




AUTEL EVO2-640T-RTK-V3-BUN Rugged Drone Instruction Manual

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AUTEL EVO2-640T-RTK-V3-BUN Rugged Drone



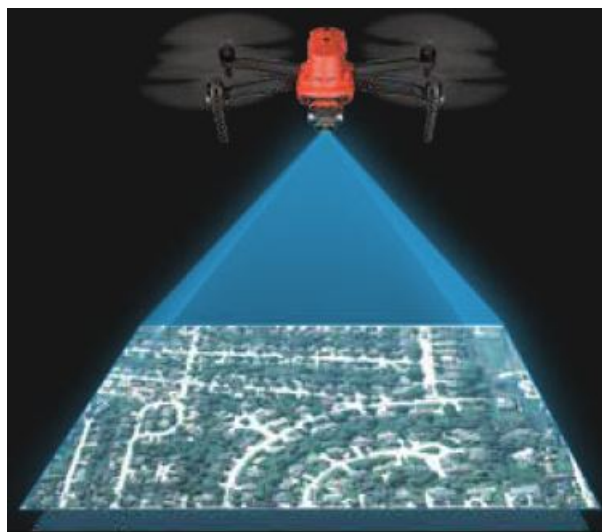
Centimeter-Level Positioning

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 the RTK base station and NTRIP RTK network, which helps to achieve accurate and stable data acquisition in complex operation environments.

-  RTK Horizontal Positioning Accuracy: 1cm+1ppm
-  RTK Vertical Positioning Accuracy: 1.5cm+1ppm

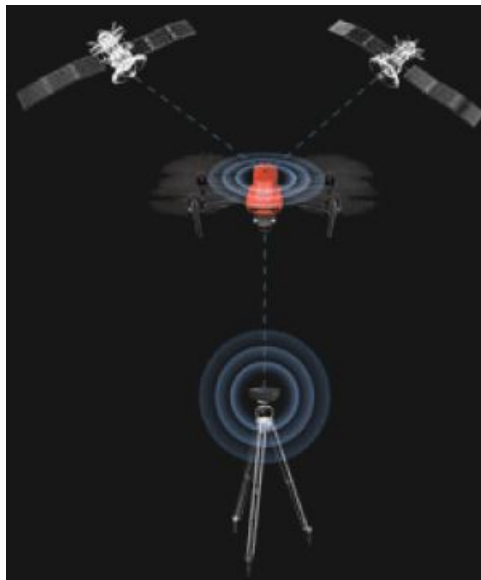
No GCP Required

- EVO II RTK Series V3 connects to the NTRIP network and does not need GCPs to provide centimeter-grade accuracy.



3rd Party Base Station Support

- EVO II RTK Series V3 supports all NTRIP-compatible base stations.



Robust Partnerships



Autel Explorer for Mapping

Multi-NTRIP Profile Saving



- The EVO II RTK Series V3 returns to where it left off in multi-battery missions without starting from the beginning.

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.

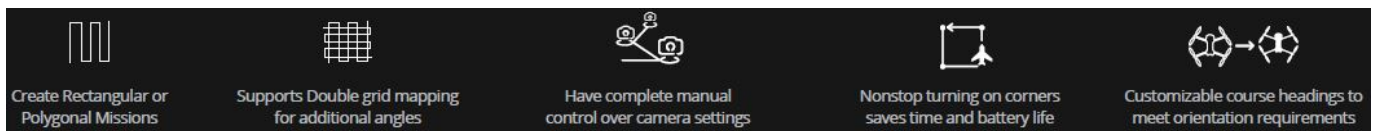
Multi-Battery Missions



- The Explorer app allows the user to create and save multiple NTRIP profiles for different locations without having to manually input account info for every travel.



Advanced Feature Sets



EVO II Pro ATk V3

Capture Every Detail

- 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.

