

17. The aircraft or remote controller experiences unexpected shutdown during firmware updates:
 - Restart the device. If it can power on normally, make sure that the device is sufficiently charged before proceeding with the update.
 - If the device cannot power on, contact Autel Robotics.
18. Restore the factory setting of the remote controller:
 - Tap the "Maxitools" app on the main interface of the remote controller to perform a factory reset. Please back up important data before performing this operation.
19. Forcefully restart the remote controller after lag:
 - Press and hold the power button on the top of the remote controller for more than 6 seconds to forcefully power off the remote controller.
 - Restarting the remote controller during flight will trigger the lost action of the aircraft.

Appendix A Product Specifications

A.1 Aircraft

Aircraft	
EVO Max 4T Weight	1640 g (ABX40 smart battery, Fusion 4T Gimbal, and propellers included)
EVO Max 4T Maximum Take-Off Mass (MTOM)	1890 g
EVO Max 4N Weight	1665 g (ABX40 smart battery, Fusion 4N Gimbal, and propellers included)
EVO Max 4N Maximum Take-Off Mass (MTOM)	1890 g
Fuselage Dimensions	562×651×147 mm (unfolded, incl. propellers) 318×400×147 mm (unfolded, excl. propellers) 257×145×131 mm (folded, excl. propellers)
Diagonal Wheelbase	Diagonal: 466 mm
Propeller Dimension	11 inches
Propeller weight	10.5 g
Maximum Propeller Rotational Speed	8000 RPM
Maximum Ascent Speed	Slow: 3 m/s Smooth: 5 m/s Standard: 6 m/s Ludicrous: 8 m/s
Maximum Descent Speed	Slow: 3 m/s Smooth: 5 m/s Standard: 6 m/s Ludicrous: 6 m/s
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: 23 m/s (forward), 18 m/s (backward), 20 m/s (sideways)

Maximum Service Ceiling Above Sea Level	4000 meters (use ABX40 smart battery); 3000 meters (use ABX41 smart battery).
Maximum Flight Altitude	121.92meters (400feet) (Altitude limit in the Flight Application)
Maximum Flight Time (Windless)	42 minutes
Maximum Range	25 km
Maximum Hovering Time (Windless)	38 minutes
Maximum Wind Resistance (Take-off and Landing)	12 m/s
Maximum Tilt Angle	Slow: 10° Smooth: 30° Standard: 30° Ludicrous: 36°
Maximum Angular Velocity	Pitch axis: 300°/s Heading axis: 120°/s
Operating Temperature	-20°C to 50°C
Hot-swappable Batteries	Supported
IP Rating	IP43* (Custom service)
Internal Storage	128GB internal storage, with 64GB of available space* (Remaining available space will vary with different firmware versions)
Strobe	Integrated
GNSS	GPS+Galileo+BeiDou+GLONASS
Hovering Accuracy	Vertically ±0.1 m (when visual positioning works normally) ±0.5 m (when GNSS works normally) Horizontally ±0.3 m (when visual positioning works normally) ±0.5 m (when GNSS works normally)
Wi-Fi Protocol	802.11a/b/g/n/ac/ax Supports 2×2 MIMO Wi-Fi
Wi-Fi Operating Frequency	2.4G: 2.400–2.476GHz*, 2.400–2.4835GHz

