



AI Intrusion Detection

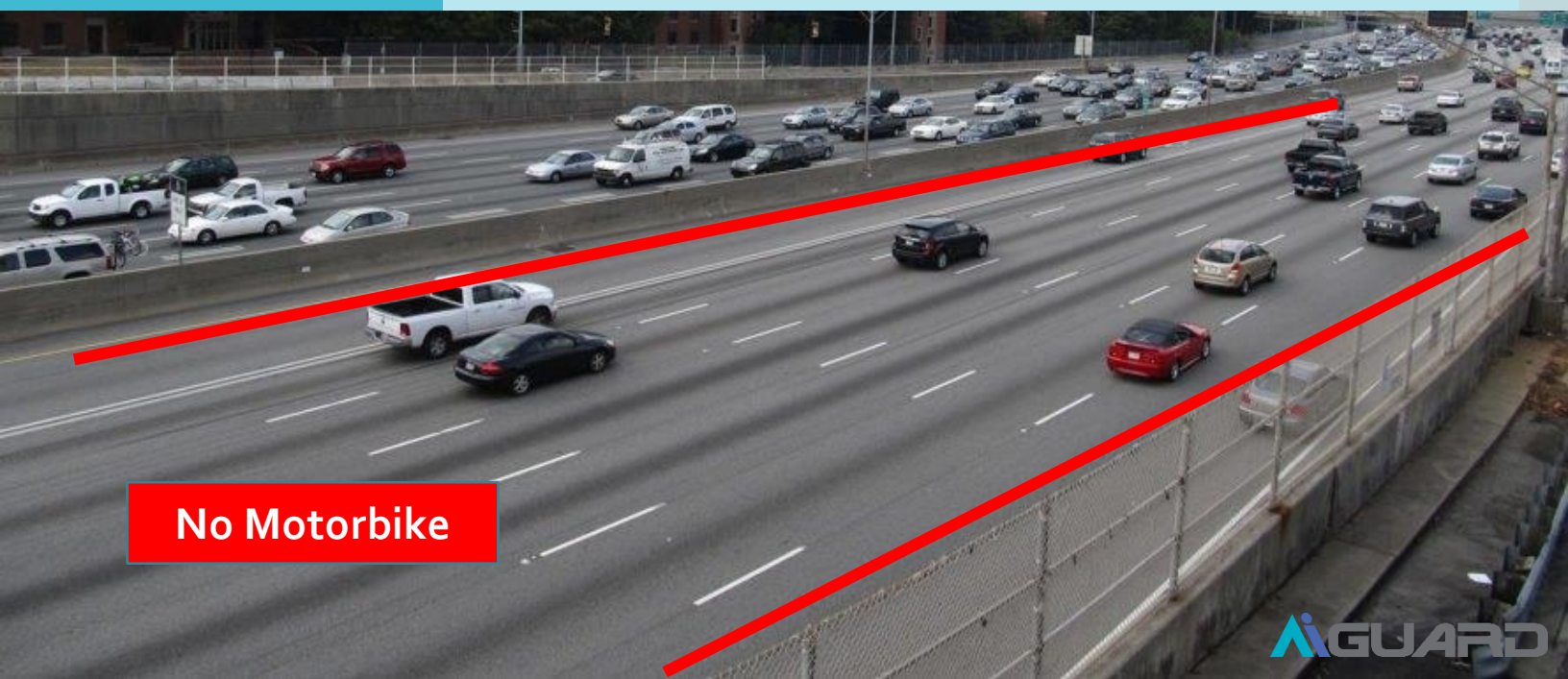
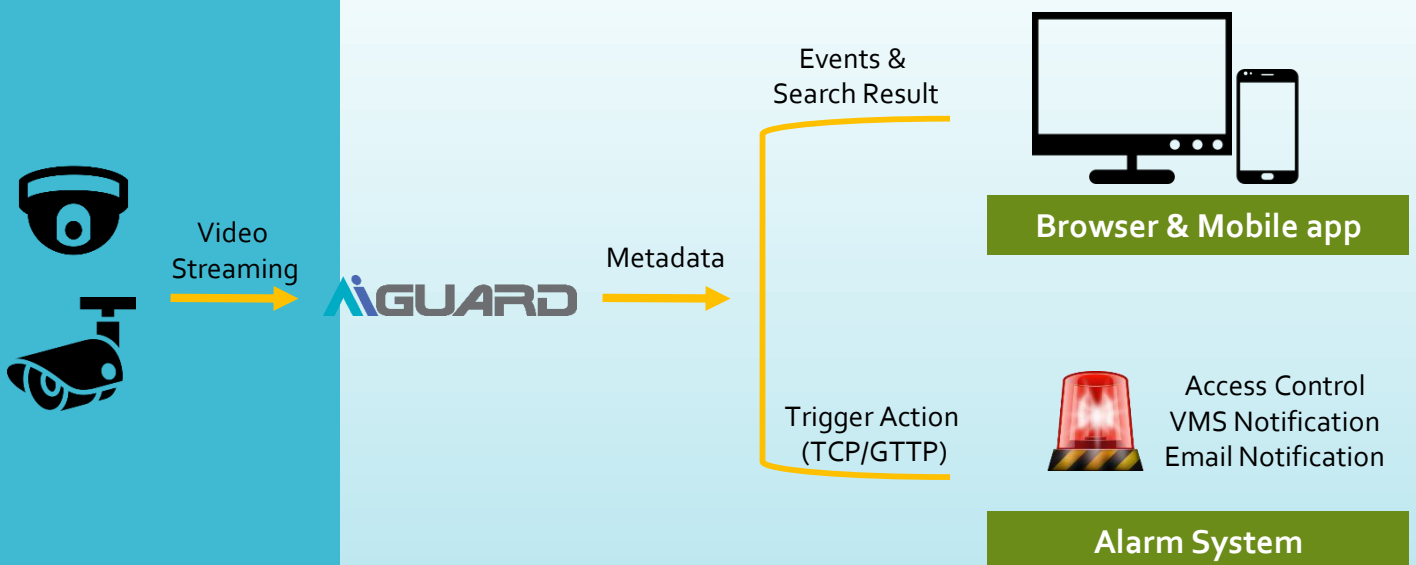
AI AIO Intrusion Detection, the AI-based virtual-fence system can detect and identify intrusion events based on the object types (vehicle, person), colors and quantities, instead of using rule-based legacy intrusion detection systems, significantly reduces 99% false alerts by identifying intrusion events based on the object types.

