



Autel Robotics EVO II Dual 640T RTK V3

The Autel EVO II Dual 640T RTK V3 is the ideal solution for professionals requiring both thermal data and centimetre-level positioning accuracy. This drone features a high-resolution thermal camera (640×512), a 50 MP visual camera and an RTK module mounted on top of the chassis. It is therefore indispensable for detailed inspections of solar panels and high-voltage power lines, as well as mapping missions where the precise geolocation of heat sources is essential. The V3 series also benefits from improved transmission and the high-end Smart Controller V3.

- Combines phase detection, contrast detection and object detection for lightning-fast, precise focusing
- 1 TB of storage – Maximum capacity for professionals working with 6K/8K video or RAW files
- Waypoint Pro and obstacle detection in all directions

Features of the Autel EVO II Dual 640T RTK V3

- Centimetre-accurate RTK positioning thanks to the integrated RTK module, with real-time data and support for PPK (Post-Processing Kinematic)
- Reduced need for ground control points (GCPs), significantly speeding up workflows for surveyors and inspectors
- Dual-sensor camera system comprising a radiometric thermal camera (640×512 @ 30 Hz) and a 50 MP 1/1.28" Sony visual sensor
- Simultaneous recording of thermal images and 8K visual video, with Picture-in-Picture mode
- Precise temperature measurement from –20 °C to 550 °C with a margin of error of just ±3 °C
- Autel Skylink 2.0 providing a robust video link up to 15 km (CE), even in highly disrupted environments
- Advanced safety with 360° obstacle avoidance thanks to 19 sensor groups
- Autel V3 intelligent controller 7.9" OLED screen



Autel EVO 2 Dual 640T RTK V3 Specifications

- Drone**

Weight (with propellers, battery and RTK module)	1250g $\pm$ 0.5g (EVO II Dual 640T RTK V3)
Maximum take-off weight	4.41 lb + (1999 g)
Dimensions (L * W * H)	Folded: 230 $\times$ 130 $\times$ 143 mm; 9.1 $\times$ 5.1 $\times$ 5.6 inches Unfolded: 457*558*143mm; 18*22*5.6 inches
Wheelbase	397 mm
Maximum service ceiling altitude	7,000 m
Maximum climb rate	8 m/s (Recreational)
Maximum descent rate	4 m/s (Recreational)
Maximum horizontal flight speed	20 m/s (Recreational)
Maximum flight distance (no wind)	21 km
Maximum angular velocity	120°/s
Maximum pitch angle	33° (Risk)
Max. flight time	36 min
Max. hover time (no wind)	32 min
Operating temperature	14°F to 104°F (-10°C to 40°C)
Maximum wind resistance	27 mph, 12 m/s (take-off and landing)
Operating frequency	902–928 MHz (FCC only) 2.400–2.4835 GHz 5.725–5.850 GHz
Transmission power (EIRP)	900M FCC/ISED: $\leq$ 31 dBm 2.4 GHz FCC/ISED: $\leq$ 32 dBm SRRC/CE/MIC/RCM: $\leq$ 20 dBm 5.8G FCC/ISED/SRRC/MIC: $\leq$ 33 dBm CE/RCM: $\leq$ 14dBm
Hovering accuracy	When RTK is enabled and operating normally: Vertical: $\pm$ 0.1 m; Horizontal: $\pm$ 0.1 m Vertical: $\pm$ 0.1 m (when visual positioning is operating normally); $\pm$ 0.5 m (when GNSS is operating normally) Horizontal: $\pm$ 0.3 m (when visual positioning is functioning normally); $\pm$ 1.5 m (when GNSS is operating normally)
Image position compensation	The position of the camera centre relative to the phase centre of the airborne A-RTK antenna, under the body coordinate system: (-2.63, 0.31, 83.5) mm, and the EXIF coordinates of the photo have been compensated. The positive XYZ axes of the body coordinate system point forwards, to the right and downwards from the aircraft, respectively.
Internal storage	8GB
SD storage	Supports up to 256 GB (UHS-3 or Class 10)



Autel EVO 2 Dual 640T RTK V3 Specifications

• GNSS

High-sensitivity single-frequency GNSS	GPS + BeiDou + Galileo (Asia) GPS+GLONASS+Galileo (Other regions)
High-precision multi-system, multi-frequency GNSS RTK	Frequency points used: GPS: L1/L2; GLONASS: L1/L2; Beidou: B1/B2; Galileo: E1/E5 First positioning time: <50 s Positioning accuracy: Vertical 1.5 cm + 1 ppm (RMS); Horizontal 1 cm + 1 ppm (RMS) 1 ppm means that the error increases by 1 mm for every 1 km travelled by the aircraft

• Gimbal

Gimbal	3-axis stabilisation
Mechanical range	Tilt: -135° to +45°; Pan: -100° to +100°
Controllable rotation range	Tilt: -90° to +30°; Pan: -90° to +90°
Maximum control speed (tilt)	300°/s
Angular vibration range	± 0.005°