	5.2G: 5.15-5.25GHz**, 5.17-5.25GHz*** 5.8G: 5.725-5.829GHz*, 5.725-5.850GHz *Only applies to SRRC regions ** Only applies to FCC, CE (Germany excluded) and UKCA regions *** Only applies to Germany Note: Some frequencies are only applicable in some regions or only used in door. For details, please refer to local laws and regulations.
Wi-Fi Max. Average or Peak Output Power	2.4G: ≤ 26.13 dBm (FCC/ISED); ≤ 20 dBm (CE/SRRC/UKCA) 5.2G: ≤ 16.95 dBm (FCC); ≤ 23 dBm (CE/UKCA) 5.8G: ≤ 16.37 dBm (FCC/ISED/SRRC); ≤ 14 dBm (CE/UKCA)
Image Transmission	
Operating Frequency	900M: 902-928MHz* 2.4G: 2.400–2.476GHz**, 2.400–2.4835GHz 5.2G: 5.15-5.25GHz***, 5.17-5.25GHz**** 5.8G: 5.725-5.829GHz**, 5.725-5.850GHz * Only applicable to FCC and ISED regions. ** Only applicable to SRRC regions. *** Only applicable to FCC, CE (Germany excluded) and UKCA regions **** Only applies to Germany Note: Some frequencies are only applicable in some regions or only used in door. For details, please refer to local laws and regulations.
Maximum Transmission Distance (Without Interference and Blocking)	FCC: 15km CE: 8km
Max. Average Output Power	900M: ≤ 27.08 dBm (FCC/ISED) 2.4G: ≤ 24.24 dBm (FCC/ISED); ≤ 20 dBm (CE/SRRC/UKCA) 5.2G: ≤ 19.76 dBm (FCC); ≤ 23 dBm (CE/UKCA) 5.8G: ≤ 24.63 dBm (FCC/ISED/SRRC) ; ≤ 14 dBm (CE/UKCA)
Visual Obstacle Avoidance Sensing System	

Sensing Range	Forward: 0.5 - 31 m Backward: 0.5 - 25 m Sideways: 0.5 - 26 m Upward: 0.2 - 26 m Downward: 0.3 - 23 m
FOV	Forward & Backward: 60°(H), 80°(V) Upward: 180° (sideways), 120° (forward & backward) Downward: 180° (sideways), 120° (forward & backward)
Operating Environment	Forward, backward, sideways, and upward: The surface has rich textures, under a sufficient lighting environment (>15 lux, normal indoor fluorescent lighting environment). Downwards: The surface is a diffuse material with a reflectivity >20% (walls, trees, humans, etc.), under a sufficient lighting environment (>15 lux, normal indoor fluorescent lighting environment).
Millimeter-Wave Radar Sensing System	
Operating Frequency	60G: 60 - 64 GHz 24G: 24.0 - 24.25 GHz
Effective Isotropic Radiated Power (EIRP)	60G: ≤20dBm (CE/UKCA/FCC) 24G: ≤20mW (SRRC)
Sensing Range	60G millimeter-wave radar: Upward: 0.3 - 20 m Downward: 0.15 - 80 m Forward & Backward: 0.3 - 50 m 24G millimeter-wave radar: Downward: 0.8 - 12 m
FOV	Horizontal (6dB): ±60°/±22° (60 GHz/24 GHz) Vertical (6dB): ±30°/±20° (60 GHz/24 GHz)
Operating Environment	60 GHz millimeter-wave radar sensing system: Supports all-weather obstacle avoidance for glass, water, wires, buildings, and trees in 4 directions. Its obstacle avoidance distance varies with the obstacle's ability to reflect electromagnetic waves and its surface size. 24 GHz millimeter-wave radar sensing system:

	Supports downward sensing, and its sensing range varies by the ground material. For example, the sensing range of cement ground is 12 meters, and the sensing range of grass with a thickness of more than 3 cm is less than 6 meters.
Aircraft Version Limitations*	To comply with (national) regional regulations, certain aircraft versions use a 24 GHz millimeter-wave radar in the downward direction and use 60 GHz radars in the forward, backward, and upward directions. In the 24 GHz aircraft version, the 60GHz radars in the forward, backward, and upward directions are disabled in the flight software at the factory, and only the 24GHz radar in the downward direction is enabled to assist in landing. The 24 GHz aircraft version only supports visual obstacle avoidance under good lighting conditions and does not support millimeter-wave radar obstacle avoidance at night.

Radar and visual obstacle avoidance sensing systems

Sensing Range	Forward & Backward: 0.3 - 50 m Sideways: 0.5 - 26 m Upward: 0.2 - 26 m Downward: 0.15 - 80 m (60GHz millimeter-wave radar)
FOV	Forward & Backward: 120°(H), 80°(V) Upward: 180° (sideways), 120° (forward & backward) Downward: 180° (sideways), 120° (forward & backward)
Operating Environment	Forward, backward, upward, and downward: Supports all-weather obstacle avoidance for various conditions, including water, forests, buildings and high voltage lines. At least one of the two conditions should be met: sufficient lighting or the obstacle has a strong reflection ability to electromagnetic waves. Sideways: The surface has rich textures, under a sufficient lighting environment (>15 lux, normal indoor fluorescent lighting environment).

