

User Manual

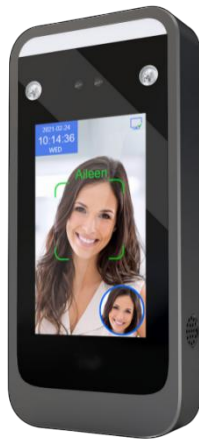
MFR-602

1. Product Description

MFR-602 is a high-performance and high-reliability face recognition product that relies on deep learning algorithms and has the characteristics of fast recognition speed and high accuracy.

Application scenarios: commuter shuttle buses and school buses.

2. Product Photo



3. Product Features

- Wide dynamic range camera, capable of recognition in both bright light and low light conditions
- Large-capacity face registration of 5000 images
- Large-capacity attendance records of 500,000
- Supports simultaneous recognition of up to 5 people, and supports face tracking and face capture
- Face recognition in less than 0.2S
- Supports liveness detection and dynamic anti-counterfeiting, preventing deception by various photos and videos on different media
- Supports downloading/uploading user information and facial photos via USB flash drive
- Supports nighttime LED and infrared illumination
- Supports TTS: English audio announcement of names

4. Product Specifications

Items	Parameters	
Operating System	Linux	
CPU	1.2G Dual-Core ARM Cortex-A7	
RAM	256M DDR3L	
ROM	4G EMMC	
Language	English	
Camera	2 million pixels	
Fill Light	LED High-brightness Fill Light	
	Dual Infrared Night Vision Fill Light	
Display	4.3-inch Touchscreen	
Keyboard	On-screen Touch Virtual Keyboard	
Recognition Rejection Rate	$\leq 0.1\%$	
False Recognition Rate	$\leq 0.001\%$	
Audio Broadcast	English	
User Capacity	5000	
Face Registration Capacity	5000 Images	
User Records	500,000	
Face Recognition Time	$< 0.2S$	
Liveness Detection	Support	
Recognition Distance	Dynamic Face Recognition	0.5~2.5 Meters
	Enabling Liveness Detection	0.5~1.5 Meters
Power Supply	DC 12~24V	
Operating Temperature	$-15^{\circ}C \sim 75^{\circ}C$	
Size	187.5mm*87.5mm*26mm	

5. Function Introduction

5.1. Main Menu

After touching the machine screen, a menu bar will pop up at the bottom. Click  to enter the main menu page. When there is a registered administrator, the administrator's identity must be verified by the registered person's face, card, or password before entering the main menu.

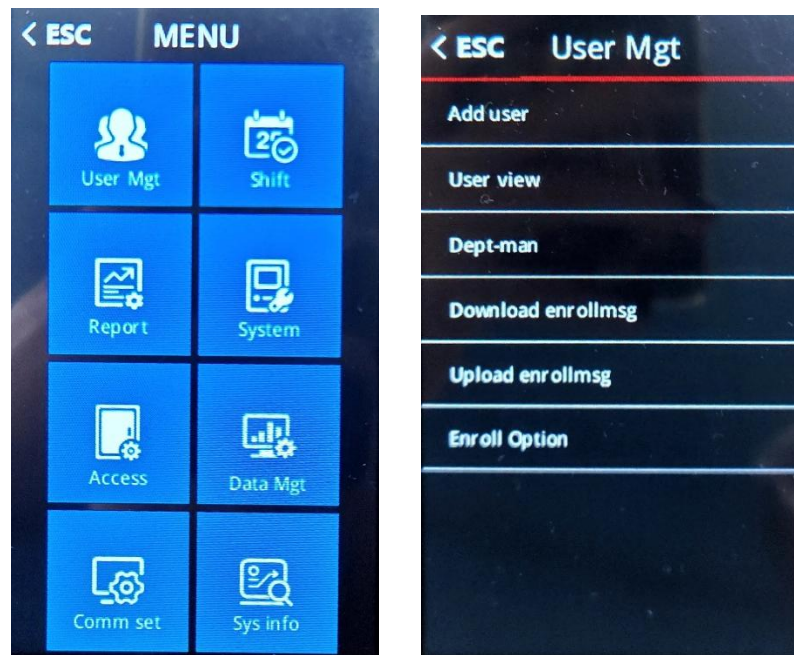


- User Mgt: Including Add user, User view, Dept-man, Download enrollmsg, Upload enrollmsg, Enroll Option settings;
- System: Including Time Option, Date, Language settings etc.; Providing settings for some basic functions of the machine; Firmware upgrade;
- Data Mgt: Export TXT format records to a USB flash drive, clear database, and initialize the machine, etc.;
- Comm set: Wired setup, wireless setup, server setup;
- Sys info: Including machine registration information and equipment details

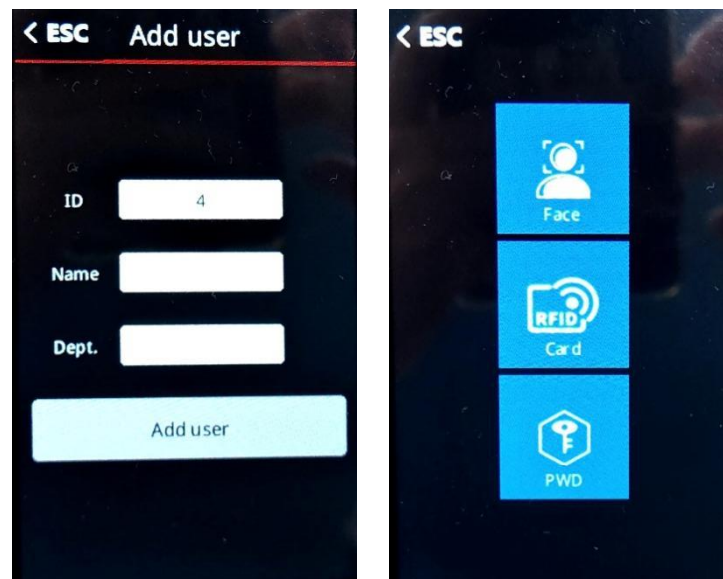
5.2. User Management (User Mgt)

The basic information of the user on the device includes face, card, password, and administrative permissions. In the company's attendance management, due to personnel changes in employees, the equipment provides operations such as adding, deleting, and modifying users.