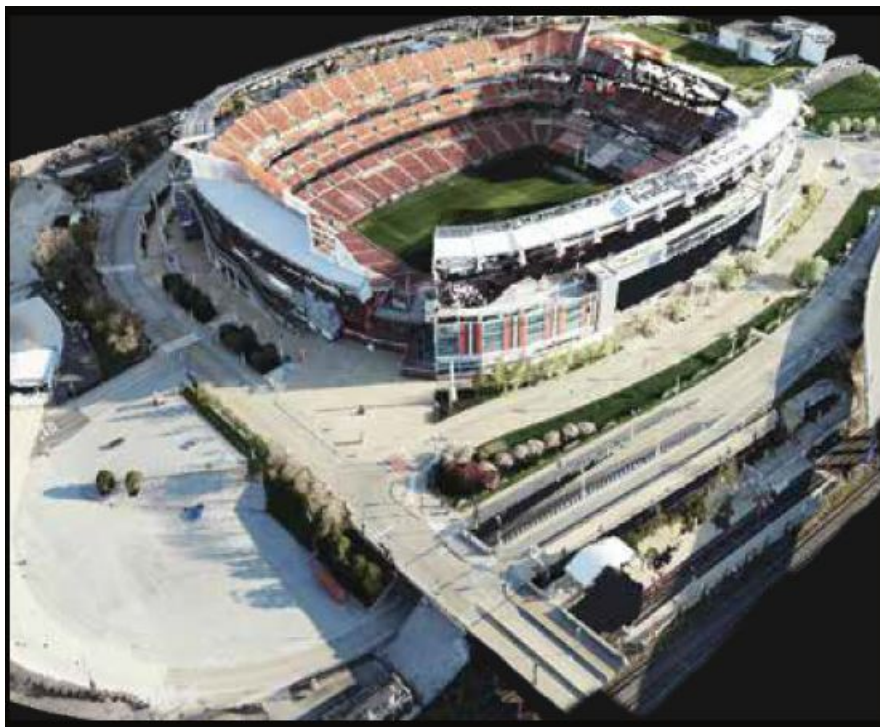
F2.8~F11 Adjustable Aperture

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



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 Detail

- EVO II Pro V3 supports 4x lossless zoom and 16x digital zoom.
- Obtain clear intel from farther away without detection.



EVO II Dual 640T RAT 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 640*512 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 a similar resolution and hardware.

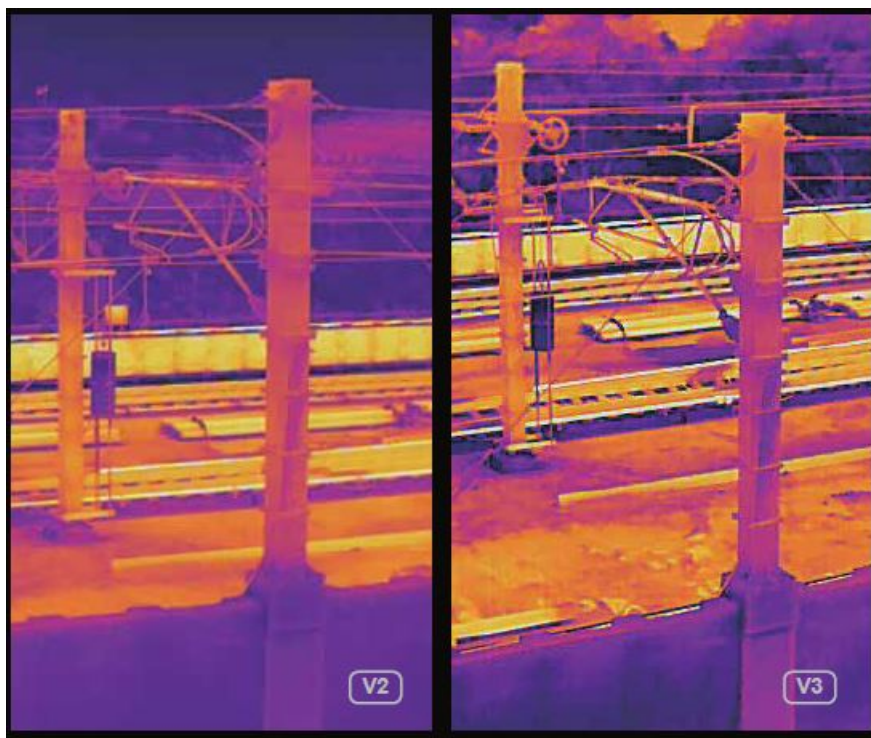
Precise Temperature Measurement

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



New Image Processing Algorithm

The V3 system uses a brand new image processing algorithm, making thermal imaging details sharper and more discernible than the competition with a similar resolution and hardware.



30hz Refresh Rate for Videogrammetry

- The EVO II RTK Dual provides high refresh rates for accurate and detailed 3D thermal maps.



