

# Raefly VT290

## Electric VTOL UAV

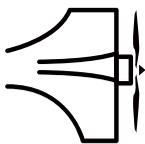


**CUAV**

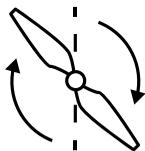
Raefly (Guangzhou) Technology Co., Ltd.



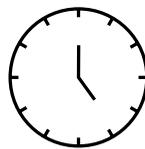
# Raefly VT290



PushBack Design



AutoCenter Motor



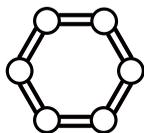
Ultra-Long  
Endurance



Quick-Release  
Fuselage



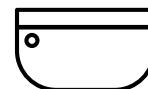
Self-Developed  
Autopilot



Composite Fuselage



5kg Payload



Quick-Release  
Load Cabin

# Raefly VT290

A white Raefly VT290 composite VTOL UAV is shown in flight against a blue sky with scattered white clouds. The aircraft is a fixed-wing drone with four propellers. In the background, there are rugged mountains with some snow patches and green hills in the foreground.

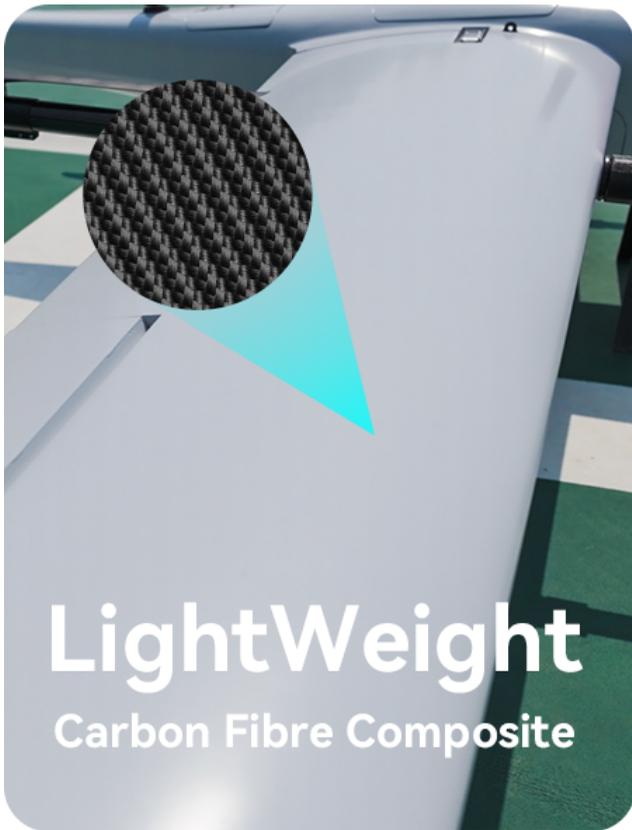
## Introduction

The new generation Raefly VT290 composite VTOL UAV, with a fluid design, has significantly reduced flight drag. Split design, support tool-free quick disassembly. Equipped with passive cooling air channel, the maximum support 5kg load, equipped with quick disassembly load tank, fast replacement task mount, improve the comprehensive application experience of aerial surveying and mapping, wide-area inspection, material delivery and other application fields; Free and efficient customization service, highly adapted to different tasks and requirements.

Integrates a powerful CUAU self-developed UAV solution, supports off-site takeoff and landing, moving platform takeoff and landing, GPS rejection, formation flight and other functions. ArduPilot's complete open source system supports secondary development

# Lightweight Design, 5kg Payload

The wing span of Raefly VT290 is 2900mm. The larger wingspan provides the aircraft with greater lift. At the same time, the fuselage is made of light weight and high strength carbon fiber composite material, that makes the maximum payload up to 5kg



# Pushback Motor Design

## High Efficiency and Good Vision

Pushback motor design with low KV large pitch propellers for higher motor efficiency without blocking the camera view



