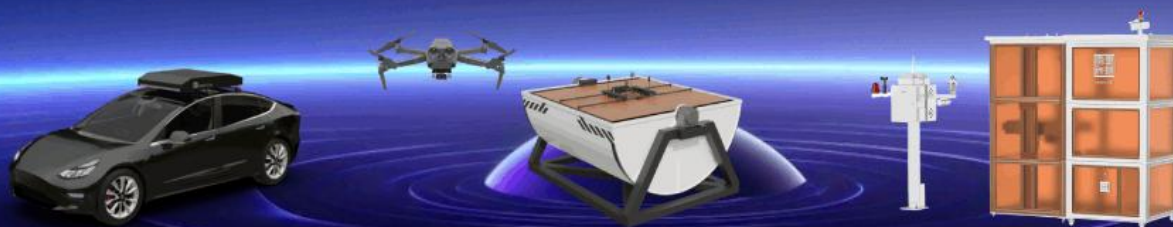


HEISHA Catalog





We build Bot-mansions



**The world's leading one-stop
drone dock innovation center**

HEISHA has provided

- ◆ Over 50 custom drone docks
- ◆ Over 30 software platform based custom drone docks
- ◆ Over 20 custom car and modified car based drone docks
- ◆ Footprint in more than 60 countries

Standard Docks

Product line	Series	Model
HEISHA cloud service and app	Cloud app + documents	HSC-DJI, HSC-Open source, HSC-SF, Based on
Dock series	Canopy series	D60, D100, D135
	Vehicle-mounted type	DCAP, DCAP LITE, DCAP PRO, DCAP INBUILT
	Cabinet series	D250, R50, R80
	Other customization	Warehouse, spherical dock, tethered dock, robot dog charging house, VTOL drone dock, unmanned life ring ...
SDK and debugging	Development integration	MODBUS RTU/TCP, MQTT
	Debugging tool	PDA, Wireless RC, Android software package
Core components	Charging series	ACK150, ACK800, ACK2000
	Charge the landing gears	CL500, CL300, CL350 and custom
	Charging pads	DPAD40, DPAD50,DPAD60,DPAD80, DPAD100·····DPAD500
	Developer sets	DK60, DK80, DK135·····
	Other customization	Small and large current switch board, remote control switch, balance charge, rain meter, temperature and humidity collection management, air conditioning ·····

Logistic and large infrastructure

		Single station		Integrated station	
	Apply	Small-sized	Medium-sized	Large-scale	Ultra-large type
Multi-rotor drones	Logistics	Logistics terminal station	Logistics three-level distribution station	Logistics secondary terminal	Logistics, remote sensing, manned, multi-stop integrated station
Multi-rotor drones	Remote sense	Security inspecting dock			
Multi-rotor drones	Special type	Roof, interior, mooring	Fire grenade swapping drone dock		
EVTOL	Remote sense		Inspection dock		
EVTOL	Logistics		Logistics three-level distribution station		
EVTOL	Manned			Manned landing point	
Helicopter	Logistics			Logistics transfer station	
Helicopter	Manned			Manned landing point	

Logistic and large infrastructure

HEISHA dock series	Series	Model
Logistics dock series	T10	T10A, T10B
	T20	T20A, T20B, T20C
	T400	T400
	Custom made	
Special dock series	V series	V200, V300
	Custom made	
Remote sensing dock series	D series	D80, D135, D250
	Custom made	
Intelligent module for docking series	Charging, changing electricity and changing packages module	Smart charging module
		Battery swapping mechanical arm module
		Two-in-one module for swapping batteries and packages
	Software and API	Drone + dock dispatching platform
		Third-party development of APIs
		Logistics dock host computer development and customization
	Transmission structure and control customization	Return, lifting, open the door, load and unload parcels

Low-altitude logistics drone dock series

Product line	T10		T20			Integrated transfer station
Configure	T10A--Minimalist	T10B	T20A	T20B	T20C	T400
Dock	✓	✓	✓	✓	✓	✓
Top cover	✗	✗	✗	✓	✓	✓
Centerize	✗	✓	✓	✓	✓	✓
Lifting	✗	✓	✓	✓	✓	✓
Container	✗	✗	✓	✓	✓	✓
Automatic unloading	✗	✓	✓	✓	✓	✓
Automatic loading	✗	✗	✓	✓	✓	✓
Parcel fetching	Manually	Unmanned vehicles	Manually	Manually	Manually	Unmanned vehicles
Automatic charges of drone	✗	✗	✗	✓	✓	✓
Automatic return of drone	✗	✗	✗	✗	✓	✓
Built-in air conditioning	✗	✗	✗	✓	✓	✓
Host computer	✗	✗	✓	✓	✓	✓
Parking apron	1	1	1	1	1	4

HEISHA Cloud App HSC

Dock



Modbus
/MQTT

Drone



MSDK/Flight
control protocol

Heisha
Cloud
App
HSC

API

Remote Operation Software



Integrated Drones

- ①HSC - DJI basic version
- ②HSC - MAVLINK open source basic
- ③HSC - Phoenix wing basic
- ④HSC - Codev basic

Customization Service

- ①Interface and payload added and change
- ②Dock integrated commands
- ③New drone operation software development
- ④New dock customization



HSC-DJI V1.0

- One-key to take off
- Point to fly
- Virtual joystick
- Waypoint upload
- Waypoint mission
- Waypoint mission abort
- Waypoint mission resume
- Waypoint mission pause
- Waypoint mission cancel
- One-key RTH
- One-key to land

*The above basic features are available in all drones regardless of model

Cloud Software Basic Version

- RTMP live streaming starts
- RTMP live streaming stops
- Live streaming resolution setting
- Live streaming cam select
- Camera mode switch
- Photo taking
- Video record starts
- Video record stops
- Focus
- Gimbal control
- Gimbal reset
- Photo saving type setting
- Video saving type setting
- Data formatting

*The above function is only for DJI drones, other payloads is to be defined

- ◆ Provide Github links and examples
- ◆ Provide API documents
- ◆ Provide HSC software pack--based on drone selected

The screenshot shows the GitHub repository page for `HEISHA-WILSON / MSDK_MQTT_Adapter`. The repository is private and has 1 watch, 0 forks, and 0 stars. The current branch is `dev`, which is 3 commits ahead of `main`. The repository contains 4 branches and 0 tags. The file list shows the following files and their commit history:

File	Commit	Time
app	initial commit	5 days ago
gradle	initial commit	5 days ago
.gitignore	Initial commit	last week
README.md	test2 (#3)	last week
build.gradle	initial commit	5 days ago
gradle.properties	initial commit	5 days ago
gradlew	initial commit	5 days ago
gradlew.bat	initial commit	5 days ago
settings.gradle	initial commit	5 days ago

The right sidebar shows the repository's metadata, including the description "MSDK 转 MQTT API基础版", the README, activity, and releases. There are no releases published yet.

The MQTT Setting dialog box displays the MQTT endpoint address: `tcp://42.194.136.236:1883`. Below the address field, there are two buttons: "Back" and "Next".

Five core systems



Remote
autonomous flight
dispatching
system for drones

01



Remote
autonomous
intelligent charging
management
system

02



Drone dock
controlling system

03



Drone dock
remote
maintenance and
diagnosis system

04



Independent
battery swapping
system

05

Core products 1:

Remote autonomous flight control system for UAV

Multi-terminal control software

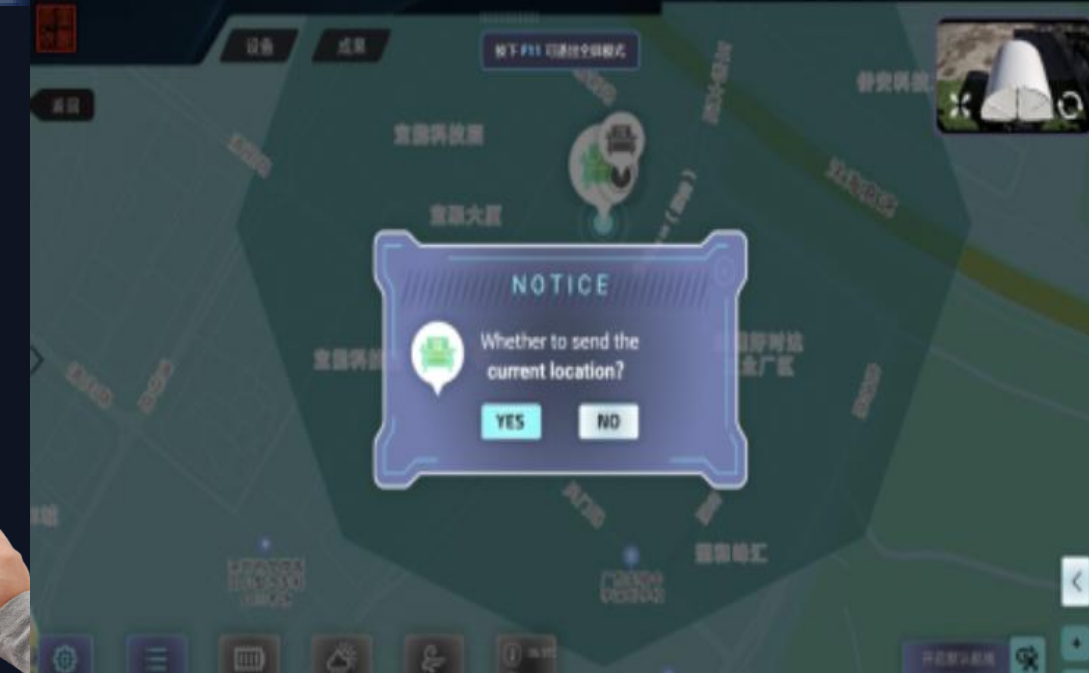
- ✿ The command software can remotely dispatch drones and docks
- ✿ Multiple terminals can be controlled
- ✿ Support private deployment

Open API

- ✿ The dock and drone interface are fully open
- ✿ Support large platform docking
- ✿ Support standard protocol formats
- ✿ A single network calls most terminal devices

For general use

- ✿ It has covered 80% of the UAV flight control protocols on the market
- ✿ Continue to open access to other aircrafts



Compatible with diverse drones

Already compatible

- DJI drone
- Open source multi-rotors
- VTOL
- Delivery drones



BOTBAY For Docks

Drone

Remote Sensing



Parrot



AUTEL®

Open Source

Logistic



Flycart 30

Size: 280*308.5*94.7cm
Weight: 65kg
Flight time: 18m
Payload: 40KG
Coverage: 28km



Ark20

Size: 215*210*70.5cm
Weight: 25kg
Flight time: 55m
Payload: 5-8KG
Coverage: 15km

Others



Flycart 30

Size: 280*308*94cm
Weight: 65kg
Flight time: 18m
Payload: 40KG
Coverage: 28km



E35

Size: 350*188*61cm
Weight: 33.5kg
Flight time: 16min
Payload: Multiple
Coverage: Optional

Open Source

Dock



D80

Size: 137*128*130cm
Weight: 40kg
Structure: Cylinder roll



D250

Size: 250*250*150cm
Weight: 350kg
Structure: Top cover slides



V200

Size: 669*213*218cm
Weight: 2800kg
Structure: Side door open



DCAP

Size: 160*85*30cm
Weight: 35kg
Structure: Top cover slides



T10

Size: 300*300*300cm
Weight: 450kg
Structure: Top cover slides



V300

Size: 650*213*218cm
Weight: 3000kg
Structure: Top cover flip



DCAP Inbuilt

Size: Customizable
Weight: Customizable
Structure: Customizable



T20

Size: 180*180*200cm
Weight: 550kg
Structure: Top cover slides



Tether

Size: 100*100*60cm
Weight: 100kg
Structure: Top cover slides



T400

Size: 1400*1700*1000cm
Weight: 5000kg
Structure: House



Warehouse

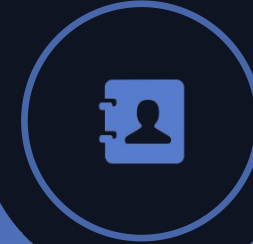
Size: 40*40*20cm
Weight: 8kg
Structure: Charging pad

Core product 2: Remote autonomous intelligent charging management system



Pain point:

Battery is the most expensive consumable in the operation process, and it is also the focus of fire safety. It is also the major factor that leads the operation cost is out of control due to scattered use and frequent loss.