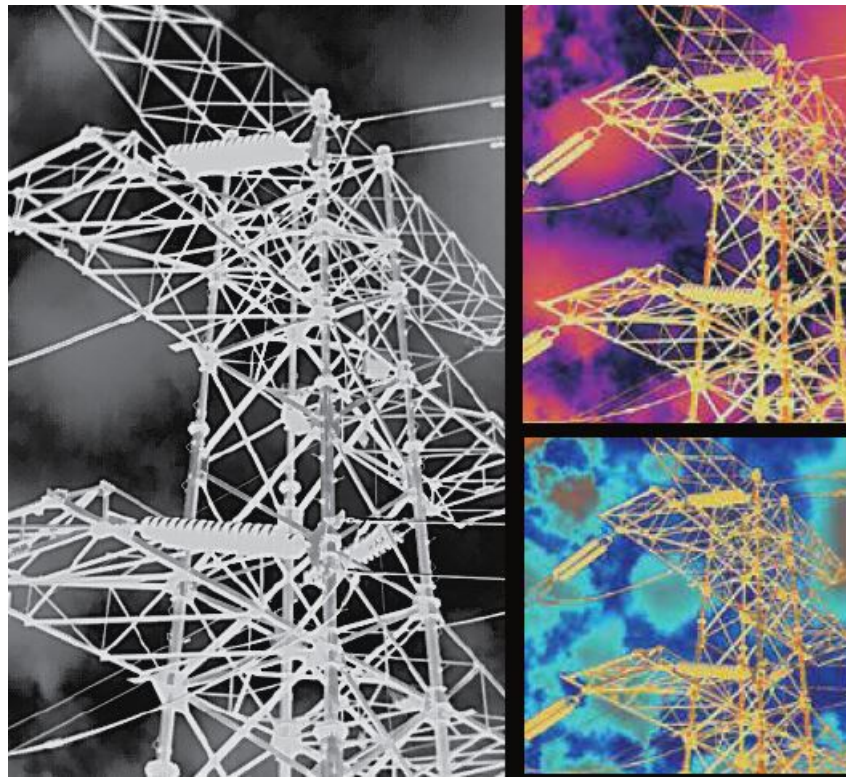
Zoom in for the Detail

- Focus in on critical areas with the EVO II RTK's 4x lossless zoom and 16x digital zoom.



Multiple Color Palettes

- White Hot | Cold and Hot | Rainbow | Enhanced Rainbow | Iron bow | Lava | Arctic | Searing | Gradation | Heat Detection



SkyLink 2.0 Video Transmission

- EVO II RTK Series V3 is upgraded with Airtel's all-new SkyLink 2.0 Video Transmission technology.

15KM

- Fly farther with HD video transmission up to 15km.

QHD

- Obtain critical details with QHD video within 1km.

2.4G/5.8G/900MHz

- Support tri-band communication and can automatically frequency hop for maximum anti-interference capability.
- 900MHz is only applicable to FCC countries.



360° Obstacle Avoidance

- Equipped with 19 groups of sensors, including 12 visual sensors, the main camera, ultrasound, and IMUs.
- The EVO II V3 can build three-dimensional maps and plan paths in real-time.



- Please refer to the manual for details on obstacle avoidance and its limitations, which may or may not work in limited lighting environments, under direct strong sunlight, or across thin tree branches or wires.

Portable and Easy to Use

Compact Design



- The EVO II RTK Series V3 folds up for ease of transport and deployment.

Trouble-Free Daily Workflows




- Deploy in under a minute. The EVO II 640T V3 can go from its case to the air in 45 seconds.




Safe and Sturdy


Level 8 Wind Resistance

-  EVO II's smaller cross section and powerful motors allow greater stability and control in windy conditions.


38 Minutes Flight Time

-  Enjoy up to 38 minutes of flight time – 20%~30% more than the next leading competitor for more area coverage and longer missions.

No Forced Updates

-  EVO II RTK Series V3 does not need to be on the latest hardware or app version in order to take off, unlike other competitors.


No-Fly Zones

-  The EVO I1 V3 series does not have no-fly zones, so pilots can take off anywhere.