• Remote control and image transmission

Operating frequency	902–928 MHz (FCC only) 2.400–2.4835 GHz 5.725–5.850 GHz
Transmission power (EIRP)	FCC: ≤33 dBm CE: ≤20 dBm at 2.4 GHz, ≤14 dBm at 5.8 GHz SRRC: ≤ 20dBm@2.4G, ≤ 33dBm@5.8G/5.7G
Maximum transmission range (line of sight, no interference)	FCC: 9.3 miles (15 km) CE: 5 miles (8 km)
Display screen	2048x1536 60fps
Expert	5800mAh
Operating time	~3 hours (max. brightness) ~4.5 hours (50% brightness)
Charging time	120 minutes
Internal storage	128GB ROM



Autel EVO 2 Dual 640T RTK V3 Specifications

• Detection system

Detection system type	Omnidirectional detection system
The Front	Precise measurement range: 0.5–18 m Effective detection speed: <12 m/s Field of view: Horizontal: 60°, Vertical: 80°
Rear	Precise measurement range: 0.5–16 m Effective detection speed: <12 m/s Field of view: Horizontal: 60°, Vertical: 80°
Upward	Precise measurement range: 0.5–10 m Effective detection speed: <5 m/s Field of view: Horizontal: 65°, Vertical: 50°
Downward	Precise measurement range: 0.5–10 m Effective detection speed: <5 m/s Field of view: Horizontal: 100°, Vertical: 80°
Left and right	Precise measurement range: 0.5–10 m Effective detection speed: <5 m/s Field of view: horizontal: 65°, vertical: 50°
Operating environment	Forward, Backward and Sides: Surface with a clear pattern and adequate lighting (lux > 15) Upwards: Detects diffuse reflective surfaces (>20%) (walls, trees, people, etc.) Downwards: Surface with a light-coloured pattern and adequate lighting (lux > 15) Detects diffuse reflective surfaces (>20%) (walls, trees, people, etc.)

• EVO II Dual Thermal Camera 640 RTK V3

Sensor	Uncooled VOx microbolometer
Lens	Field of view H33°V26° Focal length 13mm
Zoom	2–3 times faster
Pixel size	12μm
Wavelength range	8 to 14 μm
Temperature range	High gain mode: -20° to +150° Low-gain mode: 0° to +550°
Temperature measurement accuracy	± 3 °C or ± 3% of reading (whichever is greater) @ Ambient temperature -20°C to 60°C
Accurate temperature Measurement distance	2–20 metres
Video resolution	640x512 @ 25fps
Video format	MOV / MP4 (supports H.264/H.265)



Autel EVO 2 Dual 640T RTK V3 Specifications

Camera resolution	Infrared mode: 640*512 Picture-in-picture mode: 1920*1080, 1280*720
Photo mode	Single shot Burst shooting: 3/5 frames, 3 is the default Time Lapse: JPG: 2s/5s/7s/10s/20s/30s/60s
Photo format	JPG (with irg file)

• EVO II Dual Visual Camera 640T RTK V3

Sensor	1/1.28" (0.8") CMOS; 50 million effective pixels
Lens	FOV: 85° 35 mm equivalent focal length: 23 mm Aperture: f/1.9 Focus range: 0.5 m to infinity (with autofocus)
ISO range	Video: 100–64000 Photo: 100–6400
Shutter speed	Photo mode: 1/8000 ~ 8s Other: 1/8000 ~ 1/frame rate
Zoom	1-16x (up to 4x lossless zoom)
Photo mode	Single shot/burst mode/AEB/Time Lapse/HDR imaging
Maximum photo size	8192×6144 (4:3) 4096×3072 (4:3) 3840×2160 (16:9)
Image Format	JPG (default) / DNG / JPG+DNG
Video format	MOV/MP4
Video resolution	3840×2160P60/P50/P48/P30/P25/P24 2720×1528P60/P50/P48/P30/P25/P24 1920×1080P60/P50/P48/P30/P25/P24
Max. bitrate	80 Mbit/s
Supported file system	FAT32 / exFAT

• Expert

Capacities	7100 mAh
Voltage	11.55 V
Battery type	LiPo 3S
Energy	82 Wh
Weight	365 g
Charging temperature range	5 °C to 45 °C
Storage temperature and humidity	-10–30 °C, 65±20% RH
Recommended storage temperature	22–28 °C
Maximum load power	93W
Charging time	90 minutes



Autel EVO 2 Dual 640T RTK V3 Specifications

- **Charger**

Input	100–240 V, 50/60 Hz, 1.5 A
Output	13.2 V = 5 A 5V=3A 9V=2A 12V=1.5A
Voltage	13.2 ± 0.1V
Rated power	66W

