



# Microview Black Box

## Infinite AI Applications, One Smart Box

### Overview

Microview Black Box is an edge AI computing product, that empowers your system with unparalleled AI video analytics capabilities. Seamlessly integrating with cameras, it provides a standalone solution for comprehensive video analysis. Additionally, the deep integration with Microview VMS Enterprise is offering for a truly unified experience, while it also effortlessly transfers analyzed results to third-party VMS or NVR through HTTP.

### FEATURES

- 8-CH Model
- Closed-loop Solution with Microview VMS Enterprise
- Diverse and Enriched AI Algorithms
- High-efficiency AI Computing for Existing System
- 99% High Accuracy Rate

### Scalability of Connectivity

- Fully integrate with Microview network cameras and 3rd party network cameras
- Support H.265/H.264, offering better compression and substantially improving video quality.

### Ease of Use

- Compatible with existing Microview VMS system, meets the need for optimally and purposefully expanded and upgraded.
- Centralized management of diverse attributes at Microview VMS Enterprise.
- HTML5 Web-based configuration.
- Easy configuration and quick system start-up

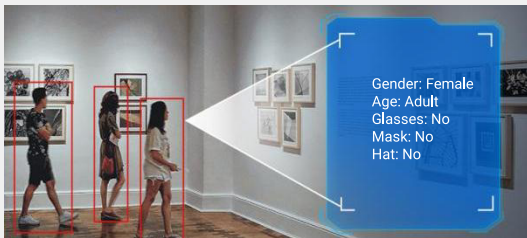
# MICROVIEW BLACK BOX



## Intelligent Applications

### Clientele Classification & Identity Management

Face-human & Recognition, Structure Analysis, such as Face, Body, Vehicle and Plate, etc.



### Alert\_Alarm Management

Smoke, Call, Run, Sleep, Gather, Fight, Person\_Over, Hold\_Weapon, Park, Wander, Over\_Wall, Intrusion, etc.



### Over-crowd Management

Regional People Counting, Entrance & Exit People Counting.



### Objects Management

Sundry Detect, Goods Forget, Goods Guard.



Fall, Smoke, Call, Watch Phone, Run, Sleep Detection, etc.



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## TECHNICAL SPECIFICATION

### SYSTEM PARAMETERS

Main Processor	High-performance embedded microprocessors
Operating System	Embedded Linux, 8GB of RAM and 32GB of storage

### DEVICE ACCESS

Video Stream Input	Video Resolution: 1920 x 1080 (1080P), 2560 x 1440 (4MP), 3840 x 2160 (8MP), Maximum video access capacity: 4*8MP; 8*4MP; 8*1080P. Decoding limit: 8*1080P
Video Decoding Type	H.264/H.265

### SMART FUNCTIONS

Working mode: multi-algorithm parallel, configurable by channel	<ul style="list-style-type: none"> <li>• Face-Human &amp; Recognition: (full load maximum 8 channels): face capture, face recognition, faceattributes, human body capture, human attributes, face-human binding.</li> <li>• Structure Analysis: (full load max 8 channels): Image capture: face, human body, motor vehicle, non-motor vehicle Attribute output: face, human body, motor vehicle, non-motor vehicle Association relationship: face-person binding, person-non-motor</li> <li>• Diagnosis_Alarm: (full load maximum 8 channels): Image_Cover_Alert</li> <li>• Alert_Alarm: (fully loaded 8 channels, 4 sub-rules per channel): Fall, Smoke, Call, WatchPhone, Run, Sleep, On/Off Duty, Gather,</li> <li>• Fight, Person_Over, Person_Less, Hold_Weapon, Park, Exit, Wander, Over_Wall, Intrusion, Tripwire, Climb.</li> <li>Goods_Alarm: (fully loaded 8 channels, 2 sub-rules per channel): Sundry_Stack, Goods_Guard, Goods_Forget</li> <li>Headcount_Alarm: (fully loaded 8 channels, 2 sub-rules per channel): Head_Count, Cross_Line</li> </ul> <p><b>Note:</b> Functional compatibility of AI Box with Microview VMS Enterprise depends on the specific version implementation</p>
Report	Support face capture, face recognition, face attributes, human body, motor vehicle, non-motor vehicle attributes, and alert alarm analysis results reporting.
Accuracy	Face: face capture rate $\geq$ 99%, false capture rate $<$ 1%, recognition pass rate: $>$ 99.5%, recognition false rate: $<$ 0.5%. Human body: human body capture rate $\geq$ 95%, false catch rate $<$ 1%. Motor vehicle: motor vehicle capture rate $\geq$ 90%, false catch rate $<$ 1%. Non-motor vehicle: non-motor vehicle capture rate $\geq$ 95%, false catch rate $<$ 1%.