High efficiency tail push motor

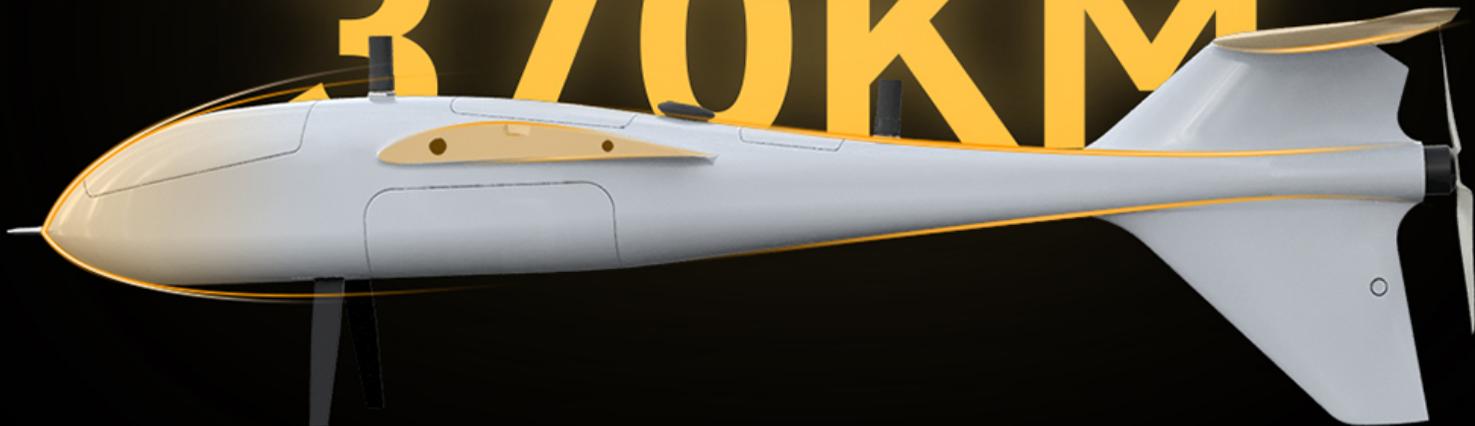


Not blocking the camera view

# Fluid Design with Small Resistance & Long Endurance

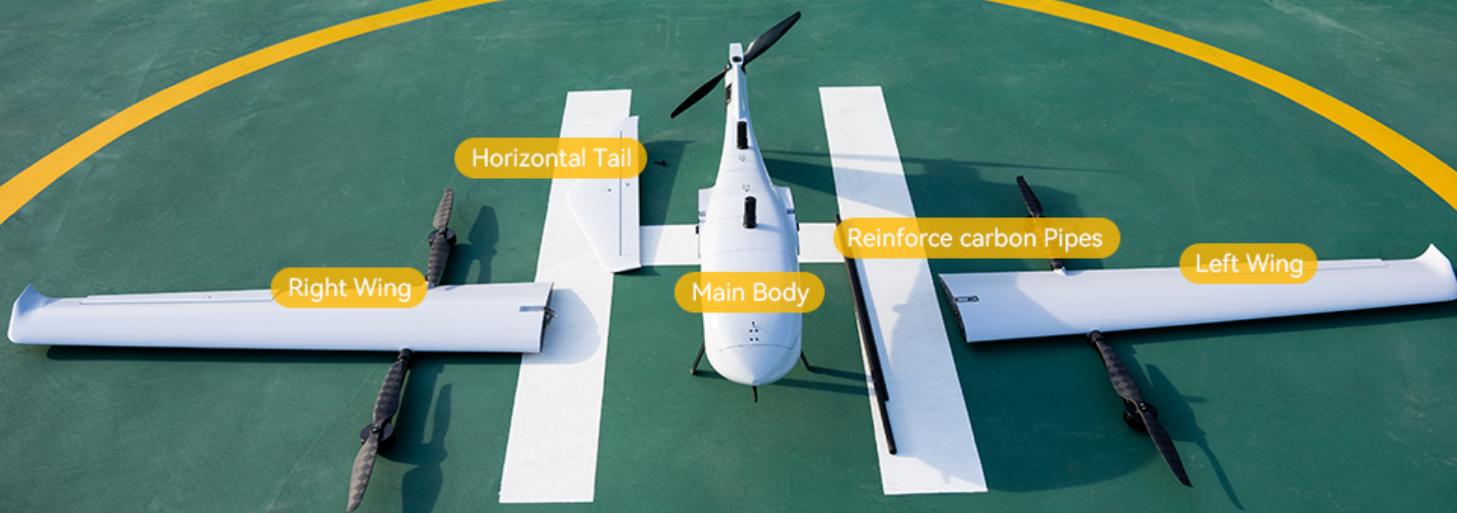
The Raefly VT290 has a fluid design that incorporates aerodynamic design. The flight resistance is small, and the endurance range is up to 370km.