After touching the machine screen, the menu bar will pop up at the bottom. Click , then click 'User Mgt'. If there is a previously registered administrator, please verify the administrator's identity before entering the menu. This section includes Add user, User view, Dept-man, Download enrollmsg, Upload enrollmsg, and Enroll Option.



5.2.1. Add User



- 1) When adding user, each person can only have one unique ID. ID is the most important information to identify a person in the attendance equipment.
- 2) Name: Enter and edit the name using the T9 input method.
- 3) Face: Register the user's face information.
- 4) Dept.: Enter the department.
- 5) Card: Only one card number can be registered for one registration number. After clicking 'Card', put the card in the induction area to read the card number. Then press Save.
- 6) Password: Only one password can be registered for one registration number. After clicking 'PWD',

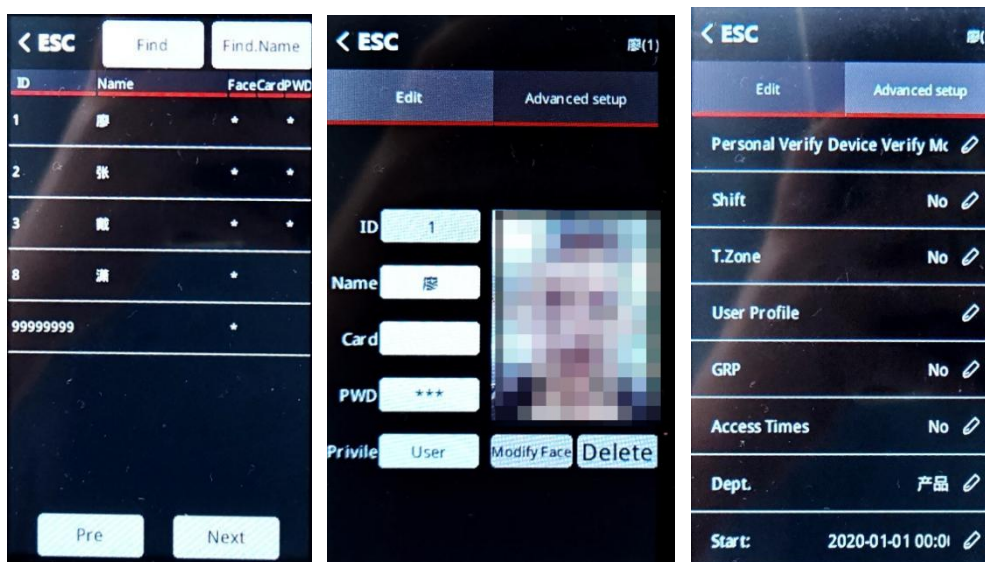
enter the password you want to set, then press 'OK' and confirm the password again to complete the registration.

Note 1: When registering a face, you must face the camera and keep the entire face intact in the frame to maintain a good face recognition effect, please refer to the following registered face diagram.

Note 2: Password verification: When the machine is on the face verification page, touch the menu bar

on the bottom of the machine screen, click  , then enter the user ID, press 'OK', then enter the password, and then press 'OK' for verification.

5.2.2. User View



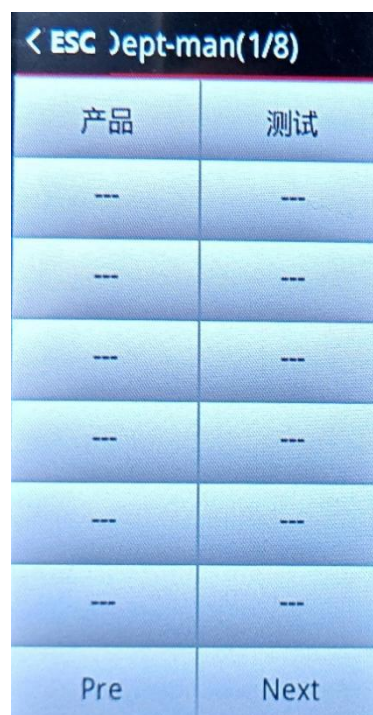
Browse all registered personnel in the machine, click on the corresponding user to edit their information, including name, card, password, department, shift and access times. You can also modify the face registration information or delete the employee. You can quickly locate the person who needs editing by using 'Find' or 'Find Name' at the top of the page.

【Privilege】 : Including 'User', 'Admin', 'Super User'

- 1) User: When the machine is set with an administrator or registrar, ordinary users do not have permission to enter the menu;
- 2) Administrator: The administrator is the highest authority of the machine, and his/her identity must be verified to enter the menu, and all functions in the menu are allowed to be operated.
- 3) Super user: A super user can only be registered when there is an administrator on the machine, and the super user can only operate some of the menus.

5.2.3. Department Management (Dept-man)

Edit the department name, supports up to 100 departments.



5.2.4. Download enrollmsg

Insert a USB flash drive, after touching the machine screen, the menu bar will pop up at the bottom. Click  to enter the main menu, then click 'User Mgt', and then click 'Download enrollmsg', then the information can be exported.

1) Data file: AFP_001.dat, It can be used to synchronize personnel information between multiple machines, where 001 represents the device ID.

