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MAKEFLYEASY

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BOUT US

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About——

Mianyang Tianyuhang Technology Co.

Mianyang Tianyuhang Technology Co., Ltd. is a science and technology enterprise engaged in the research and development, production and sales of aerial survey drone spare parts.

The company is committed to promoting the development and application of UAV technology, providing users with high quality products and services, and assisting in the continuous development of the UAV industry.

Aerial survey carrier system **5** Models	Aerial survey power system **5** Models	Aerial survey flight control system **4** Models
Navigation and Positioning System **3** Models	Aerospace Communication System **1** Models	Aerospace Sensor System **2** Models



MAKE FLY EASY

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PIONEER

VTOL



The Pioneer3200 is a 24kg-class vertical takeoff and landing fixed-wing aircraftequipped with a 3-5kg LiDAR system. It boasts both strong payload capacity andextended endurance. Featuring multiple redundant designs to ensure flightsafety, the Pioneer retains its signature characteristics of easy disassembly, por-tability, and user-friendly operation.

Pioneer3200 employs high-efficiency aerodynamic airfoils to enhance the lift-to-dragratio. The wings feature increased aspect ratio and optimized wingtips to reduceinduced drag, ultimately achieving maximum lift and minimum drag.

The nose, wings, and tail feature a tool-free quick-release assembly design tominimize disassembly and reassembly time during aircraft operation.

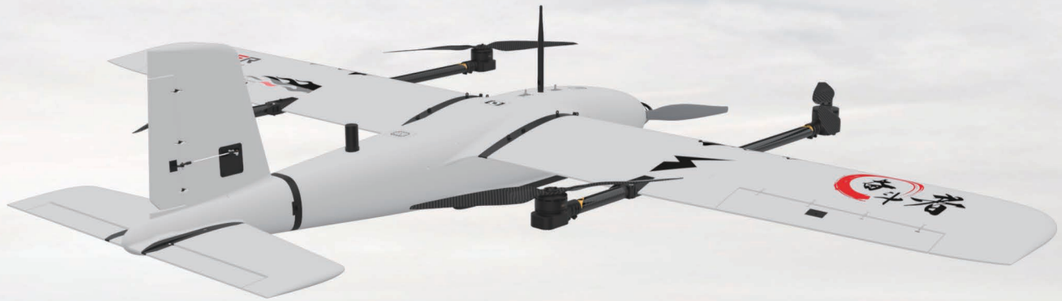
Product Features

- The aerodynamic profiles and relative positions of the wing, horizontal stabilizer, vertical stabilizer and fuselage are optimized, achieving rational distribution of aerodynamic loads, a remarkable effect of lift augmentation and drag reduction, and high flight efficiency. The whole aircraft adopts a streamlined shape to minimize flight drag
- The frame is made of composite materials and engineering plastics, and the shell is integrally foam-molded with EPO, boasting high strength and light weight. The front and rear spars of the wing adopt an interlocked grid-type box structure for enhanced structural strength and torsional rigidity. A rear tricycle folding landing gear is employed, featuring a high ground clearance, ample mounting space, and a tail rotor that avoids ground contact.
- The wing and tail feature a tool-free quick-release structure, which reduces assembly steps, shortens disassembly and assembly time, enables easy portability, and delivers a user-friendly experience.

Specification Parameters

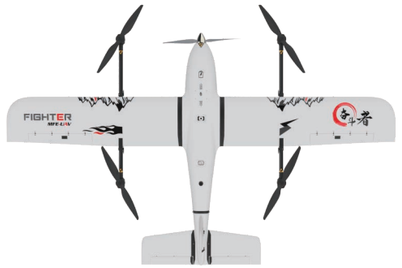
Material	EPO, EVA, carbon fibre, engineering plastics, etc.	Wing span	3200mm
Max take-off weight	<24.9g	Fuselage height	0.41m(Landing gear not included)
Max take-off height	3000m（altitude）	Dropped Boom	1m
Practical ceiling	4000m（altitude）	Fuselage length	1.68m
Wind Resistance	<36km/h	Wing area	100dm²
Take-off landing mode	Vertical take-off and landing	Recommended Flight Speed	20-21m/s
Disassembling	Tool-less dismantling	Max payload	5kg
Transport box size	1.48×0.48×0.57m	Loadspace Size	392×216×151mm
Stall speed	14m/s(Test condition:500m above sea level,24kg take-off weight)		
Endurance	Payload: 1 kg | Flight speed: 21 m/s | Takeoff weight: 20.9 kg | Flight time: 168 mins | Range: 217km Payload: 3 kg | Flight speed: 21.5 m/s | Takeoff weight: 22.9 kg | Flight time: 162 mins | Range: 216km Payload: 5 kg | Flight speed: 22.5 m/s | Takeoff weight: 24.9 kg | Flight time: 145 mins | Range: 201km		

Flight Platform



STRIVER 2430

VTOL



Striver 2430 VTOL is an 11kg-class vertical take-off and landing fixed-wing flying platform designed by MFE team "centered on the liberation of productivity" and "with safety and practicality as the two basic points", which has the features of easy-to-carry, friendly operation, stability and durability. It is easy to carry, friendly to operate, stable and durable.

The open flight control module is compatible with Pixhawk flight control, supports mounting Sony A7R2 4200W pixel full-frame camera/1.5kg lightweight LiDAR, and supports up to 12S@22000mah Li-polymer battery, which can realize ultra-long endurance and high-quality shooting effect.