Plan:

- It can provide a complete charging management system and information collection system, and a supporting intelligent temperature control system to solve the charging safety and intelligent battery management
- List of available software and hardware:
 - Hardware-Protection board and remote power on/off board PCB for non-intelligent battery
 - Hardware-self-developed charging management board
 - Software-Embedded battery charging logic and status collection
 - Hard and soft combination--intelligent temperature control system
 - Cloud-Battery data analysis and reporting

Cases



Size: 710*430*430mm (H*W*L)

Name: 4 Gallon Battery Charging Explosion Proof Cabinet

Type: Single door double locker

Capacity: 15L

Wheel height: 70mm

Core product 3:

Independently developed drone dock control system T100

After more than 6 years of accumulation, we have realized the pure independent research and development of core control systems for large, small and medium-sized drone docking stations.

The master control system includes the top-level main logic processing, multi-platform management, and subsystem module access (such as intelligent temperature control system, weather station system, internal sensor system, etc.).

In the future, it can be extended to access the AI model of the Internet of Things, and be upgraded and iterated to a pure autonomous drone dock, so as to ensure that the core modules always meet the needs of vertical scenarios and the advanced nature of general autonomy.



It can ensure that the core control system is general intelligent, and the external structure module can be modified according to the adapted applications.

At present, the unified control of all types of drones has been realized.

Core product 4: Remote drone dock maintenance system



We have developed a remote maintenance and diagnosis platform system, which can realize remote diagnosis and maintenance of equipment.



Based on the internal sensor system design, all types of devices can be connected to the network for remote management and collection of various states



In the future, we plan to expand all kinds of robots and drones to ensure the overall operation and maintenance efficiency.

Core product 5: Independent battery and warehouse replacement system

01 List of kit hardware and software:

Hardware-Intelligent parcel swapping with smart buckles on the drone
Hardware-Power interface on the drone
Hardware-intelligent battery container and swapping transmission mechanism
Hardware-Can add parachute and GPS positioning, bar code, RF ID
Document-Communication protocol with the drone

02 value

- ✓ The core component of future drone logistics air-land connection
- ✓ Patented
- ✓ It can solve the synchronous operation of goods and battery replacement

03 Future potential

All kinds of drones can be opened for docking
Different sizes and specifications have been planned

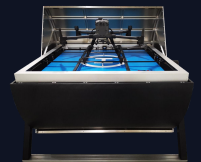
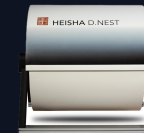


1. HEISHA Docks



Canopy Series

- Structural advantages: only one set of transmission, great waterproof performance, suitable for all kinds of extreme climate.
- Size range: 50, 60, 80, 100, 135cm.



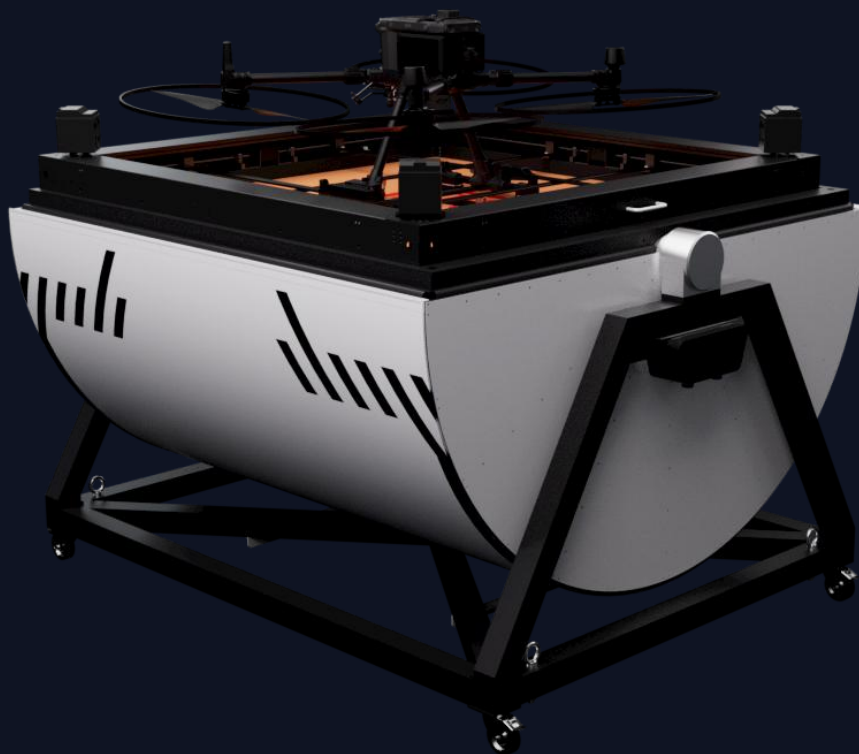
D80

Weight	86kg
Size (open)	1067*890*510 mm
Size (close)	1067*890*934 mm
Max. power	450W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-20℃~50℃
Compatible drones	DJI M3E\M4E\Other same size's
Battery capacity	4S
Standard inventory	10 set



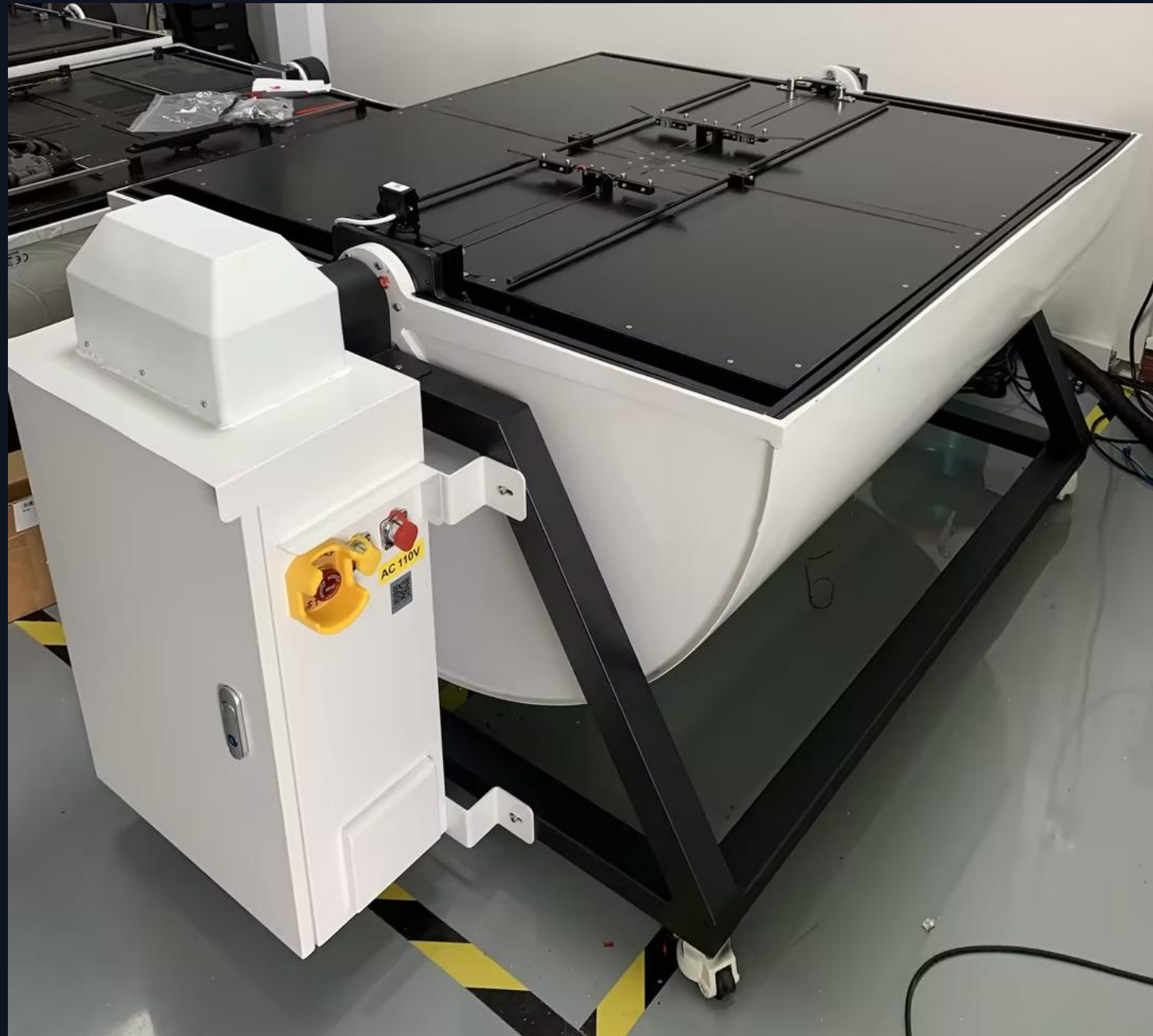
D135

Weight	248kg
Size (open)	1650*1500*1050mm
Size (close)	1650*1500*1650mm
Max. power	800W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-20°C~50°C
Compatible drones	DJIM30\M350\M300 Other same size's
Battery capacity	6S
Standard inventory	5 sets



D100

Weight	95kg
Size (open)	1200*890*710 mm
Size (close)	1200*890*1034 mm
Max. power	800W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-20°C~50°C
Compatible drones	DJIM30, Codev, Other same size's
Battery capacity	6S
Standard inventory	0 set