# 370KM



# Quick disassembly Design Portable Storage

The fuselage adopts split design, which can be quickly installed without screwdriver. The aviation plug can be inserted for a long time without affecting its fasteness. The upgraded folding and storage design improves the operation efficiency and makes the transportation more portable



Quick Release Buckle



Horizontal Tail Hand  
Screw



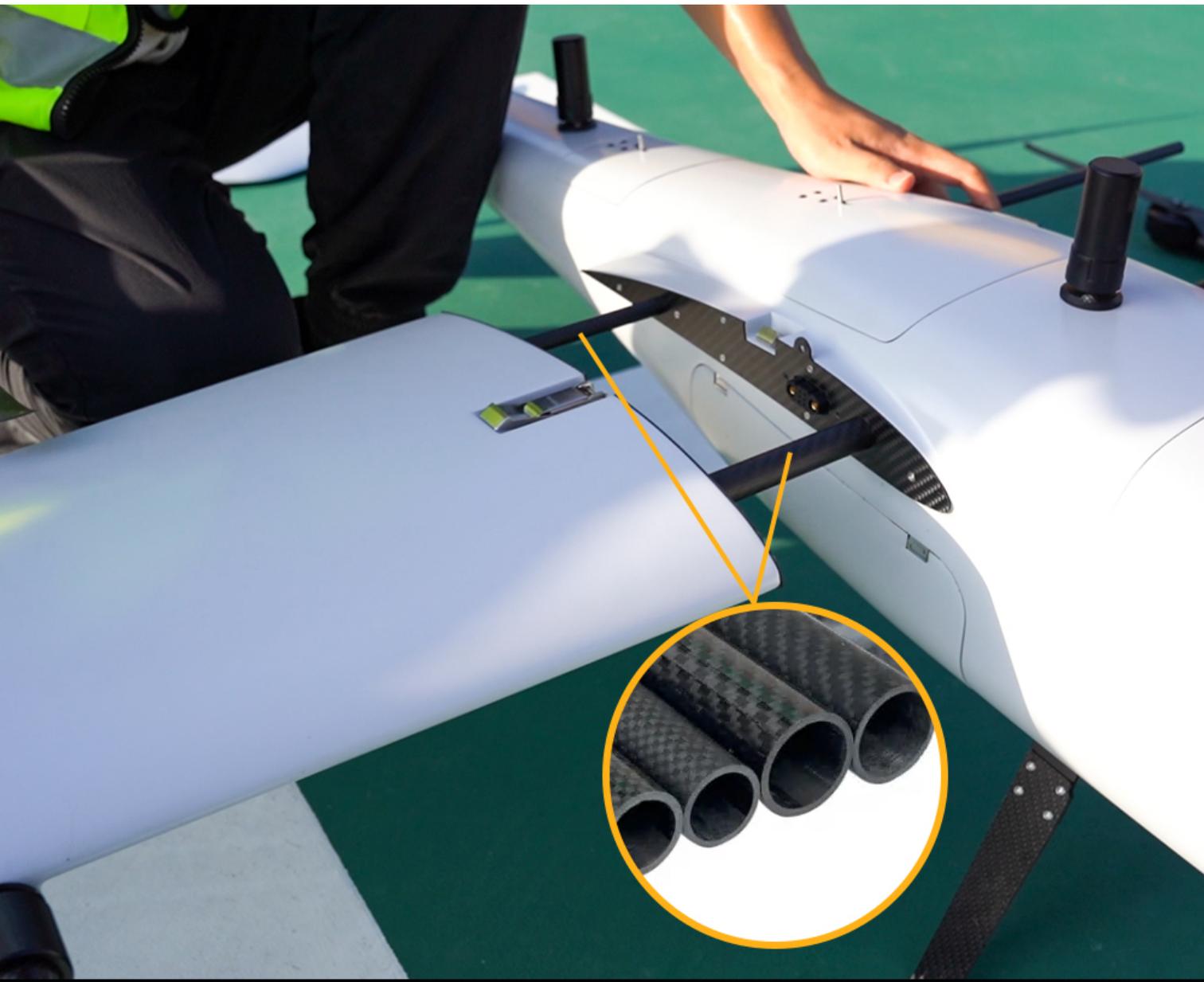
Foldable Rotor Arm



Aviation Plug