- **Multi-Charger**

Voltage	13.2 V
Charging temperature range	5°C to 45°C

Autel EVO II Pro RTK V3 Robust Kit



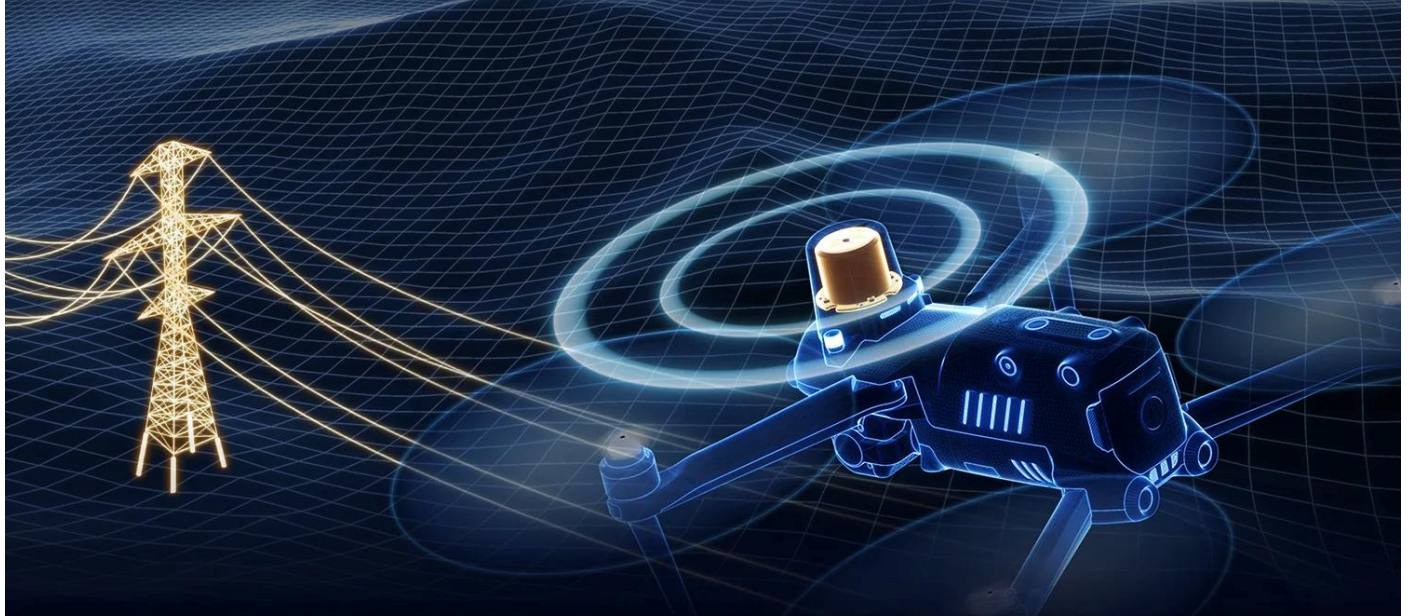


EVO II Dual RTK V3 Features in pictures

Autel latest EVO II Pro Dual 640T RTK V3 bundle features a brand-new RTK module for 2026, which provides real-time centimeter-level positioning data within three minutes and supports kinematic post-processing (PPK). The drone can record raw satellite observation data, camera exposure settings and more. The positioning system supports RTK base stations and the NTRIP RTK network, enabling accurate and stable data acquisition in complex operating environments.

CENTIMETER-LEVEL POSITIONING SYSTEM

Brand-new RTK module, which provides real-time centimeter-level positioning data, and supports Post-Processing Kinematic (PPK).



