

# AI-APPLIANCE-DEEP

Deep learning in one hand



# AI-APPLIANCE-DEEP



One of the questions we often have to answer is: where can I install the video analytics software?

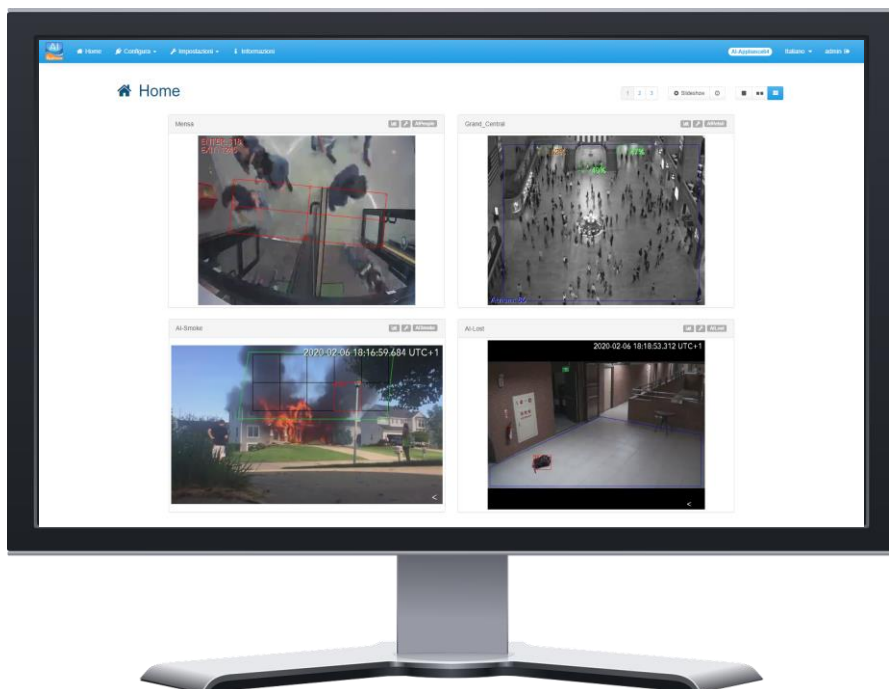
Typically, in order to have high accuracy, especially in older generation systems, the answer is: on a large and expensive server equipped with GPU, which will have a high cost both in the system implementation phase and in its phase operational, due to high consumption.

However, today A.I. Tech offers an alternative to this solution.

The alternative is called AI-APPLIANCE-DEEP.

It is a new generation embedded solution: a small box equipped with an NVIDIA GPU card, inside which the video analysis licenses of A.I. Tech are already preloaded and ready for use. The number of licenses and types can vary from 1 to 5, based on the specific version of the device purchased.

An off-the-shelf solution, therefore, in which the best of deep learning technology, the last frontier of artificial intelligence, is made available.





## Strengths of AI-APPLIANCE-DEEP?

### WHAT YOU WANT (COSA VUOI)

Video analysis solutions based on the best deep learning algorithms are already pre-loaded within the **AI-APPLIANCE-DEEP**. Over 15 different products (including apps and bundles) available to face the different challenges in the most varied markets, including retail and digital signage, smart cities and smart roads, smart parking, smart hospitals and intelligent video surveillance

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### WHERE YOU WANT (DOVE VUOI)

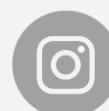
**AI-APPLIANCE-DEEP** can be installed practically anywhere, both indoors and outdoors, thanks to its extremely small size and consumption. It becomes the ideal solution both for revamping existing systems and for new generation systems, especially in small and medium-sized installations, or in large installations where a decentralized architecture is required. The integrated GPU, combined with the high optimization of the A.I. Tech, allows you to simultaneously activate up to 5 licenses (based on the specific version chosen).

