

DHI-IVS-MC8000-E-TU1

Dahua Micro Center Intelligent Server



System Overview

With its built-in AI computing chips, Dahua Micro Center Intelligent Server is a high-performance comparison and analysis device that is easy to scale. It has a large storage capacity, a user friendly webpage and can perform a variety of functions such as face comparison, search by image and face arming. The server integrates databases into its functions, and detects motor vehicles, non-motor vehicles, and the faces and bodies of people. Widely compatible, this server can be connected to cameras and platforms through multiple methods, and is highly suitable for industries that require intelligent comparison and analysis.

Functions

Target Classification

Classify targets including human, motor vehicles and non-motor vehicles. Generate intelligent structured analysis on the live video and then extract structured information on the moving targets.

Motor Vehicle Detection

Detects motor vehicles by a wide range of attributes such as type, color, brand and plate number. It also detects inspection sticker, not wearing seatbelt, calling, sunshields, calling, number of ornaments and pendants.

Non-motor Vehicle Detection

Detects non-motor vehicles by a wide range of attributes such as type and color. It can also detect the attributes of drivers such as with passenger, helmet, helmet color, trunk and basket.

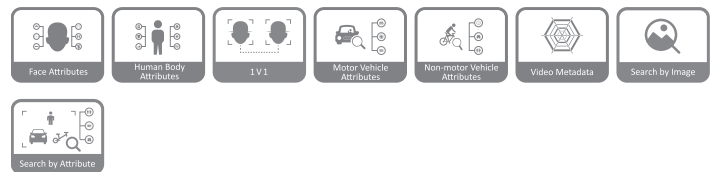
Pedestrian Detection

Detects pedestrians by a wide range of attributes such as gender, age, hair style, the color of their top and bottom clothes, direction, whether they are wearing a hat and items belonging to them such as umbrellas and backpacks.

Face Detection

Detects and analyzes face image streams by gender, age, expression, glasses, mustache, and face mask.

- One-click deployment and can be used immediately at startup.
- Brand-new UI design, and the server supports storage, analysis and detection.
- B/S architecture with SDK support.
- Linux OS, simplified architecture and high performance.
- One card analyzes up to 60-channel real-time 1080p video of moving target or 200 face images per second.
- Supports configuration of modifying channel streams of video stream, static face database, armed face database and storage period.
- Up to 30 million pieces of features can be stored in the server.
- Perform feature comparison in up to 400 million times per second.
- Up to 2 million pieces of data can be stored in the arming database (Allowlist is not supported).
- Up to 30 million pieces of data can be stored in the all databases.
- Search by image is available for the snapshot and arming databases and can be performed in seconds.
- Smart 1U 19 inch standard case.
- Stable running with dual power supply.



Face Modeling

Supports extracting attributes from face images.

Search by Image

Images can be used to search for information, and the search results can be filtered by time and channel. The results are compared with data on humans, motor vehicles and non-motor vehicles in the database, and the matches are displayed based on their similarity level.

Face Arming

Compares the face snapshot against a designated face database to get information on the first person that exceeds the arming threshold.

History Alarm Record Search

Quickly search for history records on arming alarms to review information on alarms that were previously triggered and the search results can be filtered by time and channel.

Management of Registered Database

Manage and use multiple types of databases such as the arming database and static database. You can add, delete and modify these databases and their members.

Search in Registered Database

Quickly search for registered database members by name, gender, credential type, date of birth, ID card number and region.

Search by Image in Registered Database

Images can be used to search for information. The results are compared with data on humans in the registered database, and the matches are displayed based on their similarity level.

Search in Snapshot Database

Conveniently search for history records of passing persons in the snapshot database.

Search by Image in Snapshot Database

Images can be used to search for information, and the search results can be filtered by time and channel. The results are compared with data on humans in the snapshot database, and the matches are displayed based on their similarity level.

1V1

Supports 1V1 face comparison, and returns similarity result.

Scene

It's widely used for buildings, financial and traffic industry.