2) Face photo file (EnrollPhoto)

3) Staff information Table: You can edit the information on your computer, as shown below:

Staff															
Note: A. Enroll number: only fill in the number (maximum of 8) required. B. Name: up to 48 words. C. Department: up to 48 words. D. Shift: 0-8. E. Admin :0 or not filled: user, 1: admin. F. Fingerprint, Face: no need to fill in. G. Password: up to 8 digits. H. Card number: up to 10 digits. I. Time Zone: 0-8. J. start, end: user valid date, the format is yyyy-mm-dd. K. Birthday format MM-DD															
ID	Name	Dept.	Shift	Admin	Face	PWD	Card	Lock timezone	GRP	Verify mode	Access Times	Birthday	Start:	End:	User Profile
1	廖	产品	0	0	1	123	0	0	0	0	0				
2	张	测试	1	0	1	123	0	0	0	0	0				
3	戴	测试	1	0	1	123	0	0	0	0	0				
8	潘	产品	1	0	1	0	0	0	0	0	0				
99999999		产品	1	0	1	0	0	0	0	0	0				

Fill in the personnel information according to the note on the table header. The 'Shift' is the sequence number of the shift edited in the attendance settings, and the 'Access Times' is the number of the access control in a week period applied by the user. After finishing editing, press 'OK' to save, and then save the modified file to the USB flash drive.

5.2.5. Upload enrollmsg

Insert a USB flash drive to import the previously exported and edited files, this method can also be used to synchronize the personnel information of multiple machines.

5.2.6. Enroll Option

Number format (By default, no resource pack upgrade is required): 9 digits (default); 18 digits; 30 characters.

RFID Free Registration: The card can be recognized without registration or authorization.

Swipe to register face: When the person has registered a card, he/she can swipe the card and jump directly to the face registration interface to register his/her face.

Face Duplication Check: Selecting 'Yes', when a duplicate face is registered, the registration fails. Selecting 'No', the same face can be registered repeatedly.

Register RFID: Register a card, the registrant interface will pop up directly by swiping the card.

5.3. System

After touching the machine screen, the menu bar will pop up at the bottom. Click  to enter the main menu, then click 'System'.

5.3.1. Device setup

Content	Description
Time	Set device time
Time format	Select 24H or 12H
Date format	Different date display formats are available
NTP	Automatically update time by connecting to an external time server
Language	The language in which the menu is displayed
Voice	Set the volume level of the speaker
Play name voice	Select whether the user's name is announced after the user is identified
Multiple faces	Select whether to enable multi-person recognition mode, up to 5 users can be recognized at the same time after it is enabled
Result Time	The duration for the machine to recognize the face repeatedly when the face is detected on the screen the whole time, if it is set to 0, it can only be recognized again when the face moves out of the screen and then enters again
Screen Idle	The time it takes to enter screen idle mode after stopping clocking in
Sleep mode	The time it takes to enter sleep mode after stopping clocking in

Screen Saver Wakeup	When the machine is in sleep mode, you can choose to wake up the machine with a face (when the machine recognizes a face) or by touching the screen
Label Style	Gym Style: Expiration date information can be displayed; Message Bar: Software delivery information can be displayed
Identify Distance	Set the distance for face recognition
Bio-assay	Select whether to check the user is a real person
Show Avatar	Select whether the user's avatar is shown on the screen after successful verification
Keyboard	Select T26 or T9 input methods

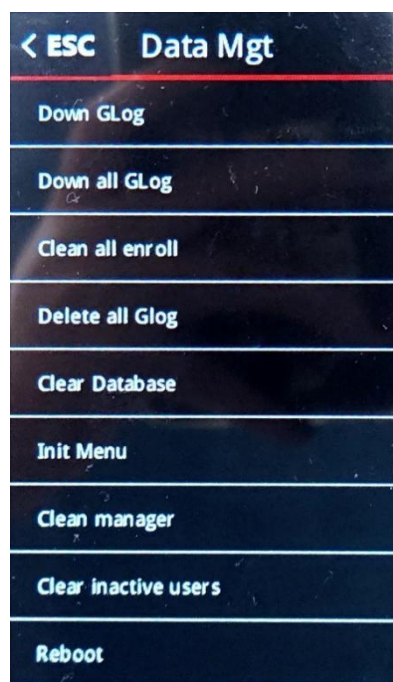
5.3.2. Advanced setup

Content	Description	
Max Admin	Set the maximum number of admin of the device	
Device Verify Mode	Set the identification verification method of the machine, which can be individually selected or combined	
QR code	Visitor QR code: It can be used with our cloud platform, and the machine can recognize specific QR codes Card->QR code: Convert card numbers into QR code identification Server QR code: Used with software, the software will judge the effectiveness of QR codes	
Hide Privacy	Part of the name can be hidden on the display	
1:N Identify	Set the matching accuracy for face recognition	
Live threshold	The accuracy of face recognition after enabling liveness detection	
Wear Mask	No	The machine does not detect whether the user is wearing a mask
	Yes	Users can wear a mask or not to wear a mask for face recognition, and when wearing a mask for recognition, the recognition accuracy is the same as the set value of 'mask threshold'
	Must	Users must wear masks to perform face recognition
Mask threshold	The accuracy of face recognition when wearing a mask	
Disable Face	Disable face recognition function	
Exposure compensation	When the environment is too bright or too dark, the machine will fail to recognize faces, you can change this value to adjust the camera	

	exposure compensation value appropriately
Camera calibration	Camera factory calibration
Testing	Detect if the camera is damaged, and black and white images are used for liveness detection
Firmware upgrade	Insert the USB flash drive to upgrade the machine firmware

5.4. Data Management (Data Mgt)

After touching the machine screen, the menu bar will pop up at the bottom. Click  to enter the main menu, then click 'Data Mgt'.



【Clean all enroll】 : Delete the registration information (face) of all people.

【Clear Database】 : Clear all personnel information data and clock-in data on the device.