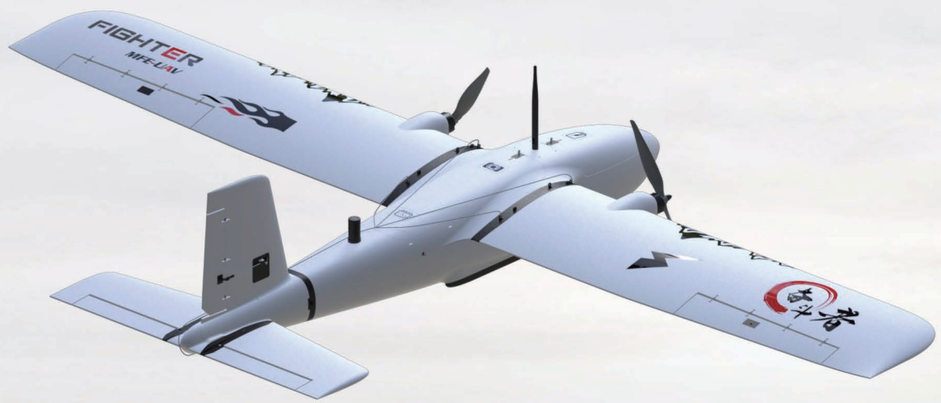
It is widely used in topographic mapping, land survey, engineering survey, digital city, planning and construction, landscape planning, precision agriculture, environmental protection monitoring, ecological monitoring and other fields.

Product Features

- Conventional inverted T layout: optimized aerodynamic shape and relative position of wing, tail and fuselage, reasonable load distribution, increased lift and reduced drag, high flight efficiency.
- Flat-tail dual rudder redundancy: independent control for increased flight safety.
- Modular design: wing high current connector, arm folding and stowage, tail quick release, reduce transportation size, easy to carry, with portability and friendly user experience.
- Efficient and stable power system: the cruise motor is matched by multiple KV values, the rotor ESC has extremely fast response speed, and the motor mount adopts aerospace aluminium alloy CNC, which is conducive to heat dissipation, waterproof and dustproof, and is able to face different operating environments.

Specification Parameters

Material	EPO,EVA,carbon fiber,PC,engineering plastics and etc.	Wing Span	2430mm
Max take-off weight	<13.5kg	Fuselage height	180mm
Practical ceiling height	4000m	Fuselage length	1450mm
Wind resistance	<36km/h	Wing area	72.5dm²
Take-off landing mode	Vertical take-off and landing	Suggested flight speed	19-21m/s
Disassembly	Tool-less disassembly	Max payload	2.5kg
Transport box size	1.27×0.36×0.50m	Loadspace Size	280×160×110mm
Stall speed	10m/s (test conditions: 500m above sea level, 10.5kg take-off weight)		
Endurance	120min/137km(speed 19m/s load 600g,2 batteries 6S@16000mah in series,take-off weight 10kg,altitude 500m) 131min/155km(speed 19m/s load 600g, 2 batteries 6S@22000mah in series, take-off weight 11.5kg, altitude 500m) 101min/131km (speed 21m/s load 2.5kg, 2 batteries 6S@22000mah in series, take-off weight 13.4kg, altitude 500m)		



STRIVER 2430

hand-thrown version



Striver2430 (hand-thrown version) is a 7kg class hand-thrown fixed-wing flying platform, with more load space and rich load weight, featuring long endurance and easy operation.

It adopts the conventional inverted T pneumatic layout for smoother take-off, and the powerful twin-engine power provides more than 10kg pulling force, which makes it easy to take off even under large weight.

With stable performance and excellent endurance, it can be widely used in topographic mapping, land survey, engineering survey, digital city, planning and construction, landscape planning, precision agriculture, environmental protection monitoring, ecological monitoring and other fields.

Product Features

- Conventional inverted T layout: optimised aerodynamic shape and relative position of wing, tail and fuselage, reasonable load distribution, increased lift and reduced drag, high flight efficiency.
- Stable and lightweight: the material uses a large number of lightweight PC boards and adopts embedded box structure to improve the structural strength and rigidity of the body.
- Quick disassembly: the wing and tail adopt tool-less quick-disassembly structure, which reduces the steps of loading and shortens the disassembly time, with portability and friendly user experience.
- IPX3 waterproof rating: the fuselage hatch is specially designed with water guiding grooves and water outlet holes to ensure normal flight capability in rainy days.
- The cabin is large and small resistance: the streamline shape is used to reduce flight resistance, the bottom is set up with cushion, shock absorption and wear-resistant, and the size of the rear handgrip and the spacing of the power are in the best ergonomic range.

Specification Parameters

Material	EPO, EVA, carbon fibre, engineering plastics, etc.	Wing span	2430mm
Max take-off weight	<7kg	Fuselage height	180mm
Practical ceiling height	4000m	Fuselage length	1450mm
Wind Resistance	<36km/h	Wing area	72.5dm²
Take-off landing method	Hand parachuting/gliding	Recommended flight speed	17-20m/s
Disassembly	Tool-less disassembly	Max Payload	1.5kg
Transport box size	1.27×0.36×0.50m	Loadspace size	280×160×110mm
Stall speed	10m/s(Test condition: 500m above sea level, 10.5kg take-off weight)		
Max range	126km(Test condition:Li-Po6S@22000mah.0.6kg load)		



STRIVER 2100

VTOL



Striver 2100 VTOL is a 7kg class vertical take-off and landing fixed wing, which inherits the safe and practical qualities of the Striver.

