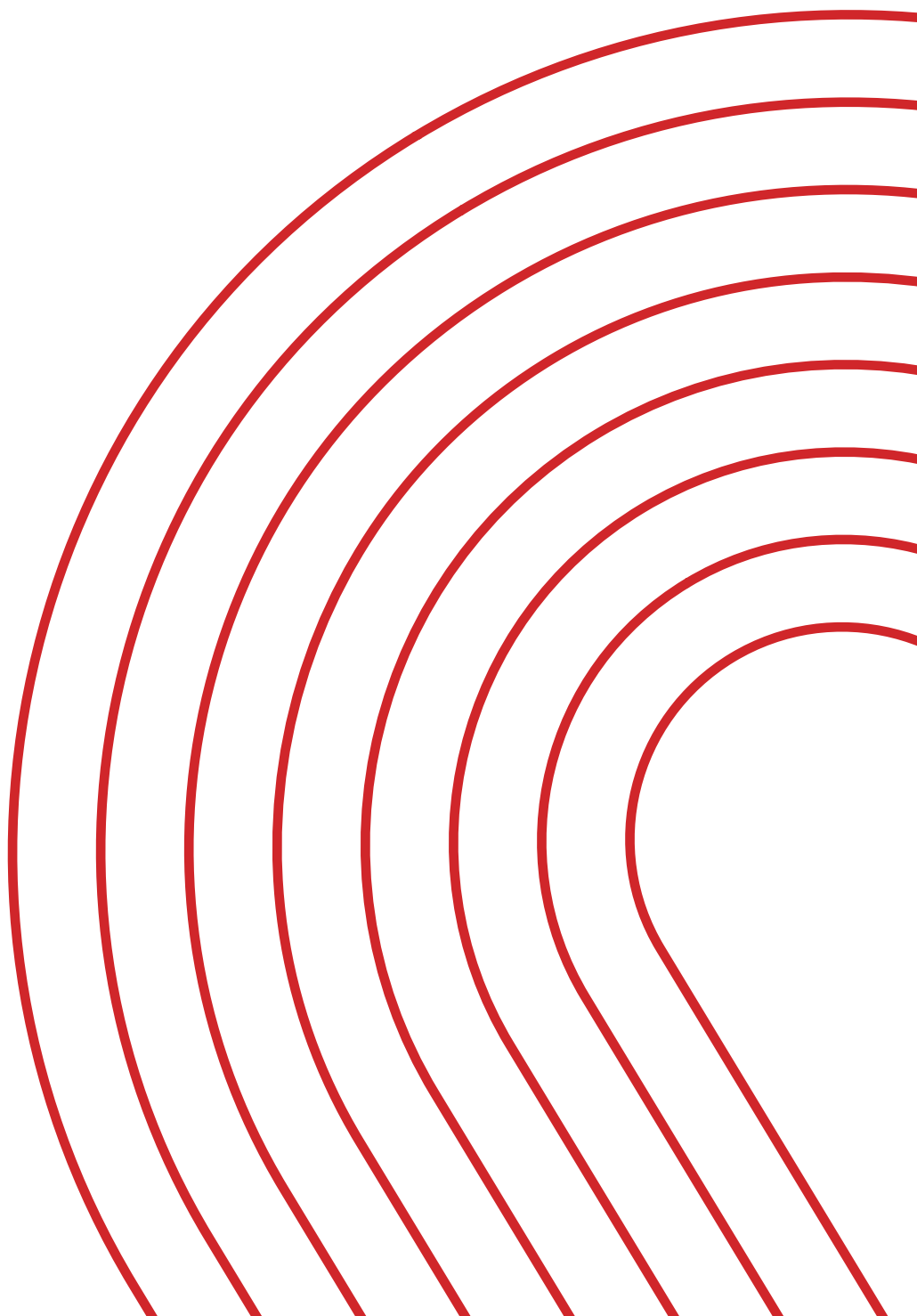


Autel Robotics Products Brochure

www.autelrobotics.com



Born To Explore

In Autel Robotics, we strive to lead the world in the science and technology advancements of aerial robotics.

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01

Message From Founder



Founder: Frank Lee

A Message from Autel Robotics Founder, Frank Lee

Since 2014, Autel Robotics has been committed to accelerating the adoption of drone technology as a globally renowned manufacturer and solution provider. Through our deep dedication to key core technology research, pursuit of excellence, and commitment to exceeding customer expectations, our team sets new benchmarks for drone technology and performance for both commercial and consumer users. We work tirelessly with our partners to provide the best aerial solutions, delivering tangible and lasting value to our customers.

A handwritten signature in black ink, likely of Frank Lee, the founder of Autel Robotics.

02

About Autel Robotics

Introduction

EVO Lite Enterprise Series

Development Timeline

Global Talent Network

Core Technologies

Digital Industry Solutions

University-industry Cooperation

Talent Structure

Corporate Honors And Certificates

Introduction

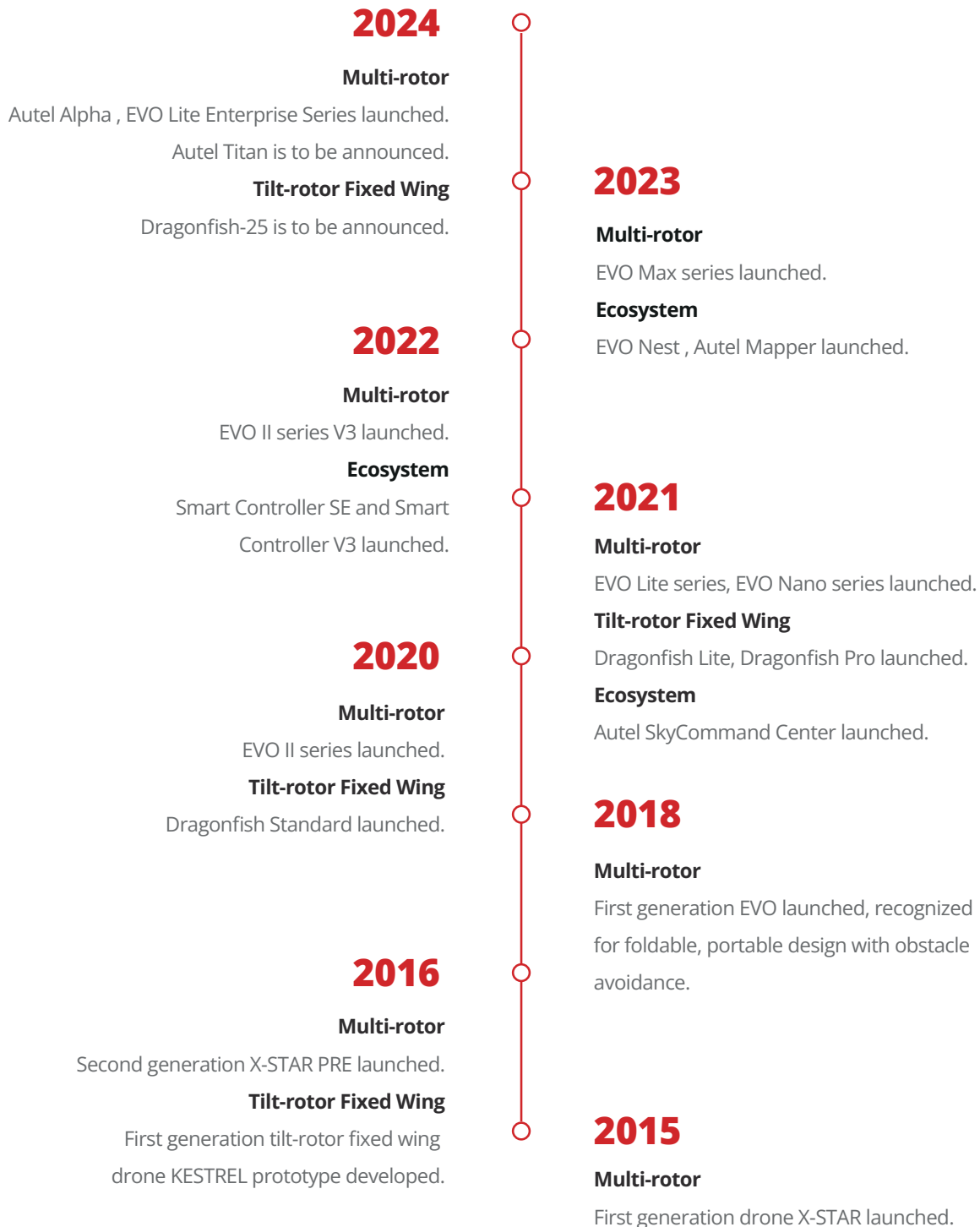
Founded in early 2014 as a hi-tech company, Autel Robotics is dedicated to researching and advancing AI-driven autonomous drones, and the solutions that surround the possibilities brought on by drones. We provide our customers with innovative solutions with distinct features, based on high performing, reliable products across our ever-expanding range of platforms.



With our own first-class international R&D teams, Autel Robotics is a customer-oriented company, pushing for excellence through constant innovation and breakthroughs, ultimately creating genuine, ongoing value for our customers.

Development Timeline

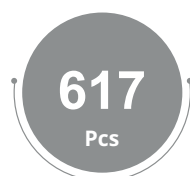
Our products can be easily divided based on their flight platform. Autel Robotics stands out in the industry, able to independently develop both multi-rotor and tilt-rotor fixed-wing drones simultaneously.



Global Talent Network

Autel Robotics is headquartered in Shenzhen, the capital of drones, with branches and R&D bases in Seattle, Munich, Netherlands, United Arab Emirates, Italy, Singapore, Vietnam and other locations, covering 26,000 m² of R&D and production area.

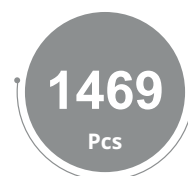
As the world's leading drones technology company, adhering to the business philosophy of "Value Innovation, Diligent Pursuit" and the product philosophy of "Manufacture to the Extreme", the company continues to innovate, focus on the core technologies of high-end consumer and enterprise drones. By December 31, 2024, the company has possessed 1469 authorized patents and 2861 patent applications, which ranks the top in the global drones industry.



**Authorized Invention
Patents**



**Global Patent
Applications**



**Global Authorized
Patents**

Core Technologies

Autel Robotics is one of the very few companies in the world who can independently research and develop, and truly master the core full stack development technologies of intelligent drones.

Autonomous Flight Technology

Continuous flight model optimization via iteration
Precise test simulation and data fusion analytics
Multi-mode AI compute engine, machine learning process engineering
Intelligent target identification and recognition
Autonomous map positioning and building planning

Efficient Endurance

Overall layout optimization
Efficient avionics
Efficient power

Ultra-HD Imaging

Supersensitivity
Low Light & Infrared Dual Night Vision
Technology
8K images

Communication Mesh

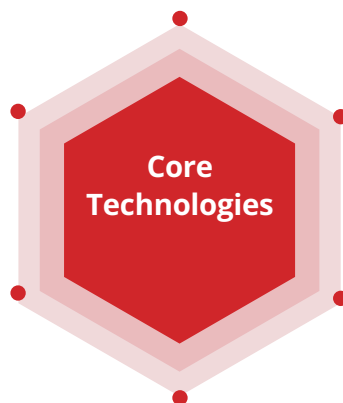
Long Range Image Transmission
Ultra-HD Low Latency Image Transmission
4G/5G Collective Communication
Efficient Visual Simulation & Analysis
Situation Awareness Anti-jamming

Gimbal Stability Augmentation

High-precision gimbal
High-speed, low-latency target
detection & tracking

Flight Control

Industry-leading accurate and reliable
flight control for multi-rotor and VTOL
tilt-rotor models

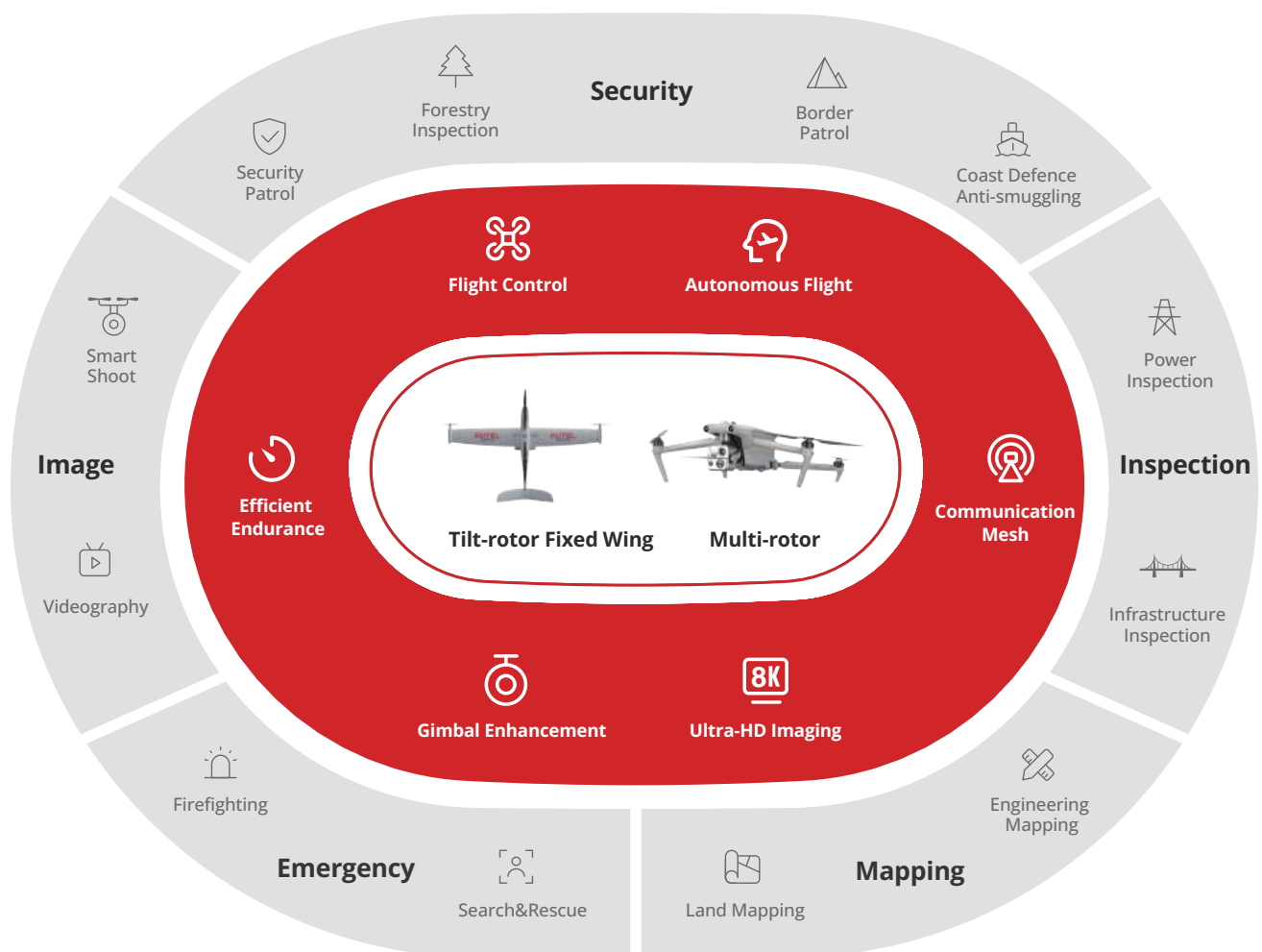


Autel Robotics 2+6+N

Digital Industry Solution

2 Flight Platforms, 6 Core Systems and Application Scenarios

Autel Robotics is dedicated to developing AI-driven autonomous flight drones, delivering ground-breaking industry solutions, with distinct features that can tackle wide-ranging, diverse scenarios. High performing, reliable, and scalable. That's the power of an Autel solution.



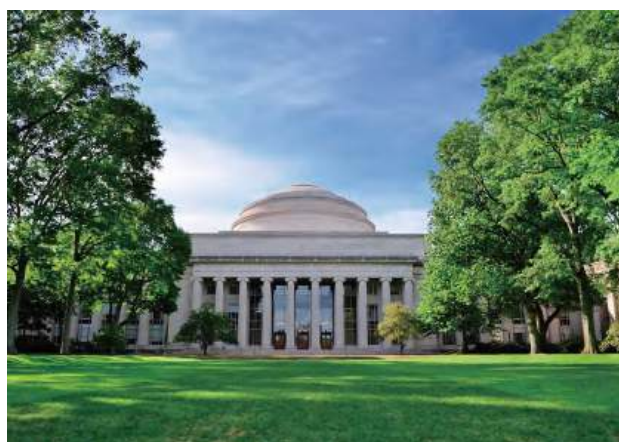
University-industry Cooperation

Autel Robotics has been carrying out long-term cooperation with international prestigious universities to pre-research latest technologies so as to jointly cultivate and attract talents.