Cabinet Series

D250

Weight	350kg
Size (open)	4500*2200*1500 mm
Size (close)	2500*2200*1500 mm
Max. power	800W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-20°C~50°C
Compatible drones	Phoenix Wings' Ark20\Other same size's
Battery capacity	6S
Standard inventory	0 set



Cabinet Series

D220

Weight	350kg
Size (open)	4400*2200*1500 mm
Size (close)	2200*2200*1500 mm
Max. power	800W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-20℃~50℃
Compatible drones	Phoenix Wings' Ark20\Other same size's
Battery capacity	6S
Standard inventory	0 set



R50

Weight

Size (close)

Max. power

IP rating IP54

Input voltage AC100~240

Working temp. -20°C~50°C

Compatible drones DJI M3E\Other same size's

Battery capacity 4S

Standard inventory 0 set



Vehicle-mounted Series

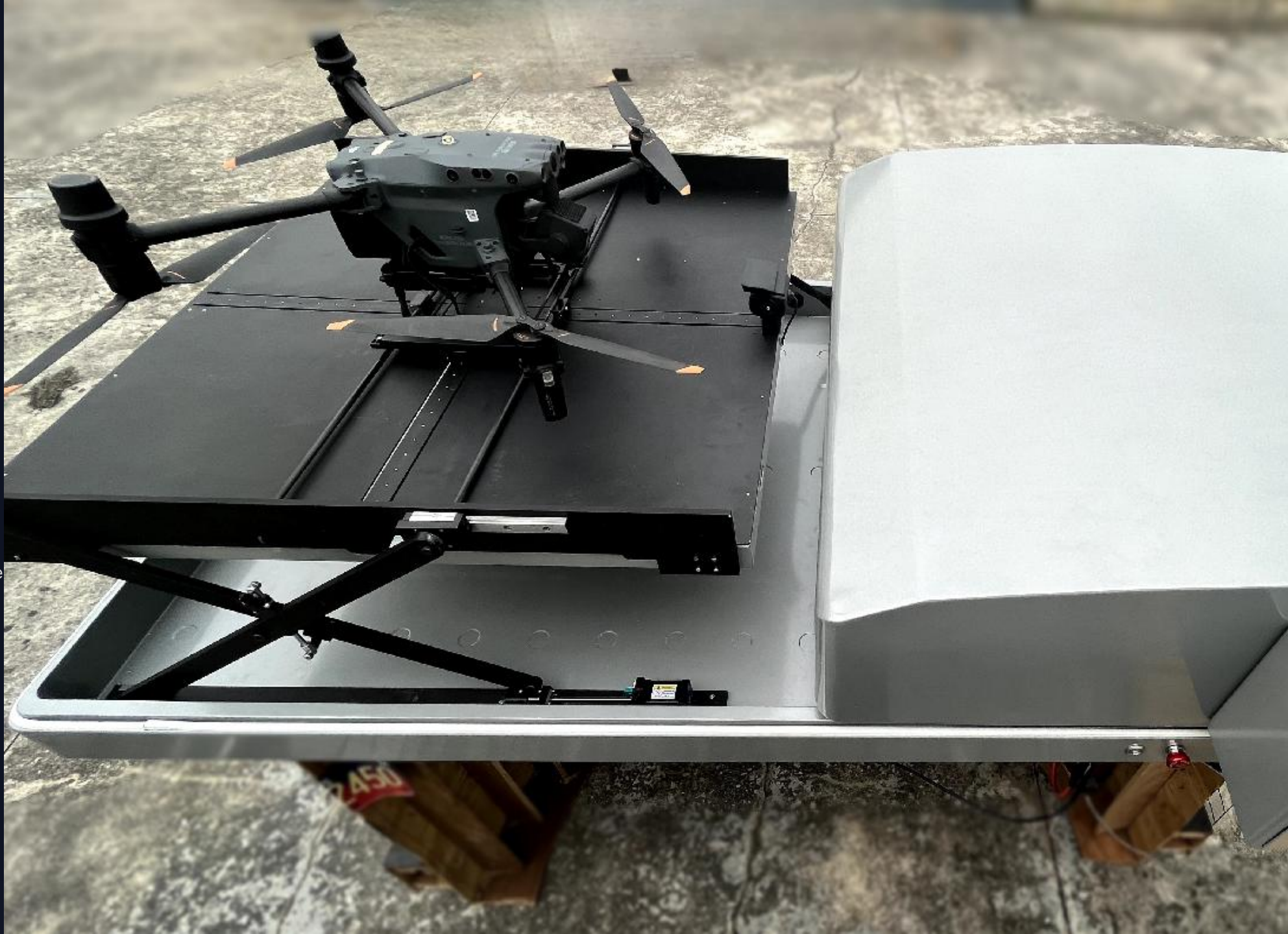
Dcap

Weight	45kg
Size (open)	2200*850*300 mm
Size (close)	1600*850*300 mm
Max. power	120W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-5°C~50°C
Compatible drones	DJI M3E M4E\Other same size's
Battery capacity	4S
Standard inventory	5 sets



Dcap Pro

Weight	95kg
Size (close)	2800*1050*950 mm
Max. power	250W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-5°C~50°C
Compatible drones	DJI M30\Other same size's
Battery capacity	6S
Standard inventory	0 set



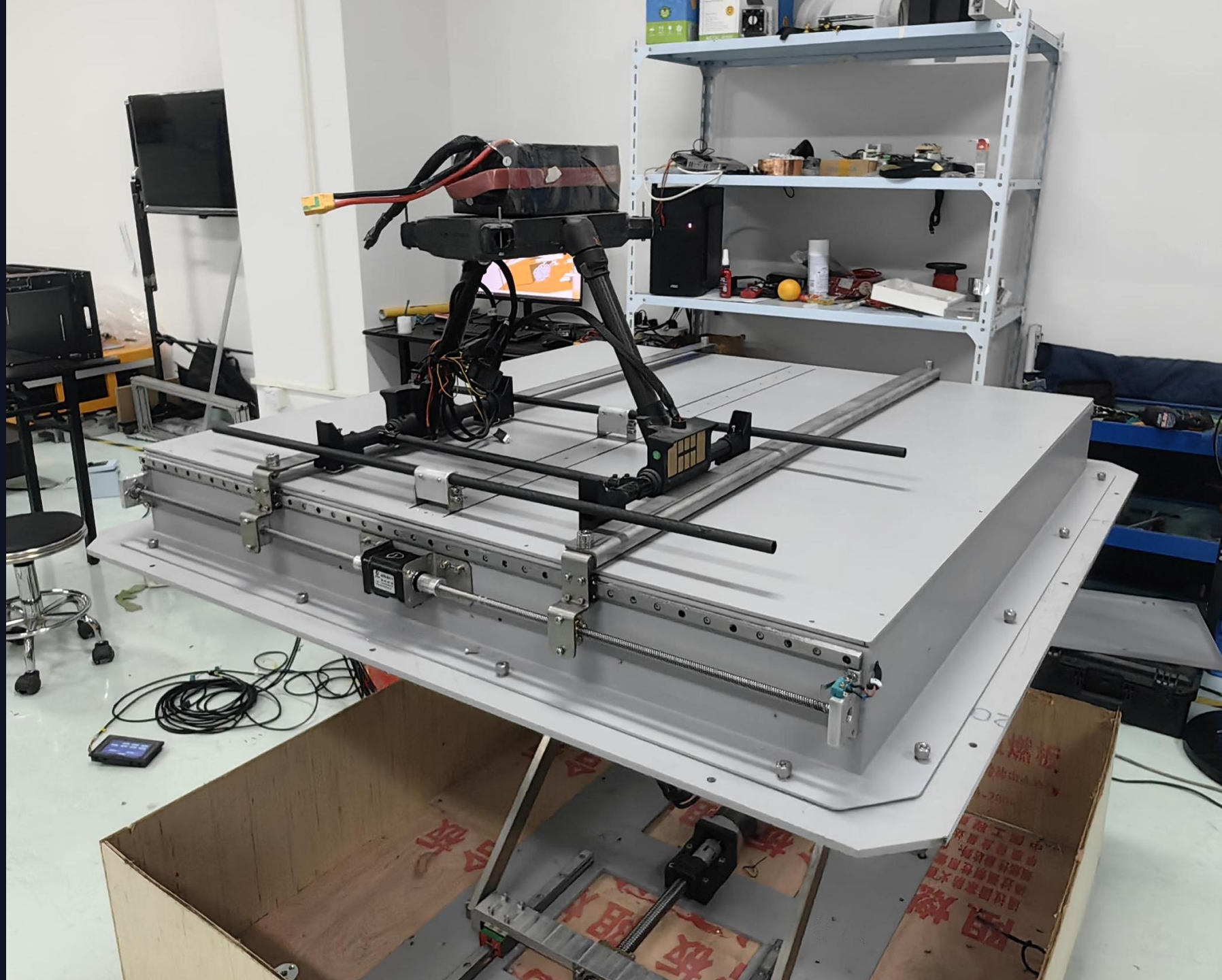
Dcap Lite

Weight	24kg
Size (close)	2800*1050*950 mm
Max. power	250W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-5°C~50°C
Compatible drones	DJI M3E\Other same size's
Battery capacity	4S
Standard inventory	0 set



DCAP INBUILT

Weight	24kg
Size	Customizable
Max. power	120W
Input voltage	12V/24V
Working temp.	-5°C~50°C
Compatible drones	Customizable
Battery capacity	Customizable
Standard inventory	0 set



Vehicle Modification

Weight	Customizable
Size	Customizable
Max. power	Customizable
Input voltage	12V/24V
Working temp.	-5°C~50°C
Compatible drones	Customizable
Battery capacity	Customizable
Standard inventory	0 set