It adopts classic aerodynamic layout, redundant backup avionics system, the whole aircraft supports tool-less quick-disassembly, and has undergone 500+ take-off and landing durability tests and 4000+ plateau low-temperature tests.

With small storage volume, flexible and convenient use, it can be widely used in terrain mapping, land survey, engineering survey, digital city, planning and construction, landscape planning, precision agriculture, environmental protection monitoring, ecological monitoring and other fields.

Product Features

- Conventional inverted T layout: the aerodynamic shape and relative positions of the wing, tail and fuselage are optimised for reasonable load distribution and high flight efficiency; streamlined shape is adopted to reduce drag.
- Stable and lightweight: the material makes extensive use of high-strength lightweight carbon fibre, wood panels, PC boards, embedded box structure to improve the structural strength and rigidity of the fuselage; the bottom adopts a three-point bracing mechanism with high ground clearance to improve the stability of the aircraft's heading.
- Quick disassembly: the wing and tail adopt tool-less quick-disassembly structure, which reduces the steps of loading and shortens the disassembly time; it is easy to carry, with portability and friendly user experience.
- Compatible with 2 flight modes: supports 4+1 mode and 4+2 mode.

Specification Parameters

Material	EPO, EVA, carbon fibre, engineering plastics, etc.	Wing span	2100mm
Max take-off weight	<7.5kg	Fuselage height	156mm(without feet)
Max take-off height	3000m（altitude）	Dropped Boom	744mm
Practical ceiling	4000m（altitude）	Fuselage length	1200mm
Wind Resistance	<36km/h	Wing area	59dm²
Take-off landing mode	Vertical take-off and landing	Recommended Flight Speed	18-21m/s
Disassembling	Tool-less dismantling	Max payload	1kg
Transport box size	1.08×0.35×0.48m	Loadspace Size	180×150×110mm
Stall speed	10m/s(Test condition:500m above sea level,7kg take-off weight)		
Endurance	4+1:82min/95km(speed 19m/s load 600g, battery 6S@16000mah, take-off weight 6.5kg, altitude 500m) 4+1:112min/127km(speed 19m/s load 600g, battery 6S@22000mah, take-off weight 7.1kg, altitude 500m) 4+2:96mini/105km(speed 19m/s load 600g, battery 6S@22000mah, take-off weight 7.3kg, altitude 500m)		



STRIVER 2100

(hand-thrown version)



The Striver 2100 hand-thrown version is a 7kghand-thrown fixed-wing platform, and the MFE team has been working hard on the areas of flight stability, power configuration, and quick-release portability, in order to pursue an airborne work of art that can stand the test of time.

After a new generation of aerodynamic optimisation, it has stronger anti-stall and anti-rotation performance, and is single- and twin-engine compatible.

With small storage volume, flexible and convenient use, it can be widely used in topographic mapping, land survey, engineering survey, digital city, planning and construction, landscape planning, precision agriculture, environmental monitoring, ecological monitoring and other fields.

Product Features

- Conventional inverted T layout: the aerodynamic shape and relative positions of the wing, tail and fuselage are optimised for reasonable load distribution and high flight efficiency; streamlined shape is adopted to reduce drag.
- Stable and lightweight: the material makes extensive use of high-strength and lightweight carbon fibre, wood panels and PC boards, and adopts an embedded box structure to improve the structural strength and rigidity of the body.
- Quick disassembly: the wing and tail adopt tool-less quick-disassembly structure, which reduces the steps of loading and shortens the disassembly time; it is easy to carry, with portability and friendly user experience.
- Hand-throwing take-off: the size of the hand grip at the end of the machine and the spacing of the force are in the optimal ergonomic range to achieve precise force and smooth throwing.

Specification Parameters

Material	EPO, EVA, carbon fibre, engineering plastics, etc.	Wing span	2100mm
Max take-off weight	<7kg	Fuselage height	156mm(without footrest)
Practical ceiling	4000m	Fuselage length	1200mm
Wind Resistance	<36km/h	Wing area	59dm²
Take-off landing mode	Hand throw take-off/parachute landing	Recommended Flight Speed	17-21m/s
Disassembling	Tool-less disassembly	Max payload	1.2kg
Transport box size	1.08×0.35×0.48m	Loadspace Size	180×150×110mm
Stall speed	10m/s (Test: altitude 500m, 6kg take-off weight)	Max Range	145km
Twin-engin Endurance	145min/151km(speed 18m/s load 600g, battery 6S@22000mah, take-off weight 6kg, altitude 500m)		



HERO2180

VTOL



Hero 2180 VTOL is a multi-purpose vertical take-off and landing fixed wing with interchangeable nose design, which can carry ortho or tilt camera for surveying and mapping field as well as optoelectronic pod for monitoring field.

The multi-purpose design expands the range of applications, reduces flight costs, further liberates and develops productivity, and supports a variety of payloads, covering both mapping and monitoring application scenarios.

With small stowage volume, flexible and convenient use, it can be widely used in topographic mapping, land survey, engineering survey, digital city, planning and construction, landscape planning, precision agriculture, environmental protection monitoring, ecologicalmonitoring and other fields.