# High Strength Carbon Pipes

The connection of the wing is made of customized high-strength carbon pipes, which maintain a good wing condition under a 5kg payload.



# Press and Push to Change the Payload

RRaefly VT290 adopts quick disassembly payload cabin, which can quickly replace the load, cope with different operation scenarios, and realize a machine with multiple application

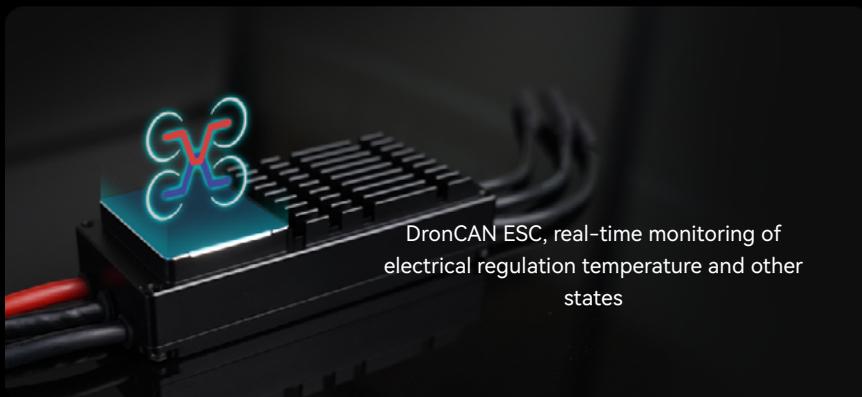
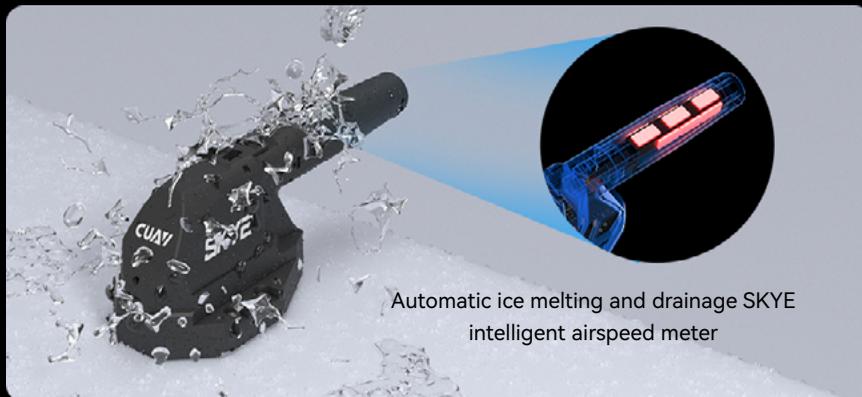
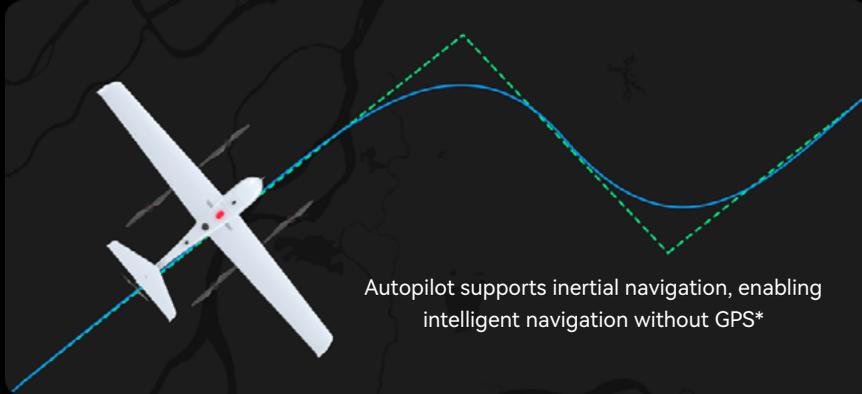