The R&D team is composed of Doctors and postgraduates from Tsinghua university, University of Science and Technology of China, Zhejiang University, Shanghai Jiaotong University and other domestic top universities as well as MIT, Carnegie Mellon University, National University of Singapore, Technische Universitat Munchen, and Indian Institute of Technology and core team members served as R&D backbone in well-known technology companies at home and abroad. We energetically explore the independent innovation and set up R&D centers in Beijing, Xi 'an and other places to actively introduce and cultivate the core R&D force.



Tsinghua University



MIT



Technische Universität München



Carnegie Mellon University

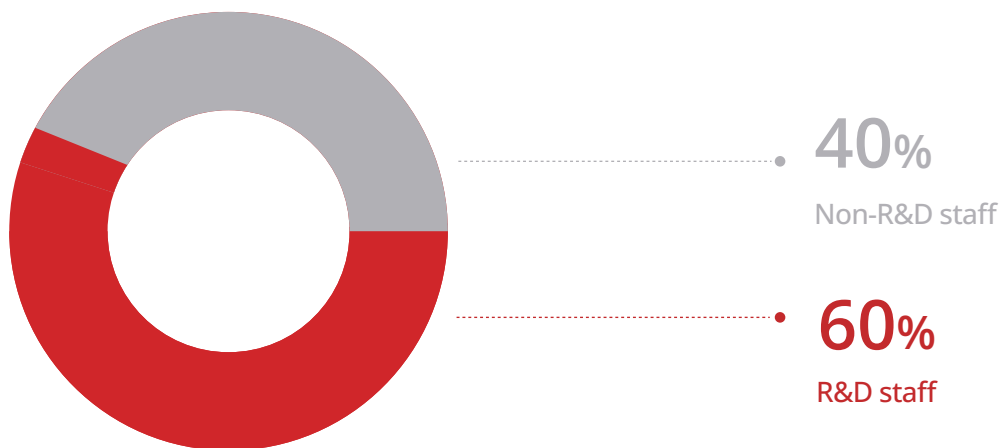
Talent Structure



Autel Robotics has **1011** employees by the end of December, 2024.

Among non-production personnel, **60%** are R&D staff.

Over **200** employees hold a bachelor's degree, and more than **80** employees have a master's degree or above.



Corporate Honors And Certificates

As an international hi-tech company, Autel Robotics has repeatedly won numerous awards, being internationally renowned for build quality, unique design, and a superior user experience.

The EVO Lite+ and EVO Nano+ both won the “Red Dot Best Design Award”, becoming the only company in the drone industry to win two “Best of the Best” (Red Dot Best Design) awards at one time. In addition, they both won the “Good Design Award”, and EVO Lite and EVO Nano+ won the “iF Design Awards” respectively.

The Dragonfish has won the “Fixed-wing Technology Innovation Application Award”, “Dapeng Design Award of the Fifth World Drone Conference” in China also.



Red Dot Award Ceremony



03

Enterprise Products

Dragonfish Series

EVO Lite Enterprise Series

EVO Max Series

Autel Alpha

Autel Titan

EVO II Enterprise V3

EVO II RTK Series V3

EVO II DUAL 640T V3



Dragonfish Series

Command The Future

The Dragonfish Series UAV features a unique tilt-wingtip design that effectively combines the advantages of vertical takeoff and landing from multirotor systems with the long endurance of fixed-wing aircraft. Agile and flexible, it adapts to a wide range of complex takeoff and landing conditions. The UAV is engineered with quick-release components and an efficient aerodynamic design, enabling full assembly within 5 minutes, delivering portability and ease of use while achieving industry-leading flight performance. Equipped with dual-frequency HD video transmission technology, it ensures ultra-long-distance, stable, and reliable communication, facilitating smooth operations in complex scenarios. The industrial-grade flight control and navigation system enable fully autonomous flight, supporting payloads such as a quad-sensor camera, among others, to meet diverse operational needs. This comprehensive and professional solution is designed for applications in public safety, energy inspection, emergency management, and other fields.



Superior
Anti-Interference



Vertical Takeoff
and Landing



Rapid
Deployment



Easy
Transportation



Silent
Flight



Intelligent
and User-Friendly



5-Second
Self-Check



Max Flight Speed:
108 km/h



Max Flight Time:
240 minutes*



Payload Capacity:
10 kg*

* Only applicable to Dragonfish-25. For specific parameters of each model, please refer to the technical specifications on the official website.



Dragonfish Pro



Dragonfish Standard



Dragonfish-25

Tilt-rotor Drones Benchmark



Superior Anti-Interference Fearless of Challenges

In complex environments, the UAV maintains exceptional communication and video transmission performance, featuring strong anti-interference capabilities and stable, reliable transmission. This ensures smooth operation even over long distances.

Smart Operations Efficient and Reliable

Integrated with Autel Robotics' advanced flight control technology and AI intelligence, the powerful combination of hardware and software enables features such as intelligent tracking, point-to-fly, AI target recognition and positioning, rapid mission, offsite landing, mobile platform takeoff and landing. Effortlessly meeting complex operational demands, it offers unparalleled ease and precision.

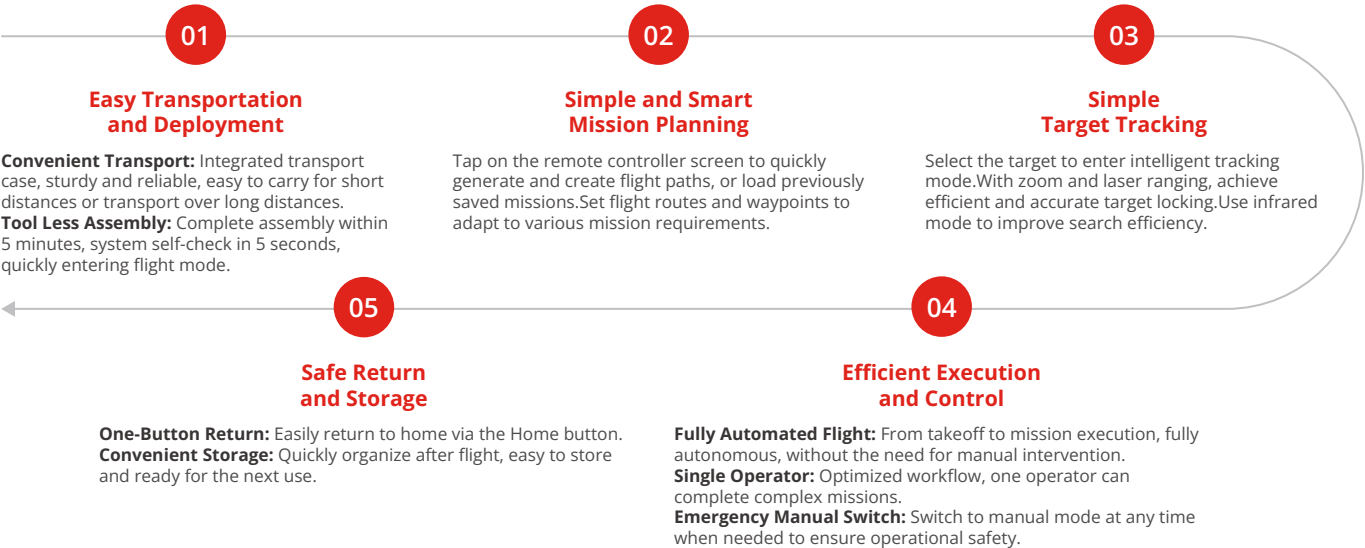
Quick Assembly Efficient Operations

The Dragonfish Series features an innovative quick-release design, addressing the traditional challenges of bulky and inconvenient transport associated with VTOL fixed-wing UAVs. With a 5-second rapid self-check and the ability to take off within 5 minutes, it swiftly transitions into operational mode. Whether for emergency mission deployment or efficient inspections, it ensures a head start, delivering an exceptionally efficient user experience.

Silent Flight Enhancing Stealth Operations

The Dragonfish UAV, in fixed-wing mode, achieves ultra-silent flight through its exceptional propulsion system and innovative noise-reduction design. At altitudes exceeding above 400 ft ground personnel can barely hear any sound, making it a true stealth tool in the sky. Additionally, its zero interference with the surrounding environment provides unmatched support for mission execution.

Workflow



Specifications

Dragonfish



	Dragonfish Standard	Dragonfish Pro	Dragonfish - 25
Dimension	1290x2302x483mm	1655x2980x520mm	3025.7x4566x823.6mm
Weight	7.5kg	14.5kg	29kg
Max. extra payload weight	1.5kg	2.5kg	10kg
Max. Flight Time	106min	179min	240min
Flight Speed	Multi-rotor:0~17m/s Fixed Wing:17~30m/s	Multi-rotor:0~17m/s Fixed Wing:17~30m/s	Multi-rotor:0~17m/s Fixed Wing:17~35m/s
Max. horizontal flight speed	108km/h (30m/s)	108km/h (30m/s)	126km/h (35m/s)
Max. Wind Resistance	12m/s	12m/s	15m/s
Service Ceiling Above Sea Level	6000m	6000m	5000m
Transmission Range	30km	30km	60km
IP Rating	IP43	IP43	IP45
GNSS	GPS / GLONASS / BDS / Galileo	GPS / GLONASS / BDS / Galileo	GPS / GLONASS / BDS / Galileo
Supported Payloads	-4°F to 122°F (-20°C to 50°C)	-4°F to 122°F (-20°C to 50°C)	-4°F to 122°F (-20°C to 50°C)
Supported Payloads	DG-L20T	DG-L20T, L50T	DG-L20T, L35T

*The dimensions of the aircraft are length x wingspan x height (excl. propellers); Aircraft Weight (incl. Battery, propellers, excl. gimbal).



EVO Lite Enterprise Series

Lightweight Yet Mighty

EVO Lite Enterprise Series, by Autel Robotics, is characterized by its lightweight and compact design, making it remarkably portable. The A-Mesh networking capability supports collaborative dual-drone dual-control operations. Equipped with high-precision visual navigation capabilities, it supports stable flight even in environments with poor signal through SLAM technology. The EVO Lite 640T Enterprise Edition features a dual gimbal system, with a visible light camera providing clear and detailed images, while the thermal imaging camera aids in decision-making during operations. The EVO Lite 6K Enterprise Edition is equipped with a 1-inch CMOS visible light camera, offering outstanding sensitivity for excellent image quality. With the intelligent features of the professional flight app, it enables flexible single-person deployment and efficient application in scenarios such as public safety and emergency rescue.



Lightweight and
Portable



Simple Control



AI Target Recognition
and Positioning



6K Resolution



640*512 Infrared
Thermal Imaging



12km Video
Transmission Range



Three-Way Binocular
Vision Obstacle Avoidance



40-Minute
Flight Endurance



EVO Lite 640T Enterprise

Equipped with a dual gimbal, the wide-angle visible-light camera offers a broad field of view with vivid high-definition images, while the infrared thermal-imaging camera integrates high-resolution thermal-imaging algorithms, providing clear and detailed thermal source identification.

Thermal-Imaging Camera

640*512 resolution
9.1 mm focal length
16x digital zoom
Temperature measurement range:
-20°C to 150°C / 0°C to 550°C
Temperature accuracy: $\pm 3^{\circ}\text{C}$ or $\pm 3\%$ of reading



Visible-Light Camera

1/2 inch CMOS
48 million pixels
F2.8 aperture
16x digital zoom
Maximum photo size of 8000*6000
Maximum video resolution of 4K 30P

EVO Lite 6K Enterprise

Equipped with a 6K visible-light camera, it can still capture high-definition, low-noise images in low-light environments, providing insights into targets and empowering police enforcement, patrol inspection, search, and rescue scenarios.



Visible Light Camera

1-inch CMOS sensor
20 million pixels
Adjustable aperture from F2.8 to F11
ISO support up to 48,000 (night mode)
16x digital zoom
Photo resolutions of 5472*3648 / 5472*3076
Maximum video resolution of 4K 30P

Technical Specifications

Aircraft	
Weight	866g
Dimensions	210×123×95mm (folded, propellers included) 433×516×95mm (unfolded, propellers included)
Wheelbase	368mm
Maximum flight mileage	24km
GNSS	GPS / BDS / GLONASS
Maximum Service Ceiling	3000m
Above Sea Level	40mins
Maximum flight time(no wind)	Vertically: ±0.1 meters (when visual positioning is working normally) ±0.3 meters (when GNSS is working normally)
Hover accuracy	Horizontally: ±0.15 meters (when visual positioning is working normally) ±0.3 meters (when GNSS is working normally)
Maximum Wind Speed Resistance	10.7 m/s

EVO Lite 640T Enterprise — Visible Light Camera	
Image sensor	1/2 inch CMOS, 48 million pixels
Lens	DFOV: 83.4° Equivalent focal length of 35mm: 24 mm Aperture: f/2.8
ISO range	Auto/Manual: ISO100 ~ ISO6400
Zoom	1-16x digital zoom
Photo size	8000*6000 / 4000*3000
Video resolution	4000*3000 P30

EVO Lite 6K Enterprise — Visible Light Camera	
Image Sensor	1 inch CMOS, 20 million pixels
Lens	DFOV: 82° Equivalent focal length of 35mm: 29 mm Aperture: f/2.8-f/11
ISO range	Auto/Manual: ISO100 ~ ISO6400
Zoom	1-16x digital zoom
Photo Size	5472*3076 / 3840*2160
Video Resolution	3840*2160 P30

EVO Lite 640T Enterprise — Thermal Imaging Camera	
Image Sensor	Uncooled VOx Microbolometer
Lens	FOV: 61° Focal length: 9.1 mm Aperture: f/1.0
Pixel Pitch	12um
Radiometric Temperature Range	-20°C to 150°C (high gain mode); 0 to 550°C (low gain mode)
Radiometric Measurement Accuracy	±3°C or reading ±3% (using the larger value)
Digital Zoom	1-16x digital zoom
Photo Size	640×512
Video Resolution	640×512@30FPS

EVO Max Series

Reach New Frontiers

The EVO Max series adopts Autel Autonomy's autonomous flight technology, achieving global path planning, 3D scene reconstruction, autonomous obstacle avoidance, and return-to-home in complex environments. With the capability of precise navigation without GNSS, it offers high-precision visual navigation in scenarios where GNSS signals are blocked, weak, or heavily interfered with, ensuring stable and reliable flight with high accuracy and low latency. The industry's first A-Mesh networking technology supports the free networking of multiple devices, achieving integrated air-ground network coverage. Featuring a "dual fisheye vision + millimeter-wave radar" multi-sensor fusion perception technology, it has 720° omnidirectional sensing and obstacle avoidance capabilities. The EVO Max series is equipped with the FusionLight camera 4T, FusionLight camera 4T XE and FusionLight camera 4N, integrating a zoom camera, an ultra-starlight level night vision camera, an ultra-sensitive wide-angle camera, a thermal imaging camera, and a laser rangefinder. It efficiently empowers public safety, energy inspection, emergency management, and other fields, setting a new benchmark for industry applications of drones.



720° Obstacle Avoidance



Superior Anti-Interference Capability



High-Precision Visual Navigation



A-Mesh Networking



8K 10x Optical Zoom Camera



Superstarlight-Grade Night Vision Camera



Hot-Swappable Batteries



15-Kilometer HD Video Transmission



42 Minutes of Enduring Endurance



IP43 Protection Rating



EVO Max 4N | Chasing Light and Shadows

The EVO Max 4N is equipped with a flagship-level payload, integrating a super starlight-level night vision camera, an ultra-sensitive wide-angle camera, a thermal imaging camera, and a laser rangefinder. Intelligent linkage among multiple sensors breaks through visual limitations, offering a revolutionary experience for all-weather operations.