Product Features

- It adopts high-efficiency V-tail layout, optimises the aerodynamic shape and relative position of the wing, tail and fuselage, with reasonable load distribution, increased lift and reduced drag, and adopts streamlined shape to reduce flight resistance.
- Stable and lightweight: the material uses a lot of high-strength and lightweight carbon fibre, wood board, and PC board, and adopts embedded box structure to improve the structural strength and rigidity of the fuselage; the bottom of the fuselage adopts the three-point landing gear, with a high clearance from the ground, a large space for mounting, and the tail rotor doesn't touch the ground.
- Quick disassembly and assembly: the wing and tail adopt quick-disassembly structure to reduce the steps of loading; the wing can be split into wing root and wing tip to reduce the storage volume.

Specification Parameters

Material	EPO、Aviation Aluminium Alloy、Carbon fibre, engineering plastics, etc.	Wing span	2180mm
Max take-off weight	<7kg	Fuselage height	255mm(with landing gear)
Max take-off height	3000m	Dropped Boom	755mm(including motor mount)
Practical ceiling	4000m（altitude）	Fuselage length	1140mm
Wind Resistance	<36km/h	Wing area	53dm²
Aircraft Angle of Approach	0-2°	Wing Mounting Angle	2.9°
Airspeed	14m/s	Max Roll Angle	30°
Max Climbing Angle	3.5°	Max Dive Angle	5°
Take-off landing mode	Vertical take-off and landing	Recommended Flight Speed	17-22m/s
Disassembling	Tool-less dismantling	Max payload	< 1kg
Transport box size	1.10*.0.35*0.43m	Working Temp.	-10℃ ~ 50℃
Stall speed	12m/s (test: 500m altitude, 7kg take-off weight)	Aileron Angle	22° up； 28° down
V-tail angle	28° up； 20° down		
Mapping Endurance	136min/144km(speed 19m/s, load 600g, battery 6S@22000mah, take-off weight 6.65kg)		



BELIEVER 1960



Believer1960 is positioned as a smaller take-off weight entry-level handheld carrier with good portability and excellent user experience.

The layered design of the flight control compartment can carry a 4200W pixel camera compartment, and the battery compartment can hold 6S@22000mah, which brings ultra-long endurance and high quality shooting effect.

Combined with the flight control system, telemetry system, power system and imaging system, it can obtain stable and safe flight performance, and can be widely used in the fields of topographic mapping, land survey, engineering survey, digital city, planning and construction, landscape planning, precision agriculture, environmental protection monitoring, ecological monitoring and so on.

Product Features

- V-tail aerodynamic layout, efficient and smooth flight, more suitable for aerial survey operations, reasonable aerodynamic load distribution, significant lift and drag reduction, high flight efficiency; the overall streamline shape, reducing flight resistance.
- Stable and lightweight: the bottom of the fuselage is equipped with a large landing cushion, double generators upward, avoiding the propeller hitting the ground when taxiing and landing, and the belly of the fuselage damps the vibration and releases the energy.
- Quick disassembly and assembly: tool-less disassembly and assembly, the wing and tail can be inserted without additional wires, the structure and electrical synchronous separation of the disassembly of the space occupied by the small, can be easily carried.
- Hand-throwing take-off: The tail section of the fuselage makes the ergonomic standard size range of hand-holding while guaranteeing strength, making it easier to lift and more stable to throw.

Specification Parameters

Material	EPO, EVA, carbon fibre, engineering plastics, etc	Wing span	1960mm
Max take-off weight	<5.5kg	Fuselage height	185mm
Practical Lift	4000m	Fuselage length	1070mm
Wind Resistance	<36km/h	Wing area	51dm²
Take-off landing mode	Hand-carried take-off/parachute/skid landing	Recommended Flight Speed	17-21m/s
Disassembly	Tool-less disassembly	Max payload	1kg
Transport box size	1.11×0.30×0.44m	Loadspace Size	120×150×119mm
Stall speed	10m/s (Test: altitude 500m, 5kg take-off weight)	Max Range	116km
Endurance	111min/116km(speed 17m/s load 500g, battery 6S@16000mah, take-off weight 5.2kg, altitude 500m)		

Unmanned Aerial Vehicle Power Systems



UAV power system is mainly for different models of vertical take-off and landing flight platforms optimised for custom power packages, including the corresponding multi-rotor brushless motors, multi-rotor ESCs, multi-rotor propellers, cruise motors, cruise ESCs, cruise propellers, rudder, UBEC, etc.

MFE 6518 KV200 BLDC Motor



KV value	200	Rated voltage	12S(44.4V)
Rated power	1200W	Motor weight	423g
Max Pulling	14700g	Max Current	87A
Match ESC	MFE 12100	Match propeller	2278carbon fibre paddle
Match Model	Pioneer 3200 VTOL		

MFE 5015S KV220 BLDC Motor



KV value	220	Rated voltage	12S(44.4V)
Rated power	530W	Motor weight	221g
Max Pulling	7600g	Max Current	36A
Match ESC	MFE 1240（12S ESC）	Match propeller	1862 carbon fibre paddle
Match Model	Striver2430 VTOL		

MFE M4112 KV460 BLDC Motor



KV value	460	Rated voltage	6S(22.2V)
Rated power	350W	Motor weight	177g
Max Pulling	4100g	Max Current	39A
Match ESC	MFE 650	Match propeller	1550 carbon fibre paddle
Match Model	Hero 2180 VTOL、Striver 2100 VTOL		

MFE 6525 KV180 BLDC Motor



KV value	180	Rated voltage	12S(44.4V)
Rated power	1500W	Motor weight	563g
Max Pulling	11900g	Max Current	85A
Match ESC	MFE 12120	Match propeller	2113E
Match Model	Pioneer 3200 VTOL-Cruise		