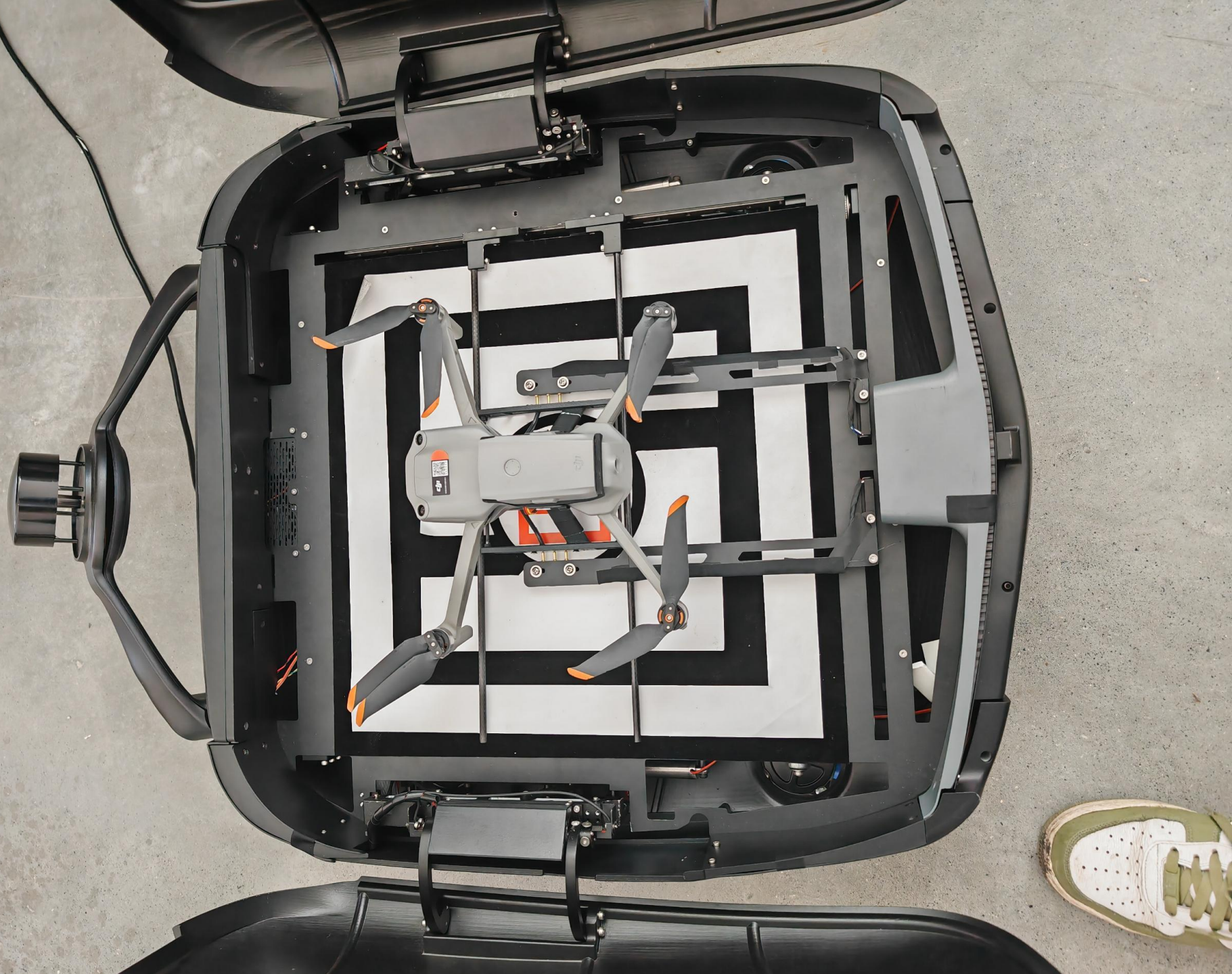
Minecart

Weight	Customizable
Size	Customizable
Max. power	Customizable
Input voltage	12V/24V
Working temp.	-5°C~50°C
Compatible drones	Customizable
Battery capacity	Customizable
Standard inventory	0 set

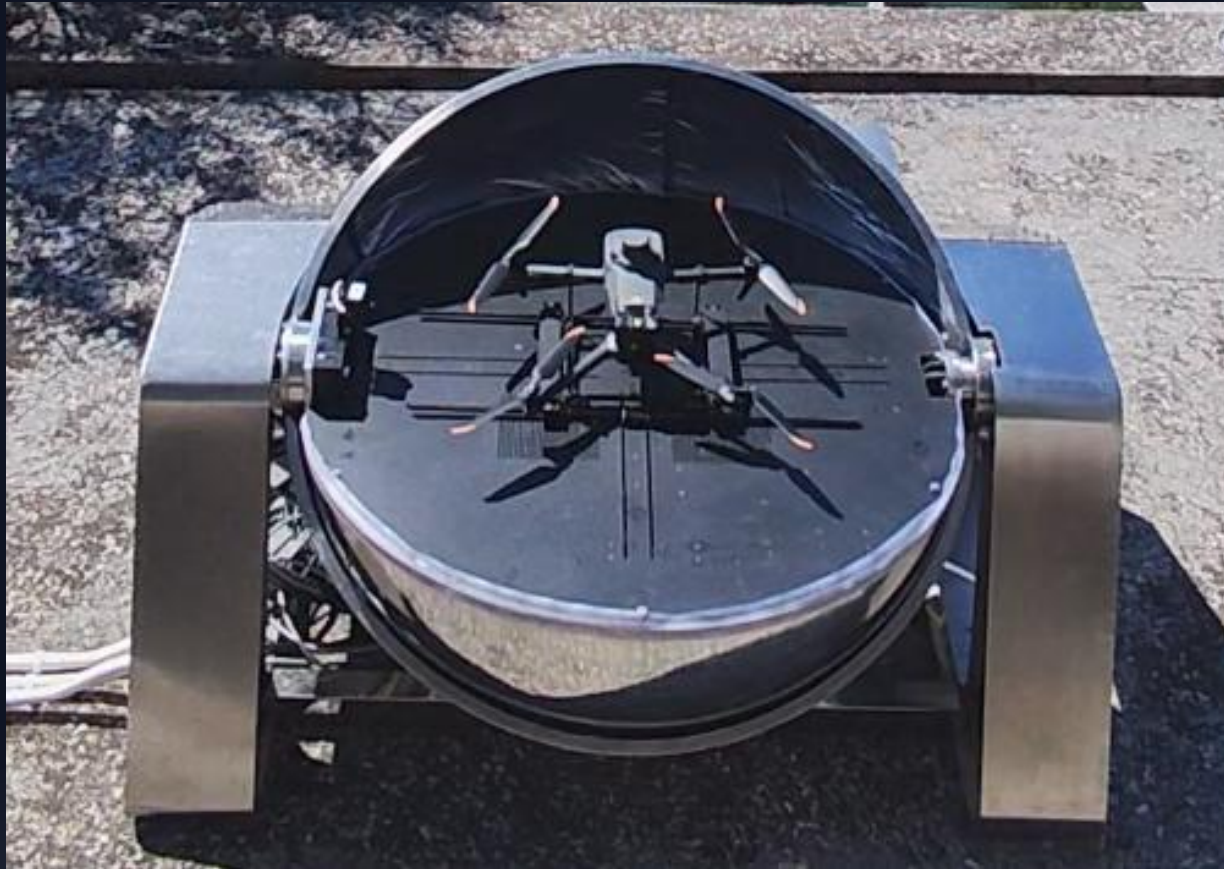


Brand customization

Weight	Customizable
Size	Customizable
Max. power	Customizable
Input voltage	12V/24V
Working temp.	-5°C~50°C
Compatible drones	Customizable
Battery capacity	Customizable
Standard inventory	0 set



Other customization



R80 Boat

Weight

Size (close)

Max. power

IP rating IP54

Input voltage AC100~240

Working temp. -20°C~50°C

Compatible drones DJI M3E\Other same size's

Battery capacity 4S

Standard inventory 0 set



D006



D007

Weight	Customizable
Size	Customizable
Max. power	Customizable
Input voltage	12V/24V
Working temp.	-5°C~50°C
Compatible drones	Customizable
Battery capacity	Customizable
Standard inventory	0 set



T3 control tower

Weight	40kg
Size	
Max. power	
Input voltage	110~240V
Working temp.	-10°C~50°C
Compatible drones	Customizable
Battery capacity	Customizable
Standard inventory	0 set



Smart drone tower



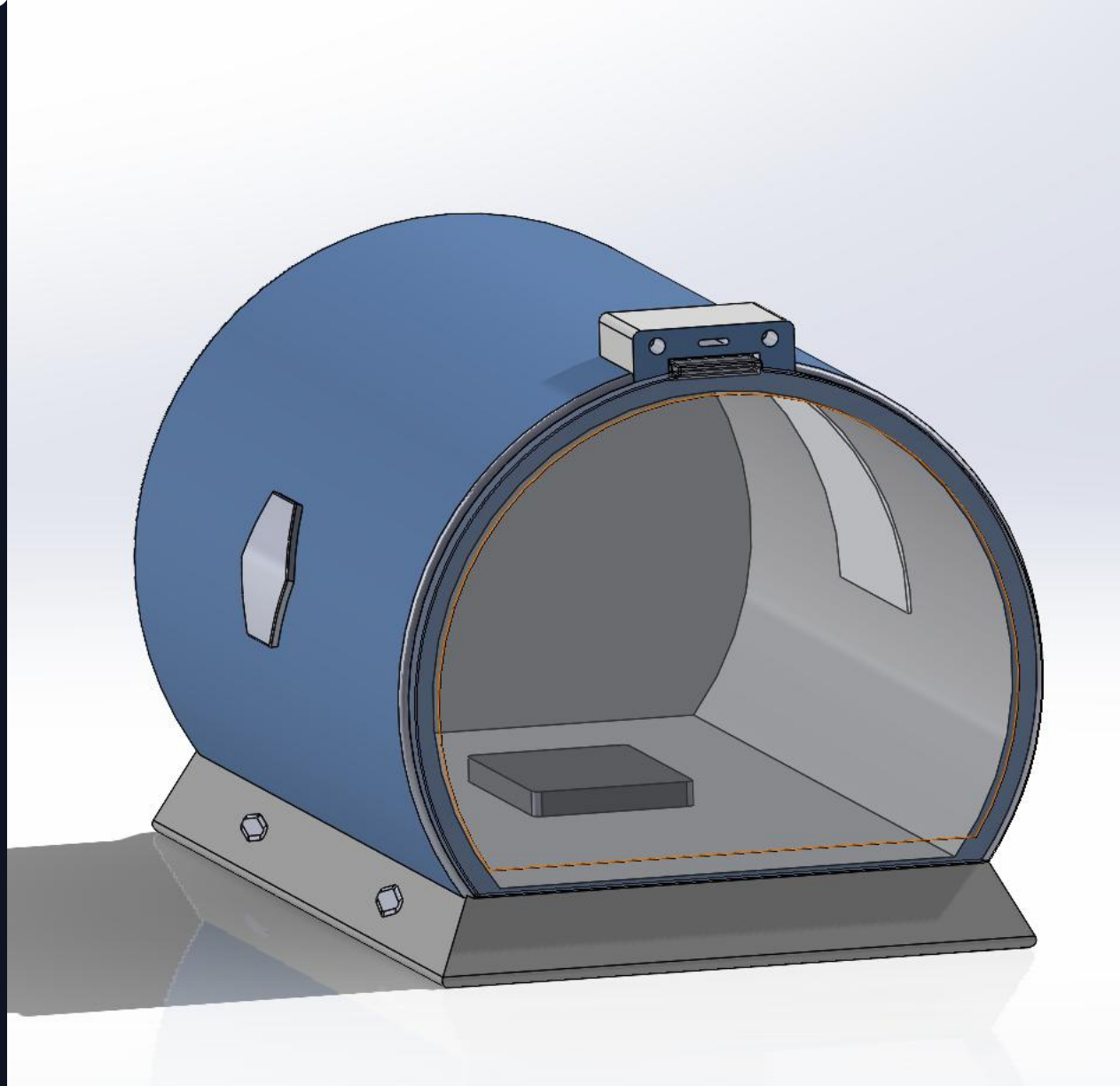
D100T

Tethered drone dock

Weight	85kg
Size (open)	1800*1000*1500 mm
Size (close)	1200*1000*1500 mm
Max. power	800W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-20°C~50°C
Compatible drones	Codev3F\Other same size's
Battery capacity	6S
Standard inventory	0 set