【Init Menu】 : Restore the device setting parameters to the factory state without affecting personnel information and clock-in records.

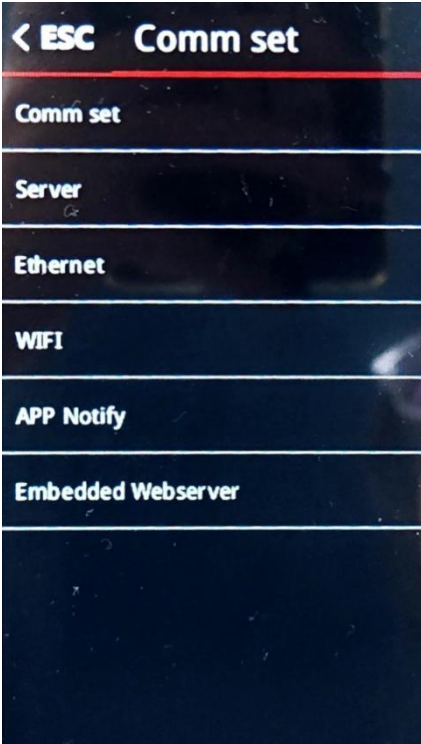
【Clean manager】 : Clear all manager privileges on the device.

【Clear inactive users】 : If there is no identification record for more than 3 months, the person's information will be deleted.

【Reboot】 : Click to reboot device.

5.5. Comm set

After touching the machine screen, the menu bar will pop up at the bottom. Click  to enter the main menu, then click 'Comm set'.

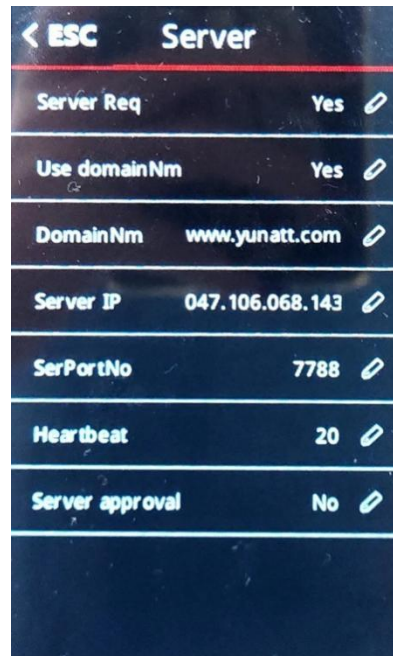


5.5.1. Comm set

Content	Description
Device ID	Set the corresponding device ID, the factory default device ID is 1, please note that the device ID is related to communication
Port No.	The default port number is 5005, for communication connections under the LAN
Baud rate	38400
RS485 function	Software, Printer, Send JSON

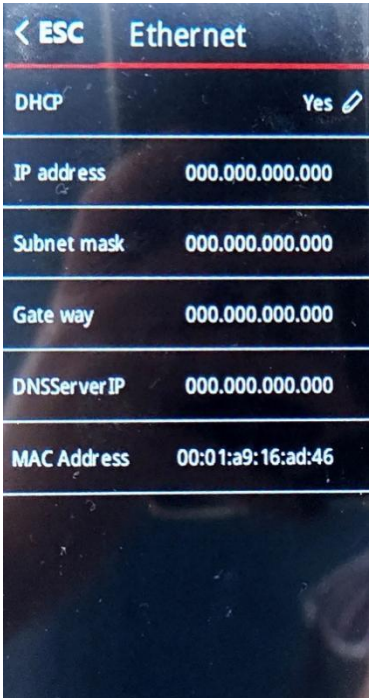
5.5.2. Server

When using the WAN method for communication, set the corresponding server settings on this page.



Content	Description
Server Req	Select 'Yes' or 'No', select 'Yes' to enable server communication
Use domain Nm	Select 'Yes' or 'No'
Domain Nm	If you have selected 'Yes' for 'Use domain Nm', enter the domain name here
Server IP	If you have selected 'No' for 'Use domain Nm', enter the server IP address here
Ser Port No.	Enter the server port number
Heartbeat	3s (Default)
Server approval	If this function is enabled, clock-in can only be done when the machine is connected to the server

5.5.3. Ethernet



5.5.4. Embedded Webserver

Embedded Webserver	Yes: Function On; No: Function Off
WebServer Port	80
Login Password	12345678
Hide IP	Select 'Yes': The device IP will not be displayed on the standby interface

You can enter the IP address on the LAN browser to enter the device management interface. Default account: admin, Password: 12345678 (you can change it yourself)

5.6. Sys info

After touching the machine screen, the menu bar will pop up at the bottom. Click  to enter the main menu, then click 'Sys info', query device storage information and device details.

< ESC Sys info	
Capacity	Info
Manager	0 10
Add user	5 5000
Face	5 5000
Card	0 5000
PWD	3 5000
RT_Log	14 500000
New_Log	14 500000
All log quantity	14 500000

< ESC Sys info	
Capacity	Info
Company	
Device ID	1
IP address	000.000.000.000
SN	AYTK05140130
Released	8 Nov 2025
Firmware	ai806_f06v_v5.15
Check Update	Network Update