1cm+1ppm

RTK Horizontal
Positioning Accuracy



1.5cm+1ppm

RTK Vertical Positioning
Accuracy



High-precision

Positioning System



No Need

for Ground Control Points



Omnidirectional

Obstacle Avoidance



A-RTK

Base Station

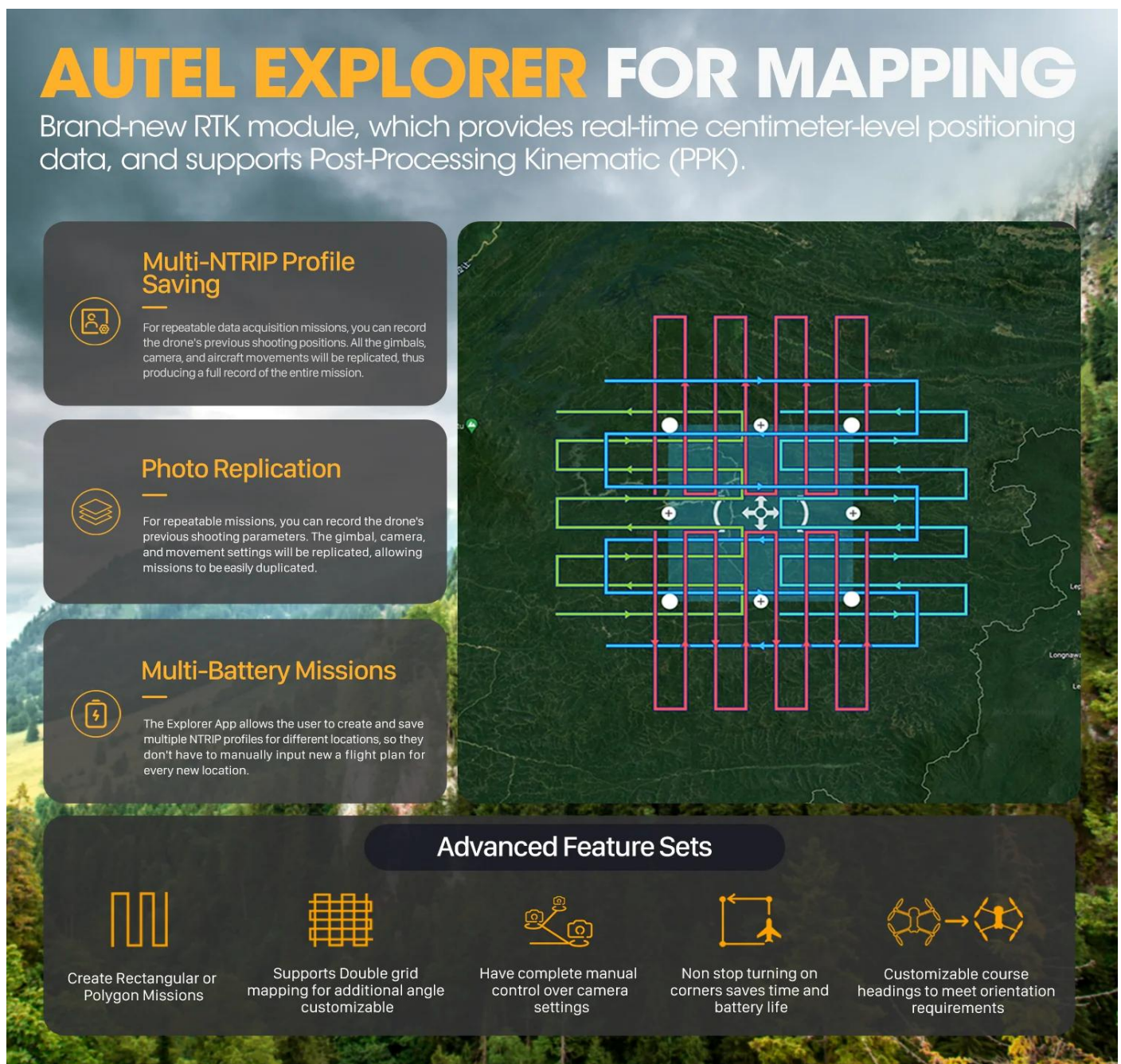
Autel Explorer for mapping

Create rectangular or polygonal missions **without stopping** to turn corners, supported by dual-grid mapping for additional angles

Multi-NTRIP profile recording: For repeatable data acquisition missions, you can record the drone's previous shooting positions. All gimbal and camera movements will be replicated, producing a complete record of the entire mission.

Photo replication: For repeatable missions, you can save the drone's previous shooting settings. Gimbal, camera and movement settings will be replicated, making it easy to duplicate missions.

Multiple missions: The Explorer app allows the user to create and save multiple NTRIP profiles for different locations, so they do not have to manually enter a new flight plan for each new location.



AUTEL EXPLORER FOR MAPPING

Brand-new RTK module, which provides real-time centimeter-level positioning data, and supports Post-Processing Kinematic (PPK).

Multi-NTRIP Profile Saving

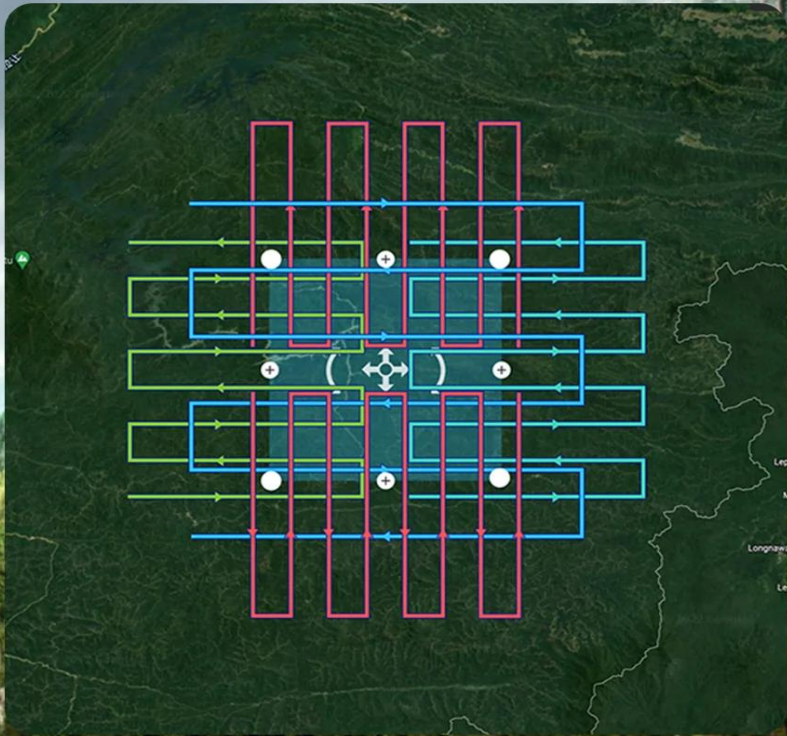
For repeatable data acquisition missions, you can record the drone's previous shooting positions. All the gimbals, camera, and aircraft movements will be replicated, thus producing a full record of the entire mission.