MFE 5120S KV190 BLDC Motor



KV value	190	Rated voltage	12(44.4V)
Rated power	680W	Motor weight	324g
Max Pulling	7400g	Max Current	45A
Match ESC	MFE 1260	Match propeller	1912E
Match Model	Striver 2430 VTOL-Cruise		

MFE 4120 KV430 BLDC Motor



KV value	430	Rated voltage	6S(22.2V)
Rated power	320W	Motor weight	307g
Max Pulling	5800g	Max Current	79A
Match ESC	MFE 6100	Match propeller	APC 1612E
Match Model	STRIVER 2100 VTOL-Cruise		

MFE 3520 KV500 BLDC Motor



KV value	500	Rated voltage	6S(22.2V)
Rated power	280W	Motor weight	207g
Max Pulling	5400g	Max Current	70A
Match ESC	MFE 6100	Match propeller	1512
Match Model	HERO 2180 VTOL -Cruise/Striver 2430（Hand-thrown version）		

MFE 2820 KV550 BLDC Motor



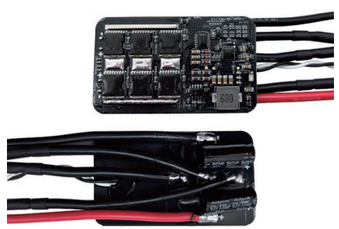
KV value	550	Rated voltage	6S(22.2V)
Rated power	240W	Motor weight	143g
Max Pulling	2200g	Max Current	18A
Match ESC	MFE 640	Match propeller	1280
Match Model	Striver 2100（Hand-thrown version）		

MFE12120 BLDC ESC



Con/Burst Max Current	60A/120A	Rated voltage	12S(44.4V)
Rated power	2600W	ESC Weight	253g
Match Motor	MFE 6525	Match Propeller	2113E
Match Model	Pioneer 3200 VTOL-Cruise		

MFE12100 BLDC ESC



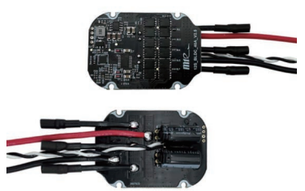
Con/Burst Max Current	50A/100A	Rated voltage	12S(44.4V)
Rated power	2200W	ESC Weight	117g
Match Motor	MFE 6518	Match Propeller	2278 carbon fibre paddle
Match Model	Pioneer 3200 VTOL		

MFE1260 BLDC ESC



Con/Burst Max Current	30A/60A	Rated voltage	12S(44.4V)
Rated power	1300W	ESC Weight	125g
Match Motor	MFE 5120S	Match Propeller	1912E
Match Model	Striver2430 VTOL-Cruise		

MFE1240 BLDC ESC



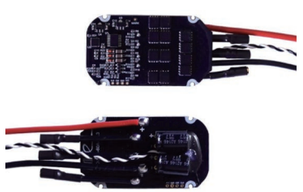
Con/Burst Max Current	20A/40A	Rated voltage	12S(44.4V)
Rated power	880W	ESC Weight	53g
Match Motor	MFE 5015S	Match Propeller	1862 carbon fibre paddle
Match Model	Striver 2430 VTOL		

MFE6100 BLDC ESC



Con/Burst Max Current	50A/100A	Rated voltage	6S(22.2V)
Rated power	1100W	ESC Weight	85g
Match Motor	MFE 4120/3520	Match Propeller	1612E/1512
Match Model	STRIVER 2100 VTOL-Cruise/HERO 2180 VTOL-Cruise/ Striver 2430 （Hand-thrown version）		

MFE 650 BLDC ESC



Con/Burst Max Current	25A/50A	Rated voltage	6S(22.2V)
Rated power	550W	ESC Weight	49g
Match Motor	MFE M4112	Match Propeller	1550 carbon fibre paddle
Match Model	STRIVER 2100 VTOL/HERO 2180 VTOL		

MFE 2278 Propeller



Length	22 Inch	Centre Hole I.D.	4mm
Mounting Pitch	20mm	Weight	55g
Dynamically balanced	yes	Paddle Material	Carbon fibre composite paddle

MFE 2068 Propeller



Length	20 Inch	Centre Hole I.D.	4mm
Mounting Pitch	12mm	Weight	39g
Dynamically balanced	yes	Paddle Material	Carbon fibre composite paddle

MFE 1862 Propeller



Length	18Inch	Centre Hole I.D.	4mm
Mounting Pitch	12mm	Weight	39g
Dynamically balanced	yes	Paddle Material	Carbon fibre composite paddle

MFE 1755 Propeller



Length	17 Inch	Centre Hole I.D.	4mm
Mounting Pitch	12mm	Weight	26g
Dynamically balanced	yes	Paddle Material	Carbon Fibre Paddle

MFE 1550 Propeller



Length	15 Inch	Centre Hole I.D.	4mm
Mounting Pitch	12mm	Weight	28g
Dynamically balanced	yes	Paddle Material	Carbon Fibre Paddle

UBEC 5.3V 10A



Continuous current	10A	Working Voltage	3S-14S LiPo
Instantaneous Current	20A（10S）	Weight	57g
Size	55*33*13mm	Input Power Cord	Red-Black-18AWG-60cm
Output Power Cord	Two-way Red-Black-22AWG-15cm-with Servo Female Head		