# Multifunctional Vertical Tail Design

The vertical tail of the Raefly VT290 is cleverly designed to prevent the tail propeller from touching the ground, and also serves as a tripod, and the internal space is reserved for installing the link antenna



# High Quality Intelligent Components Safeguarding Flight Safety



# Dual Antenna Estimate Yaws Fearless of Strong Magnetic Environments

The Raefly VT290 is equipped with a dual antenna heading module instead of a magnetic compass. Fearless of magnetic field interference caused by internal equipment and external environment, abandoning complex compass calibration procedures





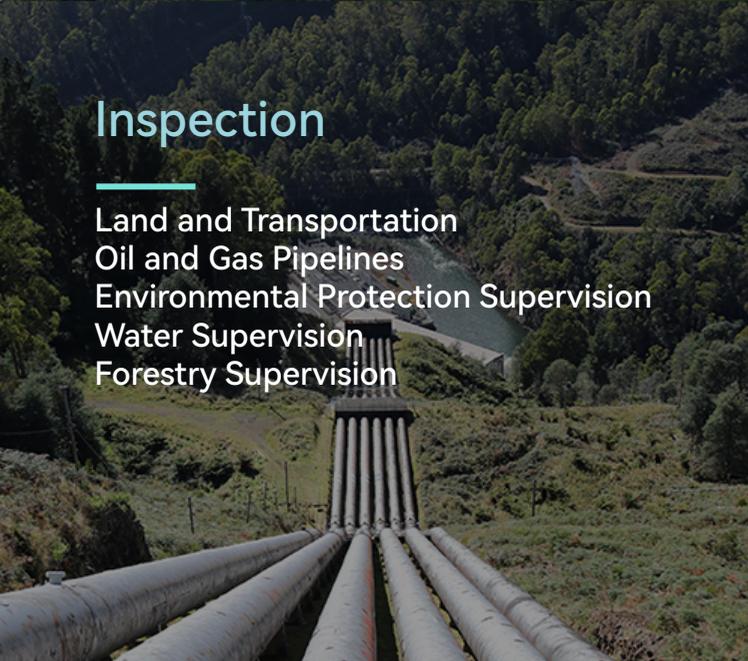
## Mapping

3D Modeling | Urban Planning  
Geological Exploration  
Land title confirmation



## Security

Security and firefighting  
Anti-smuggling Anti-drug  
Anti-crime and evil  
Maritime Supervision  
Emergency Rescue



## Inspection

Land and Transportation  
Oil and Gas Pipelines  
Environmental Protection Supervision  
Water Supervision  
Forestry Supervision



## Scientific research

Scientific experiment  
Training and education  
Secondary development  
Subject research



