Fig 6-8 "Battery Information" Interface

■ View Basic Information of the Smart Battery

Here, you can view the real-time status of the battery and the estimated flight time of the aircraft with the current battery level. Please refer to the parameters in the following table to view the basic information of the battery, so as to deal with it in time when the battery condition is not good.

Table 6-5 Power Parameter Details

Parameter	Description
Battery Level	If the battery level is higher than or equal to the critically low battery warning threshold and lower than or equal to the low battery warning threshold. In this case, there will be an orange warning. If the battery level is lower than or equal to the critically low battery warning threshold, there will be a red warning.
Temperature	The temperature range is -10℃-75℃. 6℃ ≤ battery temperature ≤ 74℃, the temperature is normal. -10℃ ≤ battery temperature ≤ 5℃, the temperature is low, and there will be an orange warning. If the battery temperature is lower than or equal to -10℃, the temperature is too low and there will be a red warning. If the battery temperature is ≥75℃, the temperature is high and there will be a red warning. If the battery temperature is ≥95℃, the temperature is too high and there will be a red warning.
Voltage	Normal voltage range: 36.0-53.4V. When it exceeds the normal range, there will be a red warning.
Discharge Times	The normal range of the number of discharges is 0-200 times. When it exceeds the normal range, there will be a red warning.

■ **Set Battery Warning Threshold**

Move the slider left or right to set warning thresholds for low battery and critically low battery.

➢ Critically Low Battery Warning: Red status. The adjustable range is from 8% to 25%.

➢ Low Battery Warning: Orange status. The adjustable range is from 15% to 50%. The low battery warning threshold should be at least 5% higher than the critically low battery warning threshold.

6.5.6 Gimbal Settings

In the sidebar of the "Settings" interface, click the "⬚" icon to enter the "Gimbal Settings" interface, where you can set the gimbal pitch sensitivity and extended pitch angle, or calibrate and adjust the gimbal, as shown below.
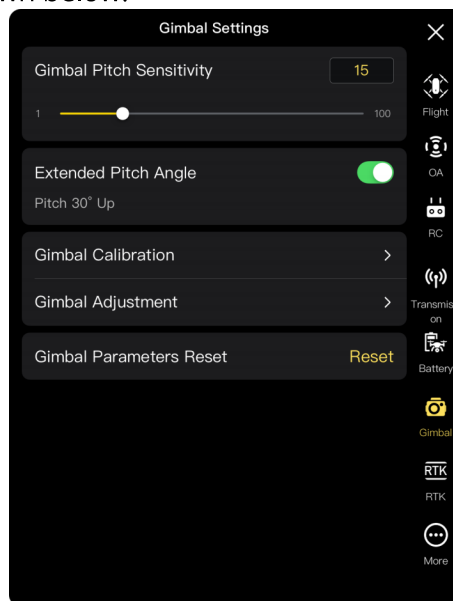

Fig 6-9   "Gimbal Settings" Interface

■ **Set Gimbal Pitch Sensitivity**

Enter a value in the edit box to the right of "Gimbal Pitch Sensitivity", or move the slider left or right to adjust the value, so as to set the number of degrees the gimbal rotates on the pitch axis per second (unit: °/second).

■ **Turn On/Off Extended Pitch Angle**

Click the button to the right of "Extended Pitch Angle" to turn on the upward gimbal rotation function.

➢ If this function is turned on, the gimbal can rotate up to 30 degrees above the level baseline.

➢ If this function is turned off, the gimbal can only maintain a level or downward rotation and cannot rotate upwards to switch to a pitch view.

■ **Gimbal Calibration**

When there is an abnormality in the gimbal, click "Gimbal Calibration", and then click the "Start calibration" button, and the gimbal will automatically start calibrating. For more information, see "2.11.2 Gimbal Calibration" in Chapter 2.

■ **Gimbal Adjustment**

When the position of the gimbal tilts, click "Gimbal Adjustment" and click the buttons under the functions of "Roll", "Yaw", and "Pitch" to adjust the gimbal, so that the horizontal and vertical axes

on the screen remain aligned to the reference objects on the three-screen image transmission screen.