6. Set the MFR-602 MettaXIOT domain name

MENU > Comm set > Server

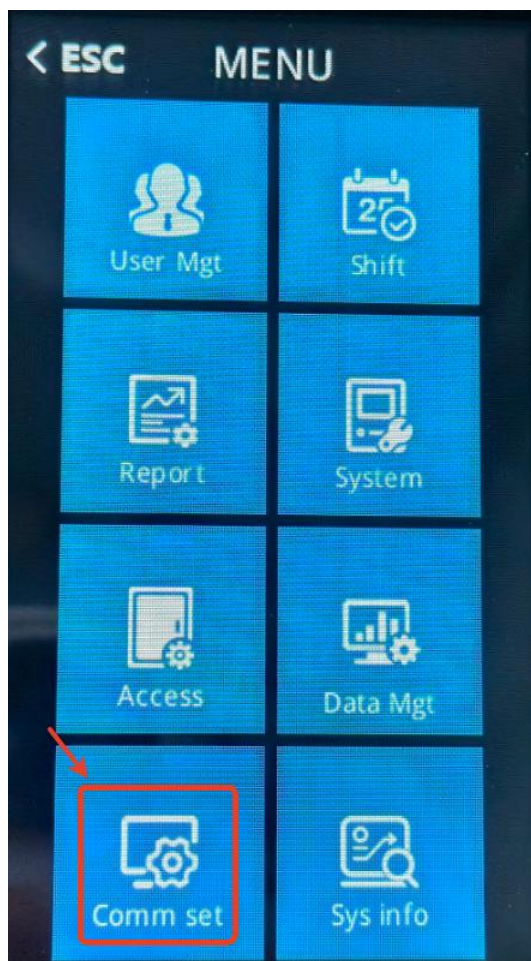
Server Req: Select Yes

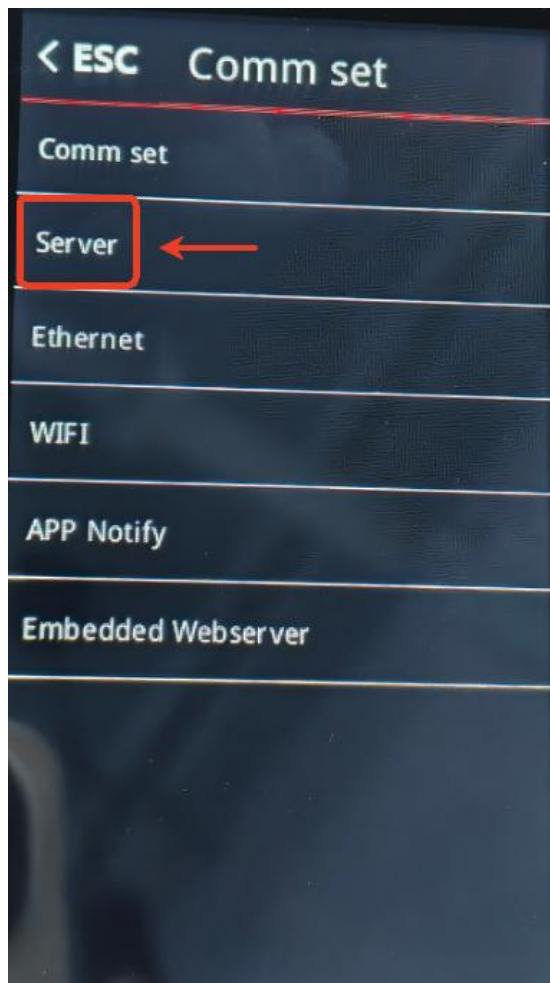
Use domain Nm: Select Yes

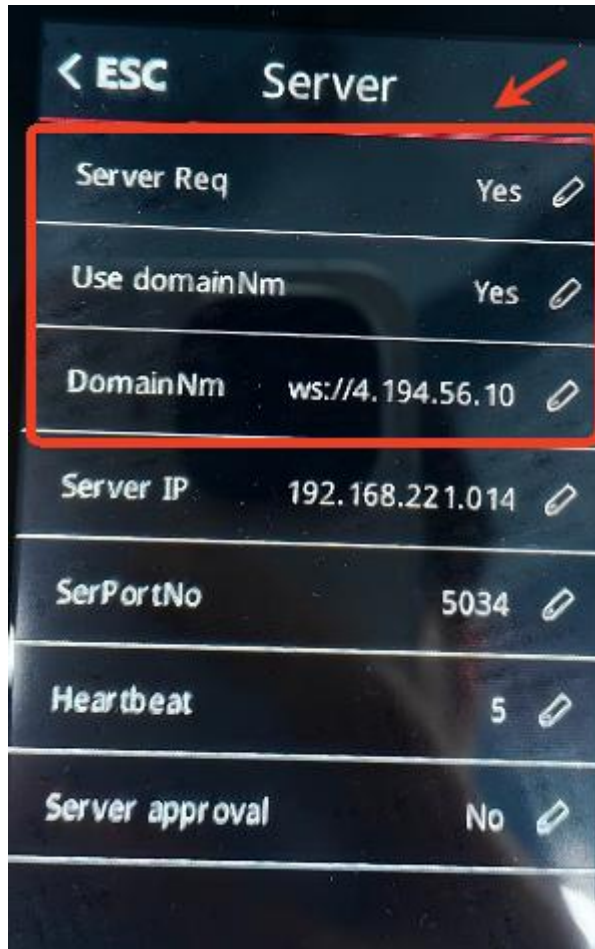
Domain Nm: Enter ws://4.194.56.109:5034

SerPortNo: Enter 5034

Other settings default to their default values.