Thermal Camera

640×512 resolution
9.1 mm focal length
16x digital zoom
-20°C to +150°C / 0°C to +550°C
temperature measurement range

Starlight Camera

2.3 million pixels
0.0001 Lux: 0.0001
ISO: 440000
41.4 mm equivalent focal length



Laser Rangefinder

5-1200 meters measurement range
 $\pm (1 \text{ meter} + D \times 0.15\%)$ measurement accuracy
*D = measurement distance

Wide Camera

50 million pixels
1 inch CMOS
F1.9 aperture
FOV 85°
23 mm equivalent focal length

EVO Max 4T XE | Chasing Light and Shadows

The EVO Max 4T XE comes with a flagship-level payload, integrating up to 160x hybrid zoom camera, ultra-sensitive wide-angle camera, thermal imaging camera, and laser rangefinder into one. Intelligent linkage among multiple sensors breaks through visual limitations, bringing a revolutionary experience for all-weather operations.

Laser Rangefinder

5-1200 meters measurement range
 $\pm (1 \text{ meter} + D \times 0.15\%)$ measurement accuracy
*D = measurement distance

Zoom Camera

48 million pixels
4000x3000 30P
10x continuous optical zoom
160x hybrid zoom
F2.8-F4.8 variable aperture



Thermal Camera

640×512 resolution
9.1 mm focal length
16x digital zoom
-20°C to +150°C / 0°C to +550°C
temperature measurement range

Wide Camera

48 million pixels
1/2 inch CMOS
F2.8 aperture
FOV 83.4°
24mm equivalent focal length

Specifications

Aircraft	
Weight (including battery, gimbal, and propellers)	EVO Max 4T: 1640 g EVO Max 4N: 1665 g EVO Max 4T XE: 1635 g
Maximum Take-off Mass	1999 g 1890 g (for C2 Certification in EU)
Fuselage Dimensions	562*649*150 mm (unfolded, 1136 propellers included) 563*650*150 mm (unfolded, 1158 propellers included)
Diagonal Wheelbase	465 mm
Maximum Flight Time (windless)	42 minutes
Maximum flight mileage	25 km
Maximum Wind Speed Resistance	12m/s
IP Rating	IP43 (*Customized services)
Operating Temperature	-20°C to 50°C (Without load) ; -20°C to 40°C (Full load)
GNSS	GPS / Galileo / BDS / GLONASS
Hovering Accuracy	Vertically: ±0.1 m (when vision systems working normally); ±0.5 m (when GNSS working normally); Horizontally: ±0.3 m (when vision systems working normally); ±0.5 m (when GNSS working normally);
Operating Frequency	900M / 2.4G / 5.2G / 5.8G
Maximum signal effective distance	FCC: 15 km, CE: 8 km



Autel Alpha

Beyond The Frontiers

Autel Alpha is an intelligent industrial drone for multi-purpose. Boasting significant enhancements in autonomous flight capabilities, anti-interference capabilities, obstacle avoidance capabilities, video transmission technology, and battery systems, it injects robust performance into the flight platform. With a foldable design and IP55-rating level, it tackles challenging environments. The built-in RTK dual-antenna system ensures precise control within millimeters when carrying out the missions. Paired with the next-gen DG-L35T gimbal, it integrates a 560x hybrid zoom camera, dual thermal imaging cameras, a visible light wide-angle camera, and a laser rangefinder. The dual thermal imaging cameras meet the needs of both short-range overview and long-range detail observation, achieving distant operation scenarios with unobstructed personnel recognition within an 8-kilometer range, providing more professional and comprehensive solutions for applications such as public safety, energy inspection, and emergency management.



Superior Anti-interference



High-Precision Visual Navigation



AI Target Recognition and Positioning



56x Dual Thermal Camera



4K 35x Optical Zoom



IP55 Rating



Hot-swappable Battery



Wire-Level Obstacle Avoidance and Pathfinding



15 Kilometers Video Transmission Range



Flexible Payload Expansion



Autel DG-L35T Gimbal | Insight Beyond Limits

The Autel Alpha is equipped with a versatile payload, integrating dual thermal imaging cameras (short/long focal length), a 4K 35x night vision zoom camera, a wide-angle camera, and a laser rangefinder, giving you full-spectrum target monitoring and efficient support for long-range reconnaissance scenarios.



Zoom Camera

8 MP
4K 35x Optical Zoom
560x Hybrid Zoom
Ultra-sensitive ISO supports up to a maximum of 160,000

Laser Rangefinder

Measurement range: 10-2000 meters
Measurement accuracy: <400m: +1m; >400m: $D \times 0.3\%$
* where D represents the distance from the vertical reflecting surface

Wide Camera

48 MP
Aperture: f/2.8
DFOV: 84°
Equivalent Focal Length: 24mm

Dual Thermal Camera

640*512
56x Hybrid Zoom
13mm Focal Length Wide-angle Thermal Imaging
45mm Focal Length Long-range Thermal Imaging



Exceptional Anti-Interference Capability

Autel Alpha's GNSS visual positioning capabilities, adaptive frequency-hopping and SLAM navigation technology empowers resistance from interference and enables the drone to fly confidently near powerlines, critical structures and in complex areas.



Autonomous Flight

Autel's Autonomy Engine is continuously improving, enabling functions such as global path planning and 3D scene reconstruction in complex environments. It offers various obstacle avoidance capabilities, including return-to-home, manual control, and mission planning, providing a more professional solution for industries such as security, inspection, and surveying.



No Blind Spots Ultimate Obstacle Avoidance

By integrating multi-source sensor fusion technology, including 5-direction dual fisheye vision + 6-direction millimeter-wave radar, the drone is equipped with wire-level obstacle avoidance and pathfinding capabilities. Additionally, it supports nighttime obstacle avoidance for flight safety.

Specifications

Aircraft		
Weight (including battery, gimbal, and propellers)	6480g	
Maximum Takeoff Weight	8400g	
Dimensions	1205*980*278mm (unfolded, incl. propellers) 780*568*278mm (unfolded, excl. propellers) 455*263*248mm (folded, excl. propellers)	
Diagonal Wheelbase	814mm	
Max Flight Time (windless)	40mins	
Max Hovering Time (windless)	38mins	
Maximum Horizontal Flight Speed (Windless Near Sea Level)	Slow: 3 m/s Smooth: 10 m/s Standard: 15 m/s (forward & backward), 10 m/s (sideways) Ludicrous: 25 m/s (forward & backward & sideways)	
Max Wind Resistance	12m/s	
Operating Frequency	2.4GHz/5.2GHz/5.8GHz/900MHz	
Hovering Accuracy	Vertically ±0.1 m (when visual positioning works normally) ±0.3 m (when GNSS works normally) ±0.1 m (when RTK FIX)	Horizontally ±0.15 m (when visual positioning works normally) ±0.3 m (when GNSS works normally) ±0.1 m (when RTK FIX)
IP Rating	IP55	
Operating Temperature	-20°C to +50°C	
GNSS	GPS+GLONASS+BeiDou+Galileo	

Autel Alpha Wide Camera		
Sensor	1/2 CMOS, Effective pixels: 48M	
Lens	DFOV: 84° Equivalent Focal Length: 24 mm Aperture: f/2.8	
ISO Range	normal: AUTO: ISO100~ISO3200	
Photo Size	4000*3000	
Video Resolution	4000*3000 25P	

Specifications

Autel Alpha Zoom Camera	
Sensor	1/1.8" CMOS
Lens	FOV: 66.7-34.6° Focal Length: 34.7~838mm Aperture: f/1.61~f/5.19
Zoom Range	Optical Zoom: 1~35 times Digital Zoom: 35~560 times
ISO Range	Photo: ISO100~ISO6400 Video: ISO100~ISO6400 (Night scene mode: up to ISO160000)
Photo	Format: JPG Resolution: 3840*2160
Video	Format: MP4 Max Resolution: 3840*2160 P30 Max Bit Rate: 30Mbps

Autel Alpha Thermal Camera (Wide)		Autel Alpha Thermal Camera (Tele)	
Sensor	Uncooled VOx Microbolometer	Sensor	Uncooled VOx Microbolometer
Lens	FOV: 42° Focal length: 13mm Aperture: f/1.2	Lens	FOV: 12.3° Focal length: 45mm Aperture: f/1.2
Zoom Range	Wide Digital Zoom: 1~3.5 times	Zoom Range	Tele Digital Zoom: 3.5~56 times
Resolution	640*512 P25	Resolution	640*512 P25
Temperature Measurement Range	-20℃ to +150℃, 0℃ to +550℃	Temperature Measurement Range	-20℃ to +150℃, 0℃ to +550℃
Radiometric Measurement Accuracy	5-meter distance test in a windless laboratory environment at 25℃: ±3℃ or reading ±3% (using the larger value) @ ambient temperature ranges from -20℃ to 60℃	Radiometric Measurement Accuracy	35-meter distance test in a windless laboratory environment at 25℃: ±5℃ or reading ±5% (using the larger value) @ ambient temperature ranges from -20℃ to 60℃

Autel Alpha Laser Rangefinder	
Measuring Range	10-2000m
Measurement Accuracy	<400m: +1m; >400m: D×0.3% where D represents the distance from the vertical reflecting surface



Autel Titan

Combination Of Speed And Security

Autel Titan is a four-rotor, eight-propeller heavy-lift multi-rotor drone which boasts formidable anti-interference and payload capabilities, allowing safe and efficient transportation of up to 10 kg in complex environments. With a dual-battery redundancy design, it offers up to 55 min flight time. Its IP55 protection rating equips it to handle adverse environmental conditions and unexpected situations effectively. The integration of a binocular vision system and millimeter-wave radar enhances environmental perception and nighttime obstacle avoidance. Coupled with a dual thermal imaging gimbal camera, it covers both long and short-range operations, making it suitable for day and night, all-weather operations and providing efficient support for transportation and emergency response in various fields.



Exceptional Anti-Interference Capability



High-Precision Visual Navigation



Maximum Payload: 10 kg



Max. Flight Time: 55 minutes



Max. Range: 50 km



Hot-Swappable Batteries



720° Omnidirectional Obstacle Avoidance



Supports Multiple Payloads





Exceptional Anti-Interference Capability

Autel Titan's GNSS visual positioning capabilities, adaptive frequency-hopping and SLAM navigation technology empowers resistance from interference and enables the drone to fly confidently near powerlines, critical structures and in complex areas.



Extended Endurance, Superb Payload Capacity

The four-rotor, eight-propeller foldable design is lightweight yet sturdy and reliable. This design enhances lifting capabilities, with a dual-battery redundancy design, it can achieve up to 55 minutes of maximum flight time with a standard payload and cover distances of up to 50 km, effectively accommodating payloads to 10 kg to meet diverse transportation needs.



Omnidirectional Obstacle Avoidance, All-Weather Operations

By fusing multiple sensors, including a binocular fisheye vision system and millimeter-wave radar, it provides 720° all-around perception and obstacle avoidance capabilities. It also supports nighttime obstacle avoidance, ensuring safe flights.

Accessories



Transportation Case

Efficiently Empowering Long-Distance Transportation Operations



DG-L35T Gimbal Camera

Providing support for long-distance and nighttime reconnaissance operations



Ground Station Pro

Extending the transmission range by 90%

Specifications

Aircraft	
Weight	23kg
Max. Payload	10kg
Dimensions	1879*1866*584mm (incl. propellers and mount.) 1141*1120*563mm (excl. propellers) 752*328*526mm (folded, excl. mount)
Diagonal Wheelbase	1440mm
Max Flight Time (windless)	55mins
Max Horizontal Speed (windless near sea level)	25m/s
Max Wind Resistance	12m/s
Hovering Accuracy	Vertically: ±0.1 m (when vision systems working normally); ±0.3 m (when GNSS working normally); Horizontally: ±0.15 m (when vision systems working normally); ±0.3 m (when GNSS working normally)
IP Rating	IP55
Operating Temperature	-20°C to +50°C
GNSS	GPS+GLONASS+BeiDou+Galileo
Visual Sensing Systems	5-way binocular vision OA, detection range >50m
Radar	6-way millimeter-wave radar, supporting nighttime OA, detecting small metal objects at a distance >60m, buildings at a distance >100m

03

Enterprise Products

EVO II Enterprise V3

EVO II Enterprise V3

Compact. Versatile. Powerful.

An improved high-quality imaging system, upgraded 9.3 miles image transmission range, and additional modular accessories help you meet a variety of use cases including inspection, search and rescue, situation overwatch and more.



9.3 Miles
Transmission
Range



360° Obstacle
Avoidance



Moonlight
Algorithm 2.0



Modular
Accessories



Centimeter Level
Positioning with RTK



EVO II Pro Enterprise V3

All New 6K 1" CMOS Camera

See clearer with Sony's new 20 megapixel 1-inch CMOS image sensor, supporting up to 6K video resolution with greater dynamic range and higher frame rates.

Aperture Range Of f/2.8 To f/11

The lens's adjustable aperture range of f/2.8 to f/11 and a maximum ISO of 44000 enables the photographer to enhance their image control and creative freedom.

EVO II 640T Enterprise V3

640 x 512 25Hz Thermal Imaging Sensor

Equipped with a 640 x 512 high-resolution thermal imaging camera featuring a 13mm focal length lens and 16x digital zoom, it is easy to observe distant targets with incredible detail. With the new image processing algorithm, thermal details are incredibly crisp and clear.

0.8" RYYB CMOS

The 0.8-inch RYYB CMOS sensor and Moonlight Algorithm 2.0 suppress image noise in limited-lighting conditions, making target detection, identification, and classification easier than ever. Paired with the 50 megapixel camera, users can expect extremely high quality photo capture at all times of the day.

Mission Versatility



Loudspeaker

Enables effective on-site communication through long distance live broadcasts and prerecorded audio loops.



Spotlight

Beams a powerful, long distance aerial light when searching or shooting at night.



Strobe

Indicate the location of the aircraft at night to avoid air traffic accidents.



RTK Module (Optional)

Improve anti-electromagnetic interference capability to achieve centimeter-level positioning and assist refined inspection.

Specifications

Aircraft	
Takeoff Weight (without Payload)	EVO II Pro Enterprise: 2.45 lbs (1110 g) EVO II Dual 640T Enterprise: 2.51 lbs (1136.5 g)
Dimension	Folded: 9.6*5.1*4.4 inches; 245*130*111mm Unfolded: 19.9*24.4*4.4 inches; 506*620*111mm
Diagonal Length	16.8 inches (427 mm)
Max Flight Time (no wind)	42 Mins (without accessories)
Max Hovering Time (no wind)	38 mins (with strobe), 29 mins (with spotlight), 34 mins (with loudspeaker), 36 mins (with RTK module)
Operating Temperature	14°F to 104°F (-10°C to 40°C)
Maximum wind resistance level	fresh breeze

Accessories	
Strobe Dimensions: 39*72*34 mm Weight: 19.5 g Connections: Floating Connectors Power: Avg. 1.6W Controllable Range: 5000 m Light Intensity: Min 50cd; Max 486cd; Avg. 290cd	Loudspeaker Dimensions: 46*80*77 mm Weight: 98.5 g Connections: Floating Connectors Power: Max 18W Decibel: 120dB @ 1m; 88dB @ 60m; 70dB @ 110m Max Bitrate: 36kbps Adjustable Angle Range: 0° - 45°
Spotlight Dimensions: 48.5*72*63 mm Weight: 77 g Connections: Floating Connectors Power: Max 35W Controllable Range: 30 m Adjustable Angle Range: 0° - 90° Illuminance: FOV14°, Max: 11lux @ 30m Straight	RTK Module Dimensions: 55.5*72.5*57 mm Weight: 59.5 g Connections: Floating Connectors Power: ~ 3W RTK Positioning Precision: 1.5 cm + 1 ppm (Vertical) 1 cm + 1 ppm (Horizontal)

EVO II Pro Enterprise V3 Visual Camera	
Sensor	1 inch CMOS; 20M Pixels
FOV	82°
Aperture	f/2.8 - f/11
Focus Range	0.5 m to infinity
Equivalent Focal Length	29mm
Zoom	1-16x (up to 4x lossless zoom)

EVO II Dual 640T Enterprise V3 Thermal Camera	
Sensor	Uncooled VOx Microbolometer
FOV	H33°V26°
Wavelength	8 - 14µm
Temperature Measurement Distance	2-20m
Focal Length	13mm
Zoom	1-16x

EVO II Dual 640T Enterprise V3 Visual Camera	
Sensor	1/1.28"(0.8") CMOS; 50M effective pixels
FOV	85°
Aperture	f/1.9
Focus Range	0.5m to infinity
Equivalent Focal Length	23mm
Zoom	1-16x (up to 4x lossless zoom)

EVO II RTK Series V3

Unrivalled Accuracy And Control

The EVO II RTK Series V3 introduces a brand-new RTK module, which provides real-time centimeter-level positioning data, and supports Post-Processing Kinematic (PPK). The aircraft can record the original satellite observation data, camera exposure parameters and more. The positioning system supports an RTK base station and NTRIP RTK network, which help to achieve accurate and stable data acquisition in complex operation environments.