## Logistics

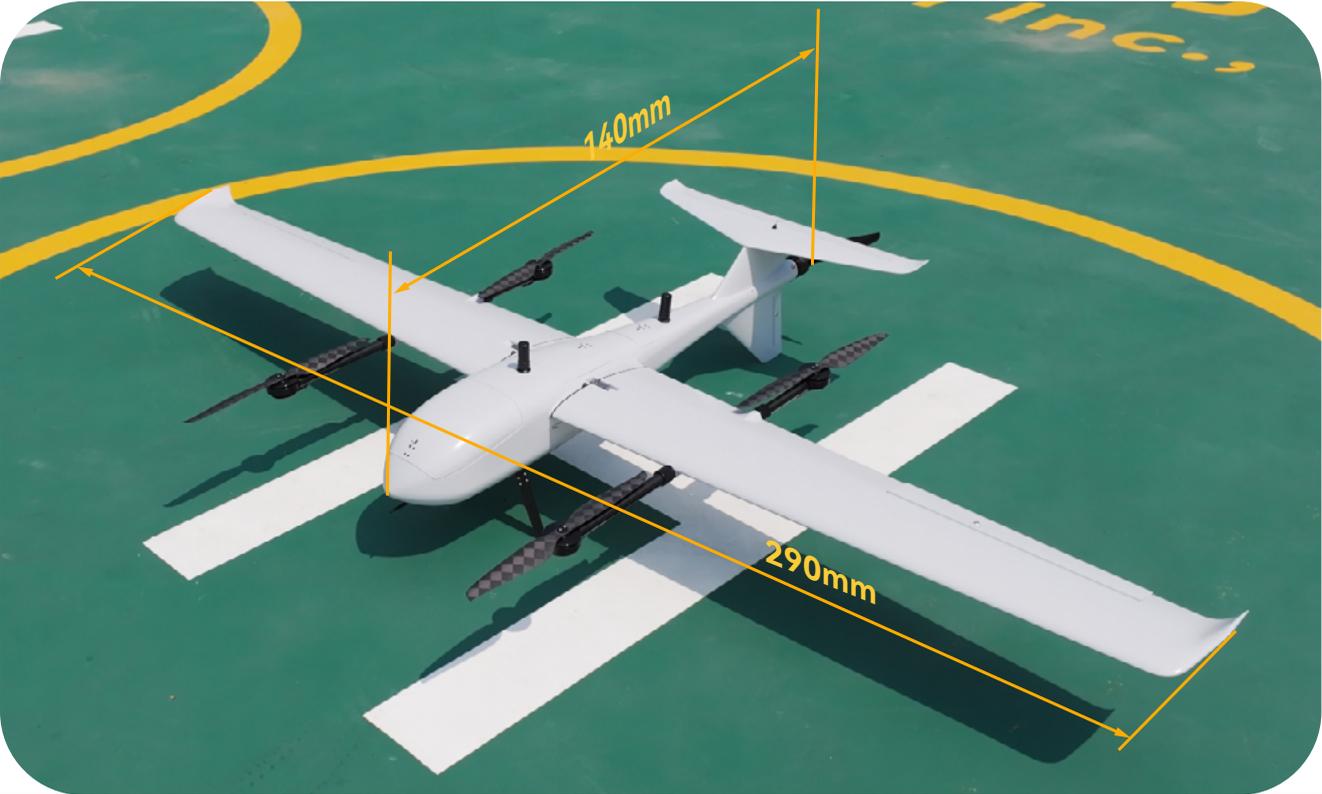
Logistics Transportation | Emergency  
Material Transportation



## Agriculture

Precision Agriculture  
Ecological Protection  
Poppy patrol

# Raefly VT290 Size



# Raefly VT290 Specification

Body material	Carbon fiber+Kevlar composite material
Wingspan	2900mm
Maximum flight speed	35m/s
Economic cruising speed	20m/s
Stall speed	16m/s
Endurance [1]	No load: 5h 5kg load: 3h
Maximum range	370km
Maximum payload	5kg
Empty weight	13.5kg
Maximum takeoff weight	19kg
Wind resistance	Level 6
Takeoff and landing mode	Vertical takeoff and landing
Power energy	Battery
Positioning accuracy	Single point positioning: 1.5m
Flight controller	RTK: 1CM+1PPM
Communication distance	Standard CUAU flight controller (optional) Based on link data
DIY customization	Flight controller, GNSS, remote controller, mission payload, body coating, waterproof design, remote ID, etc
Ground station	QGoundcontrol/Missionplanner/LGC
Application Scenario	Mapping, inspection, logistics, monitoring, public security, delivery, etc
Wing installation angle	2°
Wing area	72dm <sup>2</sup>
Wing load	264g/dm <sup>2</sup> @ 19kg

[1] Actual measurement at calm sea level and flight speed of 20m/s. Configuration, weather, flight speed, environment, etc. all affect battery life. Actual conditions shall prevail.