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### WHEN YOU WANT (QUANDO VUOI)

The solutions can be activated and deactivated both on a time basis (scheduling their activation through a simple and intuitive calendar) and on an event basis. It is in fact possible to dynamically activate (via HTTP requests) the app of interest when an external event occurs. In addition, on the same device, for example, it is possible to activate the **AI-INTRUSION** function on the external cameras for the detection of intrusions and during the day instead, **AI-CROWD-DEEP** with the estimate of the gathering and the evaluation of social distances. All using a single device.

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## HARDWARE

### Mechanical & Environmental

Dimension [L x P x A]: 88 mm x 75 mm x 39 mm

Storage Humidity: 95% @ 40°C, non-condensing

Anti-Vibration: 3 Grms/ 5 ~ 500Hz/ operation

Certification: CE/FCC class A

### Power Supply

Power Requirement: 12Vdc w/ 2-pin terminal block

### System

GPU: NVIDIA Jetson

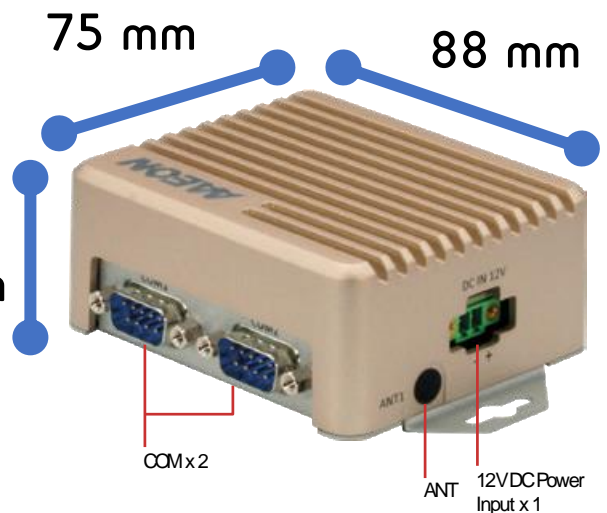
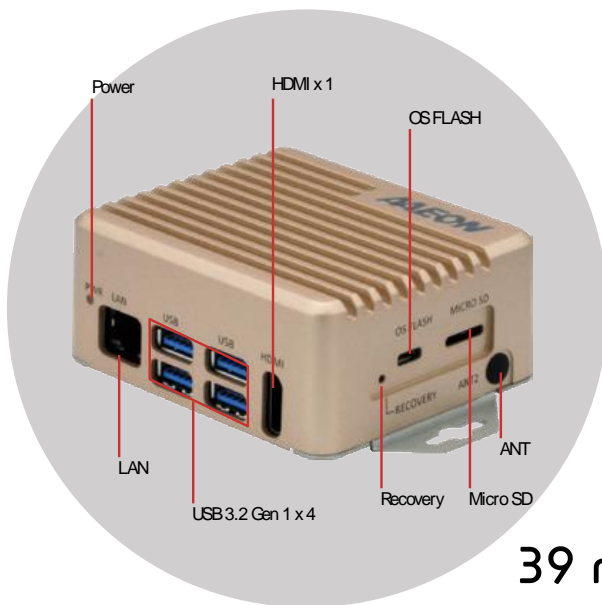
Storage: 16GB eMMC

MicroSD Slot x1

USB: 3.2 Gen 1 x 4

RS-232 x 2

Ethernet: 10/100/1000Base-TX x 1



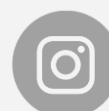


## VERSIONS

You can choose the version of the AI-APPLIANCE-DEEP, based on specific needs. In particular on the basis of the number of licenses to be activated (1, 2, 4 or 5) as well as on the type of license activated.

In fact, all versions support all available applications, except for AI-TRAFFIC-DEEP, which can only be activated on versions of AI-APPLIANCE-DEEP-TRAFFIC1 (with a license) and AI-APPLIANCE-DEEP-TRAFFIC4 (with 4 licenses).