Centimeter-Level
Positioning



360° Obstacle
Avoidance



Phase-free
Control



RTK
Positioning



9.3 Miles
Transmission
Range



38 Mins
Flight Time



20m/s Flight
Speed





EVO II Pro RTK V3

Capture Every Detail

EVO II Pro RTK V3 has high dynamic range and powerful low light performance, enabling users to capture clear detail sets with minimal distortion and noise.

1-Inch Ultra-Sensitive Sensor

The EVO II Pro RTK V3 comes with a NEW updated 1-inch 6K CMOS image sensor with a maximum of 20 megapixels. Thanks to the ultra-sensitive algorithm, you can still shoot clean, detailed, low-noise data sets under twilight or night conditions.

f/2.8 ~ f/11 Adjustable Aperture

Adapt to lighting changes by adjusting the lens aperture size, giving the pilot more shutter speed control.

EVO II Dual 640T RTK V3

Dual Cameras, Accurate Temperature Measurement

The EVO II Dual 640T RTK V3 is equipped with a high-resolution thermal imaging camera and an all new Sony .8" 50 megapixel RYYB sensor.

High-Resolution Thermal Imaging Sensor

Equipped with a 640x512 high-resolution thermal imaging camera featuring a 13mm focal length lens and 16x digital zoom, it is easy to observe distant targets. The system uses a new image processing algorithm, making thermal imaging details clearer and more discernible than the competition with the similar resolution and hardware.

Precise Temperature Measurement

The EVO II Dual 640T RTK V3 can accurately detect heat sources within a distance of 2-20 meters. By leveraging the compensation algorithm of infrared temperature measurement, the 640T RTK can regulate temperature deviations within 3 degrees Celsius.



Specifications

Aircraft			
Weight (with propellers, battery and RTK module)	1250g±0.5g (EVO II Dual 640T RTK V3) 1237g±0.5g (EVO II Pro RTK V3)		
Dimensions	Folded: 230*130*143mm; 9.1*5.1*5.6 inches Unfolded: 457*558*143mm; 18*22*5.6 inches		
Wheelbase	397mm		
Max Ascent Speed	Novice mode:3 m/s	Standard: 5m/s	Ludicrous: 8 m/s
Max Descent Speed	Novice mode: 3 m/s	Standard: 3 m/s	Ludicrous: 4 m/s
Maximum horizontal flight speed (no wind near sea level)	Novice mode: 3 m/s	Standard: 10 m/s	Ludicrous: 20 m/s
Maximum Service Ceiling Above Sea Level	5000 meters		
Maximum Flight Time (no wind)	38 minutes		
Hovering Accuracy	When RTK is enabled and working normally: Vertical: ±0.1 m; Horizontal: ±0.1 m Vertical: ±0.1 m (when the visual positioning is working normally); ±0.5 m (when GNSS works normally) Horizontal: ±0.3 m (when the visual positioning is working normally); ±1.5 m (when GNSS works normally)		
Maximum wind resistance level (takeoff and landing phase)	Fresh Breeze		

Remote Controller & Image Transmission	
Resolution	2048x1536 60 FPS
Operating Time	2.5 hours (Max Brightness) 4.0 hours (50% Brightness)
Charging Time	120 Minutes
Max Transmission Range (unobstructed, free of interference)	FCC: 9.3 miles (15 km) CE: 5 miles (8 km)

EVO II Dual 640T RTK V3 Thermal Camera	
Sensor	Uncooled VOx Microbolometer
Lens	FOV H33°V26° Focal Length 13mm
Zoom	1-16x
Temperature Measurement Accuracy	±3 or ±3% of reading (whichever is greater) @Environmental temperature -20 C to 60 C
Temperature Measurement Distance	2-20 meters

EVO II Pro RTK V3 Visual Camera	
Sensor	1 inch CMOS; 20M pixels
Lens	FOV: 82° Equivalent Focal Length: 29 mm Aperture: f/2.8 - f/11 Focus range: 0.5 m to infinity
Zoom	1-16x (up to 3x lossless zoom)

EVO II Dual 640T RTK V3 Visual Camera	
Sensor	1/1.28"(0.8") CMOS; 50M effective pixels
Lens	FOV: 85° Equivalent Focal Length: 23 mm Aperture: f/1.9 Focus range: 0.5 m to infinity (with auto focus)
Zoom	1-16x (up to 3x lossless zoom)

EVO II Dual 640T V3

Power. Efficiency. Reliability.

Equipped with a 640 x 512 high-resolution thermal imaging camera featuring a 13mm focal length lens and 16x digital zoom, it is easier than ever to observe distant targets. The system uses a new image processing algorithm, making thermal details clearer and more discernible than other options with similar resolution and hardware.



9.3 Miles
Transmission Range



38 Mins
Flight Time



Aluminum-
magnesium Alloy



360° Obstacle
Avoidance



20 m/s
Flight Speed






EVO II Dual 640T V3

640x512 25Hz New Thermal Imaging Sensor

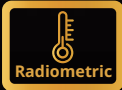
Equipped with a 640 x 512 high-resolution thermal imaging camera featuring a 13mm focal length lens and 16x digital zoom, it is easier than ever to observe distant targets. The system uses a new image processing algorithm, making thermal details clearer and more discernible than other options with similar resolution and hardware.

DRI Ranges

See a specific subject's identity, activity, or personal items.

	 Person	 SUV	 Truck
Dimension	1.8*0.5m	4.2*1.8m	6*4m
Detection	542m	1661m	2889m
Recognition	135m	415m	722m
Identification	68m	208m	361m

- Detection: Detect if an object is present.
- Recognition: See what type of object it is (i.e. person, vehicle, airplane).
- Identification: Determine subject affiliation and intent.



50MP Ultra-Sensitive Camera

The EVO II Dual 640T V3's RYYB sensor features the Moonlight Algorithm 2.0 that provides excellent noise reduction in limited lighting conditions, further enhancing its 50 megapixel camera to give users more detail for better forensics and analysis.

0.8" Sensor Size

The EVO II Dual 640T V3's 0.8" RYYB CMOS offers up to 144%~233% more surface area when compared to 1/2" or 1/2.3" competitors for maximum details in high contrast lighting conditions.

RYYB Sensor Technology

RYYB sensor technology moves away from RGB cameras by offering up to 40% more light sensitivity in low light scenarios.

PDAF+CDAF Autofocus System

Never lose sight of your subjects with a combination of PDAF (Phase Detection Auto Focus) and CDAF (Contrast Detection Auto Focus) technology for fast and accurate tracking.

Specifications

Aircraft			
Takeoff Weight (with propellers and battery)	2.54 lbs (1209 g)		
Maximum takeoff weight	1270 g (C2)		
Dimension (L*W*H)	Folded: 230*130*108 mm: 9.1*5.1*4.3 inches Unfolded: 457*558*108 mm: 18*22*4.3 inches		
Wheelbase	397 mm		
Battery Capacity	7100 mAh		
Max Ascent Speed	Novice mode:3 m/s	Standard: 5 m/s	Ludicrous: 8 m/s
Max Descent Speed	Novice mode:3 m/s	Standard: 3 m/s	Ludicrous: 4 m/s
Maximum horizontal flight speed (no wind near sea level)	Novice mode:3 m/s	Standard: 10 m/s	Ludicrous: 20 m/s
Maximum Service Ceiling Above Sea Level	5000 meters		
Max Flight Time (no wind)	38 Mins		
Max Hovering Time (no wind)	33 Mins		
Max Flight Distance (no wind)	22 km		
Max Wind Resistance	27mph, 12 m/s (Take-off and landing)		
Operating Temperature	14°F to 104°F (-10°C to 40°C)		
Operating Frequency	900M / 2.4G / 5.2G / 5.8G Note: Some frequencies are only available in some regions or for indoor use only. Check local laws and regulations for details.		
Maximum signal effective distance (No interference, no obstruction)	FCC: 10 kilometers CE: 8 kilometers		

Thermal Camera	
Sensor	Uncooled VOx Microbolometer
Lens	FOV H33°V26° Focal Length: 13mm
Zoom	1-16x
Wavelength	8 - 14μm
Temperature Measurement Distance	2-20m
Focal Length	13mm
Video Resolution	640x512@25FPS
Camera Resolution	Infrared Mode: 640*512 PIP Mode: 1920*1080, 1280*720

Visual Camera	
Sensor	1/1.28"(0.8") CMOS; 50M effective pixels
Lens	FOV: 85° Equivalent Focal Length: 23 mm Aperture: f/1.9 Focus Range: 0.5 m to infinity (with auto focus)
Zoom	1-16x
Video Resolution	3840x2160 P60/50/48/30/25/24 2720x1528 P60/50/48/30/25/24 1920x1080 P120/P60/P50/P48/P30/P25/P24

04

Consumer Products

EVO Nano Series

EVO Lite Series

EVO II Series



EVO Nano Series

Make Every Moment Matter

The EVO Nano series is Autel's first mini drone featuring smart selfies, endows with customers refreshing and delight new aerial shooting experience. The 250g lightweight design, 1/1.28-inch(0.8-inch) CMOS sensor capable of 50 MP photos, one click video, easy for the novice to shoot blockbusters and capture every details at any time and anywhere.



249g
(0.55 lbs)



6.2 Miles
Transmission Range



3-Way Obstacle
Avoidance



22mph Wind
Resistance



28 Mins
Flight Time



3-Axis
Gimbal



16x Digital
Zoom



EVO Nano+

The Ultralight Companion For The Photography Enthusiast

EVO Nano+ is packed a 1/1.28-inch (0.8-inch) CMOS sensor capable of 50 MP photos. A RYYB color filter array design with a large aperture of f/1.9 offers superior noise reduction capabilities and the power to effortlessly produce quality images in low-light conditions. Track fast-moving subjects with incredible precision through PDAF + CDAF autofocus system; Squeeze rich detail from shadows and highlights no matter how extreme the lighting conditions using HDR mode, which rapidly snaps several photos at different exposures so they can be stitched together in post-production.



1/1.28" (0.8") CMOS



RYYB Sensor



2.44µm Pixel



PDAF+CDAF
Autofocus System

EVO Nano

Super Sharp. Ultra Smooth

The EVO Nano is equipped with a 48MP camera that can record ultra sharp 4K@30FPS video. Paired with a three-axis mechanical gimbal to prevent vibration, the Nano provides everything you need to ensure your footage is smooth and stable no matter how rough the conditions.



4K HDR



1/2" CMOS



48MP Camera



3-axis Gimbal

Specifications

Aircraft	
Takeoff Weight (with propellers and battery)	0.55 lbs (249 g)
Dimensions (including blades)	Folded: 142×94×55mm Unfolded: 260×325×55mm
Wheelbase	231 mm
Max Ascent Speed	5m/s (ludicrous), 4m/s (standard), 3m/s (smooth)
Max Descent Speed	4m/s (ludicrous), 3m/s (standard), 2m/s (smooth)
Max Horizontal Flight Speed	15m/s (ludicrous), 10m/s (standard), 5m/s (smooth)
Max Takeoff Altitude	4000 m
Max Flight Time (no wind)	28 Mins
Max Hovering Time (no wind)	26 Mins
Max Flight Distance (no wind)	16.8 km
Max Wind Resistance	22mph, 10 m/s (Take-off and landing)
Max Tilt Angle	33° (ludicrous), 5° (standard), 25° (smooth)
Max Angular Velocity	200° (ludicrous), 120° (standard), 60° (smooth)

EVO Nano		EVO Nano+	
Sensor	CMOS: 1/2 inch Effective Pixels: 48M Pixel Size: 1.6µm*1.6µm (Bin2)	Sensor	CMOS: 1/1.28 inch (0.8 inch) Effective Pixels: 50MP Pixel Size: 2.44µm*2.44µm (Bin2)
Lens	FOV: 84° Equivalent Focal Length: 24mm Aperture: f/2.8 Focus Range: 1m - infinity Focus Mode: fixed focus	Lens	FOV: 85° Equivalent Focal Length: 23mm Aperture: f/1.9 Focus Range: 0.5m - infinity Focus Mode: PDAF+CDAF/MF
Zoom	1-16x	Zoom	1-16x
Photo Resolution	48 MP: 8000x6000 (4:3) 12 MP: 4000x3000 (4:3) 4K: 3840x2160 (16:9)	Photo Resolution	50 MP: 8192x6144 (4:3) 12.5 MP: 4096x3072 (4:3) 4K: 3840x2160 (16:9)
Video Resolution	3840x2160 P30/25/24 2720x1528 P30/25/24 1920x1080 P60/50/48/30/25/24	Video Resolution	3840x2160 P30/25/24 2720x1528 P30/25/24 1920x1080 P60/50/48/30/25/24



EVO Lite Series

New Perspectives. New Possibilities.

EVO Lite series is the new generation flagship aerial photography drone, which consists of EVO Lite and EVO Lite. The EVO Lite series interprets Autel's latest technology in video, flight control and software, providing an unprecedented flight control experience and professional images, which brings about more inspirations, new perspectives and new possibilities.



Supersensitive
Image



7.4 Miles
Transmission Range



3-way
Obstacle Avoidance



40 Mins
Flight Time



18m/s
Flight Speed



16x
Digital Zoom



EVO Lite +

Cut Through The Darkness. Take Back The Night.

Discover The World By Moonlight

Equipped with a 1-inch CMOS image sensor and Autel's intelligent moonlight algorithm, the EVO Lite+ can capture crisp, vibrant details at night with low noise - even when the ISO is cranked up high.

Take Control With An Adjustable Aperture

Flex your creativity with an adjustable aperture from f/2.8-f/11, giving you the ability alter exposure and depth of field in imaginative ways that show off your unique artistic style.

1"CMOS

CMOS

6K@30FPS

Video

HDR

EVO Lite

Instant Lightweight Champion

World's First 4-axis Gimbal Design

The EVO Lite is the first drone in the world to introduce a four-axis gimbal design, enabling you to shoot vertical videos for easy editing and sharing on mobile devices.

Supersensitive 50MP Camera

Experience a new level of image quality thanks to a supersensitive 50MP camera equipped with a 1/1.28-inch CMOS sensor. The camera adopts an RYYB color filter array design, which absorbs 40% more light than traditional RGGB arrays, allowing you to capture natural scenery in all its glory.

1/1.28"(0.8")

CMOS

50 MP

Photo

4K HDR

Video

RYYB

Sensor

PDAF+CDAF

Autofocus System

Specifications

Aircraft	
Takeoff Weight (with propellers and battery)	1.84 lbs (835g)
Dimension (including blades)	Folded: 210×123×95mm Unfolded: 433×516×95mm
Wheelbase	368 mm
Max Ascent Speed	5m/s (ludicrous), 4m/s (standard), 3m/s (smooth)
Max Descent Speed	4m/s (ludicrous), 3m/s (standard), 2m/s (smooth)
Max Horizontal Flight Speed	18m/s (ludicrous), 10m/s (standard), 5m/s (smooth)
Max Takeoff Altitude	13123 ft (4000 m)
Max Flight Time (no wind)	40 Mins
Max Hovering Time (no wind)	26 Mins
Max Flight Distance (no wind)	24km
Max Wind Resistance	27mph,12 m/s (Take-off and landing)
Max Tilt Angle	33° (ludicrous), 25° (standard), 25° (smooth)
Max Angular Velocity	200° (ludicrous), 120° (standard), 60° (smooth)

EVO Lite		EVO Lite+	
Sensor	CMOS: 1/1.28 inch Effective pixels: 50M Pixel Size: 1.22μm*1.22μm	Sensor	CMOS: 1 inch Effective Pixels: 20M Pixel Size: 2.4μm*2.4μm
Lens	Equivalent Focal Length: 23mm Aperture: f/1.9 Focus Range: 0.5m - Infinity Focus Mode: PDAF+CDAF/MF	Lens	Equivalent Focal Length: 29mm Aperture: f/2.8 ~ f11 Focus Range: 0.5m - infinity Focus Mode: CDAF/MF
Zoom	Digital Zoom: 1 - 16 times Lossless Zoom: 4K: 2 times; 1080p: 4 times	Zoom	Digital Zoom: 1 -16 times Lossless Zoom: 4K: 1.3 times; 1080p: 3times
Photo Resolution	50MP: 8192x6144 (4:3) 12.5MP: 4096x3072 (4:3) 4K: 3840x2160 (16:9)	Photo Resolution	5472x3648 (3:2) 5472x3076 (16:9) 3840x2160 (16:9)
Video Resolution	3840x2160 P60/50/48/30/25/24 2720x1528 P60/50/48/30/25/24 1920x1080 P120/60/50/48/30/25/24	Video Resolution	5472x3076 P30/25/24 3840x2160 P60/50/48/30/25/24 2720x1528 P60/50/48/30/25/24 1920x1080 P120/60/50/48/30/25/24

EVO II Series

Go Beyond The Boundaries Of Aerial Photography

The EVO II series is designed with modular gimbal that allows consumers to replace the gimbal on demand, which satisfies the photography enthusiasts. The world's first foldable 8k drone-EVO II enables users to zoom deep into a scene and crop an image to 4K without any loss in quality, pushing color further than ever before. With Sony's new 20 megapixel 1-inch CMOS image sensor, the EVO II Pro supports up to 6K video with greater dynamic range, stronger noise suppression, and higher frame rates.