■ **Gimbal Parameters Reset**

Click the "Gimbal Parameters Reset" button, and then click the "Confirm" button to reset the gimbal parameters.

6.5.7 RTK Settings

In the sidebar of the "Settings" interface, click the " $\overline{RTK}$ " icon to enter the "RTK Settings" interface, Users can enable the RTK positioning function, check the RTK connection status, and configure the reception mode for RTK signals.
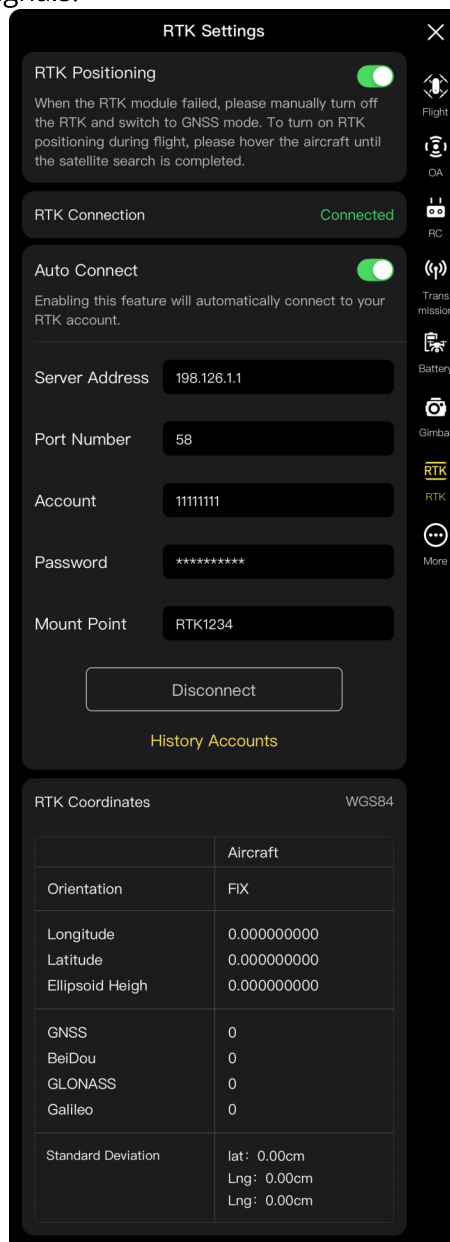

Fig 6-10 "RTK Settings" Interface

■ **Enable/Disable RTK Positioning**

To enable or disable RTK positioning, click the button on the right side of "RTK Positioning".

> ⚠ **Warning**
>
> ● In case of RTK module issues, please manually disable RTK positioning and switch back to GNSS mode.
> ● When activating RTK positioning during flight, please hover the aircraft and wait for satellite searching.

■ Check RTK Connection

To check the RTK network status, enable RTK positioning, enter the RTK account, and click "Log In Account" to establish the RTK network connection.

➤ If the connection is successful, it will display "Connection Successful."
➤ If there is an issue, it will display "Connection Failed" along with a reason for the failure.

■ RTK Receive Signal Setting

For setting the RTK signal reception, enter the network RTK server address, port number, account, password, and mount point in the RTK service configuration section.

➤ Click "Log In Account" to log in to the network RTK service. If there's an issue with the configuration, it will provide relevant prompts.
➤ Click "History Accounts" to view previously configured RTK accounts. The aircraft supports saving multiple network RTK accounts.
➤ Click the button on the right side of "Auto Connect" to enable or disable automatic login RTK accounts.

■ Check RTK Coordinates

To view the RTK coordinate system, after establishing the RTK network connection, check the coordinate system type, RTK orientation mode, latitude, longitude, altitude, satellite quantity, and standard deviation.