Photo Replication

For repeatable missions, you can record the drone's previous shooting parameters. The gimbal, camera, and movement settings will be replicated, allowing missions to be easily duplicated.

Multi-Battery Missions

The Explorer App allows the user to create and save multiple NTRIP profiles for different locations, so they don't have to manually input new a flight plan for every new location.



Advanced Feature Sets



Create Rectangular or Polygon Missions



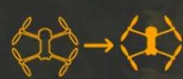
Supports Double grid mapping for additional angle customizable



Have complete manual control over camera settings



Non stop turning on corners saves time and battery life



Customizable course headings to meet orientation requirements



EVO II Dual RTK V3 Features in pictures

Dual camera: precise temperature measurement

The EVO II Dual 640T RTK V3 is equipped with a high-resolution thermal camera and a brand-new Sony 1/2.8" 50-megapixel RYYB sensor.

Temperature alarm: monitors the screen temperature in real time. The system alerts the user when the temperature reaches a defined threshold.

Isotherm: set a temperature range and the Autel system will detect all objects within the selected temperature range.

Image enhancement: supports real-time adjustment of brightness, contrast and image detail. The system will highlight all objects within the temperature target.

DUAL CAMERAS FOR ACCURATE TEMPERATURE MEASUREMENT

- 640x512 30Hz New Thermal Imaging Sensor

Thermal Camera



640X512
HIGH-RESOLUTION



13MM
FOCAL LENGTH LENS



16X
DIGITAL ZOOM



12 μM
PIXEL PITCH

8K Visual Camera



8K
ULTRA HD



1/1.28"(0.8")
CMOS



50M
EFFECTIVE PIXELS



F/1.9
APERTURE



1-16X
(UP TO 3X LOSSLESS ZOOM)



80Mbps
MAX BITRATE



EVO II Dual RTK V3 Features in pictures

High-resolution thermal imaging sensor

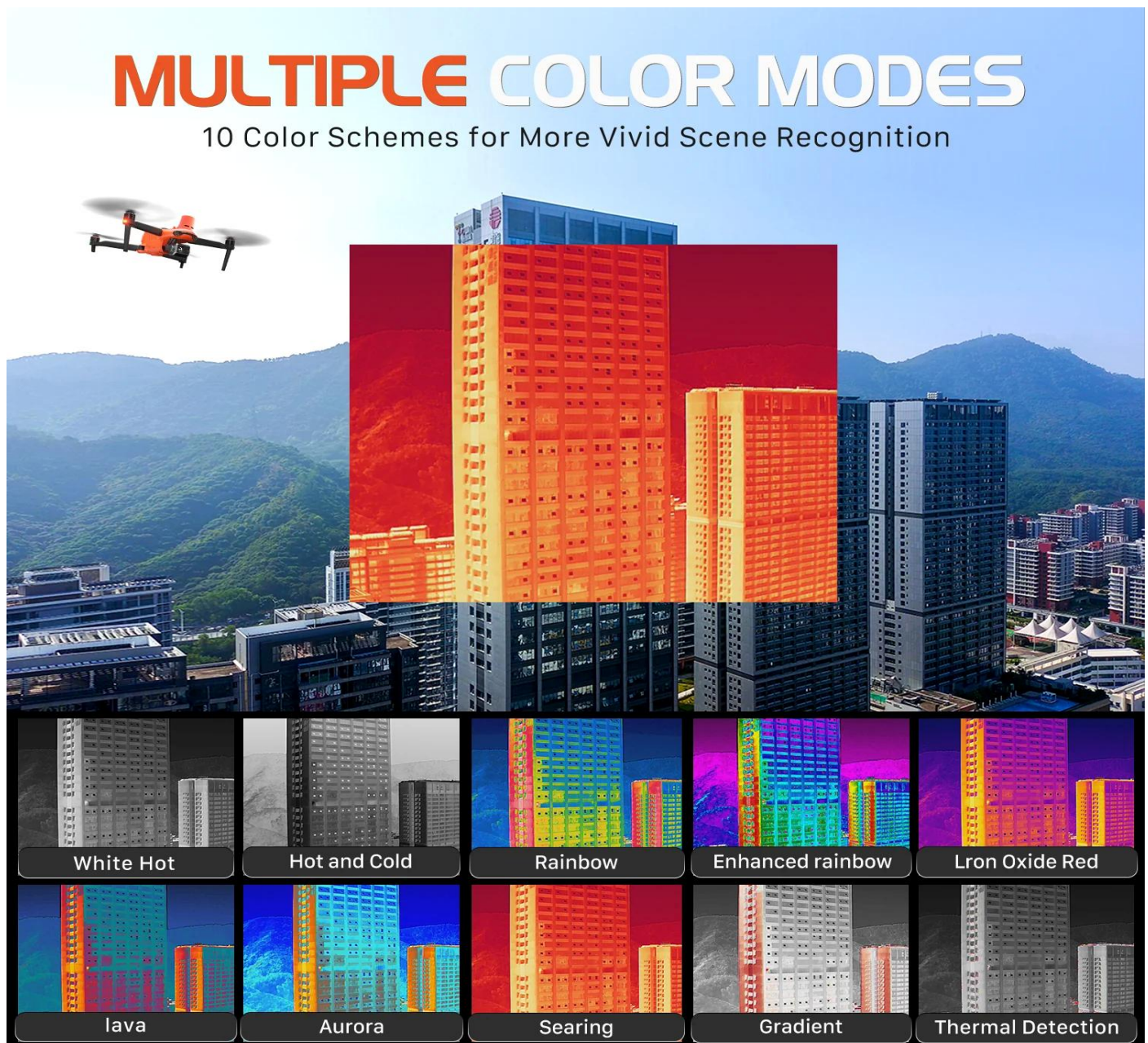
Equipped with a 640x512 high-resolution thermal imaging camera featuring a 13 mm focal length lens and 16x digital zoom, it is easy to observe distant targets. The system uses a new image processing algorithm, making thermal imaging details clearer and more discernible than competitors with similar resolution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