5.5 Miles
Transmission Range



360° Obstacle
Avoidance



40 Mins
Flight Time



45mph
Max. Flight Speed





EVO II Pro V3

**Leader In Picture Quality
And Flight Intelligence**

Exceptional Image Quality

With Sony's new 20 megapixel 1-inch CMOS image sensor, the EVO II Pro V3 supports up to 6K video with greater dynamic range, stronger noise suppression, and higher frame rates. The f/2.8-f/11 adjustable aperture and 44000 maximum ISO gives photographers enhanced creative control.



1-Inch

CMOS

20MP

Photo

6K@30FPS

Video

F2.8~F11

Aperture

EVO II

**Go Beyond The Boundaries
Of Aerial Photography**

Life In 33 Million Pixels Excellent With 8K

Autel Robotics EVO II 8K records in resolutions up to 7680x4320. With 16 times more pixels than HD and 4 times more pixels than 4K, 8K video redefines image detail. The high resolution enables users to zoom deep into a scene and crop an image to 4K without any loss in quality, pushing color further than ever before.



1/2-Inch

CMOS

48MP

Photo

F1.8

Aperture

4K 10Bits

HDR



Specifications

Aircraft	EVO II Pro V3	EVO II
Maximum takeoff weight	1270 g (C2)	2.48 lbs (1127 g)
Dimensions (L*W*H)	9.1*5.1*4.3 inches (folded); 18*22*4.3 inches (unfolded)	9.1*5.1*4.3 inches (folded); 18*22*4.3 inches (unfolded)
Wheelbase	15.6 inches (397 mm)	15.6 inches (397 mm)
Max Ascent Speed	8 m/s (Ludicrous)	8 m/s (Ludicrous)
Max Descent Speed	4 m/s (Ludicrous)	4 m/s (Ludicrous)
Max Horizontal Flight Speed	20 m/s (Ludicrous)	20 m/s (Ludicrous)
Max. Takeoff Altitude	5000 meters	5000 meters
Max Flight Time (no wind)	39 minutes	39 minutes
Max Hovering Time (no wind)	35 Mins	35 Mins
Max Flight Distance (no wind)	25km	25km
Maximum wind resistance level	fresh breeze	fresh breeze
Operating Temperature	14°F to 104°F (-10°C to 40°C)	14°F to 104°F (-10°C to 40°C)
Operating Frequency	900M / 2.4G / 5.2G / 5.8G Note: Some frequencies are only available in some regions or for indoor use only. Check local laws and regulations for details.	2.400 - 2.4835 GHz 5.725 - 5.850 GHz (non-Japan) 2.400 - 2.4835 GHz 5.650 - 5.755 GHz (Japan Only)

EVO II Pro V3		EVO II	
Sensor	1 inch CMOS; 20M Pixels	Sensor	1/2 inch CMOS; 48M Pixels
Lens	FOV: 82° Equivalent Focal Length: 29 mm Aperture: f/2.8 - f/11 Focus Range: 0.5 m to infinity	Lens	FOV: 79° Equivalent Focal Length: 25.6 mm Aperture: f/1.8 Focus Range: 0.5 m to infinity (with auto focus)
Zoom	1-16x (up to 3x lossless zoom)	Zoom	1-16x (up to 4x lossless zoom)
ISO Range	Video: 100-6400 Photo: 100-6400 Night scene mode: Maximum video ISO44000	ISO Range	Video: 100-6400 Photo: 100-3200
Photo Resolution	Photo Mode: 1/8000 - 8s Other: 1/8000 - 1/frame rates	Photo Resolution	8000*6000 (4:3) 7680*4320 (16:9) 4000*3000 (4:3) 3840*2160 (16:9)
Video Resolution	5472×3076 P30/P25/P24 3840×2160 P60/P50/P48/P30/P25/P24 2720×1528 P60/P50/P48/P30/P25/P24 1920×1080 P120/P60/P50/P48/P30/P25/P24		

05

Ecosystem

Autel Smart Controller V3

Autel Smart Controller SE

Autel Smart Antenna Transmission (ASAT)

Autel Ground Control Station

Dragonfish Payloads

Dragonfish Repeater

EVO Nest

Autel Dragonfish Nest

Autel Integrated Command System

Autel Mapper

Autel Smart Controller V3

Simplicity. Clarity. Control.

Smart Controller V3's built-in display at 2000nits is 4 times brighter than a conventional cell phone screen and the 7.9 inch Ultra-HD (2048x1536) touch screen provides clear visibility under direct sunlight. Integrated true tone technology dynamically adjusts the white balance of the display, delivering the best viewing experience for the pilot in any lighting environment.



15 km
Transmission Range



Max 2000nits
Brightness



4 Hours
Operating



Specifications

Dimension	269×189×66mm (antennas folded) 269×302×87mm (antennas unfolded)	Max Transmission Range (unobstructed, free of interference)	FCC: 9.3 miles (15 km) CE/SRRC: 5 miles (8 km)
Weight	2.63 lbs / 1194g (without protective case) 3 lbs / 1365g (with protective case)	Resolution	2048x1536
Battery Capacity	5800 mAh	Max Brightness	2000 nits
Charging Time	120 Mins	Compatibility	EVO Max series EVO II series V3 Autel Alpha
Operating Time	2.5 hours (Max. Brightness) 4 hours (50% Brightness)	Operating Frequency	900M / 2.4G / 5.8G <small>Note: Some frequencies are only applicable in some regions or only used in door. For details, please refer to local laws and regulations.</small>
Operating Temperature	-4°F to 104°F (-20°C to 40°C)		
Storage	ROM 128GB		
IP Rating	IP43		

Autel Smart Controller SE

Simplicity. Clarity. Control.

Smart Controller SE comes with a 6.4-inch OLED touch screen and latest gen 8-core processor for HD image transmission. SkyLink 2.0 Transmission technology guarantees long-distance operations from up to 9 miles away and enhances anti-interference abilities with triple band frequency hopping. The customized Android system allows for additional flexibility with 3rd-party apps and an IP43 rating ensures all-weather performance.



10 km
Transmission Range



800nits
Brightness



3 Hours
Operating



Specifications

Dimension	8.9*5.4*1.2 inches (antennas folded) 8.9*8.5*1.2 inches (antennas unfolded)	Maximum Transmission Distance (Without Interference and Blocking)	FCC: 10 km CE/SRRC: 8 km
Weight	1.36 lbs (617g)	Resolution	2340 x 1080
Battery Capacity	1900 mAh	Max Brightness	800 nits
Charging Time	90 Mins	Supported Aircrafts	EVO II Pro V3 EVO II Dual 640T EVO II RTK Series V3 EVO II Enterprise V3
Operating Time	2 hours (Max. Brightness) 3 hours (50% Brightness)	Operating Frequency	900M / 2.4G / 5.8G <small>Note: Some frequencies are only applicable in some regions or only used in door. For details, please refer to local laws and regulations.</small>
Operating Temperature	14°F to 104°F (-10°C to 40°C)		
Storage	ROM 128GB + expandable storage via micro-SD card		
IP Rating	IP43		

Autel Ground Control Station

With an ultra-bright touchscreen of 1,000 nits, the Autel Ground Control Station is twice as bright as the average smartphone, making the 9.7-inch screen easy to see under direct sunlight.



18.6-mile
Transmission Range



1000nits
Brightness



4.5 Hours
Operating



Specifications

Dimension	319×233×74mm (antennas folded) 319×398×74 mm (antennas unfolded)	Resolution	2048x1536
Weight	HDMI Port	Max Brightness	1000 nits
Battery Capacity	8200 mAh	Compatibility	Dragonfish Lite Dragonfish Standard Dragonfish Pro
Charging Time	120Mins		
Operating Time	3 hours (Max. Brightness) 4.5 hours (50% Brightness)	Video Transmission	Operating Frequency: 902-928 MHz (Only for FCC/ISED); 2.4000-2.4835 GHz; 5.150-5.250 GHz (Only for FCC/ISED); 5.725-5.850 GHz Max Transmitting Distance (unobstructed, free of interference): FCC: 6.2 miles (10 km) CE: 3.1 miles (5 km)
Operating Temperature	-4°F to 104°F (-20°C to 40°C)		
Storage	ROM 256GB + scalable (TF)		
IP Rating	IP64		



Dragonfish Payloads

Tackle any operation with a variety of payload options that can be toolessly swapped to suit mission needs. Dragonfish payloads are designed to be interchangeable between aircraft classes to maximize the value and enhance the mission capability of the system.



Autel DG-L20T

For DF Standard/Pro

- 1.79 lbs/810 g
- 5.94*3.82*6.77 inches
- 4K 20x optical zoom
- 12m pixel wide angle camera
- 640x512 infrared camera
- Laser range sensor



Autel DG-L50T

For DF Pro

- 4.08 lbs/1850 g
- 5.51*9.33*9.53 inches
- 4K 50x optical zoom camera
- 12m pixel wide angle camera
- 1280x1024 infrared camera
- Laser range sensor
- 3-axis gimbal stabilization



Autel DG-L35T

- 4K 35X optical zoom camera
- 48m pixel wide angle camera
- 640x512infrared camera
- Laser range sensor
- 3-axis gimbal stabilization

Payloads Adaptability	Autel DG-L20T	Autel DG-L35T	Autel DG-L50T
Dragonfish Standard	√	×	×
Dragonfish Pro	√	×	√
Dragonfish-25	√	√	×

Autel Smart Antenna Transmission (ASAT)

Go Beyond

The Autel Smart Antenna Transmission (ASAT) System integrates three antennas into one lightweight and portable base station. The ASAT provides a transmission range of up to 28 miles*, expanding operational range with improved wireless signal reception and greater anti-interference security. The ASAT fully integrates into Autel Robotics' range of solutions, giving peace of mind for compatibility and interoperability.

*Measured in clear environments.



28 Miles
Transmission Range



15 Hours
Battery Life



90 Mins
Charging Time



Unlimited
Horizontal Rotation



Specifications

Dimensions	RTK Folded: 16.54(L)*15.75(W)*20.28(H) RTK Unfolded: 16.54(L)*31.5(W)*37.8(H)	Max Pitch Rotation Angle	0°~55°
Weight	10.5kg (without tripod)	Horizontal Tracking Error	0.2°
Fast Deployment	Mobile/Fixed Deployment	Max Horizontal Rotation Angle	360°n (continuous rotation)
Working Temperature	-20~45 °C	Pitch Tracking Error	0.2°
Wind Resistance	Level 6	Battery Type	Lithium-ion
IP Rating	IP64	Battery Capacity	6550 mAh
Max Transmission Distance	28 Miles (45 km)	Run time	8.5h
Max Transmission Rate	70Mbps (within 6.2 miles under MIMO)	Input Voltage	100-240V
Operating Frequency	2.4GHz/5.8GHz (*customized frequency that complies with local laws and regulations are supported)	Charging Voltage	25.2V
		Charging Power	151.2W
		Charging Time	90 Mins
		Compatibility	Dragonfish Series

Dragonfish Repeater

The Hands-off Solution For Remote Operations

The Dragonfish Repeater System is a network of directional antennas, omnidirectional antennas, repeater base stations, 4G communication modules, and solar power supplies to provide 24/7, offgrid, low maintenance, ultra-long-distance flight command and communications for Autel Dragonfish series aircraft. The Dragonfish Repeater System, once set up, will improve the connectivity, management, and control of Dragonfish aircraft with a site coverage of up to 347 mi² per module when used in conjunction with the Autel Dragonfish Nest.



Self-Organizing
Mesh Network



Low
Maintenance



All Weather
Performance



Easy Range
Extending
Capabilities



Ultra-stable HD
Image
Transmission

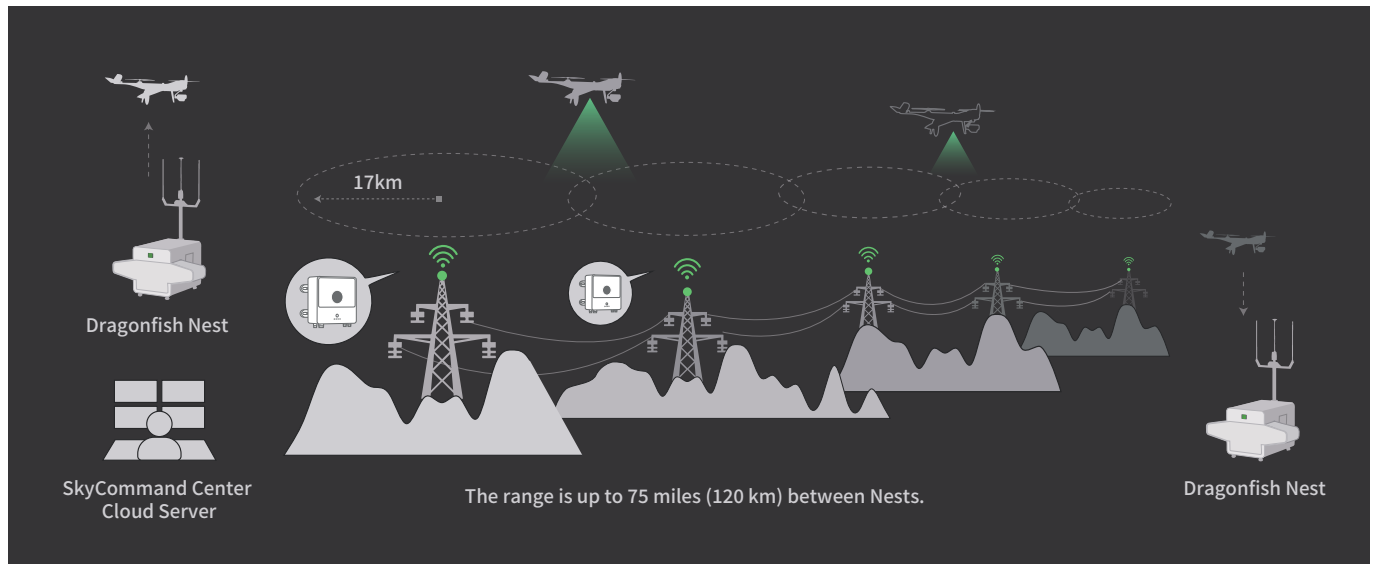


Long-lasting
Battery

4G

Remote
Monitoring





Powerful Self-Organizing Mesh Network Capability

A network of multiple Nests and Repeaters gives the Dragonfish full communication within the coverage area and the ability to land at multiple charging points.

Ultra-stable HD Image Transmission

Autel Repeater is specially designed to operate in areas with high electromagnetic interference. 1080P 30FPS transmission comes standard, with latency as low as 210ms*.

*Each repeater adds 10ms latency. 200ms is the latency of ground station.

Remote 4G Monitoring

Built-in 4G module supports real-time monitoring and remote wake-up and control of the device*.

*4G and performance availability varies.

Low Maintenance

The wireless setup paired with built-in batteries and solar panels allows users to set up once and forget.

*Measured in sand and wind-free environments with moderate temperature conditions. Maintenance intervals may vary based on environmental factors.