6.5.8 More

In the sidebar of the "Settings" interface, click the " ⊙ " icon to enter the "More" interface, where you can configure unit settings, light settings, safety, target recognition settings, and the language settings of the Autel Enterprise App for the aircraft and manually check for updates to the App or firmware.
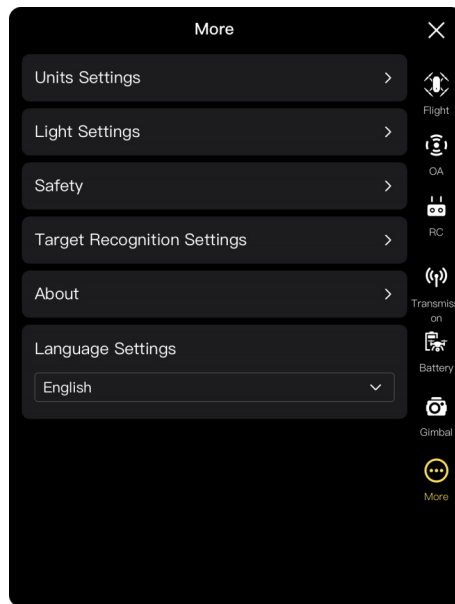
Fig 6-11 "More" interface

■ Unit Settings

Click "Units Settings", and then set "Speed/Distance Units", "Area Units", "Temperature Units", and "Coordinate Format" according to your needs. After the setting, the Autel Enterprise App will display relevant parameters in the specified units.

■ Light Settings

Click "Light Settings", and then set "Stealth", "Strobe", and "Aux Light" according to your needs.
● Turn On/Off Stealth Mode
Click the button to the right of "Stealth" to turn on or off stealth mode.
➢ If stealth mode is turned on, the arm lights, strobe, and auxiliary bottom light will be turned off by default.
➢ If stealth mode is turned off, you can configure the strobe and auxiliary bottom light.

⚠ Warning
● Turning off the arm lights and strobe may violate local laws and regulations. Only turn on stealth mode when necessary.

● Turn On/Off Strobe
Click the button to the right of "Strobe" to turn on or off the strobe on the top of the fuselage.

⚠ Warning
● When flying at night, please turn on the strobe to ensure flight safety.   ● Do not look directly at the strobe while they are on to avoid vision damage caused by strong light.

● Set Aux Light
Click the drop-down list of "Aux Light" and then select "Auto", "On", or "Off" according to your needs.

➢ If "Auto" is selected, the auxiliary bottom light is automatically turned on or off according to ambient brightness.
➢ If "On" is selected, the auxiliary bottom light is always on by default.
➢ If "Off" is selected, the auxiliary bottom light is off by default.

🔆 Tip
● The auxiliary bottom light is mainly used to enhance the ambient brightness of the landing point during the landing of the aircraft, improve the sensing performance of the downward visual sensing system, and ensure landing safety.

■ Turn On/Off Visual Positioning

Click "Safety", and then click the button to the right of "Visual Positioning" to turn on or off the visual positioning function.
➢ If the visual positioning function is turned on, the aircraft will hover in a place with a poor GNSS signal.

🔆 Tip
● Turning on visual positioning is a must to enter visual positioning mode. For more information, see "3.8.1 Flight Status" in Chapter 3.

■ Turn On/Off GNSS

Click "Safety", and then click the button to the right of "GNSS" to turn on or off the GNSS positioning function.
➢ If "Auto" is selected, the aircraft will automatically select the best GNSS positioning signal.
➢ If "Beidou" is selected, the aircraft will only receive GNSS positioning signals from the BeiDou Navigation Satellite System.

⚠ Warning
● For non-specialized operations, it is recommended to always turn on GNSS positioning. GNSS positioning can enhance the flight safety of the aircraft.
● When GNSS positioning is turned on and the aircraft are flying in an environment with good lighting and rich texture, the aircraft will enter the visual positioning mode.
● When GNSS positioning is turned off and the aircraft are flying in an environment with poor lighting or insufficient texture, the aircraft will enter the ATTI mode. In this mode, the aircraft has high safety risks and is prone to flight accidents.
● If you choose to turn off the GNSS positioning function and this leads to flight accidents or aircraft damage, Autel Robotics will not provide warranty services. Instead, you should be responsible for any related accidents on your own.
● The "Beidou" navigation mode is a specific function for China. In other regions, "Auto" is selected by default to automatically select the GNSS positioning signal. After switching the navigation mode, you must restart the aircraft for the changes to take effect.
● After the GNSS positioning function is turned off, the aircraft cannot turn on the auto-return function.