## Raefly VT290 Configuration Recommendation Table

### Fuselage

Items	KIT	RTF
Main body	1	1
Left wing	1	1
Right wing	1	1
Horizontal tail	1	1
Landing gear	1	1
Task mount bin	1	1
Payload compartment guide rail	1	1
Payload compartment printout	1	1
Airspeed meter printout	1	1



## Power System

Items	KIT	RTF
Lift rotor motor	-	4
Rotor ESC	-	4
Rotor propellers(CW&CCW)	-	2
Fixed wing ESC	-	1
Fixed wing motor	-	1
Fixed wing steering gear	-	4
Fixed wing propeller	-	1
BEC	-	1

## Flight Controller System

Items	KIT	RTF
Flight Controller	-	X7+
Baseboard	-	CAN PDB
GPS/RTK	-	C-RTK 2HP
Airspeed meter	-	MS4525

## Application Recommendations

	Inspection	Wide area inspection	Mapping	Take-off and landing on moving platform
Link system	H16	LBA3	H16	P8/P9
Link system 2	-	H16	P8/P9	
Camera System	10x zoom camera	30x zoom camera(tracking)	Share 102S(3D	-
	HDMI cable	HDMI cable	Map)	-
	BEC adapter	BEC adapter	-	-
Other	Camera Mount	Camera Mount	Camera Mount	Beacon
	-	-	C-RTK 2	-



## Optional Accessories & Services

Battery	6S 30000mAh×2	36000mAh×2	7S 36000mAh×2
Charger	1080W balance charger	1080W balance charger	7S balance charger
Customized services	Waterproof, LOGO, Painting		

1. KIT: does not include technical support and after-sales service, no assembly tutorials, configuration recommendations, parameter configuration, etc. Users are required to have independent configuration and the ability to independently install and tuning.
2. RTF: RTF + Application Recommendations(changeable) + power battery, charger selected according to user needs
3. RTF include assembly, tuning, customized, technical support and after-sales service; self-modification or addition of items does not provide the above services, and system compatibility is not guaranteed.
4. Ultra-long endurance: It is recommended to choose a 36000mAh high energy density battery, which has a higher capacity at the same weight
5. Loading mode: It is recommended to choose 7S 36000mAh high energy density battery to increase the loading capacity