Easy Range Extending Capabilities

With a range of up to 10.6 miles between base stations, daisy chain additional repeaters to further extend coverage.

Long-Lasting Battery

The 100Wh high capacity battery can standby for up to 30 days without solar panels.

Specifications

Dimension (in) 11.42(L)*9.33(W)*3.54(H)

Weight (lbs) 6.61

Working Temperature -4°F - 140°F

IP Rating IP55

Power Consumption 8W

Communication Method Support 4G Network

Power Supply 11.07V

Battery Type Lithium-ion battery

Capacity 9539 mAh

Power Mode External DC Power Supply
Solar Power Supply

EVO Nest

Simplify Remote Operations

Reliable, durable, and transportable, EVO Nest is a base for automatic take off, landing, charging, and mission planning for the EVO Max Series. The Nest is designed for all-weather operation and uses a single-piece protective drum with fewer moving parts to simplify maintenance. The Nest fits in the bed of a standard pickup truck and is light enough for 2 people to carry. Paired with the Autel SkyCommand Center for centralized drone management, the Nest is easy to set up, maintain, and operate.



-22°F~131°F



Easy To
Maintain



25 Mins
Fast Charging



IP55



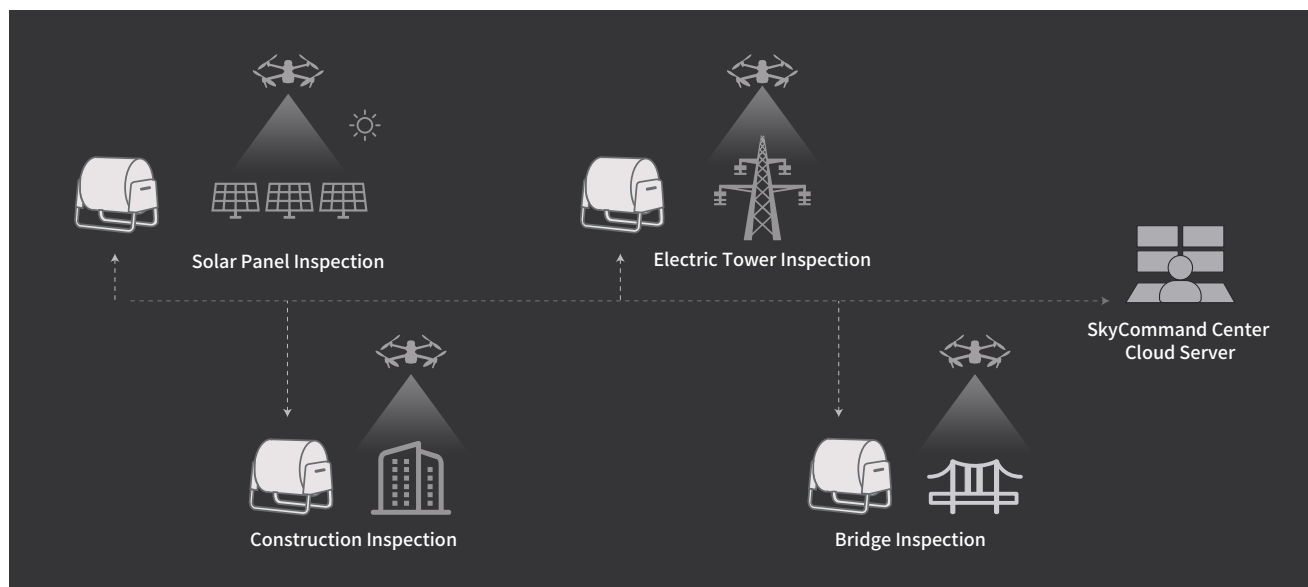
Specifications

Size	36.77*25.24*30.51 inches (hatch closed)
	36.77*25.24*21.57 inches (hatch open)
Weight	132 lbs
Protective Level	IP55
Operating Temperature	-22°F~131°F
Operating Humidity	95±3% (68°F~86°F)
Max Operating Altitude	6000m
Hatch Endurance	≥50000 Times

Max Power	1.2 kW
Standby Power	10W
Operating Voltage	AC 110V / 220V
Max Charge Current	16A
Drone Charge Duration	10% ~ 90% 25min
Model	EVO Max series

Remote Operations System

The Autel Remote Operations System consists of the EVO Nest, UAV, and the SkyCommand Center to provide a full end-to-end solution for remote task management.



Transportable & Easy Setup

The Nest weighs 155lbs, has a footprint of less than 1 yd², and can be set up by a team of 2 and used in substations, industrial parks, and rooftops.

Unbound Mission Delivery

Define the path, waypoint, angle, direction, time, and frequency for your missions through wired/wireless/mobile networks.

Custom Solutions

Standard APIs can be opened to develop your own functions.

Auto Piloting

The multi-rotor Nest automates scheduled takeoff, precision landing, and fast charge.

Information Management

The Nest uploads flight and mission data to SkyCommand cloud for easy access, storage, and management.

Encryption

The Nest supports AES 256-encrypted image transmission and complies with ISO 27001.



Autel Dragonfish Nest

Cover The Frontier

The Autel Dragonfish Nest is the world's first automated eVTOL support system. With a range of up to 75 miles between units, the Dragonfish Nest combines the high performance of the Dragonfish aircraft with autonomous takeoff, landing, charging, and flight missions. The Dragonfish Nest is perfect for long-range corridor inspections and large area coverage.



Weatherproof



Auto Takeoff,
Landing, And Charging



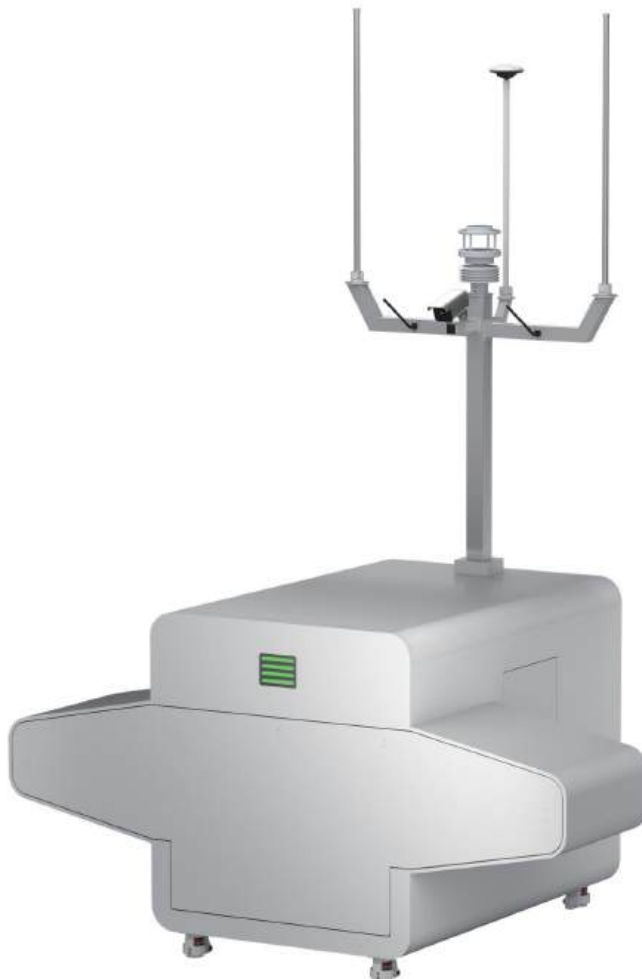
Intelligent Data
Storage And Processing



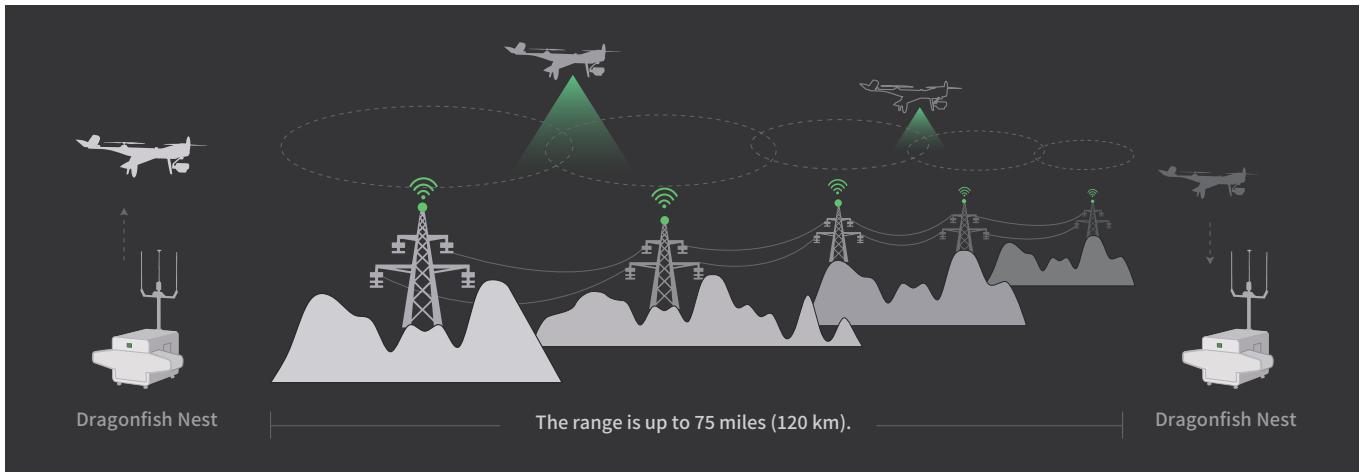
Backup
Power Supply



Pallet-sized For
Standardized Transport



Powerline Inspection



Key Features

The Dragonfish ecosystem provides the only long-range, tilt-wing VTOL solution with autonomous capabilities.

Cover entire pit mines, oil and gas pipelines, and powerlines across multiple towns, cities, or states.

The Dragonfish's 75-mile range requires fewer docks to be built and maintained.

The Dragonfish can fly faster and farther than traditional multi-rotor UAS.

The Dragonfish conducts aerial surveys and inspections much faster than traditional multi-rotor systems.

Solution Advantages

- Automatic Flight And Recharging
- Backup Power Supply
- Temperature Control
- Aircraft Management
- Environment Monitoring
- Real-Time Monitoring

Specifications

Dimensions (L*W*H)	Closed (incl. Antenna): 70.87*104.33*111.02 inches	Communication	Ethernet, optical fiber (customizable), 4G, 5G (customizable)
	Opened (incl. Antenna): 183.86*104.33*111.02 inches		
Charging Type	Battery replacement of robotic arms	Operating Frequency	Standard≤200W; Peak 2200W
Battery Quantity	6 pcs	Weight	1279 lbs
IP Rating	IP54, rainproof, corrosion resistant	Surge Protection	40KA
Monitor System	Weather monitoring system	Compatibility	Autel Dragonfish Lite
	Video surveillance system		Autel Dragonfish Standard
	Take-off and landing positioning system		

Autel Integrated Command System

Air-Ground Integration, Full-Spectrum Control

Autel Integrated Command System is a comprehensive UAV management and control cloud service platform, featuring a wide range of functions with an easy-to-use interface. It offers capabilities such as situational awareness, AI target recognition and positioning, flight route planning, live streaming, and remote control. This system enables back-end personnel to remotely manage and visualize front-line equipment, while flight data is securely stored in the cloud for later retrieval, use, and analysis. The Autel Integrated Command System supports multi-model, multi-terminal collaborative operations, breaking down information silos and enhancing team decision-making and execution efficiency. It empowers applications in security, road management, energy inspection, emergency management, and more.



Real-Time
Situational Awareness



AI Target Recognition
and Positioning



Intelligent Flight
Route Planning



Monitoring
and Early Warning



Private
Deployment



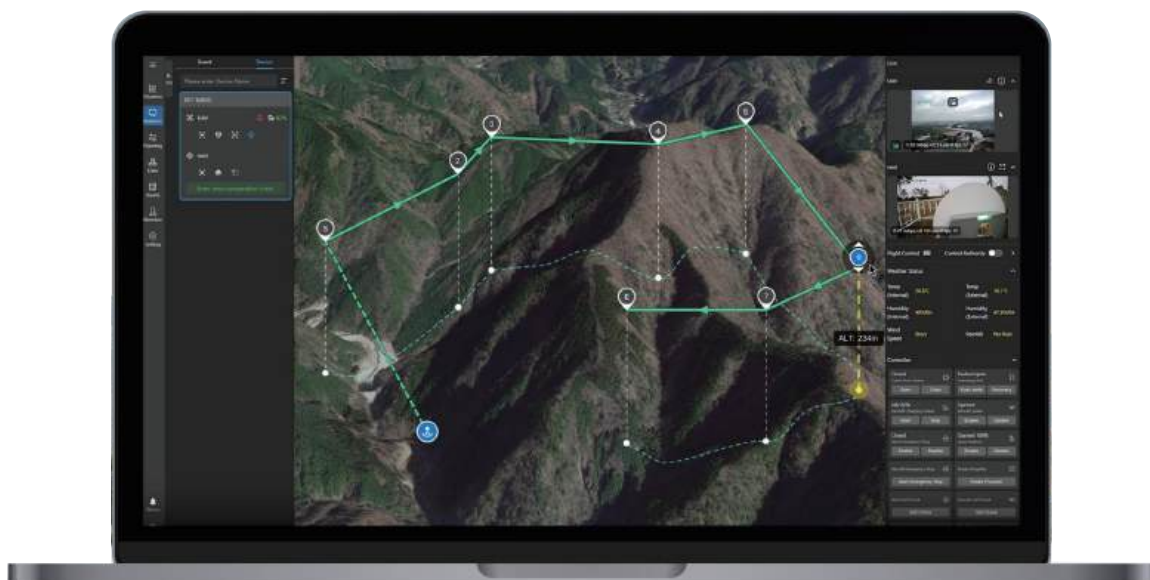
Data
Security



Information
Sharing



Open
Platform



AI Event Alert

Supports AI-based alerts for abnormal target events and aircraft countermeasure detection, issuing real-time warnings on the Autel Integrated Command System or third-party platforms, effectively mitigating potential risks.

Intelligent Flight Route Design

Supports controlling aircraft to execute various mission modes, including waypoint routes, area coverage, and complex path planning, such as point-of-interest photography, area coverage, and advanced route planning. It also allows for flexible flight action settings within mission routes, providing comprehensive flight route planning and the automatic execution of intelligent, efficient missions to adapt to diverse scenario requirements.

Multi-Terminal Collaboration

Supports multi-terminal adaptation, including PC, mobile devices, and remote controllers, enabling real-time sharing and collaborative operations. This breaks down information silos and creates an intelligent, efficient, and convenient air-ground integrated operation model.

Private Deployment

Supports private deployment, allowing integration with the user's own platform or terminals, giving full control over data within an internal network environment, effectively protecting information security and privacy.

AI Target Recognition and Positioning

Through intelligent AI algorithms and autonomous learning systems, the platform enables the aircraft to quickly and accurately recognize and locate 64 target types, including people, vehicles, ships, aircraft, flames, and smoke, in complex environments, with real-time target tracking.

Path Optimization and Obstacle Avoidance

Supports configuring various mission strategies and flight parameters, such as AI defense setup and scheduled repeats. It also allows for the customization of global obstacle avoidance, enabling the aircraft to automatically analyze the flight environment and generate safe, reliable flight paths, ensuring secure mission execution.

