People & Vehicle Counting

Next generation artificial intelligence counting solution

Aicuda's VAIDIO productline is ideal for optimizing business operations and traffic flows. Persons and / or vehicles in a pre-defined area are counted in real time. The collected data provides quantitative and actionable insights for business intelligence and data-driven decision making. The people counting solution detects and triggers alerts for sub artificial intelligence functions such as reverse movement, fall, crouch and loitering. The vehicle counting solution detects and triggers alerts for sub artificial intelligence fuctions like reverse movement and illegal parking.

Simple configuration and management

The open architecture technology of the VAIDIO Series makes it easy to integrate with 3rd party hard- and software products. Connect to surveillance cameras for live streaming or to NVR or DVR for playback. Meta data is extracted from video files and stored on the VAIDIO appliance for fast video search and review.

VAIDIO VSB 110 / 130

VAIDIO 100 Series SMB

Intelligent appliance for small-and-medium sized video surveillance deployments. Reliable and easy to set up. It is the ideal solution for customers requiring a cost-effective solution. The VAIDIO search engine is intuitive and based on easy-to-use natural language interface.

◎ Highlights

- Excellent value for an intelligent surveillance appliance
- VAIDIO solutions are trained, not programmed
- Significant time and cost savings
- Out of the box solution
- 2 year warranty on hardware / 1 year software maintenance
- Supports all ONVIF devices

Ideal for:
- Small-sized installations: local banks, drive-throughs, hotels, retail stores

VAIDIO 500 Series Enterprise

Intelligent appliance ideal for mid-sized as well as large-sized video surveillance installations. Reliable, cost-effective and easy to deploy and maintain. Powerful solution for the most demanding artificial intelligence tasks.

There are 4 enterprise models available. VAIDIO VSB 510 is offered with a single NVIDIA 8GB High Performance GPU. VAIDIO VSB 530 and 550 are equipped with a dual NVIDIA 8GB High Performance GPU. VAIDIO VSB 570 is offered with a dual NVIDIA 16GB High Performance GPU.

VAIDIO VSB 510 / 530 / 550 / 570

◎ Highlights

- High-performance intelligent appliance
- Up to 128 channels
- VAIDIO solutions are trained, not programmed
- Out of the box solution
- 2 year warranty on hardware / 1 year software maintenance
- Supports all ONVIF devices

Ideal for:
- Mid-sized installations: corporate facilities, parkings, supermarkets, transportation hubs
- Large-sized installations: airports, city surveillance, entertainment venues, government, national landmarks, public facilities, shopping centers, theme parks, tourist attractions

Key Functions

Aicuda VAIDIO Series for counting people entering or exiting an area and for counting and classify vehicles by type (bicycle, bus, car, motorcycle, truck etc.) approaching and moving away from the camera's field of view. Providing statistic information for business intelligence to determine peak hours, traffic flow etc.

Features	
Artificial Intelligence	AI counter: AI, video-based counting solution for tracking and bi-directional people & vehicle counting. AI abnormal-behavior detection: detect and trigger alert for reverse movement or falling / crouching. AI loitering detection: detect and trigger alert for people loitering and / or illegal parking of vehicles.
Live view & map view	Live view enables the surveillance operator to add multiple cameras and view events live on the same screen like a video wall. Map view shows a detected event on a map based on camera location.
Accuracy	High accuracy rate between 90% - 95% for high speed vehicles and crowded environments.
Configuration	Easy system setup in 5 steps, no programming or field knowledge required. Compatible with all ONVIF devices. Flexible camera setup as camera does not need to be installed at the entrance of a building or area. Flexible line definition as it is possible to draw the counter line in any direction (horizontal, vertical or diagonal) based on the camera's field of view. Flexible ROI configuration as it is possible to draw multiple regions of interest in any shape or size to detect and trigger real-time alerts for loitering and illegal parking. Real-time analytics to count people and vehicles (per type) in inbound and outbound directions. Real-time alerts for abnormal behavior like loitering. Customized event and alert management.
Reporting	Intelligent reporting system with interactive statistics to view data by time, by camera, by line setting and object type. User can download the analytics data for own processing or sharing.
Integration	Alert integration via e-mail, notification on mobile device (via the Aicuda mobile App) or alert triggering via integration with 3rd party VMS or sensor system. Enhanced performance with 3D cameras to increase dept perception and improve accuracy.

Aicuda VAIDIO benefits for the customer

Aicuda VAIDIO people & vehicle counting is the industry's first artificial intelligence solution with a simple and easy user interface. The intelligent software eliminates the need to manually inspect hours of video for objects or persons of interest. VAIDIO series seamlessly transform video into actionable intelligence.

- **All-in-One Solution**
  Supports multiple functions like video search, crouching, falling, illegal parking, loitering, people & vehicle counting and reverse movement.

- **Ability to learn**
  Platform is able to learn from experience using a multi-layer neural network. It is trained to recognize items and patterns, not programmed.

- **Intuitive, easy-to-use interface**
  Google-like search engine and intuitive result display based on easy-to-use natural language interface.

- **Plug-and-play**
  Out of the box ready to use artificial intelligence solution with pretrained self learning artificial intelligence models.