MFE 3054 Pro Electronic Metal Servo



Operating Voltage	5V-8.4V	Operating Temp.	-20C°~+70C°
Max. torque (4.8V)	4.2Kgf·cm	No-load speed (5V)	0.15 Sec/60°
Max. torque (6V)	7.7Kgf·cm	No-load speed (6V)	0.09 Sec/60°
Size	28.5*13*31.1mm	Weight	26g

MFE 3054 Electronic Metal Servo

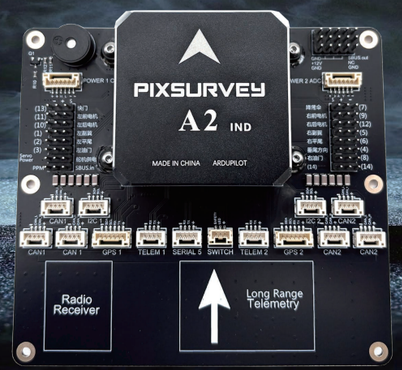


Operating Voltage	4.8V-6.0V	Operating Temp.	-20C°~+60C°
Max. torque (4.8V)	3.2Kgf·cm	No-load speed (4.8V)	0.15 Sec/60°
Max. torque (6V)	3.8Kgf·cm	No-load speed (6V)	0.13 Sec/60°
Size	28.5*13*31.1mm	Weight	23g

PIXSURVEY A2

Industrial Grade Flight Controls

Pixsurvey A2 flight control is a 4+1 vertical take-off and landing fixed-wing flight control based on Pixhawk hardware platform, deeply optimised according to the characteristics of aerial survey flights, and systematically integrated, adopting ChibiOS embedded operating system and running Ardupilot customised version of firmware, which is safe, reliable and accurately controlled, and meets the stringent requirements of industry applications.



Product Features

- Dual processor with powerful processing performance, extremely fast data computing, safe and stable flight architecture.
- Contains a redundant combination of 3 sets of IMUs and 2 sets of barometers for real-time monitoring of multiple sensor data and automatic redundant switching to enhance flight safety and stability.
- The built-in IMU adopts independent heating design, which can work at constant temperature even under low-temperature environment, avoiding temperature drift and improving the stability of the flight control system; the independent IMU damping system efficiently filters out the vibration of the motor and enhances the adaptability of the flight control to the carrier aircraft.
- The centre board adjusts the interface position, clarifies the wiring direction, avoids cross-winding of wires, and contains a redundant system consisting of 2-way flight control power supply for the flight control, which improves the degree of system integration and reduces the probability of failure.
- The housing is made of aerospace aluminium alloy CNC one-piece moulding, which is robust and anti-interference.

Specification Parameters

Processor	Main processor STM32F743, Co-processor STM32F100			
A1 IND Sensor	Accelerometer ×3	IIM42652/IIM42652/ICM42688-P	Mavlink UART Serial Port	2
	Gyro ×3	IIM42652/IIM42652/ICM42688-P	GPS UARTSerial Port	2
	Barometer ×2	BMP388×2	Remote control signal input protocol	PPM/SBUS/DSM/DSM2
PM Voltage	4.8-5.8V		I²C	2
USB Voltage	5.0V±0.25V		CAN Standard Bus	2
Operation Temp.	-20~80℃		PWM Output	Standard 8 PWM IO + 6programmable IO
Size	47×47×23mm		Weight	52g

PIXPILOT V6 Pro

Professional Flight Controls

PixPilot V6 Pro is a professional-grade autopilot with stable performance, high flexibility and stacked design, equipped with high-performance STM32H743 processor, built-in vibration damping and temperature compensation system, multi-group redundancy design, all-around protection of UAV flight safety, provides rich interfaces for easy wiring and installation, and has a wealth of peripheral extensions for better stability and anti-interference.



Product Features

- With a variety of industry applications mounted, it can meet the needs of complex tasks and empower the field of mapping and monitoring.
- The IMU is fully upgraded to ICM-4 series sensor, with higher measurement sensitivity and smaller zero-bias error; the optimised vibration damping system reduces the medium and high frequency vibration, and improves the accuracy of flight control attitude detection; and the built-in high-precision temperature compensation system ensures the sensor operates at a constant temperature.
- At the same time, it supports two groups of PMU, GPS, compass, airspeed meter, and digital transmission to form a dual-redundant autopilot system, which monitors the data of multiple sensors in real time, and performs redundant switching as soon as there is a failure to improve flight safety.
- The three groups of power inputs have over-voltage and low-voltage protection, forming a redundant power supply system, which automatically switches the power supply according to the priority level and improves the reliability of the power supply system.

Specification Parameters

Hardware Configuration			
Main Processor	STM32H743(32 Bit Arm Cortex-M7 480Mhz 2M Flash 1M RAM)	Sensor	ICM-42688-P*2（Acceleration & Gyroscope） ICM-40605*1（Acceleration & Gyroscope） BMP388*2(Barometer)
Co-processor	STM32F103(32 Bit Arm Cortex-M3 72Mhz 64K Flash 20K RAM)		
Basic Parameters			
UART	5	I²C	2
CAN	2	PWM	8+8
SBUS-OUT	1	PPM/SBUS-IN	1
Power 1	2	Power 2	2
TF-card	1	USB-Type-C	1
Case Material	CNC aircraft aluminium alloy	Operating Temp.	-10 ℃~55℃
Size	94*49*23mm	Weight	62g



PIXPILOT V3

Professional Flight Controls

PixPilot V3 flight control system is a general-purpose flight control developed on the basis of open-source flight control FMU V3. It adopts the stable and reliable F427 processor, which comprehensively improves the performance of IMU sensors and adapts to more working environments. It has the features of stable performance, simple installation and user-friendly.