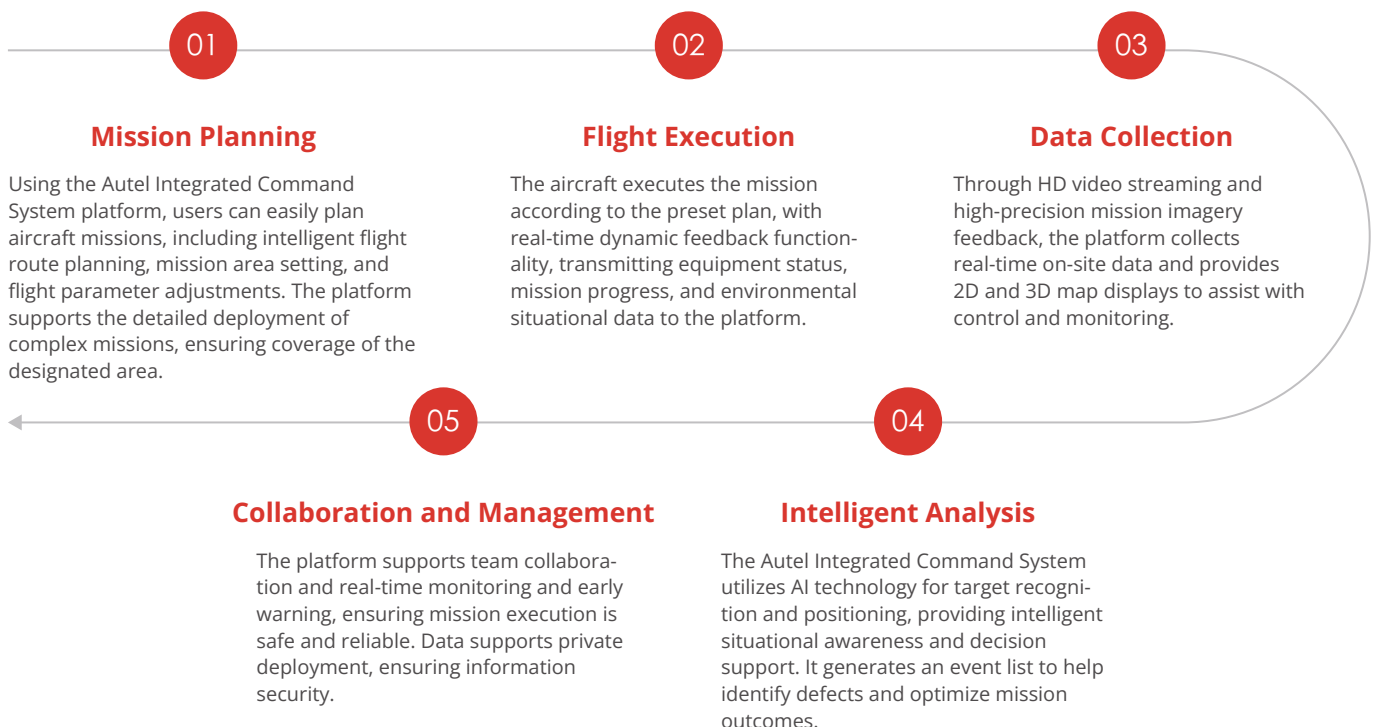
One-Click Live Streaming Share

By scanning a QR code or opening a link on a mobile device, the aircraft's live feed can be quickly shared to the phone screen, allowing full control and visibility of the operational site.

SaaS Public Cloud

Under the ISO/IEC 27001 security certification, user data is stored on Amazon Cloud servers or other cloud servers, establishing a stable, reliable, and secure cloud service environment.

| Autel Integrated Command System Workflow



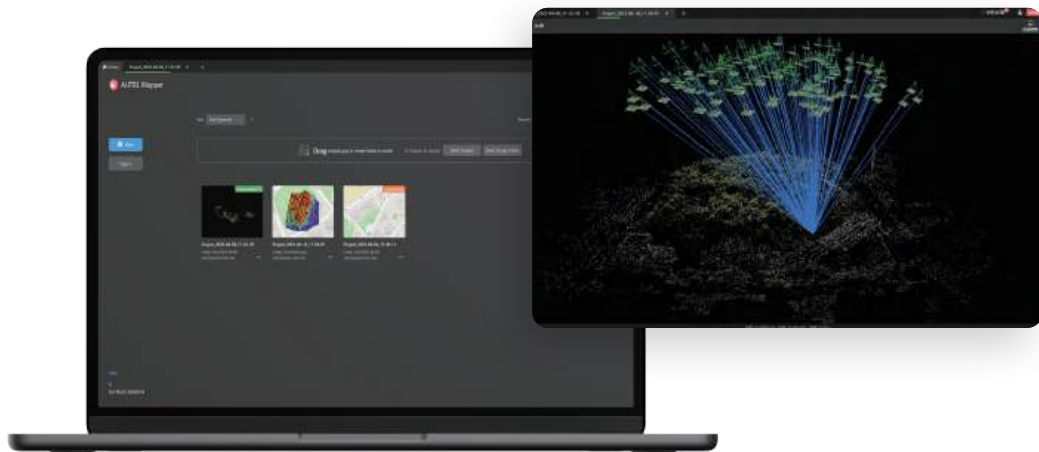


Autel Mapper

Reach New Frontiers

3D Reconstruction | 2D Reconstruction | Aerial Triangulation | Real-time 2D

Professional, efficient, and accessible mapping. Autel Mapper is a 2D and 3D reconstruction software with cloud or local processing, utilizing deep learning for highly accurate results.



Swift and Accurate

Autel's AI deep-learning algorithms make Autel Mapper one of the quickest map processing software in the industry, providing highly accurate 2D and 3D reconstruction, even for small objects - for unbeatable models and maps.

3D Reconstruction: Autel Mapper combines traditional and deep learning algorithms to greatly improve the completeness of 3D models. Reconstruction quality can be selected from three options: high, medium, and low. It can reconstruct small objects completely and meet the needs of various industries.

Aerial Triangulation: Autel Mapper supports both roll shutter cameras and global shutter cameras, and its intelligent block processing of aerial triangulation can handle large data volumes. The advanced matching algorithm can effectively solve the data processing of different heights and resolutions.

Quick Stitching

Batch import images taken by Autel drones, quickly generate 2D maps and renderings using advanced image orthorectification algorithms and fast stitching algorithms.

2D Reconstruction: Autel's deep learning technology enables autonomous adaptation of AI algorithms in different scenarios, meeting the 1:500 precision requirement in the surveying and mapping industry without GCPs.

Real-time 2D: During flight, the remote controller streams real-time images to Autel Mapper for real-time 2D stitching. Advanced image processing algorithms are used to generate high-precision 2D orthophoto images in real time, providing the on-site operators with a basis for adjusting the workflow in a timely manner.

06

Solutions

Security

Scalable Security And Premise Management

Anti-Smuggling, Border Watch

Inspection

Transmission Line Inspection

Transmission Poles And Towers Inspection

Substation Inspection

Oil Rig / Refinery Inspection

Surveying And Mapping

Spatial Planning

Engineering, Surveying And Construction



01 Scalable Security And Premise Management

Public security meets innovation, facilitating a digital and intelligent transformation in management

Overview

Send drones 24/7 to regularly inspect areas with high rates of public safety incidents and key locations where people gather. Quickly gain an understanding of the situation on the ground through the command center, solving issues of high security pressure, low patrol efficiency, and difficulty in obtaining evidence. Ensure that personnel on-site and the command center information are in sync, reducing the cost of front-to-back communication. Facilitate the rapid collection of evidence for safety incidents and promote the digital and intelligent transformation of security management.



Pain Points



High Security Pressure

Important activities and large-scale events have a great impact, risk factors are often highly concealed, and security plans can struggle to cover every base.



Low Patrol Efficiency

Fixed cameras and manual patrols have problems such as unclear, incomplete, invisible, and low efficiency, and it is often near-impossible to remove all blind spots.



Unified Command Trouble

There are many public security emergencies and complex scenarios, and it is difficult for law enforcement officers to synchronize information, command and cooperate, and often are at risk.

Business Value

High-definition Aerial Images: 12 million pixels wide-angle field of view can support large-scale monitoring of aircraft hovering in the air. 50 times visible light optical zoom, 1280×1024 thermal imaging, three-axis stabilized gimbal, flexible viewing angles, stable imaging, accurate grasp of any gathering and status of on-site personnel and the event generally. Use of spotlights for auxiliary lighting at night.

3D Panoramic Automatic Patrol: Record flight trajectories, use Autel Mapper to generate routes based on 3D real scene modeling, realize automatic, high-frequency, all-weather air patrol of urban environments including buildings, and make up for dead spots in monitoring. One drone can typically replace the manpower of three police officers and one police car, integrating both the air and ground into one unit, easily control a situation.

Unified Remote Control Command: AI can lock and dynamically track the activities of people and vehicles, can mount speakers at high altitudes, make mounted spotlights to illuminate emergencies at night, real-time image transmission, Information share with on-the-ground forces, contactless communication, and guidance for evacuation of masses. Key areas can be monitored by hovering, integrated easily into police command and dispatch system, on-site/rear video intercom, text dialogue, and ultimately unified coordination.

Recommended Autel Products

Solutions 1	Dragonfish Series + Autel Voyager + Autel SkyCommand Center
Solutions 2	EVO Max 4T + + Autel SkyCommand Center
Solutions 3	EVO II Dual 640T Enterprise V3 + Autel SkyCommand Center

02 Anti-Smuggling, Border Watch

Eyes in the sky 24/7 for highly efficient monitoring of borders

Overview

The United States stands as one of the largest countries in terms of coastal and border with defense demands: over 95,000 coastal miles alone. Whether coastal or on the ground at borders, ongoing prevention and control of smuggling plays an important part of governance, national security and long-term development. However, as long-term and high-risk anti-smuggling activities continue on, the process of finding targets, collecting evidence and logging can have challenges. In order to effectively combat smuggling, a combination of UAVs and tracking antennas can be use, allowing for highly mobile, efficient law enforcement. UAVs can be paired with automated nests for 24-hour autonomous inspections on routes with high smuggling rates. An extended benefit of this solution is the ability to utilize a full command center, allowing law enforcement personnel to analyze, view, and synchronize all aspects of ongoing operations efficiently. Ultimately, applying these solutions significantly increases the efficiency of patrolling, while also offering increased safety for personnel, making it possible to capture evidence via eyes in the sky.



Pain Points



Lengthy Patrol Routes

When borders get long, are obscured by jungle or even have issues with wilderness, border watch becomes increasingly complex. Blind spots of fixed observation are also significant, particularly at night. In some cases, patrol operations can take several days, with patchy monitoring and coverage.



High Risk To Law Enforcement Personnel

Whether risk from operating and cracking down on suspects or from the dangerous terrain borders often sit upon, officers who spend time on patrol are exposed to dangerous situations regularly.



Difficulties In Obtaining Evidence

Smuggling activities are mobile and covert. Obtaining evidence real-time during a developing situation with enough time to act is difficult for border personnel.

Business Value

Daily Autonomous Patrols, Stealth, Highly Flexible: Taking out the skies, drones can provide quiet and large-scale cruising and monitoring of target areas. Visible light/night vision high-definition images can be shared with ease.- Full 3D route planning and autonomous flying, intelligent identification and comparison of changes in border routes over time.

Non-contact Investigations, Analysis: Accurate positioning, automatic circling of targets, 1.2km laser range-finder to guide investigation, infrared/night vision tracking, heavily reducing risk of law enforcement contact.

HD Forensics, Remote Command Ready: 50x optical zoom and 1280×1024 infrared thermal imaging high-definition images, effectively identifying camouflage, penetrating occlusion, and quickly obtaining evidence.

Recommended Autel Products

Solutions 1

Dragonfish Series + Autel Voyager + Autel Smart Antenna Transmission(ASAT)
+ Autel SkyCommand Center

Solutions 2

Dragonfish Series + Autel Voyager + Autel SkyCommand Center + Dragonfish Nest

01 Transmission Line Inspection

Integration of inspection, analysis and action, real-time perception of the health status of transmission lines

Overview

Carry out intelligent inspection of overhead lines through utilization of fixed-wing UAVs, take high-definition aerial photos of line passages, surrounding environments, intersections along lines, construction operations, etc. This process is especially important for key power supply lines, old lines, identifying defects and external lines. Lines that break through high-risk areas can be supported via a normal inspection schedule by drones, easily identifying environmental health of transmission line channels in real time, and effectively promote the digital and intelligent transformation of power grid inspections.



Pain Points



Management Troubles

Continuous increase of inspection tasks leads to manpower shortage, inspection paths easily disrupted and changed.



Low Inspection Efficiency

3D waypoint planning is complex and labor-intensive, a single inspection takes a long time, often leading to a large backlog of tasks.



Slow Response To Defects

Abnormal situations cannot be fed back in real time, situation descriptions lack standards, and ineffective communication leads to ultimately slow responses to repairing defects.



Large Environmental Impact

Weather and environments are naturally complex, fight platforms need to be able to maintain stable and efficient operations in various adverse environments.

Business Value

Smart Route Planning: Support remote real-time import of transmission channel kml files through the remote control or Autel SkyCommand Center, and use the set of route reference points to quickly generate route planning.

High-efficiency Inspections: Based on the self-developed Autonomy technology, the flight platform can realize autonomous flight along the route, without manual setting of 3D waypoint planning; the flight time with load is up to 158min, the flight speed is up to 108km/h, and the longest inspection of a single sortie is 60km, and it can fly at night, in rain and snow Stable operation under adverse natural conditions such as fog and haze.

Autonomous Inspection, A New Generation: Equipped with Dragonfish Nests, Autel UAV lead the industry by being completely remotely operated, and autonomous inspection can be realized without professional pilots. By installing Autel repeaters, there is no fear of signal blocking by mountains a smooth, real-time control of an operation.

Automatic Inspection Reports: After an inspection is completed, the Autel SkyCommand Center will automatically generate a complete inspection report, including inspection time, inspection line double number, route coverage section, listing abnormal intervals, abnormal descriptions and corresponding images, and assist in judging the status of lines.

Recommended Autel Products

Solutions 1

Dragonfish Series + Autel Smart Antenna Transmission(ASAT) + Autel Mapper
+ Autel SkyCommand Center

Solutions 2

Dragonfish Series + Dragonfish NEST + Dragonfish Repeater
+ Autel SkyCommand Center

02 Transmission Poles And Towers Inspection

One-click panorama, innovating data visualization, inspection and management

Overview

Tower equipment is typically extremely complex, with a high amount of environmental factors to consider when inspecting. Multi-rotor UAV can be used to carry out detailed inspections, and the complex and changeable route trajectory is recorded through Autel's teaching algorithm, with the details of angles and time stamps memorized and saved for future use. Accurate re-shooting, importing 360° panoramas into GIS system for visual management, AI research and judgment, timely alarms and response to tower structural defects and temperature abnormalities, generating abnormal trend analysis reports, all combine to realize a multi-dimensional, independent and highly intelligent inspection routine.



Pain Points



High Human Cost

Manual inspections take a long time to commute, tower climbing is inefficient and has high safety risks, and the frequency and accuracy often fail to meet quality standards of inspections.



Complex Flight Environment

The environment around the tower equipment is complex, with many obstacles, insufficient light, and strong signal interference.



Lacking Consistency

The same point data does not have the ability to repeat the comparison of information collected each time, and there is a problem of repeated or missing shots, which cannot be processed uniformly through GIS information.



Difficult Post-Processing

Lack of systematic and visual management models and tools, and high labor processing costs.

Business Value

Smart Task Recording: Record the flight trajectory of the UAV through a teaching method to generate a three-dimensional route, realize autonomous inspection by one-key flight, record once, and reuse for a long time, effectively solving the problem of route data acquisition in a complex environment without models.

Accurate Reshoots: The on-board RTK module realizes centimeter-level flight deviation correction, and AI support can automatically correct the shooting angle of the gimbal, ensuring that each point is accurately re-shot at the same coordinates and angles, improving and simplifying the convergence of sample data.

One-click Panorama, GIS Application Support: Perform "One-click Panorama" shooting above the tower to obtain 360° surrounding environment samples, and then import the tower and panoramic photos into the GIS system to build a database for visual planning and management.

Dual-light AI Analysis: Equipped with a three-axis stabilized gimbal, equipped with a high-definition visible light + 640x512 pixel thermal imaging dual-light lens, the image is sent back to the Autel SkyCommand Center, with AI quickly able to identify structural defects and temperature abnormalities of a tower.

Automatic Inspection Reports: After an inspection is completed, Autel SkyCommand Center will automatically generate a complete inspection report, including the inspection time, the list of towers covered by the route, the list of abnormal towers, abnormal descriptions and corresponding images, and the number of abnormal towers and abnormal trend analysis by cycle.

Recommended Autel Products

Solutions 1

EVO II Dual 640T RTK V3 + EVO Nest + Autel SkyCommand Center

Solutions 2

EVO Max 4T + Autel Enterprise + Autel Mapper + EVO Nest + Autel SkyCommand Center

03 Substation Inspection

AI situational awareness drives an intelligent transformation of power substations

Overview

Considering high equipment density, complex spatial arrangements, and many possible faulty modules in any substation, multi-rotor UAVs can be used to construct a 2D map and 3D model of a substation with high precision, and the omnidirectional obstacle avoidance technology is applied to conduct refined 3D exploration, quickly identifying and locating faults. Through realizing three-dimensional inspections, unmanned substations can deploy Autel nests, remotely dispatching and completing tasks through the SkyCommand Center, and performing real-time detection and situation awareness to identify and solve problems before they become larger. Easily view equipment appearance, oil level, and temperature, driving an intelligent transformation of substation inspection and management, not to mention future fault research and judgement, and defect elimination tracking.