Technical Specification

System

Main Processor	8-core ARM processor, 2.3 GHz
GPU	One AIX3200 card
Operating System	CentOS Linux release 7.4.1708 (AltArch)
Memory	Two 16 GB DDR4 memory modules
Disk	Four 3.5" 4 TB HDDs and two 128 GB SSDs

Comprehensive Analytics Capabilities

Analytics Capabilities	Analyzes moving targets (including face attributes) for up to 60-channel real-time videos in 1080p with one card
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Comprehensive Data Comparison Capabilities

Search by Image	Responds to search by image in snapshot database (up to 30 million data) and arming database (up to 2 million data) in seconds
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Face Analytics

Face Detection	Detects and analyzes face image streams by gender, age, expression, glasses, bread, face mask
Face Modeling	Supports extracting attributes from face images
Face Arm	Compares the face snapshot against a designated face database to get information on the first person that exceeds the arming threshold
History Alarm Records Query	Quickly search for history records on arming alarms to review information on alarms that were previously triggered and the search results can be filtered by time and channel.
Management of Registered Database	Manage and use multiple types of databases such as the arming database and static database. You can add, delete and modify these databases and their members.

Search in Registered Database	Quickly search for registered database members by name, gender, credential type, date of birth, ID card number and region.
Search by Image in Registered Database	Images can be used to search for information. The results are compared with data on humans in the registered database, and the matches are displayed based on their similarity level.
Search in Snapshot Database	Conveniently search for history records of passing persons in the snapshot database.
Search by Image in Snapshot Database	Images can be used to search for information, and the search results can be filtered by time and channel. The results are compared with data on humans in the snapshot database, and the matches are displayed based on their similarity level.
1V1	Supports 1V1 face comparison, and returns similarity result.

Face Analytics Performance

Image Stream Analysis Capability	Up to 200 face images/s
Blocklist/Allowlist Database Arm	Up to 2 million pieces of data can be stored to the arming database.
Search by Image	Responds to search by image in snapshot database (up to 30 million data) and arming database (up to 2 million data) in seconds
1V1	80 times/s

Vehicle Analytics

License Plate Color Recognition	White, black, yellow, blue, red and green
Vehicle Color Recognition	Recognizes a variety of colors such as white, orange, pink, black, red, yellow, gray, blue, green, silver, brown and purple
Vehicle Type Recognition	Supports large bus, heavy truck, medium truck, sedan, van, truck, medium bus, SUV and pickup
Vehicle Attributes Recognition	Vehicle front: number of ornaments, pendant and inspection sticker, sunshields and cards Vehicle body: sunroof
Safe Driving Behavior Detection	For drivers, it detects when they are not wearing their seatbelt, playing with phone while driving. For co-drivers, it detects when they are not wearing their seatbelt.
Target Detection	Supports vehicle recognition of incomplete snapshot

Vehicle Analytics Performance

Image Stream Analysis Capability	Up to 90 images/s in 1080p (one vehicle target in each image)
Vehicle Brand/Logo Recognition	Vehicle front: 140 types Vehicle back: 60 types
Search by Vehicle Picture	Supports uploading a vehicle image, and setting the search conditions such as time, channel, similarity threshold and vehicle attributes (color, brand, type, decorations, annual inspection label, pendants and sunshield). The results can be compared with data on motor vehicles in the database, and the matches are displayed based on their similarity level.
Vehicle Search	Search by image in snapshot database (up to 30 million data) and respond in seconds

Metadata Analytic

Target Classification	Classify targets including human, motor vehicles and non-motor vehicles. Generate intelligent structured analysis on the live video and then extract structured information on the moving targets.
Non-motor Vehicle Detection	Detects non-motor vehicles by a wide range of attributes such as type and color. It can also detect the attributes of drivers such as with passenger, helmet, helmet color, trunk and basket.

Pedestrian Detection	Detects pedestrians by a wide range of attributes such as gender, age, hair style, the color of their top and bottom clothes, direction, whether they are wearing a hat and items belonging to them such as umbrellas and backpacks.
Real-time Display	Supports real-time display of analysis results of human and non-motor vehicle with tracking box
Search by Attribute	Search for human by gender, age, hair style, the color of their top and bottom clothes, direction, whether they are wearing a hat and items belonging to them such as umbrellas and backpacks. Search for non-motor vehicles by type and color. It can also detect the attributes of drivers such as with passenger, helmet, helmet color, trunk and basket.
Search by Image	Images can be used to search for information, and the search results can be filtered by time and channel. The results are compared with data on humans, motor vehicles and non-motor vehicles in the database, and the matches are displayed based on their similarity level.
Picture Storage	Supports local storage

Metadata Analytics Performance

Intelligent Video Stream	Supports real-time display of structured intelligent video streaming
Metadata Analytics Performance	Analyzes moving targets (including face attributes) for up to 60-channel real-time videos in 1080p with one card
Search by Image Performance	Responds to search by image in snapshot database (up to 30 million data) in seconds