Autel Smart Controller V3

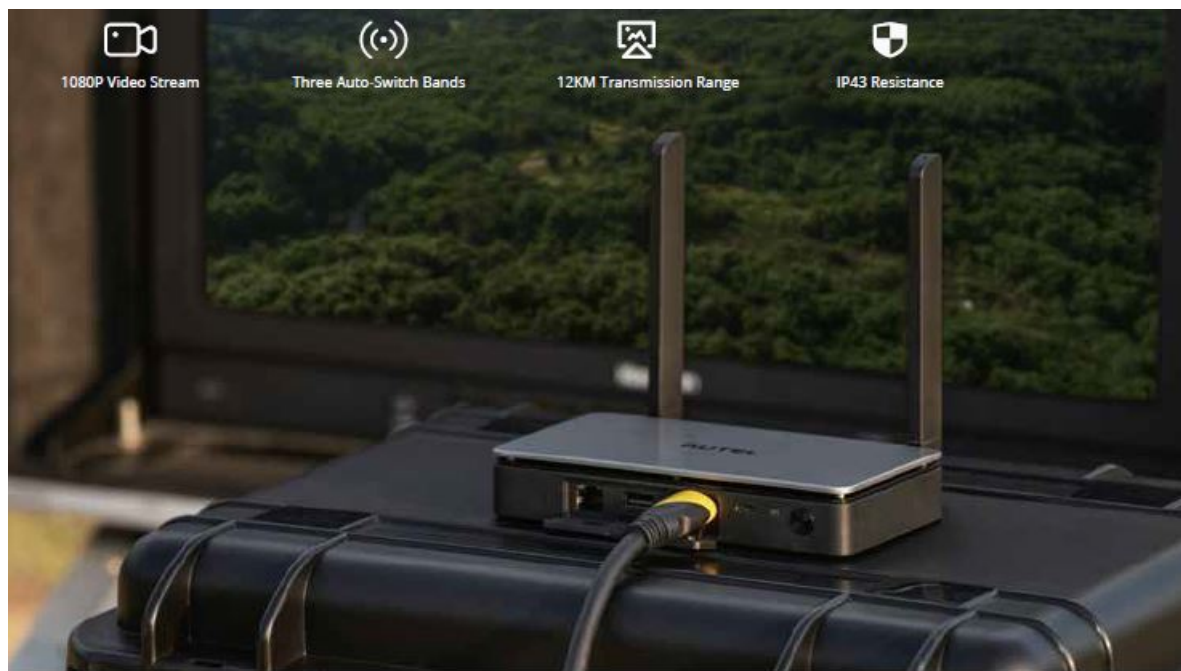
Smart Controller V3's 7.9-inch, 2000nit high-brightness screen is clearly visible even under direct sunlight. SkyLink 2.0 Transmission technology guarantees long-distance operations from up to 15km away and enhances anti-interference abilities with triple band frequency hopping. The customized Android system allows for additional flexibility with 3rd party apps and an IP43 rating ensures all-weather performance.

-  15km Transmission Range
-  Up to 4.5 Operating Hours
-  Maximum 2000nit Brightness
-  IP43 Resistance