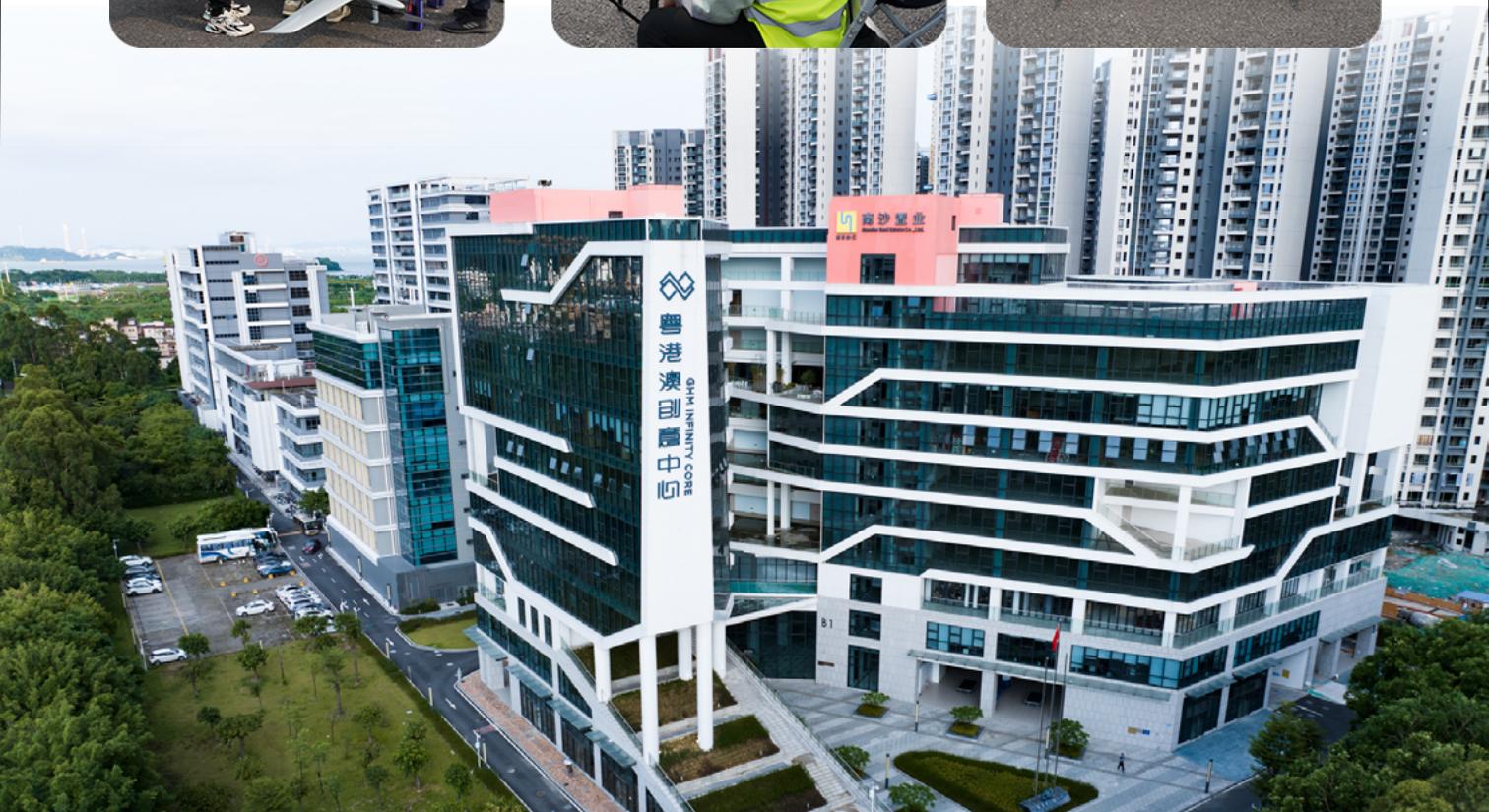


# Company Introduction

Raefly (Guangzhou) Technology Co., Ltd. is a wholly-owned subsidiary of CUAV Tech Inc., Ltd. The company is located in Nansha District, Guangzhou City. It has a dedicated airspace of 45 square kilometers and a flight base of more than 2,000 square meters. It is authorized by the Civil Aviation Administration of China , AOPA certified UAV pilot training institution. The company has a professional UAV technical team, which has provided UAV debugging and technical services for more than 2,000 UAV companies. It has rich experience in the fields of surveying and mapping, inspection, police and other UAV applications. Committed to becoming a leading provider of PIX open source UAV application solutions.



# Own Production Line



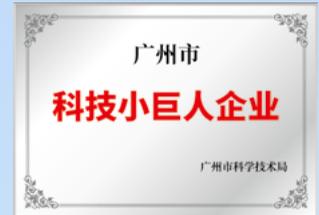
# Enterprise Strength



Special and special certificate



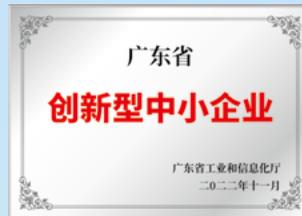
High-tech enterprises



Technology Little Giant Enterprise



Technology-based small enterprises



Innovative SMEs



Training Institution Certificate



Dronecode Member



ArduPilot Partner



PX4 Contributors

# Partner



# Patent display (Partial Display)

## Software Copyright



# Invention&Utility Patent



# Appearance Patent



# Trademark Certificate





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