Port

Network Port	4 × RJ-45 Gigabit electric ports and 1 × RJ-45 Gigabit management port
USB	2 × front USB 3.0 ports and 2 × rear USB 3.0 ports
VGA	1 × VGA port
PCIe	2 × standard PCIe card slots
M.2	3 × built-in M.2 ports
Others	14 × custom cards

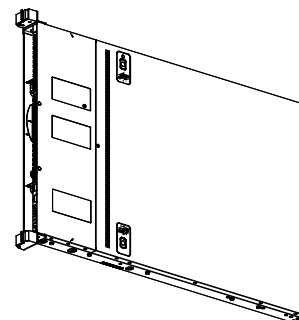
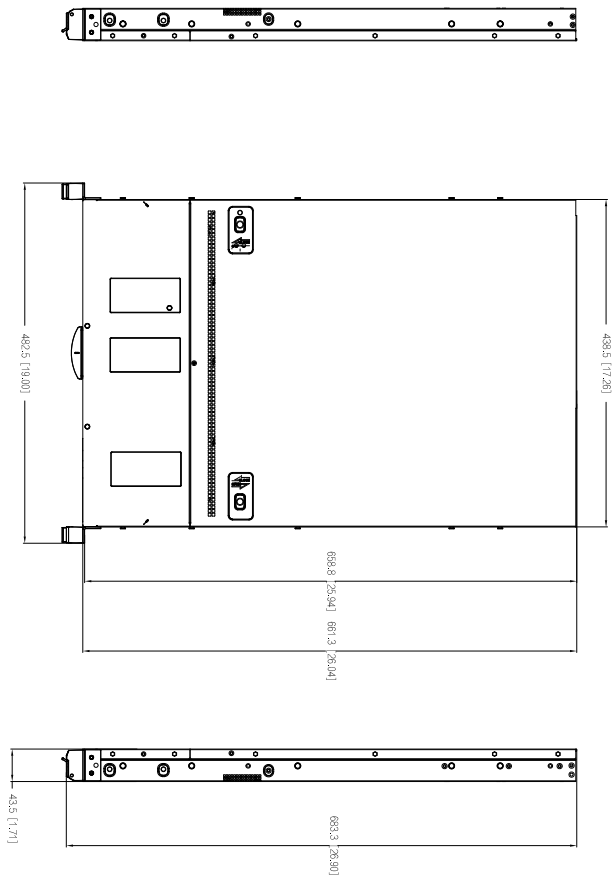
General

Power Supply	100–127 V/200–240 V, 50 Hz/60 Hz, 7.0 A/3.5 A
Power Redundancy	Dual
Power Consumption	≤550 W
Operating Temperature	+10 °C to +35 °C (+50 °F to +95 °F)
Operating Humidity	10%–80% (RH), maximum relative humidity is 90% (RH) (40 °C)
Storage Temperature	–40 °C to +60 °C (–40 °F to +140 °F)
Storage Humidity	5%–95% (RH) (33 °C)
Gross Weight	<21.5 kg (47.40 lb)
Net Weight	<15 kg (33.07 lb)
Product Dimensions	43.5 mm × 438.5 mm × 658.5 mm (1.71" × 17.26" × 25.93") (H × W × D)
Packaging Dimensions	228 mm × 595 mm × 865 mm (8.97" × 23.43" × 34.06") (H × W × D)
Installation	Standard 19" rack installation with guide rail
MTBF	10,000 h

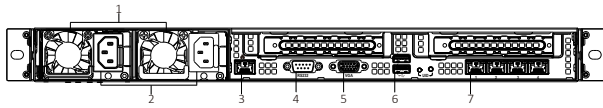
Ordering Information

Type	Model	Description
Intelligent Server	DHI-IVS-MC8000-E-TU1	Dahua Micro Center Intelligent Server

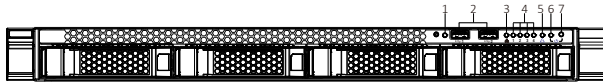
Dimensions (mm [inch])



Panels



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|---|---------------------|---|------------------------|
| 1 | Fan | 5 | VGA port |
| 2 | Power port | 6 | USB 3.0 |
| 3 | BMC management port | 7 | Data transmission port |
| 4 | Serial port | | |



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|---|------------------------------------|---|---------------------|
| 1 | UID indicator | 5 | Alarm indicator |
| 2 | USB 3.0 | 6 | Operation indicator |
| 3 | BMC network status indicator | 7 | Power indicator |
| 4 | Data transmission status indicator | | |