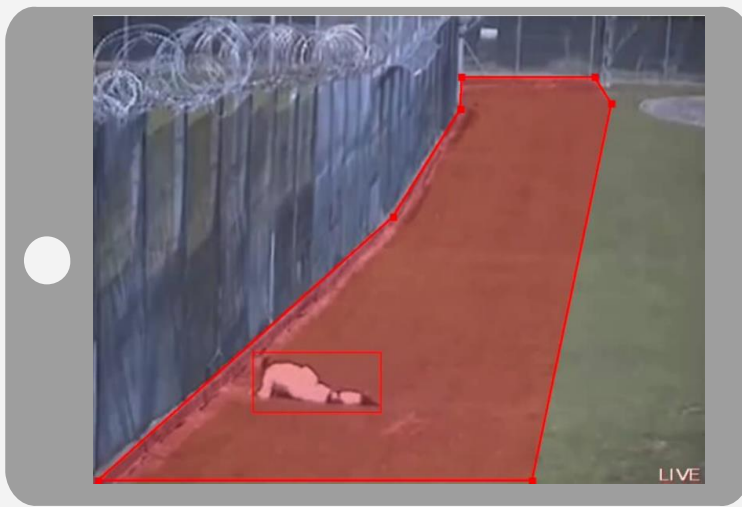
<b>AI-APPLIANCE-DEEP1</b>	It offers the possibility to activate a maximum of 1 app among those mentioned below (excluding AI-TRAFFIC-DEEP) with processing resolution: 4CIF
<b>AI-APPLIANCE-DEEP2</b>	It offers the possibility to activate a maximum of 2 apps among those mentioned below (excluding AI-TRAFFIC-DEEP) with processing resolution: 4CIF. It should be noted that, on all streams, the same app must be activated simultaneously.
<b>AI-APPLIANCE-DEEP4</b>	It offers the possibility to activate a maximum of 4 app among those mentioned below (excluding AI-TRAFFIC-DEEP) with processing resolution: 4CIF
<b>AI-APPLIANCE-DEEP5</b>	It offers the possibility to activate a maximum of 5 apps among those mentioned below (excluding AI-TRAFFIC-DEEP) with processing resolution: 4CIF. It should be noted that, on all streams, the same app must be activated simultaneously.
<b>AI-APPLIANCE-DEEP-TRAFFIC1</b>	It offers the possibility to activate a maximum of 1 app among those mentioned below with 4CIF processing resolution
<b>AI-APPLIANCE-DEEP-TRAFFIC4</b>	It offers the possibility to activate a maximum of 4 app among those mentioned below with 4CIF processing resolution





## APPLICATIONS

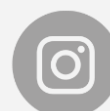
**AI-APPLIANCE-DEEP** allows you to activate up to 5 simultaneous video analysis apps (both bundles and plugins), among those listed below. Therefore, it is possible to activate up to 5 apps on the stream of a single camera or the same app on 5 different cameras or any other possible combination. The only limitation concerns the maximum number of apps that can be run at the same time, which varies according to the version chosen