Accurate temperature measurement

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

10 multi-temperature measurement modes

Warm white | Cold and warm | Rainbow | Enhanced rainbow | Iron arc | Lava | Arctic | Burning | Gradation | Heat detection





EVO II Dual RTK V3 Features in pictures

Picture-in-picture

The thermal drone can provide dual-view monitoring with this image-in-image mode; it can measure the central temperature within the image, or measure temperatures at the edges according to your needs, including regional temperatures (the maximum and minimum temperatures in the area), and can also set temperature alarms.

PICTURE-IN-PICTURE MODE

DUAL SITUATION OBSERVATION

FFC

33.5°C

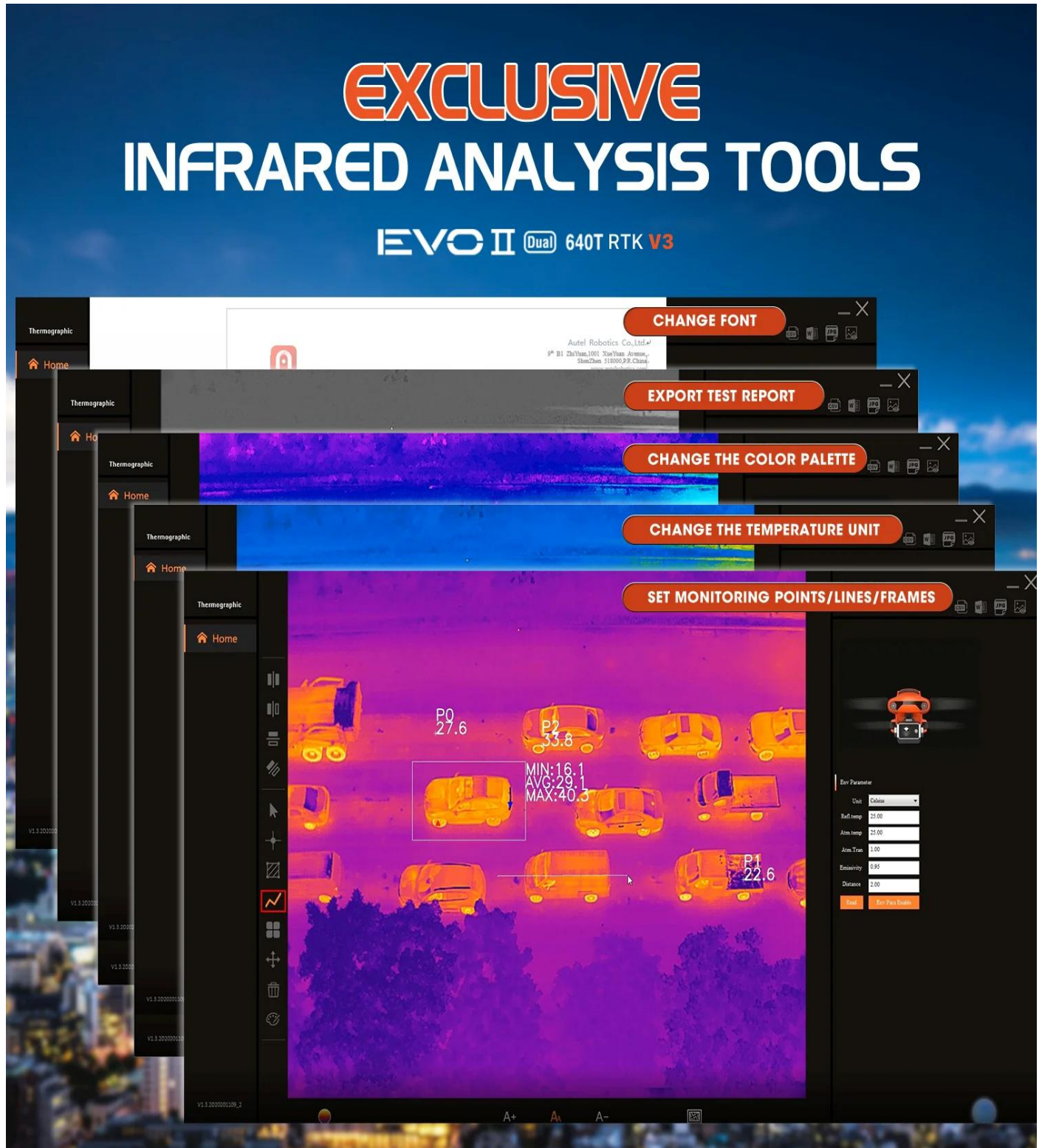
Central Temperature Measurement	Real-time Display of the Temperature in the Center Area of the Screen.
Pointing Temperature Measurement	Click on the Screen and Display the Temperature of the Selected Object in Real Time.
Regional Temperature Measurement	Dynamic Display of Average Temperature, Maximum Temperature and Minimum Temperature in the Area.
Temperature Alarm	Monitor the screen temperature in real time, when the temperature reaches the set threshold, the system will automatically prompt