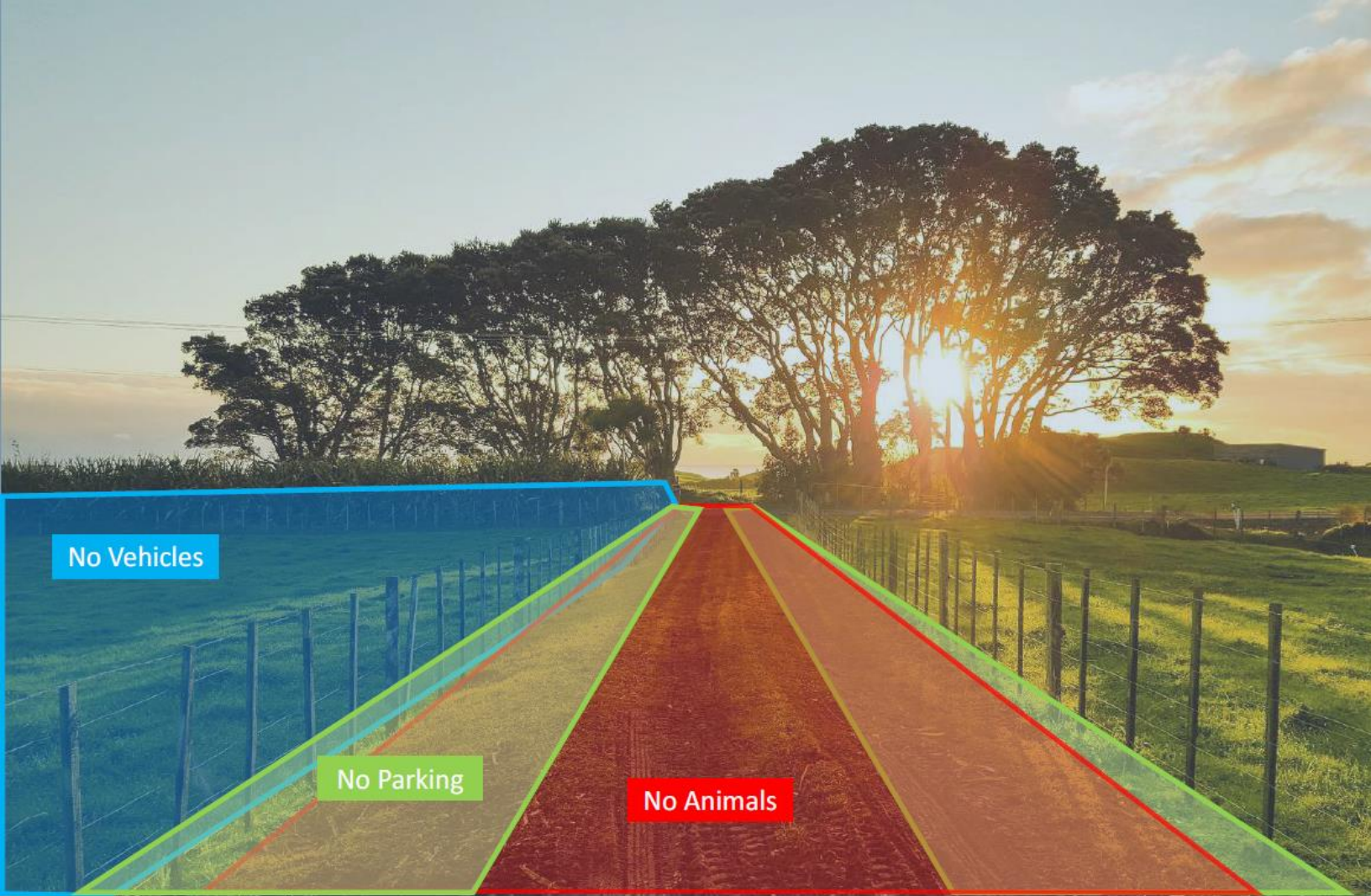
AI
AIO

How it works?

AI Guard's rapid video search engine AI NVR based on deep learning now has the added function of virtual-fence detection and intrusion alert. The artificial intelligent system automates the monitoring tasks for high-risk sites to provide a high level of security and security personnel monitoring efficiency.

In the camera view frame, the users can draw a virtual-fence zone, which generates an alarm if a vehicle, person, or object crosses a virtual tripwire. The system can categorize the object types and determine their position relative to the ROI independently of the camera position, i.e., a person standing between the camera and the ROI will not trigger an alert until he physically enters the ROI. Some application cases are: the system detects breaches into secure zones, unauthorized activity and movement in specific areas, perimeter intrusion, and loitering in sensitive areas.





ROI Configuration

1. ROI can be any irregular shape
2. Support multiple ROIs in the same frame
3. Different alert rules can be applied for different ROIs
4. Multiple ROIs can overlap one another in the same area
5. Support exclusive ROI to avoid false alert by any existing obstruction
6. Support 3D detection: a person who appears in the ROI but is actually between the camera and the ROI will not trigger the alert

No False Alarm

Traditional intrusion detection systems detect objects based on size and location, but they do not recognize the type of objects. AI NVR Intrusion Detection (Virtual Fence), with the built-in AI algorithms to recognize over 100 types of objects, can distinguish objects of interest, e.g., a person, from irrelevant objects in the Region of Interest (ROI), (e.g., animal, plastic bags, moving shadows at dawn/dusk).



Day-time



Night-time

Traditional systems have low performance at night due to video noise falsely recognized as object. AI AIO Intrusion Detection, being easily integrated with any existing system and having high accuracy from deep learning, works well under any weather conditions as well as different brightness (day-time, night-time), also can detect and identify objects with infrared camera. Thus, AI AIO Intrusion Detection can significantly decrease the false-positive rate.