A.2 Gimbal

A.2.1 Fusion 4T (EVO Max 4T)

Zoom Camera	
Image Sensor	1/2" CMOS. Effective pixels: 48M
Lens	Focal length: 11.8 - 43.3 mm 35 mm equivalent focal length: 64 - 234 mm Aperture: f/2.8 - f/4.8 Focusing distance: 5 m ~ ∞
ISO Range	Normal mode Auto: ISO100 - ISO12800 Manual Photo: ISO100 - ISO6400 Video: ISO100 - ISO12800
Shutter Speed	Photo: 0.5s ~ 1/8000s Video: 1/30s ~ 1/8000s
Digital Zoom	2.7 - 10x continuous optical zoom, 160x hybrid zoom
Max Photo Resolution	4000×3000
Photo Format	JPG
Photo Taking Mode	Auto
Video Resolution	4000×3000 30P
Video Format	MP4
Max Bit Rate	70Mbps
Supported File Systems	exFAT/Fat32
Wide Angle Camera	
Image Sensor	1/1.28" CMOS. Effective pixels: 50M
Lens	DFOV: 85° Focal length: 4.5 mm Equivalent focal length: 23 mm Aperture: f/1.9 AF motor: 8-line SMA, PDAF focusing Focusing distance: 1 m ~ ∞
ISO Range	Auto:

	Photo: ISO100 - ISO6400 Video: ISO100 - ISO64000* * Night mode: up to ISO64000 Manual: Photo: ISO100 - ISO12800 Video: ISO100 - ISO6400
Shutter Speed	Photo: 0.5s ~ 1/8000s Video: 1/30s ~ 1/8000s
Photo Size	4000×3000 (default), 8000x6000
Photo Format	JPG
Photo Taking Mode	Auto
Video Resolution	4000×3000 30P
Video Format	MP4
Max Bit Rate	70Mbps
Supported File Systems	exFAT/Fat32
Infrared Thermal Imaging Camera	
Image Sensor	Uncooled VOx Microbolometer
Lens	FOV: 42° Focal length: 13 mm Aperture: f/1.2 Focusing distance: 6 m ~ ∞
Sensitivity	≤50mK@f/1.0, 25°C
Pixel Pitch	12um
Wavelength	8 - 14um
Radiometric Measurement Method	Center measurement/Pot measurement/Rectangular measurement
Radiometric Temperature Range	-20°C to 150°C (high gain mode); 0 to 550°C (low gain mode)
Radiometric Measurement Accuracy	±2°C or reading ±2% (using the larger value) @ ambient temperature ranges from -20°C to 60°C
Accurate Temperature Measurement Distance	1 ~ 25 m

Digital Zoom	16x digital zoom
Temperature Alert	High and low temperature alarm thresholds, Reporting coordinates and temperature values
Palette	White Hot/Black Hot/Searing/ Rainbow/Grey/Ironbow/Cold and Hot
Photo Size	640×512
Photo Format	JPG (the images contain temperature information and are parsed by dedicated SDK and PC tools)
Photo Taking Mode	Auto
Video Resolution	640×512@25FPS
Video Format	MP4
Laser Rangefinder	
Wavelength	905 nm
Measurement Accuracy	$\pm (1 \text{ m} + D \times 0.15\%)$ where D is the distance to a vertical reflecting plane
Measuring Range	5 - 1200 m
Gimbal	
Mechanical Range	Pitch: -135° to 45° Roll: -45° to 45° Yaw: -45° to 45°
Controllable Range	Pitch: -90° to 30°
Stability System	3-axis mechanical gimbal (pitch, roll, yaw)
Max Control Speed (Pitch)	100°/s
Angular Vibration Range	<0.005°

A.2.2 Fusion 4N (EVO Max 4N)