**AI-INTRUSION**  
Intrusion Detection



**AI-FIRE**  
Flame Detection

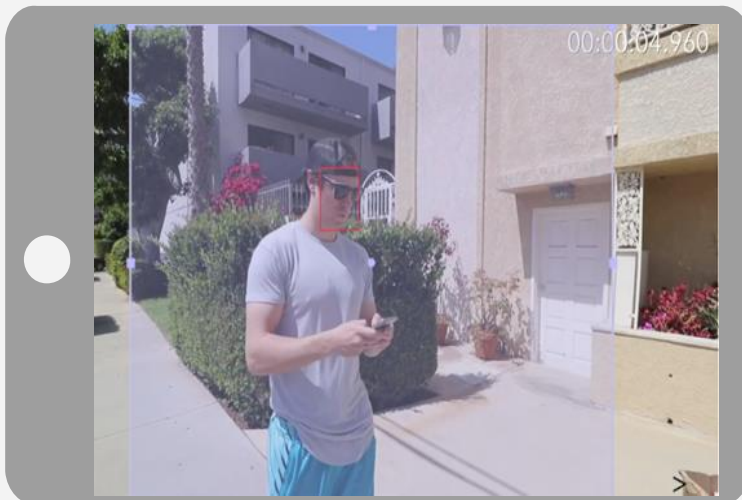




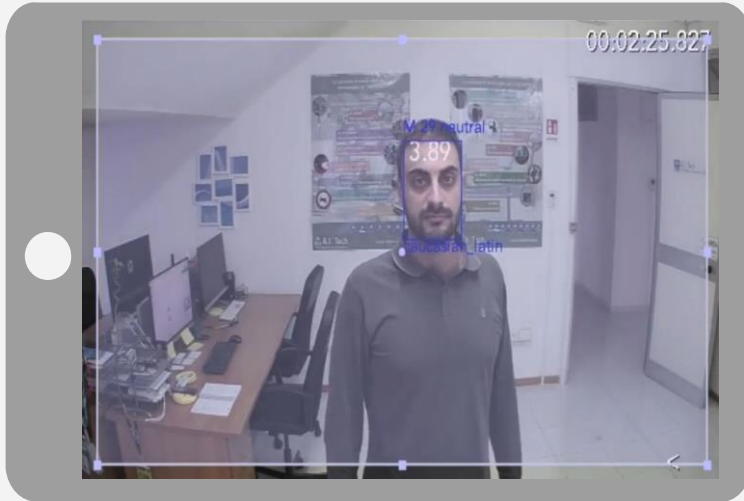
**AI-SMOKE**  
Smoke Detection



**AI-SPILL**  
Person fall  
detection

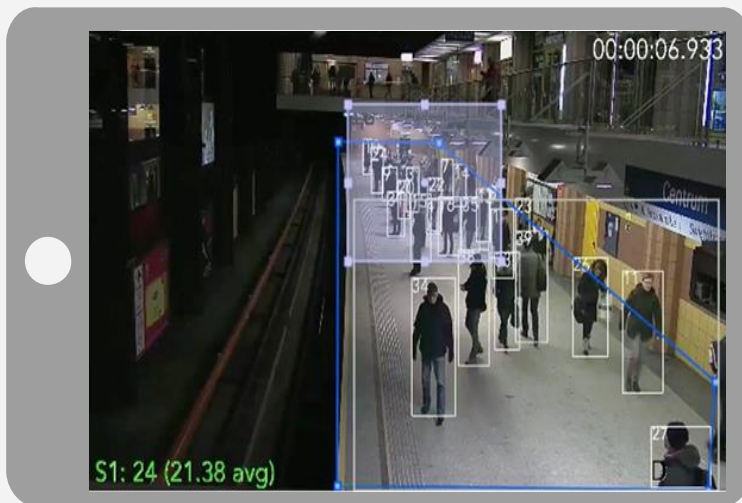


**AI-FACEDETECT**  
Face detection with  
and without mask



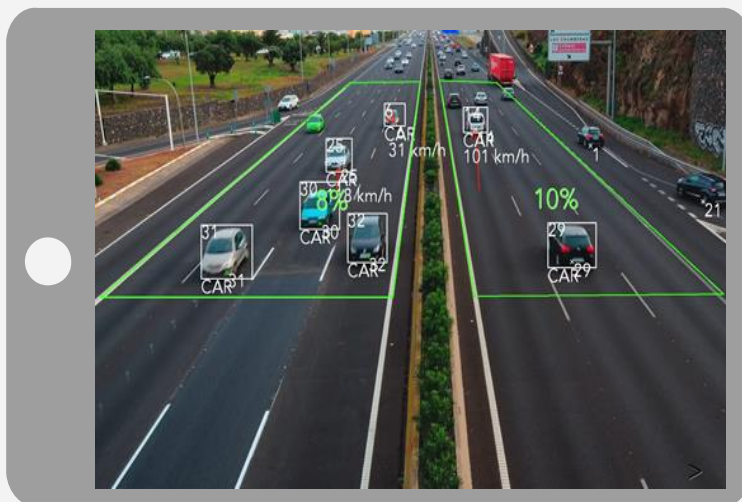
## AI-BIO

Gender recognition, age estimation, ethnicity and emotion recognition



## AI-CROWD-DEEP

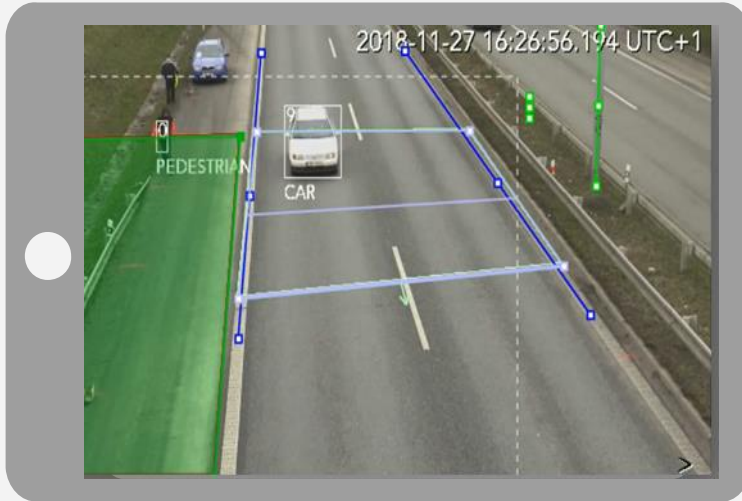
Detection of crowding and overcrowding of an area



## AI-ROAD3D-DEEP

Counting and classification of vehicle, color and speed detection [average and above]





