Magic Cube Intelligent Analysis Box Product Specification

Chongqing Huifan
Technology Co.

Continuously create maximum value for customers and society with extraordinary technology

Huifan Magic Intelligent Analysis Box

Product Features

Device Access.

- Access to ONVIF, RTSP-compliant HD network cameras

- Access to face capture machines that comply with GA/T1400 protocol

- Supports H.265/H.264 video standard and up to 8 megapixel IPC

for access intelligence applications.

- Total library supports up to 300,000 face images, supporting 64 libraries

- Multi-class algorithm mixing: face mode, mixed mode (face-human binding + video structuring)

- Face recognition: 16 video streams supported

- Video structuring: 16 video streams supported

- Smart Alert: Supports 16 video streams

- Support face capture, face recognition comparison alarm, stranger recognition alarm, etc.

- Support recognition of face attributes: gender, age, wearing a hat, glasses, mask, etc.

- Support face, human body, motor vehicle, non-motor vehicle, license plate capture and face-human binding, human-non-motor vehicle binding

- Support human body attributes such as upper and lower clothing color, upper and lower clothing style, backpack status, and whether to wear a helmet analysis

- Support motor vehicle classification, color, brand, driving direction and non-motor vehicle classification and other vehicle attributes analysis

- Support license plate recognition and license plate - motor vehicle binding relationship

- Support people and vehicles separation, mixing line crossing, area invasion, vehicle illegal parking, over the line counting and other intelligent alert function **system features.**

- Support MegConnect V2.0 protocol to access Cloudwing, Cloudbridge, Pangu, and other software platforms

- Available via GA/T1400 standard protocol cloud or third-party view library platforms

- Provide a rich RESTful API protocol interface for third-party platforms to do docking development **application scenarios.**

- Provide the ability of face recognition and full target structured analysis, with the upper platform software can realize the closed loop of face capture recognition and video structured scenes.

- Applied to places that need face recognition, such as entrances and exits of intelligent communities, entrances and exits of office buildings, key personnel list control and identification alarm, stranger identification, etc.

- It is applied to structured places that need face man-machine non-plate capture and license plate recognition, such as people and vehicle control in smart parks and license plate recognition in smart communities.

Specification parameters.

System Parameters	
Main Processor	High-performance embedded microprocessors
Operating System	Embedded Linux
Device Access	
Video Stream Input	Video resolution. 1920 x 1080 (2 million) 2560 x 1440 (4 million) 3840 x 2160 (8 million)
Video decoding type	H.264/H.265
Face Capture Machine	Maximum support for 32-way capture machine access (capture machine should support GA/T1400 protocol)

Intelligent Parameters	
Working mode: Mixed mode (Algorithms in parallel, configurable by channel, flexible switching between face, structured, and vigilance algorithms)	Face person binding + face recognition: (maximum 16 ways) Face capture, face recognition, face attributes, human body capture, human attributes, face human binding
	Video structuring: (up to 16 channels) 1) Image capture: face, human body, motor vehicle, non-motor vehicle, license plate 2) Attribute output: face, human body, motor vehicle, non-motor vehicle, license plate 3) License plate recognition 4) Relationships: face-person binding, car-plate binding, person-non-motor vehicle binding

	Smart Alert: (max. 16 channels) 1）Separation of people, cars and non-motorized vehicles, high-definition capture 2）Output of alarm events such as mixing line crossing, area intrusion, vehicle parking violation, and line crossing count
Proactive reporting	1）Face capture, face recognition, face attribute results 2）The face man-machine non-plate capture and attributes, license plate recognition results 3）Alert Alerts
Human face	Capture rate ≥ 99%
	False capture rate < 1%
	Whitelist recognition pass rate > 99.5%
	Recognition misidentification rate: < 0.5%
	The largest library: 300,000 portrait library
Human body	Capture rate ≥ 95%
	False capture rate < 1%
Motor Vehicles	Capture rate ≥ 90%
	False capture rate < 1%
Non-motorized vehicles	Capture rate ≥ 95%
	False capture rate < 1%
License plate	Capture rate ≥ 95%
	False capture rate < 1%
	Recognition rate ≥ 95%
Interface parameters	
Network Interface	2 pcs, 100M/1000M Adaptive Ethernet, RJ45 interface
Alarm input interface	4 way switching
Alarm output interface	4 way switching
Audio Output	1 Road
Audio Input	1 Road
Front USB port	Front 1 USB2.0, 1 USB3.0
Rear USB port	2 rear USB2.0
RS485	2 Roads
Reset button	1 pc
Power indicator (PWR)	1 pc
Run indicator (RUN)	1pc, two-color (red + green)