PIXPILOT C3

flight control system · Entry-level flight control

PixPilot C3 is a high-performance, small-size, lightweight autopilot, suitable for small fixed-wing, vertical take-off and landing fixed-wing, multi-rotor autopilot systems, with stable and reliable, simple installation, user-friendly features.



Product Features

- With powerful processing performance, extremely fast data computing, safe and stable flight architecture; dual processors work together efficiently, the heat is conducted through the heat-conducting silicone, avoiding processor heat degradation, reducing heat dissipation on the IMU thermostat system interference, increasing the safety of flight control.
- The IMU is fully upgraded to ICM-4 series sensor, which has higher measurement sensitivity and smaller zero-bias error; the optimised flight control damping system improves the accuracy of flight control attitude detection; and the built-in high-precision temperature compensation system of the IMU ensures that the sensor has sustained stability and accuracy in high and low temperature environments.
- The flight control monitors multiple sensor data in real time and immediately performs redundant switching once a failure occurs, improving flight safety; the power input has over-voltage and low-voltage protection, forming a redundant power supply system that automatically switches the power supply according to the priority level, improving the reliability of the power supply system.
- The I2C/CAN HUB supports a variety of peripherals to enrich the flight control functions and create unlimited possibilities.

Specification Parameters

Hardware Configuration			
Main Processor	STM32F427(32 Bit Arm Cortex-M4 180Mhz 2M Flash 256K RAM)	Sensor	CM-42688-P*2（Acceleration & Gyroscope） ICM-40605*1（Acceleration & Gyroscope） MS5611*2（Barometer） IST8310（compass）
Co-processor	STM32F103(32 Bit Arm Cortex-M3 72Mhz 64K Flash 20K RAM)		
Basic Parameters			
UART	5	I²C	2
CAN	2	PWM	8+6
SBUS-OUT	1	PPM/SBUS-IN	1
Power 1	1	Power 2	1
TF-card	1	USB-Type-C	1
Case Material	CNC aircraft aluminium alloy	Operating Temp.	-10 ℃~55℃
Size	76×45×19mm	Weight	60g

Product Features

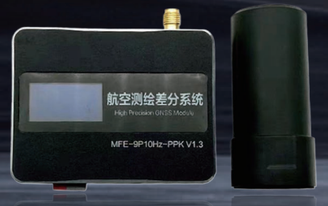
- Dual processors to provide security redundancy and peripheral expansion for flight control, stable and reliable performance; row of pins and connector interfaces all in three-dimensional design, USB and SD card is located on the top, easy to load.
- Dual peripheral backup, supporting two peripherals at the same time, two sets of PMU, GPS, compass, airspeed meter, digital transmission to form a dual-redundant autopilot system to enhance the reliability of the aircraft.
- Strong impact resistance, high consistency, suitable for parachuting fixed-wing large overload landing; signal voltage switching, complex electromagnetic environment to enhance the rudder, ESC signal anti-interference ability.
- AP custom firmware, MFE models are recommended to use MFE stable firmware, which integrates commonly used functional parameters such as PID parameters and default configurations of MFE models; only need to calibrate the accelerometer, compass, remote control, battery monitor, ESC to flight test, reduce the difficulty of debugging and reduce the risk of blowing up the aircraft.

Specification Parameters

Hardware Configuration			
Main Processor	STM32F427(32 Bit Arm Cortex-M4 180Mhz 2M Flash 256K RAM)	Sensor	ICM-42688-P*2(Acceleration & Gyroscope) BMP388*2(Barometer)
Co-processor	STM32F103(32 Bit Arm Cortex-M3 72Mhz 64K Flash 20K RAM)		
Basic Parameters			
UART	5	I²C	2
CAN	2	PWM	8+6
SBUS-OUT	1	PPM/SBUS-IN	1
Power 1	1	Power 2	1
TF-card	1	USB-Type-C	1
Case Material	CNC aircraft aluminium alloy	Operating Temp.	-10 ℃~55℃
Size	76×45×16mm	Weight	37g

PPK2

Dynamic Post-Processing Kinematic Module



Navigation and Positioning Systems

PPK is short for Post-Processing Kinematic (GPS Dynamic Post-Processing Kinematic) GPS positioning technology that uses carrier phase for post-processing kinematic, and its system also consists of a reference station and a mobile station, so that there is no need to establish a real-time communication link between the mobile station and the reference station during the field measurements, and with a large operation radius, a short observation period on the mobile station can be solved with centimetre-level accuracy.

Product Features

- Multi-band boards with fast convergence time and reliable performance are selected to support TF card hot-swap function and uninterrupted card removal without power supply.
- The 9P's compact design makes it easy to assemble on fixed-wing or multi-rotor flying platforms; the OLED LCD screen directly displays the time, number of satellites, and the number of camera triggers.
- Support mainstream GNSS signal reception: BeiDou, GPS, Galileo, GLONASS (can receive 3 GNSS simultaneously).
- Positioning is accurate and can reach centimetre-level accuracy errors through PPK post-decompute processing.