- **Partner Proven**
  Fully compatible with ONVIF IP cameras like Axis, Bosch, Hanwha, Mobotix and Sony. Compatible with leading VMS, including Axxonsoft, Digifort, Genetec, ISS, Milestone, Qognify and others.

- **Significant increase in productivity**
  Rapidly pinpoint persons and objects of interest. Review hours of video in minutes.

Deep Learning Technology

Surveillance is a repetitive and mundane task. This may cause performance dips for human beings. Aicuda Technology is developing AI solutions based on deep learning to let the technology do the surveillance for us.

Customer pain points

- Inability to perform object and person search in recorded video files from multiple sources like surveillance camera, internet or smartphone.

- Option for fast, real-time search for hundreds of object types is not available.

- Accidental elimination or overlooking of key video events due to human errors.

- High false alarm rates due to the inability to distinguish different object types in legacy sensor-based systems.

- Unavailability of an all-in-one solution that is able to support video search, face recognition, intrusion detection, license plate recognition, people & vehicle counting and real time alerts with a high accuracy rate.

Product Specifications

Model	VAIDIO VSB-110	VAIDIO VSB-130	VAIDIO VSB-510	VAIDIO VSB-530	VAIDIO VSB-550	VAIDIO VSB-570
Product Image						
Model Series	VAIDIO 100 series	VAIDIO 100 series	VAIDIO 500 series	VAIDIO 500 series	VAIDIO 500 series	VAIDIO 500 series
Video Search	Max. 13 channels	Max. 26 channels	Max. 26 channels	Max. 52 channels	Max. 52 channels	Max. 96 channels
Intrusion Detection	Max. 8 channels	Max. 16 channels	Max. 16 channels	Max. 32 channels	Max. 52 channels	Max. 64 channels
FR / FS	Max. 4 channels	Max. 8 channels	Max. 8 channels	Max. 16 channels	Max. 32 channels	Max. 32 channels
FR Database	1000 persons (5 faces per person)	1000 persons (5 faces per person)	10,000 persons (5 faces per person)	10,000 persons (5 faces per person)	10,000 persons (5 faces per person)	10,000 persons (5 faces per person)
Object Left Behind	Max. 4 channels	Max. 8 channels	Max. 8 channels	Max. 16 channels	Max. 32 channels	Max. 32 channels
AI PPE	Max. 8 channels	Max. 16 channels	Max. 16 channels	Max. 32 channels	Max. 52 channels	Max. 64 channels
AI People Count	Max. 2 channels	Max. 4 channels	Max. 4 channels	Max. 8 channels	Max. 16 channels	Max. 16 channels
AI Vehicle Count	Max. 2 channels	Max. 4 channels	Max. 4 channels	Max. 8 channels	Max. 16 channels	Max. 16 channels
Clustering	Yes	Yes	Yes	Yes	Yes	Yes
Form Factor	Tower-PC	Tower-PC	1U-Server	2U-Server	2U-Server	2U-Server
CPU	Intel Core i5	Intel Core i7	Intel Xeon	Dual Intel Xeon	Dual Intel Xeon	Dual Intel Xeon
AI GPU	NVIDA Performance GPU 4GB	NVIDA Performance GPU 8GB	NVIDA Performance GPU 8GB	NVIDA Performance Dual GPU 8GB	NVIDA Performance Dual GPU 8GB	NVIDA Performance Dual GPU 16GB
AI Storage	Include one 1TB HDD 1x 3.5" SATA III internal disk bay	Include one 2TB HDD 1x 3.5" SATA III internal disk bay	Include one 2TB HDD 2x 3.5" SATA III hot swap disk bay	HDD not included 6x 3.5" SATA III hot swap disk bay	HDD not included 6x 3.5" SATA III hot swap disk bay	HDD not included 6x 3.5" SATA III hot swap disk bay
Network	One Gigabit Ethernet	One Gigabit Ethernet	Dual Gigabit Ethernet	Dual Gigabit Ethernet	Dual Gigabit Ethernet	Dual Gigabit Ethernet
System HDD	240GB SSD	240GB SSD	480GB SSD	Dual 480GB SSD	Dual 480GB SSD	Dual 480GB SSD
Memory	8GB	16GB	16GB	32GB	64GB	64GB
RAID Support	No RAID Support	No RAID Support	RAID 0,1 Support	RAID 0,1,5,6 Support	RAID 0,1,5,6 Support	RAID 0,1,5,6 Support
HDD Support	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB	1, 2, 4, 6, 8, 10, 12TB
Stackable	Yes	Yes	Yes	Yes	Yes	Yes
Rack Mount	No	No	Yes	Yes	Yes	Yes
Video File Format	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG	MP4,WMV,AVI, MOV,MPG
Supported codecs	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9	H.264, H.265, MJPEG, MPEG1, MPEG2, MPEG4, VC1, VP8, VP9
File-Based Ingestion	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos	Multi File Videos or Single File Videos
Warranty	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance	2 years warranty HW 1 year SW maintenance

* For every camera channel with Aicuda Technology Video Analytics, Video Search is automatically included.
* People Counting includes people counting, person reverse direction movement, person fall / crouch and loitering detection.
* Vehicle Counting includes vehicle counting, vehicle reverse direction movement and illegal parking detection.
* Design and specifications are subject to change without notice.

sales@aicuda.world
www.aicuda.world