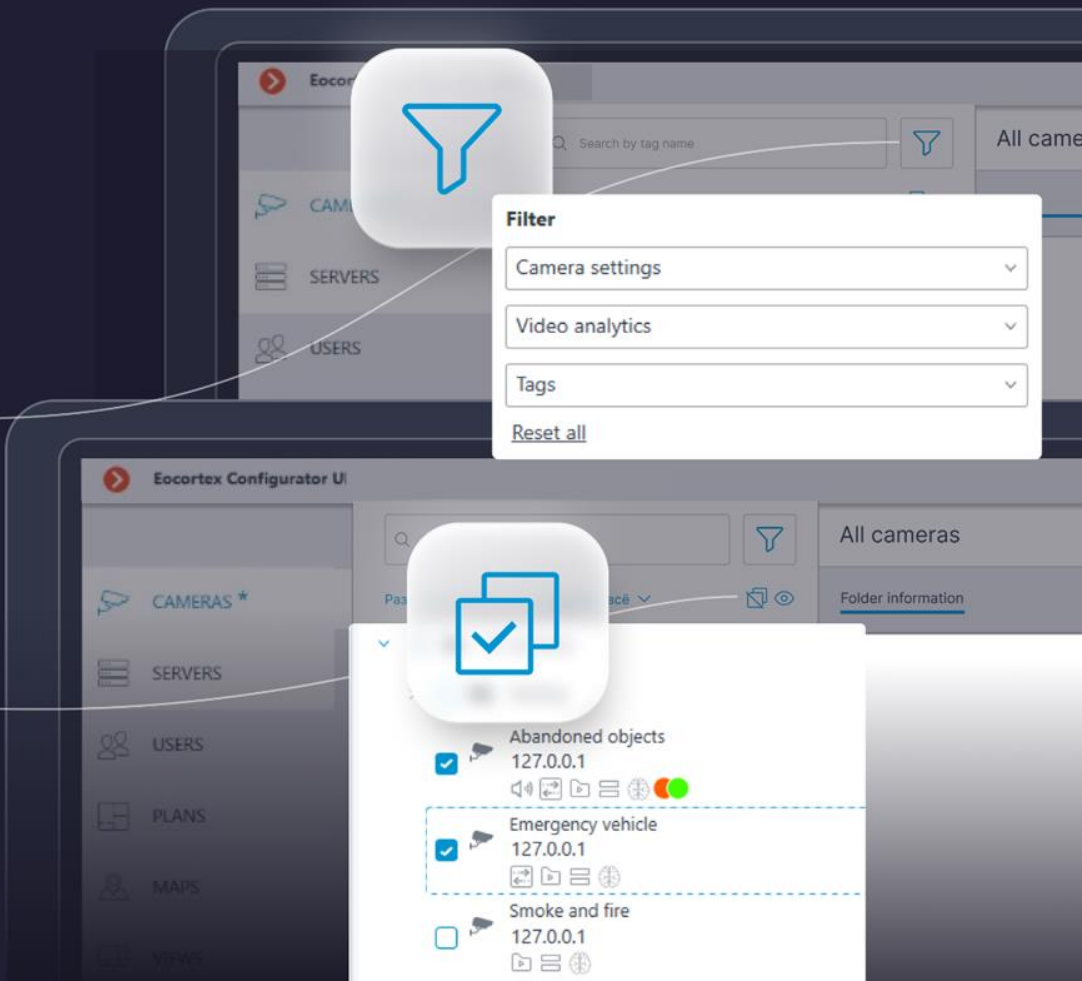
#### Filter by camera attributes

By states:

- Parameter is not considered
- Cameras with enabled parameter
- Cameras with disabled parameter