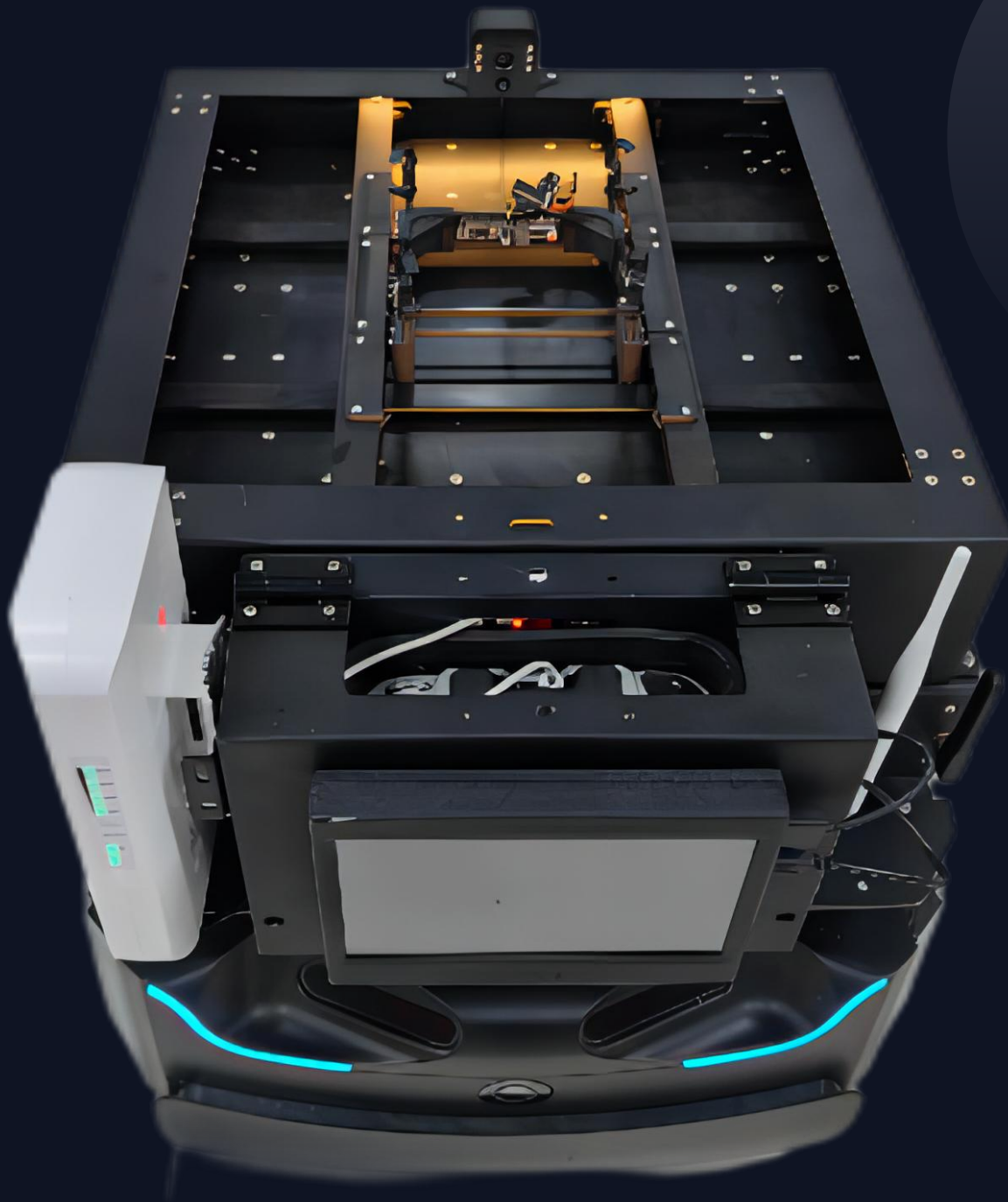
Charging house for robot dogs



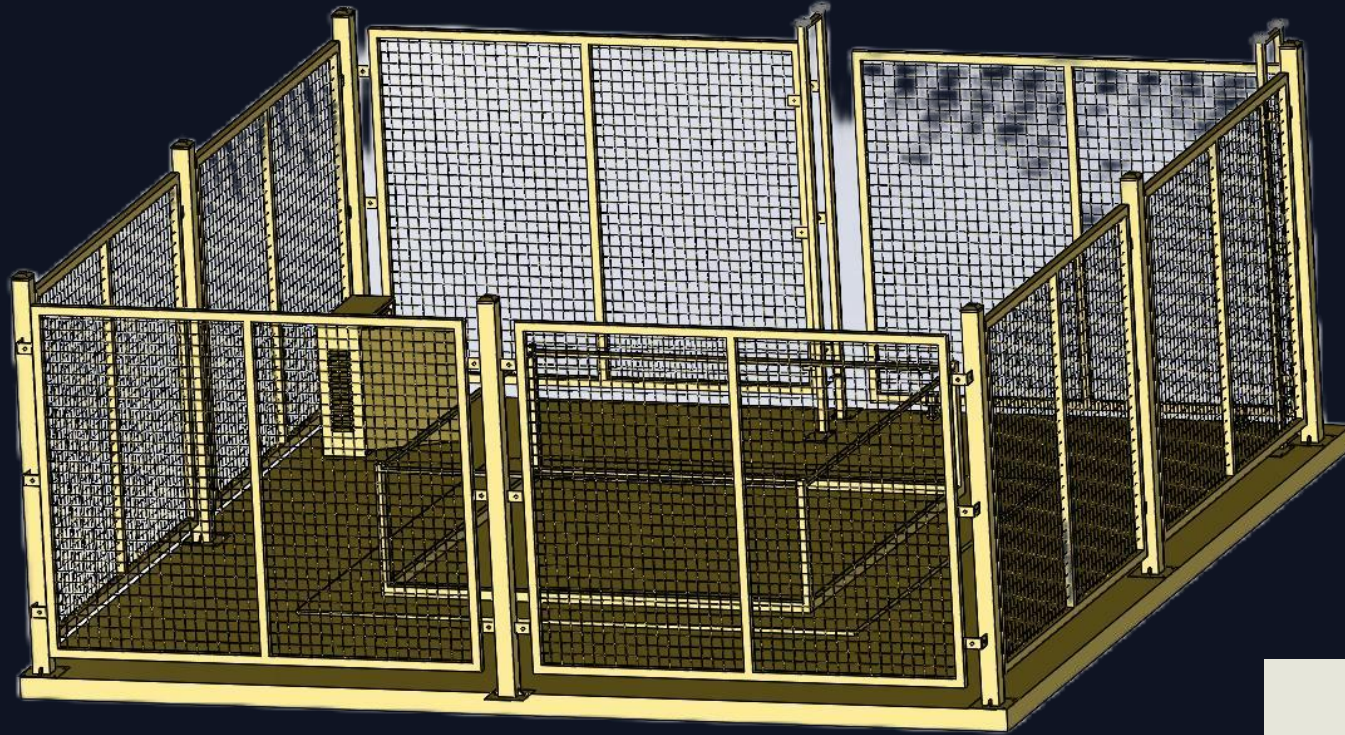
DPAD40

Warehouse management

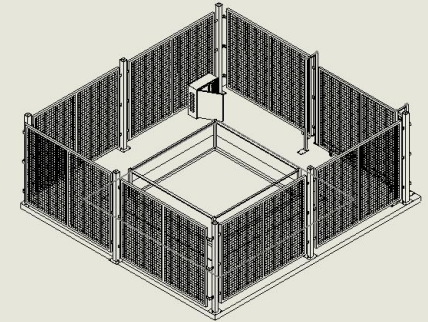
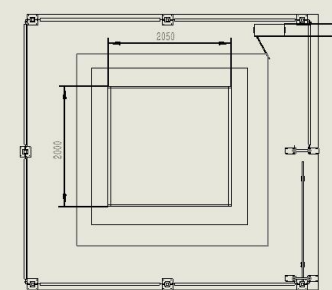
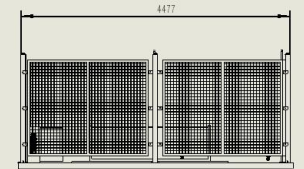
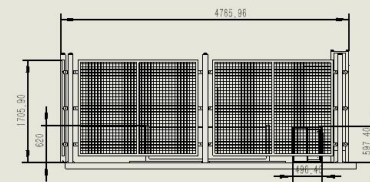
Weight	8kg
Size (close)	400*400 mm
Max. power	
IP rating	IP54
Input voltage	AC100~240
Working temp.	-20°C~50°C
Compatible drones	DJI M3E\Other same size's
Battery capacity	4S
Standard inventory	0 set



T10A--simple drone dock



- ✿ Configurable: safety warning lights, visual landing fill lights, enterprise logo/vision can be integrated into luminous characters, and safety signs can adopt ultra-thin light boxes and other main functions
- ✿ It has the function of taking off and landing, parking or temporary dock, charging and providing night flight of drones, reserving base station, weather station, monitoring station and installation position, and the supporting facilities of the site shall include: fire extinguisher, fire bucket, charging cabinet (constant temperature cabinet), base station, weather station, monitoring camera, strong power box, night flight lamp, etc
- ✿ Customization is supported



T10B--A simple drone dock for transfer

01

Configurable: take-off and landing platform of UAV and queue docking position of unmanned vehicle, design area planning

- It has the function of taking off and landing of UAV, parking or temporary dock, charging and night flight of UAV, and reserving base station, weather monitoring and installation positions

02

It can unload automatically to realize the connection between UAV cargo and unmanned vehicle. The standard is a take-off and landing position, and multiple positions and unmanned dispatching workstations can be designed

03

Customization is supported



T20A--simple terminal dock

01

Size can be customized, based on aircraft size.