EVO II Dual RTK V3 Features in pictures

Powerful infrared thermal analysis tool – IRPC TOOL

This free temperature measurement analysis tool has been developed specifically for the 640T and allows users to quickly import images, edit and analyse temperature measurements, and generate detailed reports for sharing and collaboration.

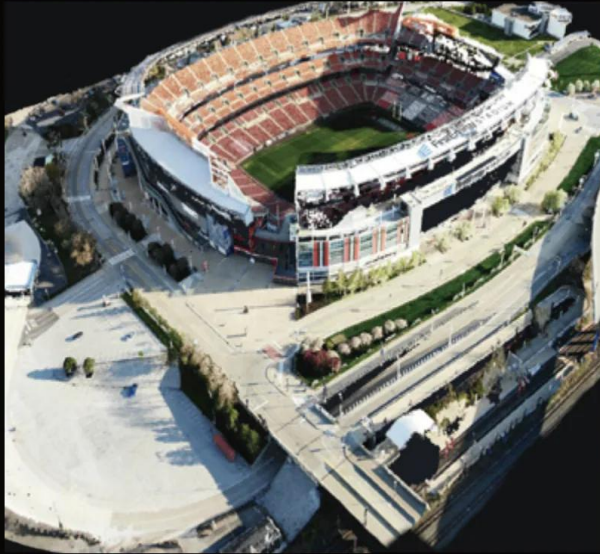




EVO II Dual RTK V3 Features in pictures

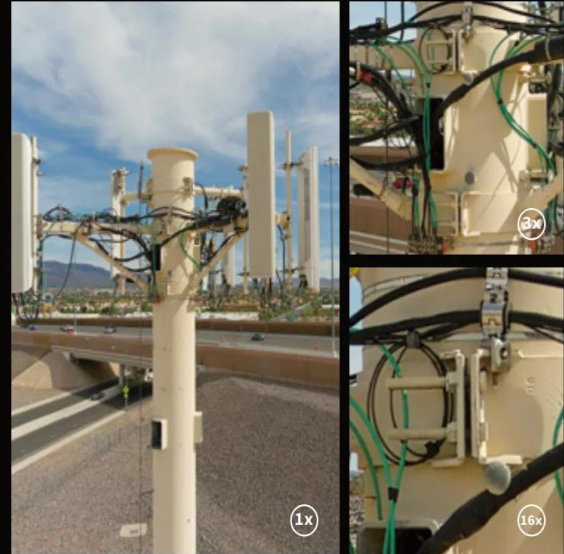
Zoom in for details

16x zoom for details: EVO II Pro V3 supports 4x lossless zoom and 16x digital zoom. Get clear and accurate information.



Optimized for Software Image Correction

EVO II PRO RTK V3 has optimized its datasets to be easily adjusted with post processing software applications.



Zoom in for the Details

EVO II PRO RTK V3 has optimized its datasets to be easily adjusted with post processing software applications.



EVO II Dual RTK V3 Features in pictures

Sky link 2.0 video transmission

The EVO II PRO V3 is upgraded with Autel brand-new sky link 2.0 video transmission technology.

15KM HD video transmission. **QHD** critical details with QHD video within 1 km

2.4G / 5.8G Fewer signal drops and improved anti-interference capabilities.