Pain Points



Low Depth

Traditional inspections are limited by distance and camera clarity, and have weak situational awareness of equipment defects, requiring a higher inspection depth.



Flying Difficulties

There are many intervals in the station, high equipment density, complex spatial arrangement, and many obstacles, making it difficult for drones to fly autonomously.



Unmanned Substation Inspection

Unmanned substations are usually located in remote areas, and personnel are regularly sent to the site for inspections, and commuting is time-consuming and laborious.



Lack Of Visual Management

Existing inspections are usually marked with tables and texts, and inspection route planning and closed-loop tracking for defect elimination are not intuitive enough.

Business Value

Intelligent Modeling And Classification: Using professional modeling software, Autel Mapper can carry out high-precision reconstruction of a 2D/3D model of a substation, performing partition display and batch management based on voltage level, geographical location, and various other operations.

All-round Autonomous, Three-Dimensional Inspection: Based on Autel's self-developed autonomous technology, the flying platform independently conducts 3D exploration based on omnidirectional obstacle avoidance capabilities, and can quickly discover and locate faults at various levels in the substation, realizing three-dimensional inspection.

Remote Inspection Of Unmanned Stations: Through Autel SkyCommand Center, inspection tasks can be issued remotely to EVO Nests, with drones able to remotely be dispatched and take off and land on their own, recharging or replacing batteries, performing flight tasks, automating and further innovating substation inspections.

Dual-light AI Analysis: Equipped with a three-axis stabilized gimbal, equipped with high-definition visible light and 640x512 pixel thermal imaging dual-light lens, the image is sent back to Autel SkyCommand Center, and AI then identifies the appearance, oil level, oil temperature, and respirator of the primary and secondary equipment in the substation, as well as general status and any abnormal issues.

Automatic Inspection Reports: After the inspection is completed, Autel SkyCommand Center will automatically generate a complete in-station inspection report, including inspection time, inspection route, covered equipment, and equipment parameter values, etc., listing abnormal equipment, descriptions, and corresponding images.

Recommended Autel Products

Solutions 1	EVO II Dual 640T RTK V3 + EVO Nest + Autel SkyCommand Center
Solutions 2	EVO Max 4T + Autel Mapper + EVO Nest + Autel SkyCommand Center

04 Oil Rig / Refinery Inspection

Eyes in the distance, accelerating and supporting oil field production

Overview

Multi-rotor drones can carry multiple loads to carry out intelligent inspection operations on oil fields. Through a series of technologies such as visible light photography, infrared temperature measurement, and gas detection, it is possible to quickly grasp the overall operation of any station, identify and eliminate hidden dangers of leakage rapidly, and effectively improve the efficiency of oil field inspections, all while reducing labor costs, improving management level, and empowering the digitization of energy, construction and production industries.



Pain Points



Complex Inspection Environment

The oil field environment is complex, pumping units are mostly distributed in canyons, high and low terrain, and there are many night patrol scenes, with unique weather, light and other problems bringing great challenges to flight.



Scattered Oil Well Distribution

The distribution of oil wells is irregular, and the number of oil wells can range from tens to hundreds of miles. Inspections in low-density areas have high requirements for image transmission, and the sampling results are often mixed quality.



Unmanned Oil Wells, Manual Operation Difficulties

With the improvement of the intelligence level of oil fields, more and more oil wells have adopted the unmanned mode, and the machine patrol based on manual operation cannot meet the needs of new scenarios.

Business Value

Strong Environmental Adaptability: Easily adaptable, able to operate in environments of -4°F to 122°F, take off, land and fly stably at a wind speed of up to 12m/s, with 40min ultra-long battery life, 15km ultra-long-distance high-definition image transmission, with proven success in canyons and undulating terrain, comfortably able to work normally at night and in bad weather, with strong anti-radio frequency interference capability.

Digital, Intelligent Management: Align orthographic images, one-click panorama, and intelligent archiving of photos for refined inspection of facilities, support multi-layer labeling, label pumping wells, self-flowing wells and other equipment, integrate AI and AR applications, and quickly carry out analysis of oil spills and well shut-downs, utilizing our digital platforms for efficient operations and maintenance.

Support Fully Unmanned Inspections: Reasonable site selection can be made based on the terrain of an oil field, and multi-rotor aircraft nests can be deployed in a grid manner. Each aircraft nest can cover oil wells within a radius of just over 4 miles (4.3mi). The operation is uniformly dispatched through the Command Center, and on-site maintenance is free for an extended period.

Smart Report Output: At the end of the inspection, a report is intelligently generated, including inspection time, route map, exception list, photos of abnormal points, text description, etc.

Recommended Autel Products

Solutions 1	EVO II Dual 640T Enterprise V3 + Autel Enterprise
Solutions 2	EVO II Dual 640T Enterprise V3 + Autel Enterprise + EVO Nest + Autel SkyCommand Center
Solutions 3	EVO Max 4T + Autel Enterprise + Autel Mapper + EVO Nest + Autel SkyCommand Center

01 Spatial Planning Solutions

Accurate digital recreation of environments, allowing for intuitive regional planning

Overview

As the US urban areas continue to expand, the need for efficient and accurate land and space governance is becoming increasingly important. To meet this need, multi-rotor UAVs can be used to collect high-resolution photos and generate 2D and 3D models. With a mechanical shutter, high-pixel camera, and free image control, drones can provide a comprehensive visual basis for the rational layout of urban buildings and the comprehensive deployment of engineering construction. With 83% of the population living in urban areas, and a predicted increase of up to 89% by 2050, it is inevitable that city centres will need to harness new tools and innovate the development process of cities. Drone solutions can provide governments and urban planners with new tools and ways to develop cities, including managing areas safely and sustainably, conducting land surveys, mapping and more.



Pain Points



Limited Information Sources

Traditional map displays are not intuitive and complex GIS analysis cannot be completed, resulting in incomplete planning.



Heavy Workload

There are many types of infrastructure such as water conservancy, bridges, and highways, with construction time often spanning over a long period. On-site measurement can become difficult when project workloads are heavy, and spatial data requires time, which can prove to be an issue.



Slow Turnaround

Traditional topographic maps take a long time to draw and have low resolution, making it difficult to intuitively grasp key information such as topography, landforms, and land attachments.

Business Value

Scalable, Rich Routing Functions: All aircraft can achieve image control-free accuracy, satisfying 2D photography, oblique photography, elevation route planning, and route simulation functions, and support offline map planning, which effectively improves acquisition efficiency, flight safety and mold release quality.

High-Precision Dimension Measurements: The measurement of position point, distance, area and volume utilizing 2D and 3D models, with high precision and small errors.

Highly Efficient Modeling: Autel Mapper can quickly generate a high-precision 2D and 3D model with coordinates from collected photos, which can then easily be combined with the BIM model to visually display plans.

Recommended Autel Products

Solutions 1	EVO Max/EVO II V3 series + Autel Smart Controller V3 + Autel Enterprise + Autel Mapper
Solutions 2	EVO Max/EVO II V3 series + Autel Mapper + EVO Nest+ Autel SkyCommand Center
Solutions 3	Dragonfish Standard + Autel Mapper

02 Engineering, Surveying And Construction

Elevate and strengthen construction supervision and planning, and measure in real-time

Overview

As we enter 2023, the US construction industry is expected to see a continued boom, with demand backed by urban development and a push for growth. Quality control, therefore, has become a top priority for the entire industry. Drones equipped with visible light and thermal imaging can be used throughout entire project cycles, from survey and design in the early stages, to construction management in the middle stages, and finally to inspection and maintenance after delivery of a project. Utilizing the mobility and efficiency of drones to provide all-round supervision benefits engineers through increased awareness and service capabilities, helping them stay competitive in the international market and ensuring engineering industry continues to innovate and push forward.



Pain Points



Limited Results

Traditional surveying and mapping results are limited to line drawings, and cannot provide visual models for acceptance or results display.



Data Acquisition Challenges

In urban locations specifically with buildings and constant obstructions, it is near impossible to provide a safe and controllable flight path to collect building facade data, and it is difficult to do defect analysis on materials such as glass.



Lacking Supervision

With particularly lengthy projects, construction often lacks effective monitoring methods. Conventional video also has some limitations in managing large amounts of data, making it difficult to obtain and retain effective key information on a project or its status.



Difficult Earthwork Measurements

During construction, earthwork is notoriously difficult to calculate, requiring large volumes of time and money.

Business Value

Intelligent Route Planning: Aircraft can be controlled flexibly, and can provide route simulation functions and facade route planning for single and multiple three-dimensional buildings, effectively improving collection efficiency, flight safety and mold release quality.

Active Calculation And Analysis: The dual-light camera can collect visible light and infrared photos at the same time, providing infrared data analysis basis for project management and construction processes. Infrared results can be used for defect analysis, and visible light results can be used for engineering supervision and earthwork calculation.

Easy Cloud Service Sharing: Project progress, project supervision photos, and project acceptance results can all be shared by multiple terminals and users based on cloud services.

Recommended Autel Products

Solutions 1	EVO Max/EVO II V3 series + Autel Smart Controller V3 + Autel Enterprise + Autel Mapper
Solutions 2	EVO Max/EVO II V3 series + Autel Mapper + EVO Nest + Autel SkyCommand Center

07

Case Studies

China Southern Power Grid - Power Tower Inspection

State Grid, Anhui - Powerline Inspection

Golden Rooster Award - Security Patrol

Emergency Management Bureau - Forest Inspection

Shanghai Harbour Patrol - Law Enforcement

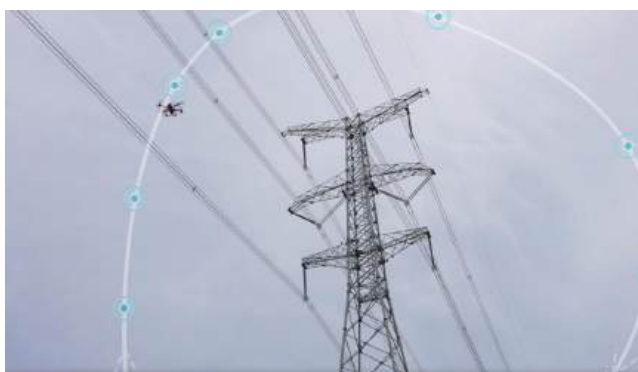
Dongguan Coast Defence - Anti-smuggling

Lee County Sheriff - Public Safety

Huntsville Police Dept. - Public Safety

China Southern Power Grid - Power Tower Inspection

With the excellent performance of the EVO II Dual 640T RTK, it has been widely used in the Guangdong Power Grid. Meanwhile, Autel is jointly developing a small multi-rotor inspection drone with power grid related units.



EVO II Series Highlights

Precise Positioning with RTK, 40 Mins Flight Time, Autonomous Path Planning, 8K Ultra-HD, 5.5 miles (12km) Transmission Range, All-way Obstacle Avoidance.

State Grid, Anhui - Powerline Inspection

According to Xinhua News Agency, Anhui Power Grid performed the Dragonfish Standard fixed-wing inspection drone to take off from the Nest more than 200 kilometers away and carried out "West-East Electricity Transmission Project" ultra-high voltage intensive lines autonomous inspection in June 2022.



Dragonfish Standard Highlights

18.6 miles (30km) Transmission Range increase the manual inspection efficiency by more than 95%; Ultra HD visible light and thermal radiometric combines with AI to timely detect the powerline faults, dangerous construction and fire hazards.

Golden Rooster Award - Security Patrol

The Dragonfish Standard was adopted to conduct security patrol by the Xiamen Police for the Golden Rooster Award Closing Ceremony, which ensured the smooth and safe of the whole process with its realtime video and image feed in December 2021.



Dragonfish Standard Highlights

3 Mins quick assembly and 126 Mins flight time enables the fast response to emergencies at any time and long time uninterrupted patrol; 4K 50x Highest optical zoom and thermal imaging detects the suspect and fire hazards at any time, works with SkyCommand Center to realize the remote command and deployment.

Emergency Management Bureau - Forest Inspection

Dapeng is the first district that applies the Dragonfish Standard into daily monitoring and inspection. It enables effective emergency rescue and forest inspection with 20 minutes flight district coverage by virtue of its intelligent flight control, gimbal, image analysis and other technologies with the combination of long-time flight, infrared detection and HD image transmission.



Dragonfish Standard Highlights

Lightweight design and 126 Mins flight time reduce the complexity of forest resource survey, logging planning and inspection. Infrared thermal imaging enables the autonomous patrol of key areas, real-time video feed ensures timely detection of temperature anomalies and fire hazards, works with SkyCommand Center to facilitate remote command and mobilization.

Shanghai Harbour Patrol - Law Enforcement

The Dragonfish Standard inspection path planned through flight control software to conduct autonomous inspection, the image identification enables the smart tracking and evidence collection of the suspicious ships, then helps the Police to figure out their routes and characteristics as well as formulate arrest plans based on the real-time images and video feed.



Dragonfish Standard Highlights

30km Image transmission, autonomous inspection, AI identification and tracking, 3 mins quick assembly, payloads flexibility.

Dongguan Coast Defence - Anti-smuggling

The Dragonfish combined with AI technology to perform regular patrol, routes planning can satisfy routine regulatory needs, and the flight direction can be adjusted via ground station to comprehensively inspect every detail. The real-time image feed facilitates the communication, connection and collaboration between border guards, drones and security center.



Dragonfish Standard Highlights

3 Mins quick assembly and 126 Mins flight time enables the fast response to emergencies at any time and long time uninterrupted patrol; Autonomous inspection and AI identification & tracking contributes to the suspect detection at any time, works with SkyCommand Center to realize the remote command and deployment.

Lee County Sheriff

Complement Manned Aircraft

Lee County, Florida was the first law enforcement department in the U.S. to adopt a Dragonfish drone to augment its helicopter fleet, increasing response options and providing convenient, low-cost aerial overwatch.



Products



Dragonfish Standard



Ground Station



DG-T3



Hurricane Response

The department used drones to survey damage and search for missing people in the wake of Hurricane Ian in 2022.



High-Profile Cases

The Dragonfish was used to search for Brian Laundrie during the highly publicized Gabby Petito case.

About

Lee County Sheriff, Lee County, Florida

- Southeast Florida
- 1,600 sworn officers
- 700,000 residents
- Serving 6 towns



"You can't hide from this thing (Dragonfish)"

Carmine Merceno, Sheriff



Huntsville Police Dept.

Critical to Mission Success

The Huntsville, Alabama Police Department carries on the Rocket City's legacy by leading the region in drone adoption. Based on their success, other departments in the region are adopting Autel drones, increasing interdepartmental operability.



Products



EVO II Series



Smart Controller



640T Thermal



Versatile Toolsets

5,000 flights in 3 years. Missions include photogrammetry, drug interdiction, overwatch, and more.



Valued Asset

Pilots are advised to treat their drones like K-9s. Monthly trainings ensure pilots are experts with their tools. drug interdiction, overwatch, and more.



Rapid Response

Precinct-based deployment means drones can typically respond to a scene within 5 minutes. Locally-based pilots have greater familiarity with the neighborhoods they're flying in.

About

Huntsville Police Dept., Huntsville, Alabama

- Northern Alabama
- 216,000 population
- 500 sworn officers
- 26 EVOs, 29 pilots



Pine Pond Fire

Rapid Response

In August 2022, firefighters in Texas got support from a Dragonfish while fighting the Pine Pond Fire. It provided precise intelligence that helped commanders deploy assets faster, safer, and more efficiently.



Products



Dragonfish Standard



Ground Station



DG-L20T



Grid Coordinate Display

Exact coordinates on the camera view, allowed assets to be deployed efficiently.



Range and flight time

2+ hour flight time allowed for rapid response and full coverage of the area.



Thermal surveillance

Multispectral cameras and precise positioning allowed commanders to monitor crews on the ground and check at-risk homes.

About

Pine Pond Fire, Bastrop, Texas

- 700 acres burned
- 10 days to contain
- 150 responders, from 30 depts
- 0 deaths, 0 homes destroyed

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