Specification Parameters

Number of tracking channels	184	Starting Speed	Cold start 24s;Hot start 2s
Operating Channel Frequency Band	GPS L1C/A; L2C	Positioning accuracy	Single point horizontal 1.5m
	BDS B1L; B2L		Single point vertical 3m
	GLONASS L1OF; L2OF		PPK Horizontal 0.01m±1ppm
	GALILEO E1-BC; E5B		PPK Vertical 0.01m±1ppm
Processor	ARM 32-bit High Performance Processor	SD Card	16G High Speed Card
Refresh frequency	10Hz	Display	OLED
Antenna Interface	SMA Male Bore	Power connector	3-Pin Reversible Interface
Signal Trigger Interface	3-Pin Connector	Operating Voltage	LiPo 3S-6S
Operating Temp.	-40℃ ~ +75℃	Storage Temp.	-40℃ ~ +85℃
Size	67.5*51.5*12.5mm	Weight	52.5g

POS

Global Satellite Navigation Modules



- POS2 is built-in Ublox NEO-M9N module and IST8310 magnetic compass, with more dual-frequency star search and higher positioning accuracy.
  POS 3 is built-in Ublox NEO-M9N module and RM3100 magnetic compass, featuring high positioning accuracy and anti-interference.

Specification Parameters

	POS3	POS2
Satellite Receiver	U-blox M9N	U-blox M9N
Magnetic Compass	RM3100	IST8310
Positioning accuracy	1.5m (with SBAS)	1.5m (with SBAS)
Communication Interface	CAN	UART / I²C
Navigation Refresh Rate	25Hz (max)	25Hz (max)
Capture Speed	Cold start 24s;Hot start 2s	Cold start 24s;Hot start 2s
Tracking Sensitivity	-167dBM	-167dBM
Number of searches	32+	32+
Magnetic Compass Accuracy	±0.1°	1°-2°
Magnetic Compass Resolution	22nT/LSB	3milli-gauss
Operating Temp.	-10℃ ~ +70℃	-10℃ ~ +70℃
Operating Voltage	5V	5V
Size	60*60*17mm	60*60*17mm
Weight	54g	54g

Communication Systems



T900 pro

UAV Telemetry

T900 Pro is a cost-effective long-distance drone telemetry, frequency range 902-928Mhz, full-duplex serial link supports Mavlink or pass-through mode, supports serial port, WiFi or Bluetooth forwarding, you can monitor the flight control data on the computer side and the mobile side. the T900 Pro sky side and the ground side are designed with the same hardware and software, which can be switched arbitrarily for easy pairing and replacement, thus reducing the cost of use.

Product Features

- Using 32-bit MCU, faster processing speed, reduce data delay; active temperature complementary crystal, long time working frequency does not drift.
- Adopting FHSS frequency hopping spread spectrum, strong anti-interference ability, long transmission distance; high uplink rate, support long-distance fast uploading of control commands without lagging.
- Support data WiFi or Bluetooth forwarding, ground station placement is more flexible; support wide voltage 3S-12S input, eliminating the need for UBEC independent power supply module.
- Aviation aluminium alloy shell, electromagnetic shielding, rugged, efficient heat dissipation; support DC port, USB, serial port three-way redundant power supply, the sky side recommended serial power supply, the ground side recommended USB power supply.

Specification Parameters

Working frequency	902-928Mhz	Frequency tolerance	+5ppm
Transmit power	1W	Overall power consumption	2.2W-2.5W
Transmission distance	60km (air-to-ground, jam-free, good performance)	Serial port level	3.3V TTL
Serial speed	57600bps	Way of working	FHSS
Data protocol	Mavlink	Operating Voltage	12V-60V(3S-12S)
Power supply interface	XT30PW-M(Male)	Antenna interface	SMA External thread inner needle
Serial interface	GH1.25-4P	USB	Type-C
Operating Temp.	-40℃~+85℃	Size&Weight	63*39*14.5mm 108g

Transducers



I²C/CAN

Airspeedometer

The airspeed meter measures the dynamic pressure of airspeed and the static pressure of the atmosphere at the altitude where it is located. The pressure signal is converted into an electrical signal in the differential pressure sensor, processed by an amplification circuit, and then converted into a digital signal by the A/D, which is finally converted into airspeed.

Product Features

- I²C digital airspeed meter uses a TE MS4525DO sensor with full calibration and temperature compensation, a total error band (TEB) of less than 1% of the compensated pressure range, and an I²C digital interface for the output.
- CAN digital airspeed meter uses TE's MS4525DO sensor with full calibration and temperature compensation, a total error band (TEB) of less than 1% of the compensated pressure range, and a CAN digital interface for the output.
- The shell is made of aviation aluminium alloy CNC machining, robust and durable, to prevent static electricity damage to the sensor; power input internal anti-reverse connection design, to avoid permanent damage to the sensor against the positive and negative connection.
- A status indicator light is designed on the top for easy observation of the working status of the airspeed meter. Compared with the traditional analogue signal, it has lower power consumption, stronger anti-interference and longer transmission distance, which is suitable for all kinds of small fixed-wing aircraft.

Specification Parameters

I²C Airspeedometer



Sensors	MS4525D0	Communication Bus	I²C
Pressure range	0-1 psi	Airspeed range	0-106 m/s
Input Voltage	5V	Interface Type	GH1.25-AWB
Operating Temp.	-25℃~+105℃	Size&Weight	27.5*19.6*15.1mm 10.8g

CAN Airspeedometer



Sensors	MS4525D0	Communication Bus	CAN
Pressure range	0-1 psi	Airspeed range	0-106 m/s
Input Voltage	5V	Interface Type	GH1.25-AWB
Operating Temp.	-25℃~+105℃	Size&Weight	27.5*19.6*15.1mm 10.8g