02

Automatic unloading can be achieved, and at least four parcel positions are included

03

The standard is 5kg container, which can be customized



T20B--Automatic parcel swapping terminal dock

- Size can be customized, based on aircraft size.
- Automatic swapping can be realized, with at least 4 parcel positions
- The standard is 5kg container, which can be customized



T20 C--Automatic parcel swapping terminal dock

- Size can be customized, based on aircraft size.
- Automatic swapping can be realized, with at least 4 parcel positions
- The standard is 5kg container, which can be customized
- It can be stored in an airplane and can be charged autonomously



T400 Large logistics center

- ▶ 4-apron
- ▶ Large scale transfer station
- ▶ Site require: 500m²



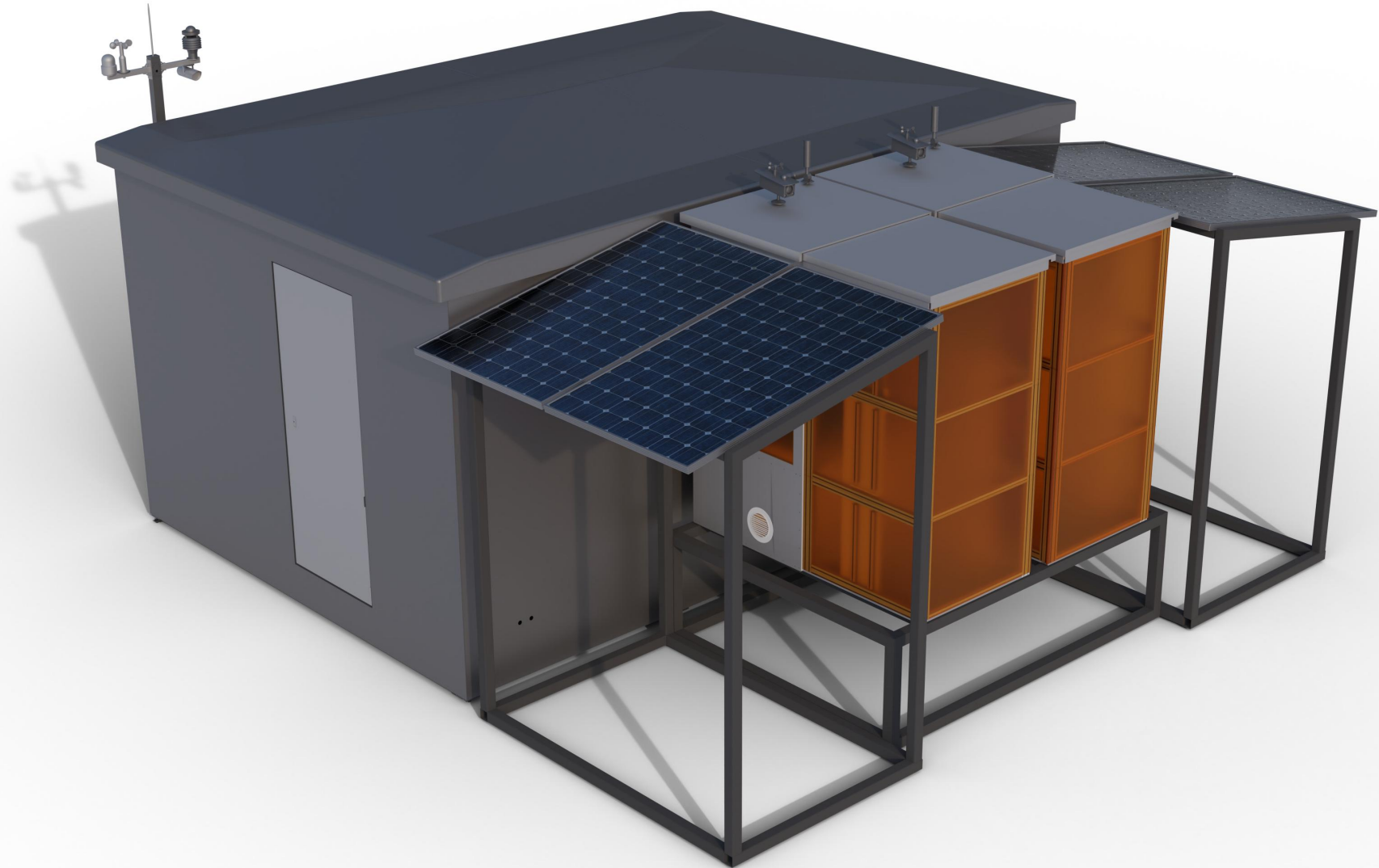
Customizable multi-dock staion

- Design standards are based on 4 logistics drone docks, belonging to a transfer station
- The size can be customized, and can be charged autonomously according to the aircraft size
- Can be compatible with different drones models



Medium dock station

The above picture can be adapted to one VTOL, two medium-sized multi-rotors, and two small multi-rotors. It is customizable.

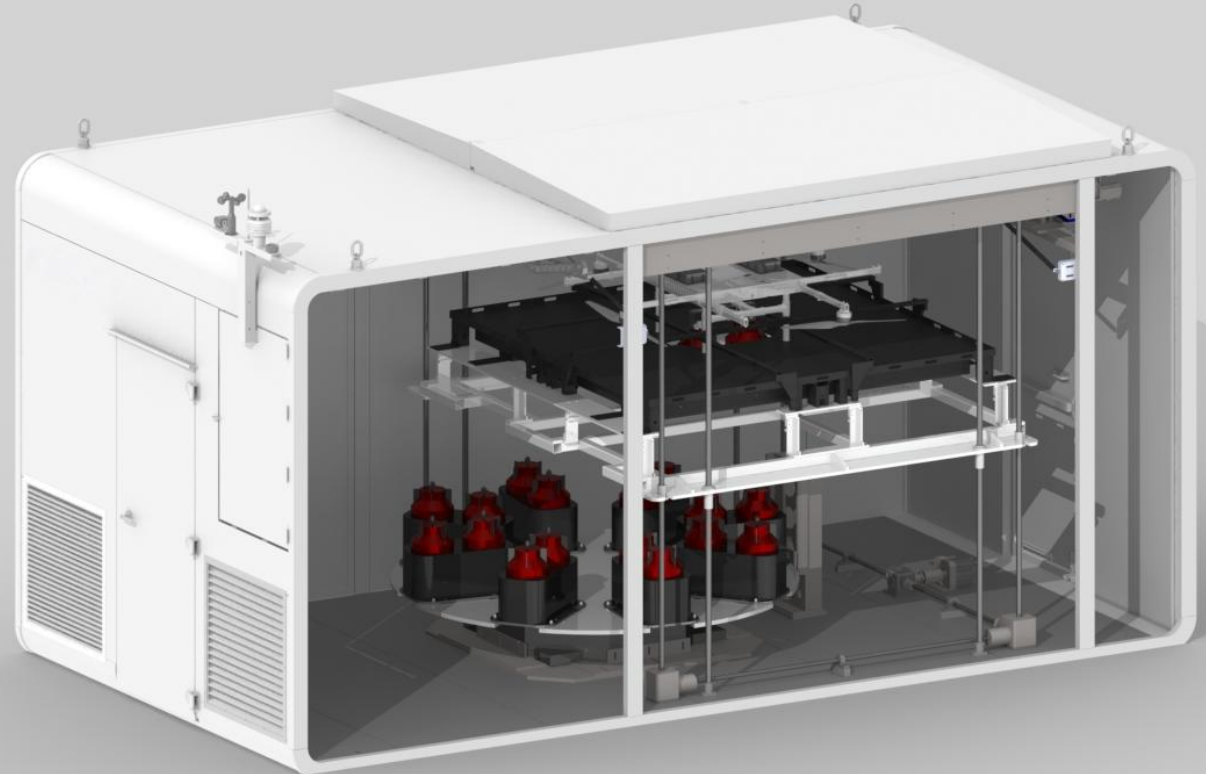
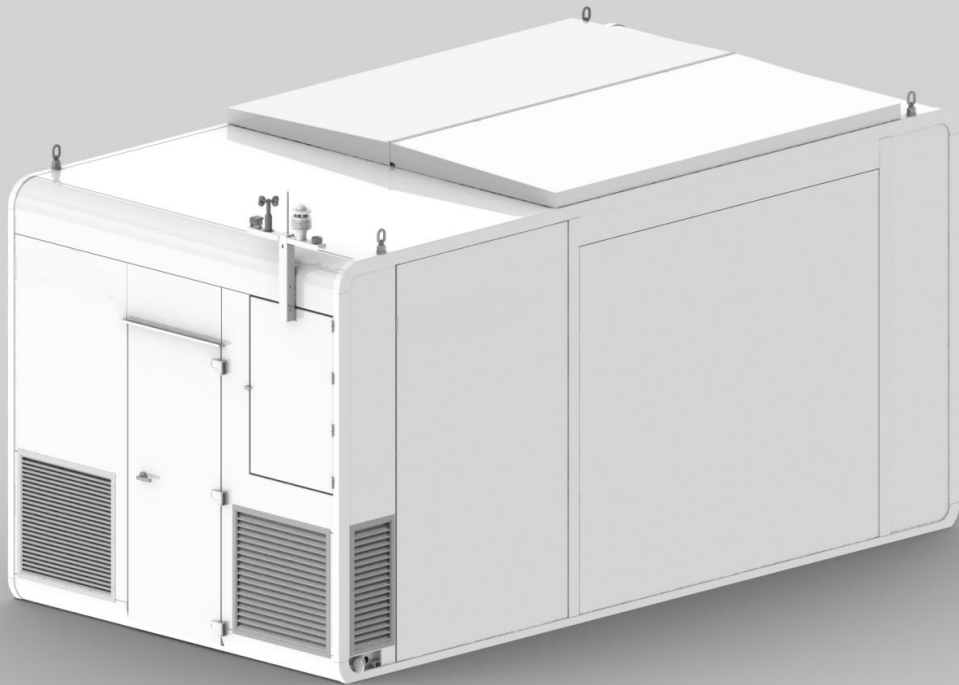


V200

Weight	3T
Size (close)	600*245*260 mm
Max. power	2000W
IP rating	IP54
Input voltage	AC100~240
Working temp.	-20°C~50°C
Compatible drones	Customizable
Battery capacity	Customizable
Standard inventory	0 set



Special Dock
Firefighting drone dock
V300



Automatic swapping of 8 fire grenades, 4kg for each, size: 6.3*3*2.4m

HEISHA Docks

Low altitude manned dock

coming soon



Smart equipment available

Case

CACC Logistics Center



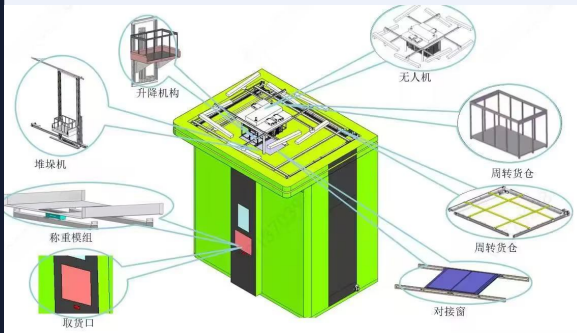
Secondary transfer

From the unmanned logistics vehicle to the drone, and then fly to the third-level docking station and terminal station