Night Vision Camera	
Image Sensor	2.3M effective pixels
Lens	FOV: 52°

	35 mm equivalent focal length: 41.4 mm Zoom range: 1 ~ 8x. Linked zoom is supported.
Pixel Pitch	12um
ISO Range	Auto/Manual mode: ISO100 - ISO450000 Night vision mode: Auto: ISO100 - ISO450000
Photo Size	1920×1200
Photo Format	JPG
Shooting Mode	Single shot (default). Press and hold for burst shot
Video Format	MP4
Video Encoding	H.264, H.265 (default)
Video Bit Rate	20Mbps (1920×1200 P30)
HDR Video	Auto
Video Resolution	Night vision mode: 1920×1200 P30
Supported File Systems	exFAT

Wide Angle Camera

Image Sensor	1/1.28" CMOS. Effective pixels: 50M
Lens	DFOV: 85° Focal length: 4.5 mm Equivalent focal length: 23 mm Aperture: f/1.9 AF motor: 8-line SMA, PDAF focusing Focusing distance: 1 m ~ ∞
ISO Range	Auto: Photo: ISO100 - ISO6400 Video: ISO100 - ISO64000* * Night mode: up to ISO64000 Manual: Photo: ISO100 - ISO12800 Video: ISO100 - ISO6400
Shutter Speed	Photo: 0.5s ~ 1/8000s Video: 1/30s ~ 1/8000s

Photo Size	4000×3000 (default), 8000×6000
Photo Format	JPG
Photo Taking Mode	Auto
Video Resolution	4000×3000 30P
Video Format	MP4
Max Bit Rate	70Mbps
Supported File Systems	exFAT/Fat32
Infrared Thermal Imaging Camera	
Image Sensor	Uncooled VOx Microbolometer
Lens	FOV: 61° Focal length: 9.1 mm Aperture: f/1.0 Focusing distance: 2.2 m ~ ∞
Sensitivity	≤50mK@f/1.0, 25°C
Pixel Pitch	12um
Wavelength	8-14um
Radiometric Measurement Method	Center measurement/Pot measurement/Rectangular measurement
Radiometric Temperature Range	-20°C to 150°C (high gain mode); 0 to 550°C (low gain mode)
Radiometric Measurement Accuracy	±2°C or reading ±2% (using the larger value) @ ambient temperature ranges from -20°C to 60°C
Accurate Temperature Measurement Distance	1 ~ 25 m
Digital Zoom	8x digital zoom
Temperature Alert	High and low temperature alarm thresholds, Reporting coordinates and temperature values
Palette	White Hot/Black Hot/Searing/ Rainbow/Grey/Ironbow/Cold and Hot
Photo Size	640×512
Photo Format	JPG (the images contain temperature information and are

	parsed by dedicated SDK and PC tools)
Photo Taking Mode	Auto
Video Resolution	640×512 @30FPS
Video Format	MP4
Laser Rangefinder	
Wavelength	905 nm
Measurement Accuracy	$\pm (1 \text{ m} + D \times 0.15\%)$ where D is the distance to a vertical reflecting plane
Measuring Range	5 - 1200 m
Gimbal	
Mechanical Range	Pitch: -135° to 45° Roll: -50° to 50° Yaw: -45° to 45°
Controllable Range	Pitch: -90° to 30°
Stability System	3-axis mechanical gimbal (pitch, roll, yaw)
Max Control Speed (Pitch)	100°/s
Angular Vibration Range	<0.005°

A.3 Remote Controller

Autel Smart Controller V3	
Material	PC+ABS
Dimensions	269×189×66 mm (antennas folded) 269×302×87 mm (antennas unfolded)
Weight	1194 g (protective case excluded) 1365 g (protective case included)
Operating Temperature	-20°C to 40°C
Storage Temperature	+15°C ~ +25°C (within a year) 0°C ~ +30°C (within three months) -20°C ~ +45°C (within a month)