System Functions	
Face Recognition	Entrance and exit staff passage; key personnel list control and identification alarm, stranger identification, etc.
Video structuring	Face, human body, motor vehicle, non-motor vehicle, license plate capture, attribute analysis, license plate recognition
Network Protocols	TCP/UDP/HTTP/MULTICAST/DHCP/FTP/NTP/HTTPS/RTSP/GAT1400 etc.
Dual network port	Support "multi-access setting", "load balancing" and "master/standby mode"
Log query	Enables query, search and display of capture information of face man-machine non-tag
Environmental requirements	
Operating temperature	-20℃ ~ +60℃
Storage temperature	-30℃ ~ +70℃
Relative Humidity	10% ~ 90%RH, non-condensing
Other	
Power supply	DC12V±10%, 2A
Structure	Metal Case
Dimensions (length, depth, height)	229×193×49 （mm）
Weight	<4KG

The conversion relationship between video streams and picture streams in terms of number of channels.

Pure face mode:1 video stream X can be equated to 2 picture streams Y, satisfying: $2X + Y <= 32$

(2 million up to 16 channels, 4 million up to 8 channels, 8 million up to 4 channels) Mixed mode: 1 video stream X can be equivalent to 4 picture streams Y (only support face), meet: $4X + Y <= 32$
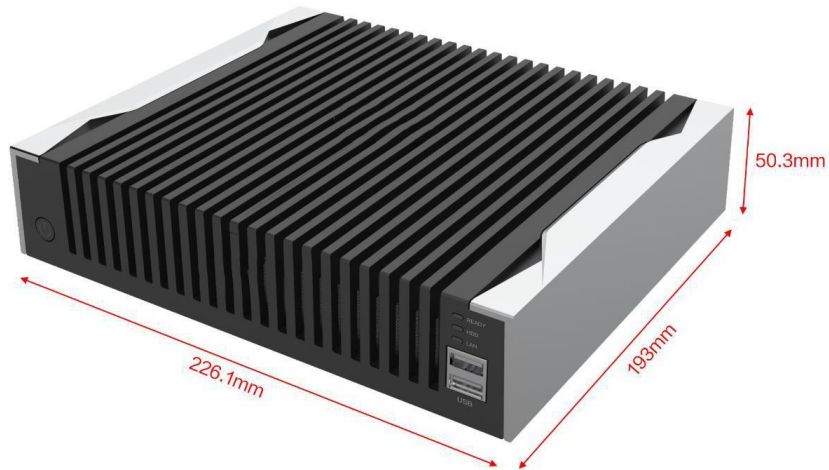
(2 million up to 8 accesses, 4 million up to 8 accesses, 8 million up to 4 accesses)

Mode	Number of video streams	Maximum access to capture the number of roads
Pure face mode	0 Road 200/4/8 million	32 Roads
	1 way 200/4/8 million	30 Roads
	2 way 200/4/8 million	28 Roads
	4 way 200/4/4/8 million	24 Roads
	8-way 2/4 million	16 Roads
	12 Roads 2 million	8 Roads

	16 Roads 2 million	0 Road
Hybrid mode	0 Road 200/4/8 million	32 Roads
	1 way 200/4/8 million	30 Roads
	2 way 200/4/8 million	24 Roads
	4 way 2/4 million	16 Roads
	8-way 2/4 million	0 Road

Dimensions.

Note: There may be multiple versions of the same model, and there will be differences in different versions of the product (including functional parameters, LOGO design, appearance details, product information, etc.), please refer to the actual product.

Data security and disclaimer

(hereinafter referred to as "Huifan") products may involve the collection, storage and use of face and other related data. (hereinafter referred to as the "Related Party") at the express request of its customers and other related parties (hereinafter referred to as the "Related Party") to provide the corresponding equipment, products and functional features (hereinafter referred to as the "Features") for use in the target area to achieve the relevant functions including face recognition. In the target area to achieve the relevant functions including face recognition. Huifan cannot unilaterally enable or use the Feature, nor can it obtain any information about the use or maintenance of the Feature by the relevant party, whether and how to enable, deploy, use or disable the Feature is at the discretion of the relevant party. As a prerequisite, Huifan has requested the relevant party, and the relevant party also undertakes accordingly, the relevant party shall, in the process of using or maintaining the feature, strictly comply with the applicable laws and regulations, effectively fulfill the valid agreements, declarations and commitments between itself and specific/non-specific third parties, respect the generally accepted social ethics and morality, give the relevant users, government agencies and other third parties the necessary notice, and obtain and retain all necessary consent, license, and authorization necessary to ensure that the use or maintenance of the feature by the relevant parties does not infringe on the various legal rights and interests of third parties. In the development of this feature and other products, Huifan will also strictly comply with relevant laws and regulations, implement the principle of personal information protection, and follow the publicly released "Artificial Intelligence Application Guidelines".

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