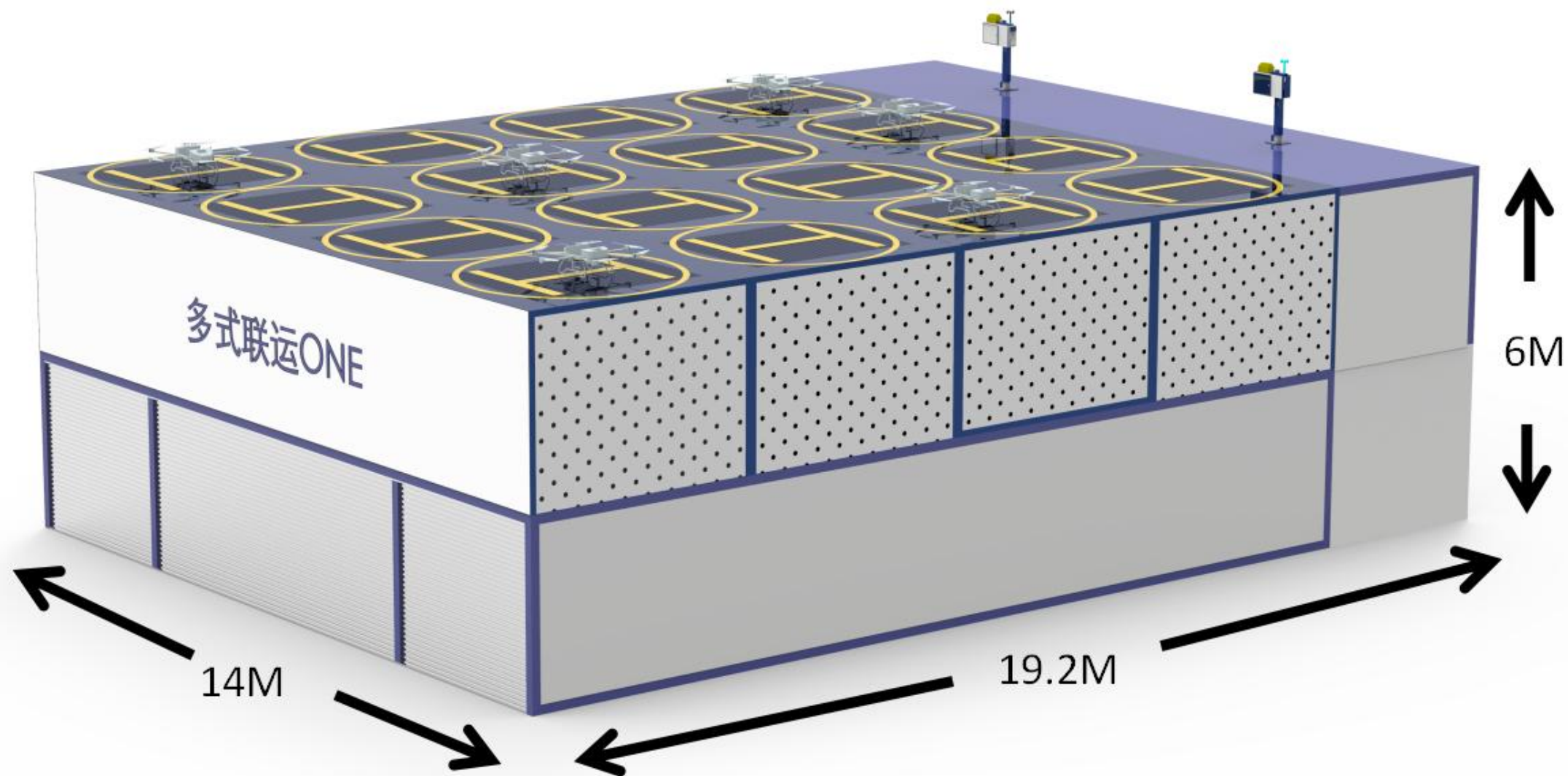
Level 3 docking station

Receive the parcels delivered by drones at the secondary docking station and then transfer them to the courier



Level 4 terminal station

Equipped with an intelligent dispatching system to monitor flight status in real time, optimize take-off and landing times, and improve operational efficiency.



Rolling door on the top

Drone battery charging box

Six-axis robot arms

Docking platform

Delivery drone

Electric box

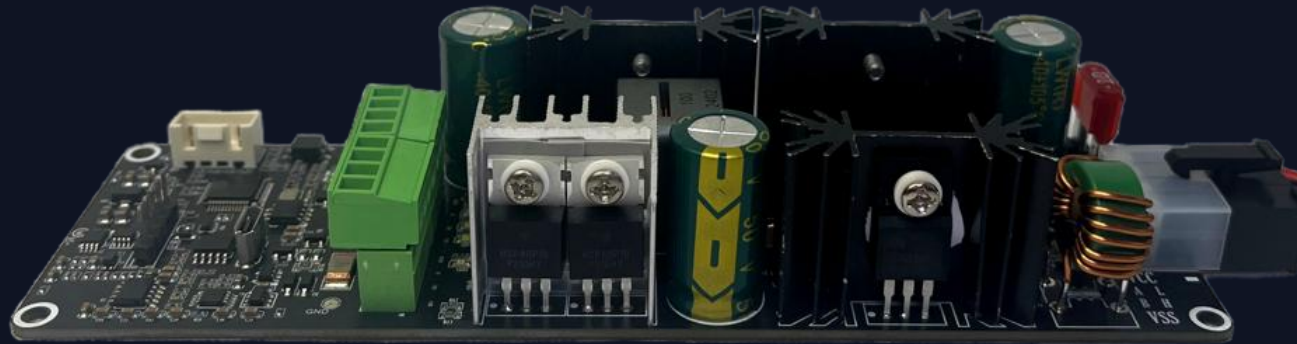
Lifting mechanism



Core components

ACK

Autonomous Charging Kit



Charging landing gear

- DJI MAVIC2 landing gear
- DJI MAVIC3 landing gear
- DJI M300/M350 landing gear
- DJI MINI3 landing gear
- Autel EVO landing gear
- PARROT ANAFI landing gear
- SKYDIO landing gear
- Smart landing gear (data access directly)



Electrode consumables

Weight

Max. power

150W

Input voltage

AC18~24V

Working temp.