#### Group operations

Added group actions for cameras located in different folders



## Evolution of the Interface

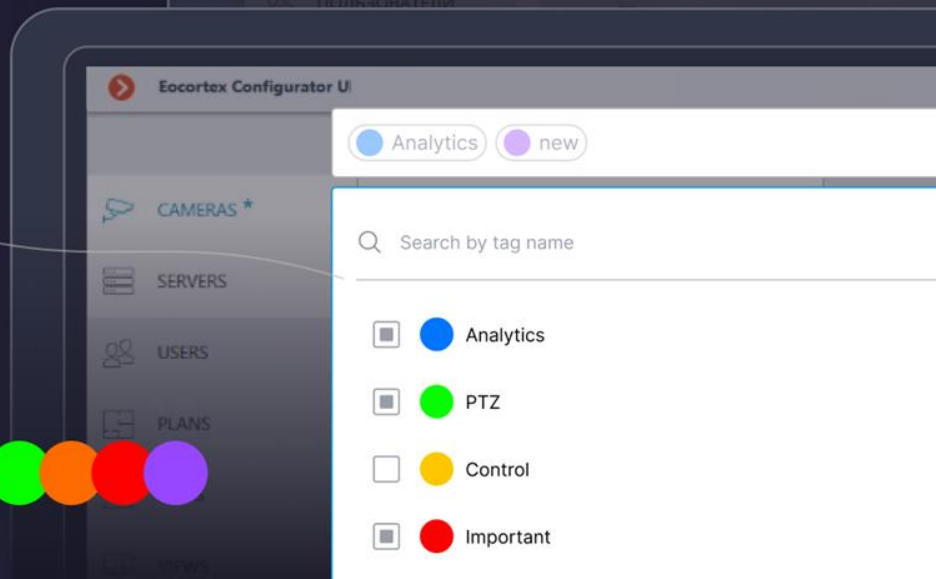
### New Camera Tree in the Configurator

#### Display of camera attributes

- Video analytics modules
- Camera properties (audio input, PTZ, motion detector, etc.)
- Tags
- Servers

#### Adding Tags and Comments

- A unified system-wide list of tags
- Tags can be configured for one or multiple cameras
- Tag name and color can be changed
- Unlimited number of tags



## Significant changes 4.2 4.5

### Video analytics

1. Introduction of the Eocortex License Plate Recognition module and performance improvements
2. Expansion of capabilities for the Uniform Detection module and performance improvements
3. The Abandoned Object Detection module has been expanded with a Missing Object Detection module
4. Introduction of the Fall Detection module and improvements in performance and accuracy
5. Overhaul of the alarm events system



## Evolution of Video Analytics

Increased the number of channels per server

up to **3.8**

Uniform  
detection



up to **2.7**

Tracking



up to **1.1**

Smoke and  
fire detection



up to **2.5**

Search for  
objects



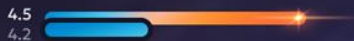
up to **3.2**

Object classification  
and counting



up to **2.7**

Emergency vehicle  
detection



up to **2.6**

License plate  
recognition



Measurements were conducted in a "desktop CPU" + "GPU" configuration (different test benches, different processors, same graphics card). Using the Standard neural network package.

Results are conditional due to different CPUs in the measurements (GPU is the same).

Stream resolution for video analytics processing: 2 MP

Test system: Core i9 + RTX 3060 Ti + 64 GB RAM

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Evolution of performance for large-scale systems

## Upgrade your systems in a big way!

Module

### Tracking

Version	Channels	Difference
---------	----------	------------

4.2	9	15
4.5	24	

...would have required a machine costing...

~ 5 000 USD

Hardware

i9 12900k + RTX 3060Ti - 64GB RAM

~ 1 600 USD

4.2



4.5



# 4.5

Evolution of performance for large-scale systems

## Upgrade your systems in a big way!

Module

### License plate recognition

...would have required a machine costing...

Version

Channels

Difference

4.2

14

4.5

37

23

~ 5 000 USD

Hardware

i9 12900k + RTX 3060Ti - 64GB RAM

~ 1 600 USD

4.2

4.5



# 4.5

Evolution of performance for large-scale systems

## Upgrade your systems in a big way!

Module

### Object classification and counting

...would have required a machine costing...

Version

Channels

Difference

4.2

7

4.5

25

18

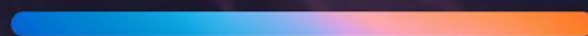
~ 6 700 USD

Hardware

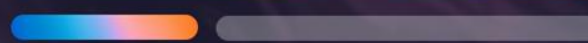
i9 12900k + RTX 3060Ti - 64GB RAM

~ 1 600 USD

4.2



4.5



4.5

Evolution of performance for large-scale systems

## Evolution of the Configurator and Client

x150

times fewer actions

when moving multiple cameras into folders

x2

times faster group camera configuration

4.3

4.4

4.5

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Evolve With Us

Our product is continuously evolving and becoming bigger, more powerful, and more relevant

eocortex 

investment

dividends

prospects

eocortex 

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