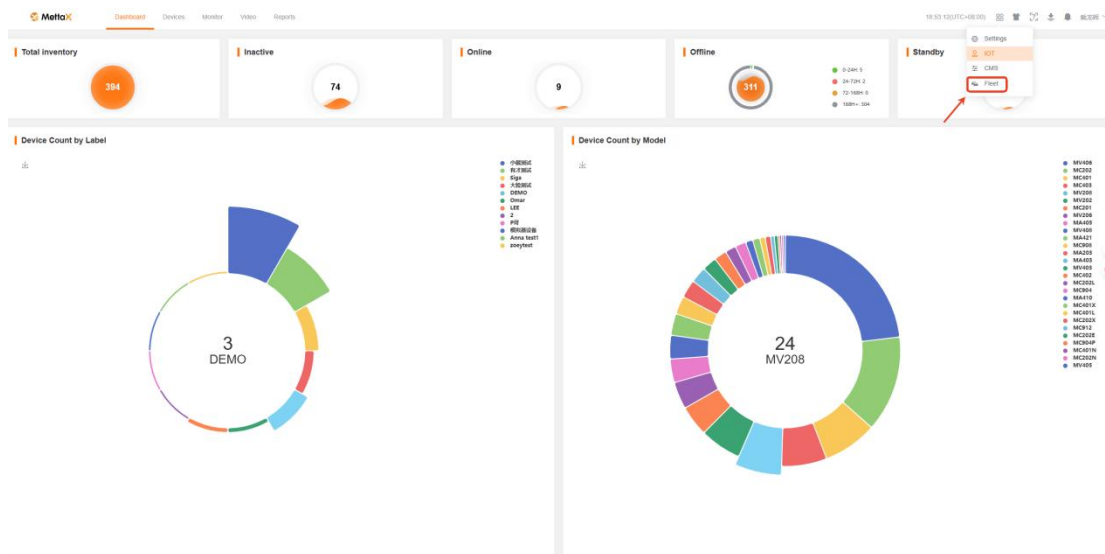


7. MettaXIOT Platform configuration

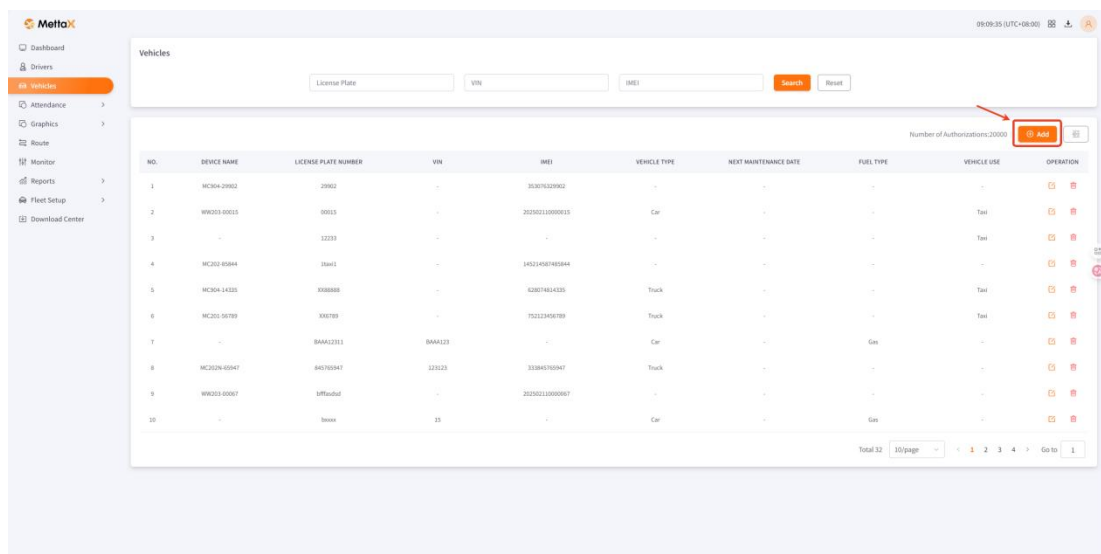
7.1. Monitor

Please first confirm that the MDVR device has been deployed on the MettaXIOT platform and that its location information is valid.

7.2. Dashboard > Fleet > Vehicles



7.3. Add Vehicle



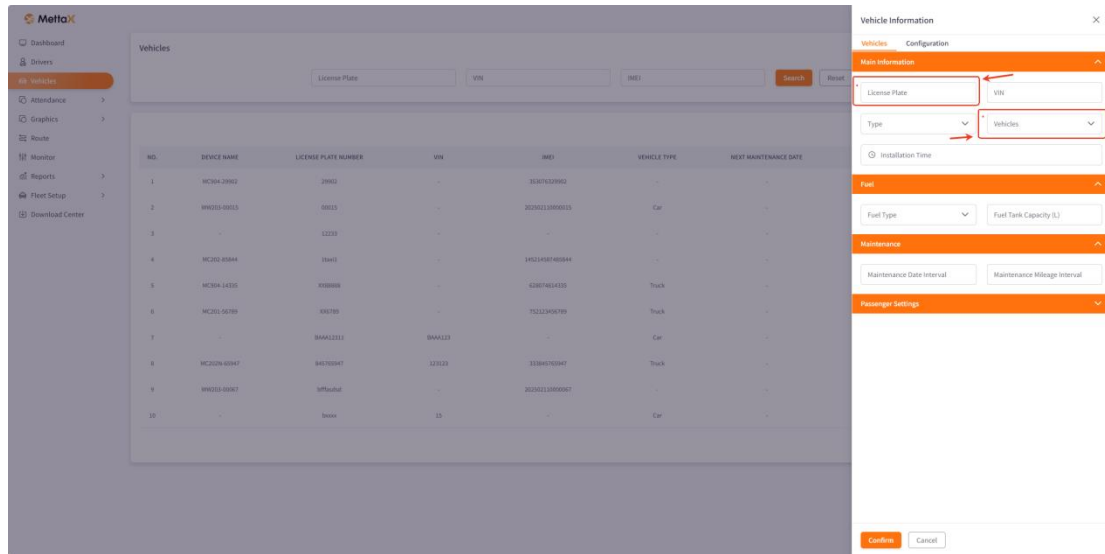
The 'Vehicles' management interface includes a search bar with fields for License Plate, VIN, and IMEI. Below the search bar is a table listing 10 vehicles. An 'Add' button is located in the top right corner of the table area, indicated by a red arrow. The table columns include NO., DEVICE NAME, LICENSE PLATE NUMBER, VIN, IMEI, VEHICLE TYPE, NEXT MAINTENANCE DATE, FUEL TYPE, VEHICLE USE, and OPERATION.