Protection Rating	IP43
Internal Storage	128GB
microSD Extension	Not supported
Operating System	Based on Android 11
Application Installation	Supports the installation of third-party Android apps
Video Performance	4K@24FPS H.264/H.265 video smooth play
HDMI	Outputs up to 1080P@60FPS video
USB-C	Charging: supports PD 60W fast charging and QC 18W fast charging. Data: USB3.1 Gen2
USB-A	Charging: 5V/2A Data: USB2.0
GNSS	GPS+Galileo+BeiDou+GLONASS
Wi-Fi Protocol	802.11a/b/g/n/ac Supports 2×2 MIMO Wi-Fi
Wi-Fi Operating Frequency	2.4G: 2.400–2.476GHz*, 2.400–2.4835GHz 5.8G: 5.725–5.829GHz*, 5.725–5.850GHz *Only applies to SRRC region Note: Some frequencies are only applicable in some regions or only used in door. For details, please refer to local laws and regulations.
Wi-Fi Effective Isotropic Radiated Power (EIRP)	2.4G: ≤30dBm (FCC/ISED) ; ≤20dBm (CE/SRRC/UKCA) 5.8G: ≤30dBm (FCC/ISED/SRRC) ; ≤14dBm (CE/UKCA)
Bluetooth	Bluetooth 5.0
Bluetooth Operating Frequency	2.400 - 2.4835 GHz
Bluetooth Effective Isotropic Radiated Power (EIRP)	≤20dBm
Image Transmission	
Antenna	Dual antennas, 1T2R, detachable design

Operating Frequency	900M: 902-928MHz* 2.4G: 2.400-2.476GHz**, 2.400-2.4835GHz 5.8G: 5.725-5.829GHz**, 5.725-5.850GHz * Only applicable to FCC and ISCED regions. ** Only applicable to SRRC region. Note: Some frequencies are only applicable in some regions or only used in door. For details, please refer to local laws and regulations.
Effective Isotropic Radiated Power (EIRP)	900M: ≤30dBm (FCC/ISED) 2.4G: ≤30dBm (FCC/ISED); ≤20dBm (CE/SRRC/UKCA) 5.8G: ≤30dBm (FCC/ISED/SRRC); ≤14dBm (CE/UKCA)
Maximum Transmission Distance (Without Interference and Blocking)	FCC: 15 km CE/SRRC: 8 km
Display	
Type	TFT LCD
Dimensions	7.9 inches
Maximum Brightness	2000 nits
Resolution	2048×1536
Refresh Rate	60Hz
Touch Control	Supports 10-point touch
Battery	
Battery Type	Li-Po 3S
Rated Capacity	5800 mAh
Voltage	11.55V
Battery Energy	67 Wh
Charging Time	About 120 minutes
Battery Endurance	2.5 hours (Max brightness) 4.0 hours (50% brightness)
Battery Replacement	Not supported

A.4 Smart Battery

ABX40 Smart Battery	
Battery Dimension	158.4×74.3×50.7 mm
Operating Temperature	-20°C to 50°C
Battery Type	LiPo 4S
Rated Capacity	8070mAh
Battery Energy	120Wh
Voltage	14.88V
Charging Voltage Limit	17.0V
Rated Charging Power	120W
Maximum Charging Power	247W
Weight	520 g
Battery Charge Temperature	+5°C ~ +45°C* (When the battery temperature is below +5°C, the battery stops charging and activates self-heating. When the battery temperature is above +45°C, the battery stops charging.)
ABX41 Smart Battery	
Battery Dimension	158.4×74.3×50.7 mm
Operating Temperature	-20°C to 50°C
Battery Type	LiPo 4S
Rated Capacity	9248mAh
Battery Energy	136.5Wh
Voltage	14.76V
Charging Voltage Limit	17.0V
Rated Charging Power	120W
Maximum Charging Power	247W
Weight	533 g

Battery Charge Temperature	+5°C ~ +45°C* (When the battery temperature is below +5°C, the battery stops charging and activates self-heating. When the battery temperature is above +45°C, the battery stops charging.)
Battery Storage	
Ideal Storage Temperature	+22°C ~ +28°C
Storage Temperature & Humidity	-10°C ~ +30°C, 65±20%RH
Battery Charger MDX120W	
Power Input	100-240V~ 50/60Hz, 3.0A
Output Port	Battery charging interface/ USB-C
Battery Charging Interface	17V=7.06A
USB-C Charging Interface	5.0V=3.0A, 9.0V=3.0A, 12.0V=2.5A
Total Power Output	120.0W Max