**AI-INCIDENT-DEEP**  
Automatic Incident  
Detection (AID)



**AI-LPR**  
License Plate  
Detection and  
Recognition



**AI-PARKING**  
Parking Monitoring

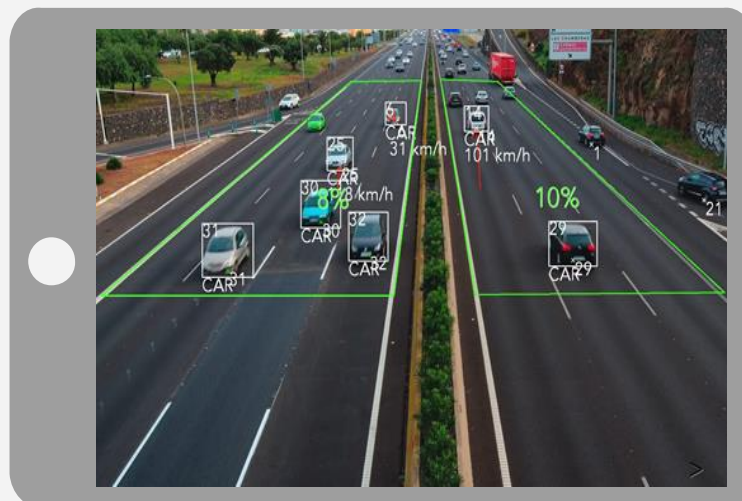


## THE APPLICATIONS

**AI-APPLIANCE-DEEP** can manage both plugins and bundles in the same way. Bundles are apps made up of the functionality of two or more plugins that allow simultaneous activation on the same stream.



**AI-RETAIL-DEEP**  
People counting,  
crowding estimate,  
gathering, social  
distance assessment



**AI-TRAFFIC-DEEP**  
Bundle of the  
applications  
AI-ROAD3D-DEEP  
and  
INCIDENT-DEEP