NO.	DEVICE NAME	LICENSE PLATE NUMBER	VIN	IMEI	VEHICLE TYPE	NEXT MAINTENANCE DATE	FUEL TYPE	VEHICLE USE	OPERATION
1	MC204-20902	20902	-	353076229902	-	-	-	-	[Add] [Edit] [Delete]
2	WV203 00015	00015	-	20200211000015	Car	-	-	Taxi	[Add] [Edit] [Delete]
3	-	22333	-	-	-	-	-	Taxi	[Add] [Edit] [Delete]
4	MC203 00044	00044	-	345214501455044	-	-	-	-	[Add] [Edit] [Delete]
5	MC204 14335	0000000	-	620074814335	Truck	-	-	Taxi	[Add] [Edit] [Delete]
6	MC203 00789	000789	-	752233456789	Truck	-	-	Taxi	[Add] [Edit] [Delete]
7	-	BAAA12313	BAAA12313	-	Car	-	Gas	-	[Add] [Edit] [Delete]
8	MC202N 00047	0000000	220225	353065705047	Truck	-	-	-	[Add] [Edit] [Delete]
9	WV203 00007	0000000	-	20200211000007	-	-	-	-	[Add] [Edit] [Delete]
10	-	00000	05	-	Car	-	Gas	-	[Add] [Edit] [Delete]

License Plate: Enter your license plate number

Vehicles: Select the MDVR device you wish to add.

Other fields to be completed as needed



Vehicles

License Plate VIN IMEI Search Reset

NO.	DEVICE NAME	LICENSE PLATE NUMBER	VIN	IMEI	VEHICLE TYPE	NEXT MAINTENANCE DATE
1	MC504-20902	29002	-	313070329002	-	-
2	MC503-00015	00015	-	20200210000015	Car	-
3	-	02293	-	-	-	-
4	MC505-80004	80004	-	346214587400004	-	-
5	MC504-14335	14335	-	430074614335	Truck	-
6	MC501-00109	00109	-	752123400709	Truck	-
7	-	B04K12311	B04K123	-	Car	-
8	MC503N-00047	040700047	123023	313040700047	Truck	-
9	MC503-00067	00067	-	20200210000067	-	-
10	-	00000	00	-	Car	-

Vehicle Information

Vehicles Configuration

Main Information

License Plate VIN

Type Vehicles

Installation Time

Fuel

Fuel Type Fuel Tank Capacity (L)

Maintenance

Maintenance Date Interval Maintenance Mileage Interval

Passenger Settings

Confirm Cancel

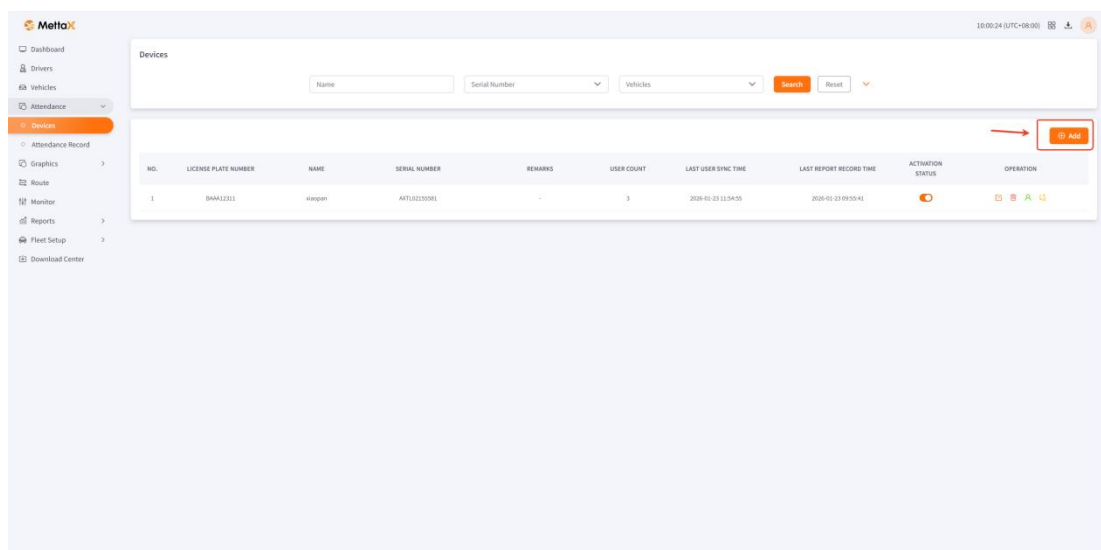
7.4. Add MFR-602 device

Attendance > Devices > Add

Vehicles: Select the added vehicle (MDVR device)