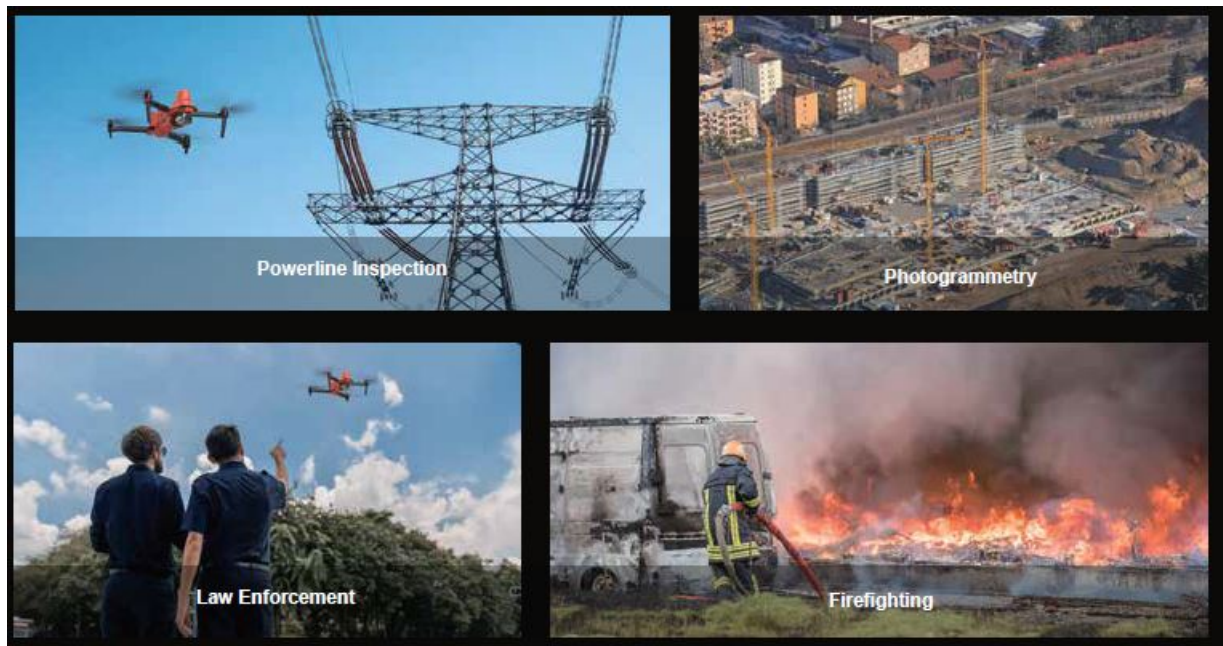


Broadcast with Live Deck 2

Broadcast live mission intel to other personnel in the operation for enhanced situational awareness and faster decision making. The EVO II Dual 640T V3 is compatible with Live Deck 2, which offers multiport streaming to monitors and Wifi support for multiple smart phones.



Applications



Specifications

Aircraft

| | |
|-------------------------------------|--|
| Weight (With Propeller and Battery) | 2.75 lbs (1250g) EVO II DUAL 640T RTK V3 2.73 lbs (1237g) EVO II PRO RTK V3 |
| Size | 230*130*143 mm folded 260*355*143 mm unfolded |
| Max Flight Time | 36 min |
| Operating Temperature Range | 14-104°F (-10-40°C) |
| Wind Resistance | Level 8 |
| Hovering Accuracy | When RTK is enabled and works normally: Vertical: ± 0.1 m, Horizontal: ± 0.1 m RTK is not enabled: Vertical: ± 0.1 m (visual positioning), ± 0.5 m (GNSS) Horizontal: ± 0.3 m (visual positioning), ± 1.5 m (GNSS) |
| GNSS | GPS+BeiDou+Galileo (Asian Region) GPS+GLONASS+Galileo (Other Region) |

EVO II Dual 640T RTK V3 Visual Camera

| | |
|--------|--|
| Sensor | 1/1.28"(0.8") CMOS; 50M effective pixels |
| Lens | FOV: 85° 35 mm format equivalent focal length: 23 mm Aperture: f/1.9 Focus range: 0.5 m to infinity (with autofocus) |
| Zoom | 1-16x (up to 4x lossless zoom) |

EVO II Dual 640T RTK V3 Thermal Camera


| | |
|----------------------------------|--|
| Lens | FOV H33°V26° |
| | Focal length 13mm |
| Zoom | 1-16x |
| Wavelength Range | 8~14μm |
| Temperature Measurement Accuracy | ±3°C or ±3% of reading (whichever is greater) @Environmental temperature-20°C~60°C |

| EVO II Pro RTK V3 Camera | |
|--------------------------|--|
| Sensor | 1 inch CMOS; 20M pixels |
| Lens | Fov: 82° 35 mm format equivalent focal length: 29 mm Aperture: F/2.8 – F/11 Focus Range: 0.5 m To Infinity |
| ISO Range | Video: 100-44000 Photo: 100-6400 |
| Zoom | 1-16x (up to 3x lossless zoom) |

| RC and Image Transmission | |
|---|---|
| Max Transmission Distance (Unobstructed, Free of Interference) | FCC: 15km CE: 8km |
| Display Screen | 2048×1536 60fps |
| Operating Time | ~2 hours (max. brightness) ~4 hours (50% brightness) |
| Charging Time | 120 minutes |
| Internal Storage | ROM 128GB |

- www.autelrobotics.cn.

Documents / Resources

| | |
|---|--|
|  | AUTEL EVO2-640T-RTK-V3-BUN Rugged Drone [pdf] Instruction Manual EVO2-640T-RTK-V3-BUN, EVO2-PRO-RTK-V3-BUN, EVO2-640T-RTK-V3-BUN Rugged Drone , Rugged Drone, Drone |
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References



Manuals+.