### INTERFACE PARAMETERS

Network Interface	2, 100M/1000M adaptive Ethernet, RJ45 interface
Alarm Input Interface	2-way switch
Alarm Output Interface	2-way switch
Audio Output	1-way
Audio Input	1-way
Rear USB Interface	1 x USB 2.0 and 1 x USB 3.0
RS485	2-way
RS232	1
Reset Button	1
Run Indicator (RUN).	1

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## TECHNICAL SPECIFICATION

### SYSTEM CAPABILITIES

Face Recognition	Employee passage at the entrance; List control and identification of key personnel, alarm, stranger identification, etc. Face library capacity: 64 face libraries, total 300,000 face pictures
Video Structured	Capture of face, human body, motor vehicle and non-motor vehicle, etc., attribute analysis.
Network Protocols	TCP/UDP/HTTP/MULTICAST/DHCP/FTP/NTP/HTTPS/RTSP, etc.
Dual Network Ports	Supports three modes: multiple access setting, load balancing, and primary/standby mode.
Log Queries	It can query, search and display the capture information of face, human body, motor vehicle and non-motor vehicle.

### ENVIRONMENT REQUIREMENTS

Operating Temperature	-20°C ~ +60°C
Storage Temperature	-20°C ~ +60°C
Relative Humidity	10% ~ 90%RH, non-condensing

### OTHER

Power Supply	DC12V±10%, 3.33A
Dimensions (L/D)	179x150x42 (mm)
Weight	1Kg
Warranty	2 Years

### RULE SETTING

#### Algorithm Pockets Management

Algorithm Pocket	Face-Human	Diagnosis	Structure	Alert	Goods	Headcount
MV108-A	8*1	8*1	8*1	8*4 sub-rules	8*2 sub-rules	8*2 sub-rules
Sub-rules	-	-	-	Fall, Smoke, Call, Watch Phone, Run, Sleep, On/Off Duty, Gather, Fight, Person_Over, Person_Less, Hold_Weapon Park, Exit, Wander, Over_Wall, Intrusion, Tripwire, Climb	Sundry_Stack, Goods_Guard, Goods_Forget	Head_Count, Cross_Line

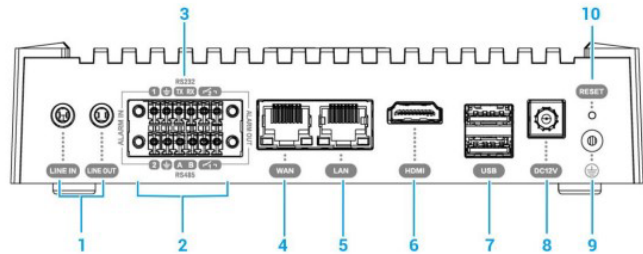
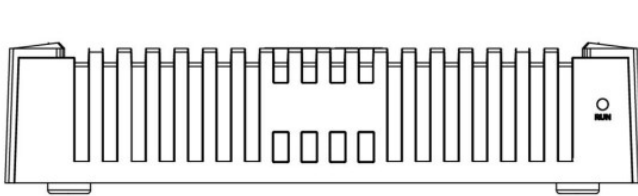
#### Note:

- 1) One AI Box supports up to 8 algorithm pockets for stacked use at the same time.
- 2) Each channel supports overlaying 4 different algorithm pockets, but does not support simultaneous deployment of "Face-Human & Recognition" and "Structure\_Analysis" algorithms. For example, if users choose channel 1 to open four algorithm pockets at the same time, Structure\_Analysis, Alert\_Alarm (with 4 sub-rules), Goods\_Alarm (with 2 sub-rules) and Headcount\_Alarm (with 2 sub-rules), and channel 2 to open the above four algorithm pockets at the same time, at which time the AI Box's computing power is full.

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## STRUCTURE DIAGRAMS



- |                           |                               |
|---------------------------|-------------------------------|
| 1. Audio input and output | 6. HDMI                       |
| 2. Alarm input and output | 7. USB                        |
| 3. RS 485/RS 232          | 8. Power                      |
| 4. WAN                    | 9. Grounding connection cable |
| 5. LAN                    | 10. Reset                     |