



As video security is continuously evolving, Arteco presents **VCA**: the video analysis suite that brings the Extreme or uSee licenses to the most advanced level of intelligence. It automatically **pulls meaningful and relevant information from video streams** to detect people, objects and their surroundings, while continuously analyzing them, their movements and behavior.

Based on pattern analysis and machine intelligence, VCA algorithms can improve the efficiency of security systems, reduce costs of management and decrease risk margins with the prospect of further developments on the horizon.

The VCA suite is a stand-alone application that must be installed on a dedicated workstation with Windows based OS.

### **HOW IT WORKS**

VCA processes video, **identifies objects in the video footage** (people, vehicles, and other items), and indexes them so that footage can be easily and quickly browsed and analyzed for different purposes:

- 1) to conduct **post-event investigation and forensics searches**
- 2) to enhance security **situational awareness** in real-time.



## DEEP LEARNING

VCA technology is rooted in the Deep Learning machines learning model, able to process video streams and contemporarily detect and classify every object that appears on screen. VCA is equipped with three Deep Learning engines.

### DEEP LEARNING OBJECT TRACKER

Classify and analyze the following classes of objects

- People
- Car
- Forklift
- Van
- Bus
- Truck
- Motorcycle
- Bicycle
- Bag

### DEEP LEARNING PEOPLE TRACKER

It allows the automatic classification of people present in the scene, therefore it is particularly suitable in the following cases: Presence detection and People Counting.

### DEEP LEARNING FISHEYE TRACKER

Enables detection and classification of people in fisheye cameras, without the need for calibration or image dewarping.

ANALYTICS	
<b>Tamper</b>	Tampering detection, lack of video signal
<b>Rules and Algorithms</b>	Presence, Enter, Exit, Appear, Disappear, Stop, Dwell, Direction, Count, Abandoned object, Color filter, Speed filter, Tailgating, Repeatedly, AND/OR/NOT logical rules
<b>Deep Learning Object tracker</b>	Automatic detection and classification of 8 object classes.
<b>Deep Learning People tracker</b>	Automatic detection and classification of people and faces.
<b>Deep Learning Fisheye tracker</b>	Rilevamento e classificazione delle persone con telecamere fisheye.

Minimum system requirements	
<b>OS</b>	Windows 10
<b>CPU</b>	Intel i3 generation 10 or later, or Intel Xeon E series
<b>RAM</b>	8GB or higher
<b>GPU</b>	NVIDIA Cuda Toolkit 12.0 or higher
<b>Network</b>	Ethernet, 1 Gigabit
<b>HDD Space</b>	1TB HDD
<b>Arteco VMS Version</b>	22.0 or later
Minimum video setting requirements	
<b>Encoder video stream</b>	H.264, H.265
<b>Resolution</b>	320*240
<b>Framerate</b>	10 fps

Recommended system requirements	
<b>OS</b>	Windows 10
<b>CPU</b>	Intel i7 or i9 generation 10 or later, Intel Xeon W series or later
<b>RAM</b>	16GB or higher
<b>GPU</b>	NVIDIA Cuda Toolkit 12.0 or higher
<b>Network</b>	Ethernet, 1 Gigabit
<b>HDD Space</b>	1TB HDD
<b>Arteco VMS Version</b>	22.0 or later
Recommended video setting requirements	
<b>Encoder video stream</b>	H.264, H.265
<b>Resolution</b>	480P
<b>Framerate</b>	15 fps