Name: Fill in as needed

Serial Number: Enter the serial number for MFR-602

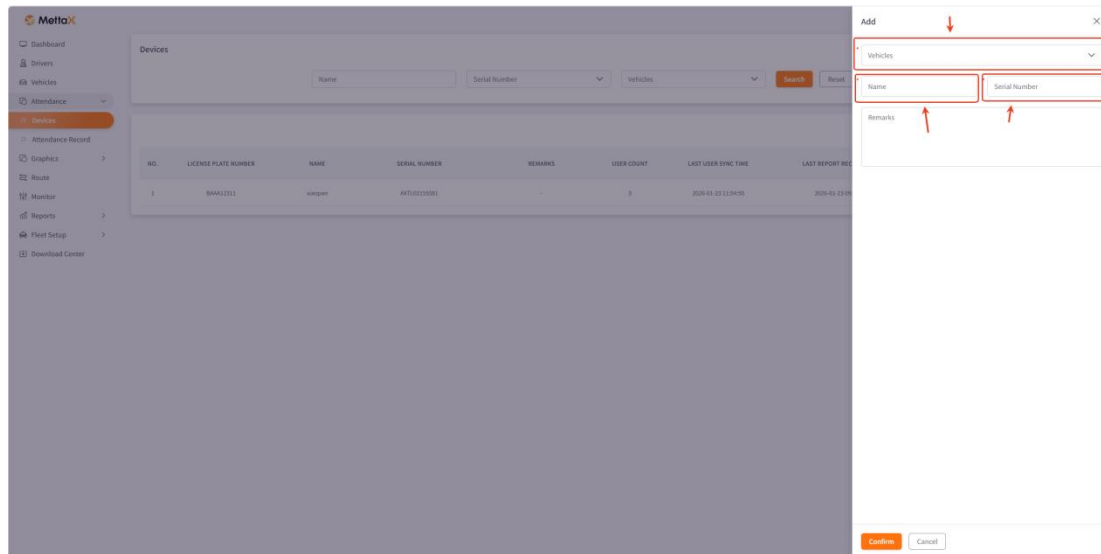


Devices

Name Serial Number Vehicles Search Reset

NO.	LICENSE PLATE NUMBER	NAME	SERIAL NUMBER	REMARKS	USER COUNT	LAST USER SYNC TIME	LAST REPORT RECORD TIME	ACTION STATUS	OPERATION
1	B04K12311	anapen	ANTL02100001	-	3	2020-01-23 11:54:05	2020-01-23 09:05:41	ON	   

Add



7.5. Add facial information

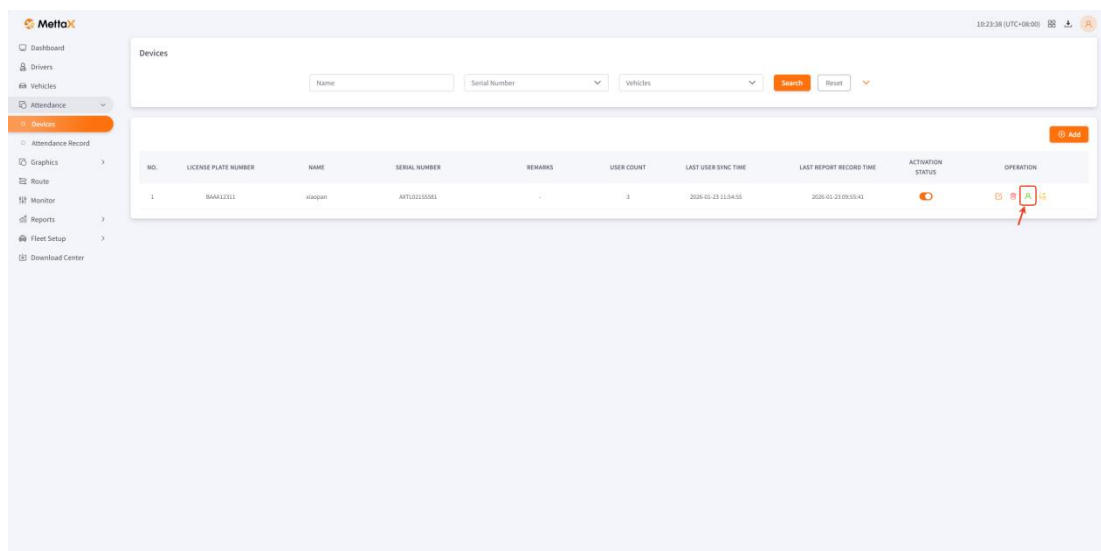


The MFR-602 device has been added. Click  to add

Upload Avatar: Upload a photo of your face (follow the prompts to complete the upload)

User ID: Enter Face ID (numeric)

User Name: Fill in your name



Users

User ID

User Name

Sync Time

Search

Reset

NO.	USER ID	USER NAME	USER PHOTO	SYNC TIME	ACTIVATION STATUS
1	1	张王		2026-01-29 20:04:40	
2	2	Spencer		2026-01-29 11:04:36	
3	3	gray Wolf		2026-01-29 11:04:36	

Add

Upload Avatar

Reset

Only images in .png format with a size not exceeding 4800x3200x4.150KB are allowed

User ID

User Name

Confirm

Cancel

7.6. Synchronize facial information

Click  to sync the added facial information to the MFR-602 device.

MettaX

Dashboard

Drivers

Vehicles

Attendance

Review

Attendance Record

Graphics

Route

Monitor

Reports

Fleet Setup

Download Center

Devices

Name

Serial Number

Vehicles

Search

Reset

NO.	LICENSE PLATE NUMBER	NAME	SERIAL NUMBER	REMARKS	USER COUNT	LAST USER SYNC TIME	LAST REPORT RECORD TIME	ACTIVATION STATUS	OPERATION
1	BAAH13311	slapman	ART102110061		3	2026-01-29 11:04:05	2026-01-29 09:05:41		

MettaX

Dashboard

Drivers

Vehicles

Attendance

Station

Attendance Record

Graphics

Route

Monitor

Reports

Fleet Setup

Download Center

18:30:56 (UTC+08:00)

Devices

Name

Serial Number

Vehicles

Search

Reset

Add

NO.	LICENSE PLATE NUMBER	NAME	SERIAL NUMBER	REMARKS	USER COUNT	LAST USER SYNC TIME	LAST REPORT RECORD TIME	ACTION STATUS	OPERATION
1	SHAN12345	HONGKAI	MT11J220050	-	3	2024-02-23 11:04:35	2024-02-23 09:05:42		

Tip

This operation will completely overwrite all platform user data with the attendance device's user data and cannot be undone. Do you want to continue?

Cancel

Confirm