Appendix B Declaration of Conformity

Product: EVO Max 4T, EVO Max 4N, EVO Max 4T Pro
Model Number: MDX
Manufacturer's Name: Autel Robotics Co., Ltd.
Manufacturer's Address: 601,701,801,901, Block B1, Nanshan iPark, No. 1001 Xueyuan Avenue, Nanshan District, Shenzhen, Guangdong, China

We, *Autel Robotics Co., Ltd.*, declare under our sole responsibility that the above referenced product is in conformity with the applicable requirements of the following directives:

RED Directive: 2014/53/EU
RoHS Recast Directive: 2011/65/EU
UAS Delegated Regulation: 2019/945/EU 2020/1058/EU
Machinery Directive: Annex I 2006/42/CE

Conformity with these directives has been assessed for this product by demonstrating compliance to the following harmonized standards and/or regulations:

Safety	EN IEC 62368-1:2020+A11:2020
EMC	ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.3.2 (2023-01) ETSI EN 301 489-17 V3.2.4 (2020-09) ETSI EN 301 489-19 V2.2.1 (2022-09) EN 55032:2015+A11:2020+A1:2020 EN 55035:2017+A11:2020 EN IEC 61000-3-2:2019+A1:2021 EN 61000-3-3:2013+A1:2019+A2:2021
Radio	ETSI EN 300 328 V2.2.2 (2019-07) ETSI EN 301 893 V2.1.1 (2017-05) ETSI EN 300 440 V2.2.1 (2018-07) ETSI EN 303 413 V1.2.1 (2021-04) ETSI EN 303 213-5-1 V1.1.1 (2020-03) ETSI EN 305 550-1 V1.2.1 (2014-10) ETSI EN 305 550-2 V1.2.1 (2014-10)
Health	EN IEC 62311:2020 EN 50665:2017
RoHS	2011/65/EU
UAS Delegated Regulation	prEN 4709-001: 2023 prEN 4709-002: 2023 Edition P 1 prEN 4709-003: 2023 Edition P 1 prEN 4709-004: 2023 Edition P 1

Machinery Directive	EN ISO 12100
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The notified body, *Bay Area Compliance Labs Corp*, notified body number: 1313, performed the EU-type examination in according with EMC Directive 2014/30/EU and Annex III, Module B of Council Directive 2014/53/EU, and issued the EU-type examination certificate: AOC SZ1221107-51889E-02 & B2302226.

The notified body, *LGAI Technological Center S.A./Applus*, notified body number: 0370, performed the EU-type examination in according with Annex Part 8, Module B of Regulation (EU) 2019/945, and issued the EU-type examination certificate: 0370-UAS-0008.

Signed for and on behalf of: *Autel Robotics Co., Ltd.*
 Place: Shenzhen, China Date: 2024-01-12
 Name: Cheng Zhuanpeng Position: Legal Representative

Signature: *Cheng Zhuanpeng*

Annex I

Product Mix. Description	Model	SW version	Description	Serial Number
EVO Max 4T	MDX	V1.7.0.97	Quad copter equipped with a 4T Gimbal	1748FEV3HMA923XXXXXX
EVO Max 4N	MDX	V1.7.0.97	Quad copter equipped with a 4N Gimbal	1748FEV3HMA923XXXXXX
EVO Max 4T Pro	MDX	V1.7.0.97	Quad copter equipped with a 4T Pro Gimbal	1748FEV3HMA923XXXXXX
Battery	MDX_8070_1488	/	Drone Battery	1748CBE46232515XX
Remote Controller	EF9-3	V1.6.0.87	Drone Remote Controller	TH79232XXXXXX
Adapter	MDX120W	/	Drone Adapter	/

*Note: Updated software will be released by manufacturer to fix bugs and improve the performance after the product placed on the market. All updated versions released by the manufacturer have been verified to be complied with the applicable regulations. All RF parameters (e.g., RF power, frequency) are not accessible to end users and cannot be changed by any third parties. Conformity of the product with EU requirements is ensured by evaluating the GNSS signals. The radio parameters are automatically set according to the detected region, the user does not have the capability to change these settings.

The guaranteed sound power level for this UAS equipment is 87 dB(A).
 The object of the declaration described above is of class 2.