Infrared Camera



Snowing

Use Cases



Perimeter Protection

Draw the ROI around larger campus or certain area (e.g. solar farm, conservation area), protecting and avoiding the specific objects (person, vehicle, or animal) from entering.



Restricted Area Protection

In different industries will have the area indoors or outdoors which only allow related personnel to enter. The user can set up the ROI with the corresponding alert rule to avoid unwanted intrusion.



Traffic Management

Some road section only allow certain vehicle to access (e.g. motorcycle is restricted on the highway, bicycle is not allow on the sidewalk). Intrusion Detection function can detected the illegal access and sent out the alert in the real-time.



Illegal Parking Detection

Set up the ROI and alert rule at the non-parking area, detecting vehicles which stay over a period of time and send out the alert notification of the illegal parking event.

Hardware Specification



	AIO-100 series		AIO-500 series		
Model series	AIO-110	AIO-130	AIO-510	AIO-530	AIO-550
Number of Channels Supported for FS/FR	4	8	8	16	32
Form Factor	Mini-PC	Mini-PC	2U	2U	2U
CPU (Intel)	Core i5 Series	Core i7 Series	Xeon E5	Dual Xeon E5	Dual Xeon E5
AI-GPU	Nvidia High Performance GPU				
Network	Dual Gigabit Ethernet				
Memory (RAM)	8GB	16GB	16GB	32GB	32GB
System HDD	128GB SSD		240GB *2 SSD (RAID 1)		
AI Storage	Include one 1TB HDD		Two 3.5" hot swappable SATA disk bays (Support 1,2,4,6,8, 10TB HDD on RAID 0,1,5,6) HDD is optional		

Alguard is a global leader in highly-secured cloud video and big data solutions for video surveillance applications. Our products have been successfully deployed by many government, university and corporate enterprise customers. Our solutions deliver unmatched performance, scalability and cost savings. Alguard has world-wide offices and partners in North America (United States and Canada), Central and South America, East and Southeast Asia (Japan, Taiwan, Korea, Thailand, and Singapore), and the Middle East.