-20°C~50°C

Compatible drones

M30 | M300 | M350 | Parrot |
Autel | Open-source drones

Battery capacity

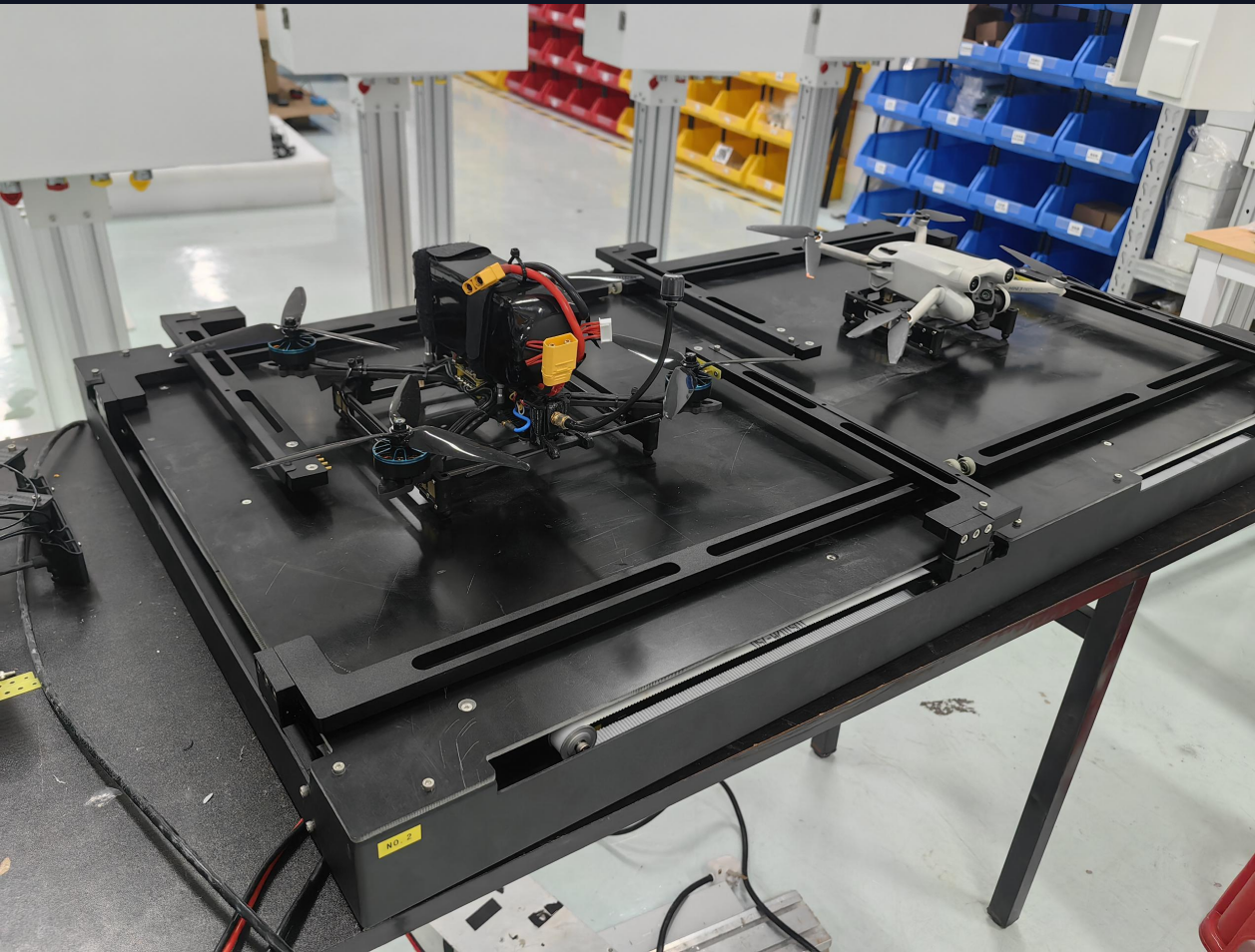
4s~16S

Standard inventory

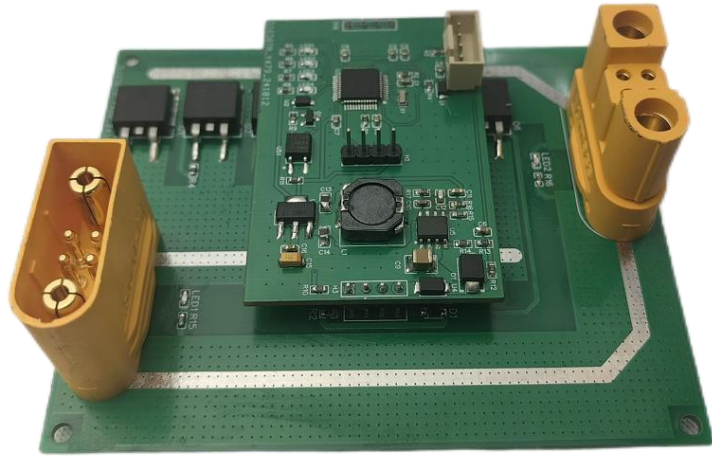
0 set



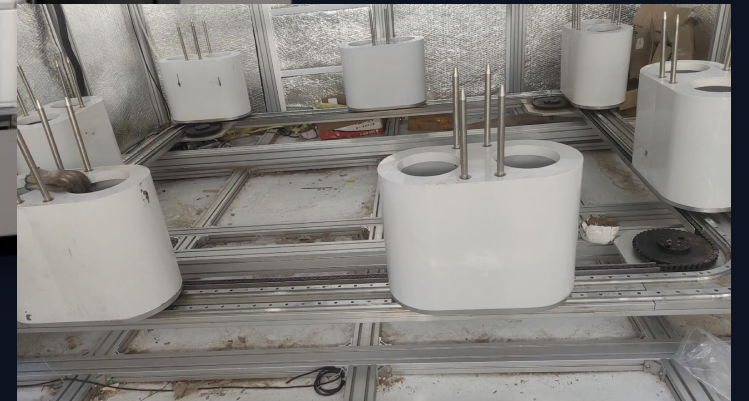
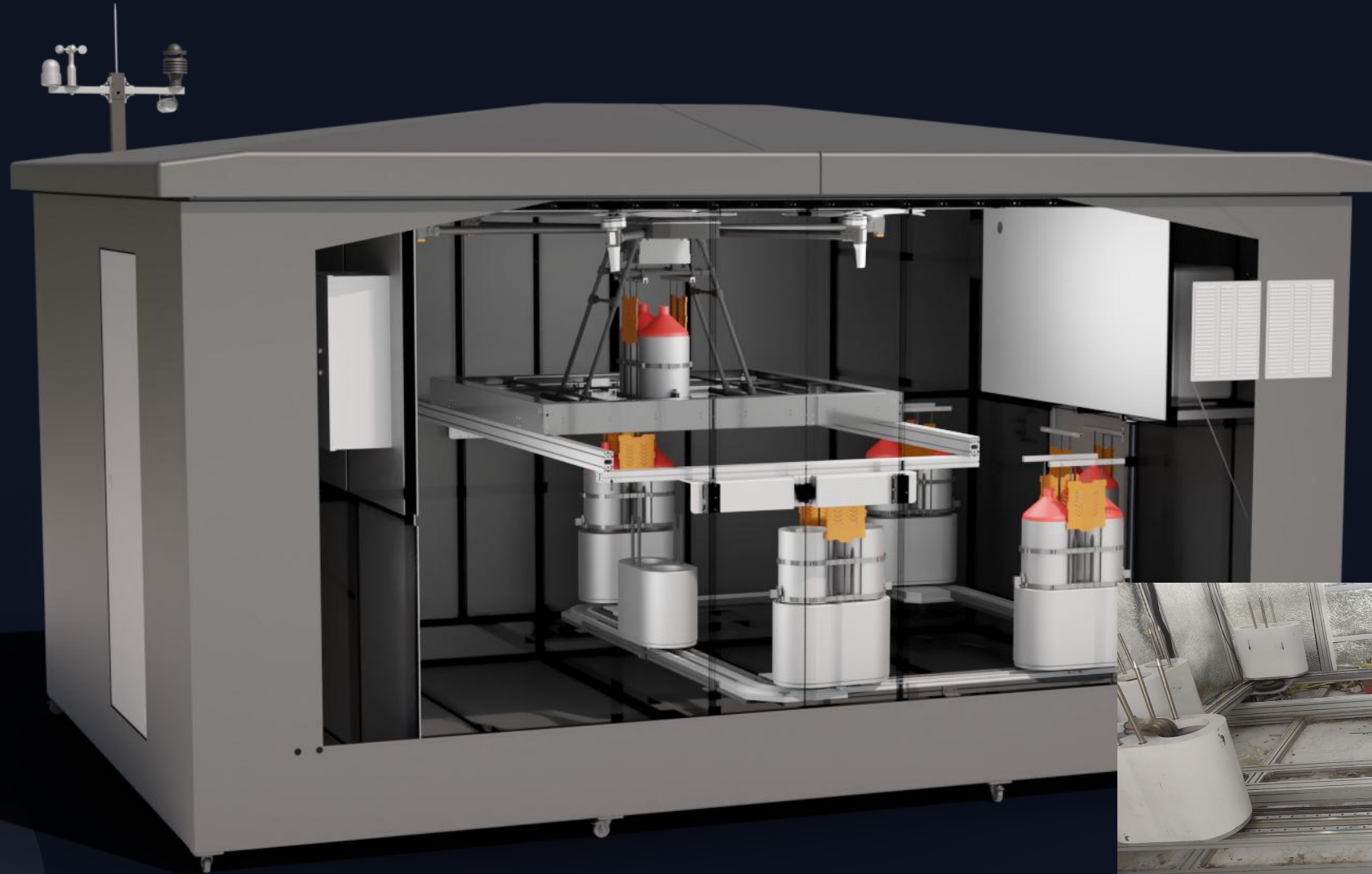
Centering type charging dock & developers



Other customization



Fire grenade swapping



SDK & Debugging Tools

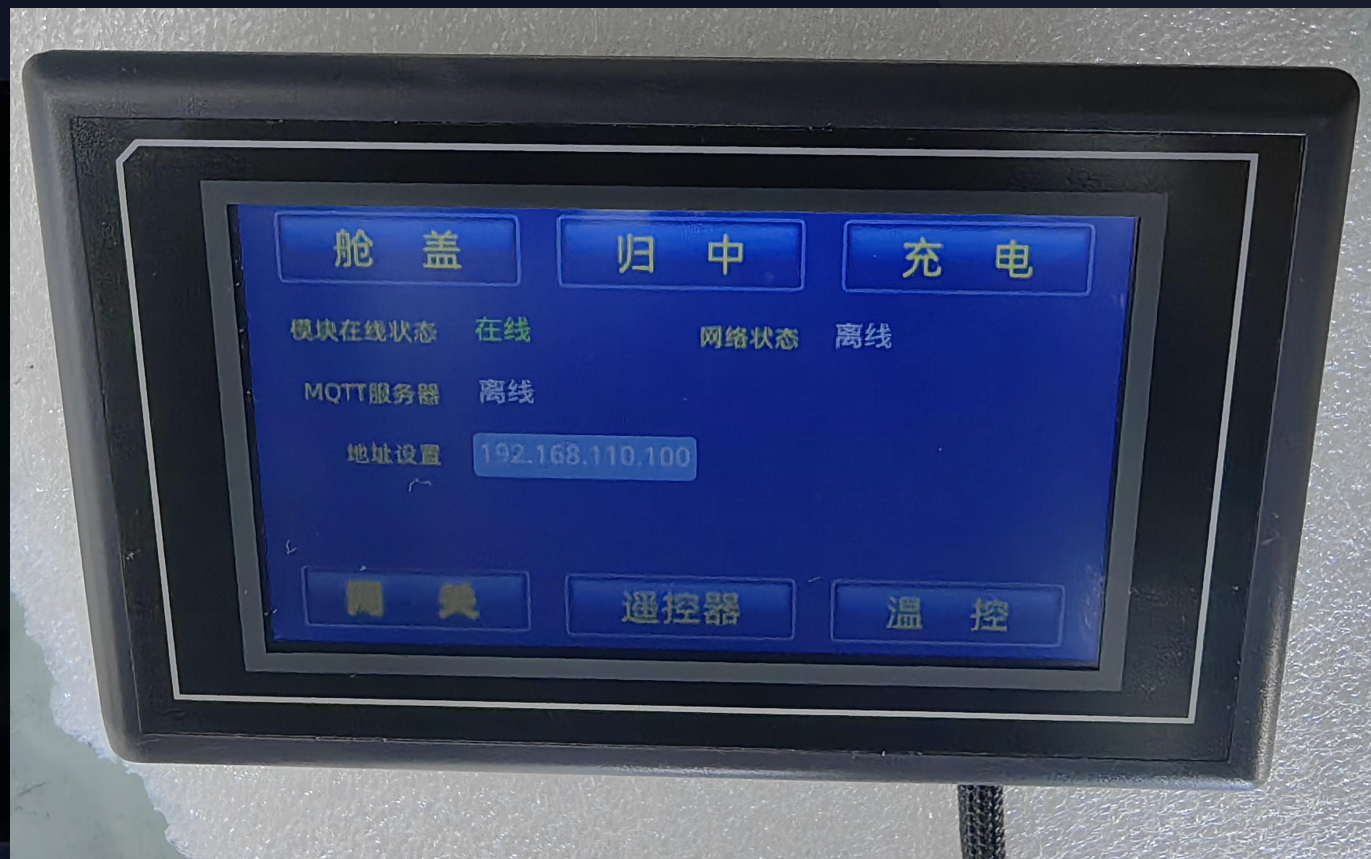


MODBUS
RTU/TCP



MQTT

Debugging Software & Tools



Production & Certificates

Certificates & patents



Innovation

Utility

Appearance



Production capacity: 200 sets/ month



Lead Time

3 days for in stock

45 days for new products



Footprint & cases



- Location South Korea
- Dock DNEST2
- Time 2021-07
- Application Mobile inspection
- 3rd year of service



- Location: Mexico
- Dock: DNEST2
- Time: 2021-07
- Application: Fixed location park inspection
- 3rd year of service



2021. Dec.

3rd year of service



4th year of service

ischi - Rifugio Ghiacciaio Marmolada - 2670 mslm - 2022-09-17 09:52:58+0200



- Location: Italy
- Dock: D80
- Time: 2022-09
- Application: Environment surveillance
- 2nd year of service

- Location: Malaysia
- Dock: D80
- Time: 2022-09
- Application: Environment surveillance



May, 2022

2022₅
2022年5月





2022. Oct.





South Korea



Italy



France



South Africa



Spain

Case Mexican Police



Background

After 4 years of accumulation, a total of 85 sites have been built, including 60 local docks, 20 HEISHA docks, and 5 DOCK1. 3 sets of different software systems have been purchased.

Pain points and needs:

1. The first 60 sites are all MAVIC2, and now we hope to upgrade to M3T with the lowest cost.
2. We hope to make a drone network and unify the dispatch. In addition, we will be able to purchase docks from different manufacturers according to the actual situation in the future.

HEISHA's solution:

Upgrade to M3T at a price of US\$1,000 per unit. Provides a new system control software and unified dispatch, including connecting HEISHA, DJI, and local docks.

Strategic Partners



GZPI



Mexican Police



China Airport Construction
Group Corporation

HEISHA, we build Bot-mansions