AUTEL SKYLINK 2.0 VIDEO TRANSMISSION



15KM

Transmission Distance

2.7K

Transmission Quality

2.4GHz / 5.8GHz / 900MHz

Transmission Frequency



AUTEL SMART CONTROLLER V3



7.9-Inch HD
Touch Screen



Portable
and Highly-Reliable



4.5 hours
long-lasting work



-4 °F to 104 °F
Temperature Range



2000 nits
Maximum Brightness



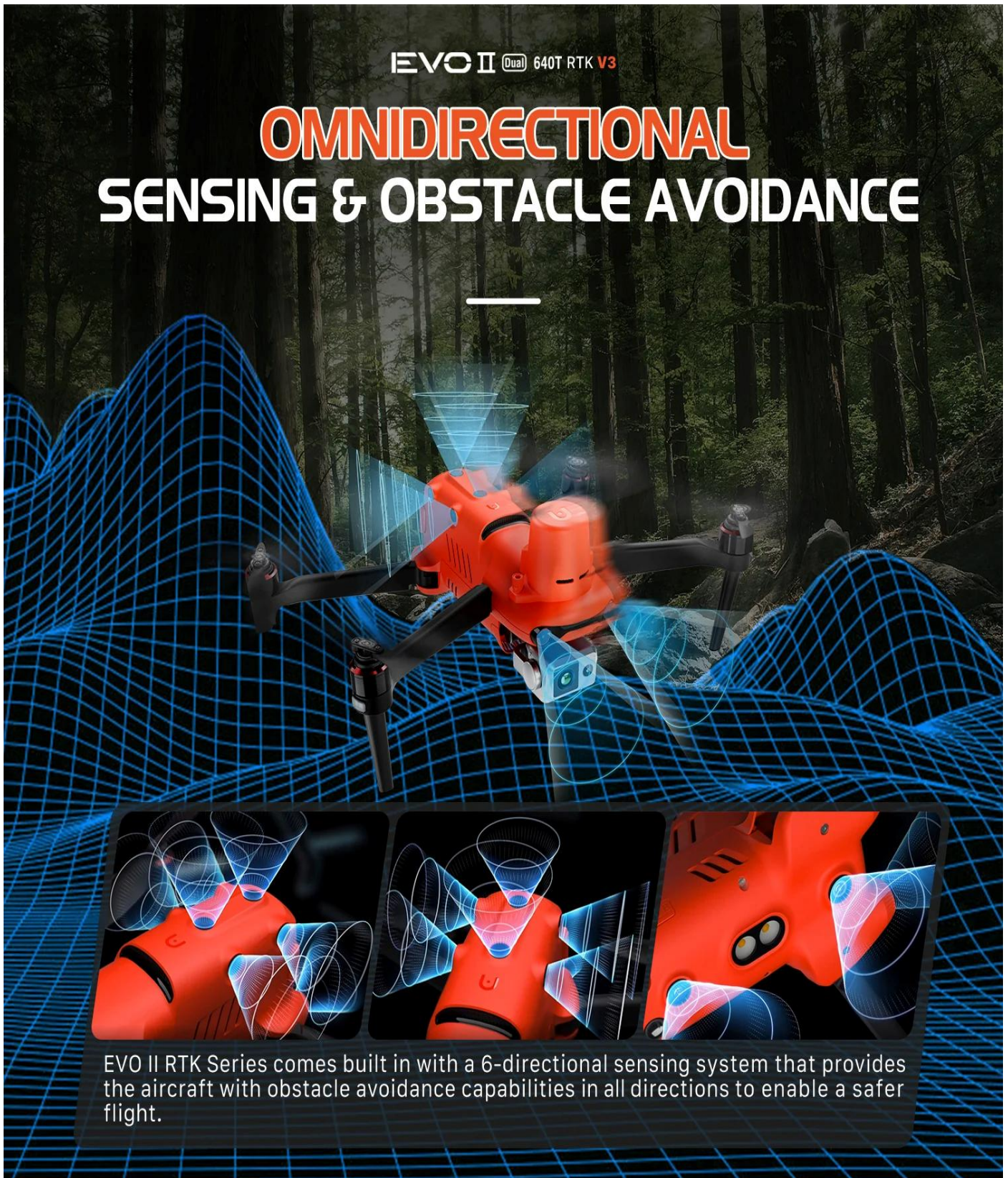
IP43
Resistance



EVO II Dual RTK V3 Features in pictures

360° obstacle avoidance

Equipped with 19 sensor groups, including 12 visual sensors, the main camera, ultrasonic sensors, IMUs and other sensors, it can create three-dimensional maps and plan routes in real time.



EVO II RTK Series comes built in with a 6-directional sensing system that provides the aircraft with obstacle avoidance capabilities in all directions to enable a safer flight.



EVO II Dual RTK V3 Features in pictures

Safe and robust

Quick deployment: The EVO II Dual RTK V3 takes 45 seconds from unpacking to take-off.

Maximum wind resistance of 27 mph, maximum flight time of 38 minutes

No forced updates: The EVO II Pro RTK V3 does not need to be running the latest version of the hardware or app to take off.

Autel V3 Smart Controller

The high-brightness 7.9-inch, 2000-nit display is clearly visible even in direct sunlight. The customised Android system offers additional flexibility with third-party apps, and an IP43 rating ensures performance in all weather conditions.

EVO II Dual 640T V3

Autel Smart Controller V3

 Portable and Highly-Reliable	 7.9-Inch HD Touch Screen	 2000 nits Maximum Brightness
 4.5 hours long-lasting work	 -4 °F to 104 °F Temperature Range	 IP43 Resistance

Areas of application

WIDE APPLICATIONS FOR 640T V3 RTK THERMAL UAV

Brand-new RTK module, which provides real-time centimeter-level positioning data, and supports Post-Processing Kinematic (PPK).

Photogrammetry



Legal Hunting



Security



Search & Rescue



Firefighting



Chemical



Roof Inspection



Powerline Inspection