■ Turn On/Off Submit Flight Data to CAAC

Click "Safety", and then click the button to the right of "Submit Flight Data to CAAC" to turn on or off the function of submitting flight data to CAAC.

⚠ Important
● It is recommended to turn on the function of submitting flight data to CAAC. According to Chinese laws and regulations, flight data must be submitted in real time to the official system of the Civil Aviation Administration of China (CAAC) via the internet. ● When the network is poor, the relevant flight data will be cached on your local device, and the Autel Enterprise App will not store or forward the data to other services.

■ Enter Registration No.

Click "Safety" and then click "Registration No." to enter the real-name registration number of the aircraft.

⚠ Important
● According to Chinese laws and regulations, real-name registration is required for aircraft. For more information, see "2.1 Legal Use Notice" in Chapter 2.

■ Remote ID

Click "Safety" and then click "Remote ID". After entering the Remote ID, you can broadcast relevant information about the aircraft for identification by nearby devices.

⚠ Important
● According to local laws and regulations, perform real-name registration for aircraft. For more information, see "2.1 Legal Use Notice" in Chapter 2.

■ Emergency Stop Propellers During Flight

Click "Safety" and then click the drop-down list of "Emergency Stop Propellers During Flight" to make relevant settings according to your needs.

➢ If "Off" is selected, the "Emergency Stop Propellers During Flight" function will be disabled.
➢ If "On" is selected, you can stop the propellers of the aircraft from spinning at any time during flight by simultaneously pushing the two command sticks inward or outward.
➢ If "Only in case of failure" is selected, you can stop the propellers of the aircraft from spinning by simultaneously pushing the two command sticks inward or outward only in the case of aircraft malfunctions.

⚠ Important
● Please use the "Emergency Stop Propellers During Flight" function with caution. Once the propellers stop, the aircraft will fall freely without control.

> ● This function is only used to reduce additional harm or damage caused by aircraft malfunctions. Please stay away from crowds or buildings when using this function.
> ● After the "Emergency Stop Propellers During Flight" function is enabled, please stop using the aircraft and contact Autel Robotics to inspect the power system of the aircraft.

■ View Version Information

Click "About", and you can view the firmware version and the serial number of the aircraft, remote controller, gimbal, and battery, as well as the version of the Autel Enterprise App, and check for versions and perform updates for the App and firmware.

■ Language Settings

Click the drop-down list of "Language Settings" and choose one from Simplified Chinese, English, Traditional Chinese, Japanese, and Spanish. After you confirm the selection, the Autel Enterprise App will automatically restart and display in the chosen language.

6.6 Attitude Ball

The attitude ball is mainly used to dynamically display the relative positions of the aircraft, remote controller, and home point, and display the relevant attitude, flight speed, battery level, operating time, and other flight safety data of the aircraft. Any changes in the aircraft's status will be reflected in the attitude ball.
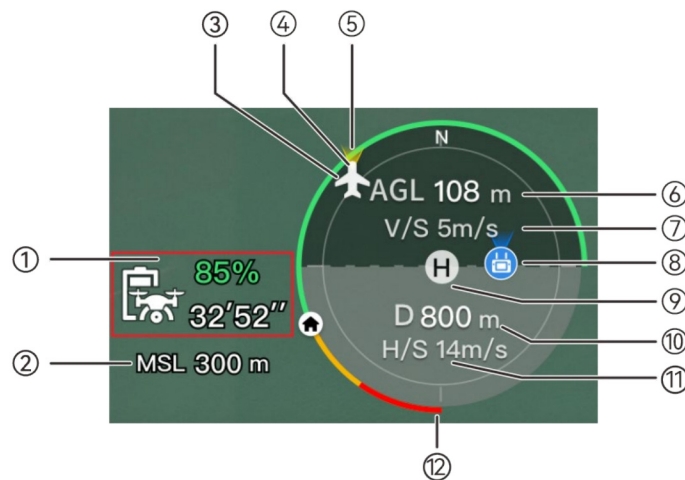

Fig 6-12   Attitude Ball

Table 6-6   Attitude Ball Details

No.	Description	Description
1	Estimated Remaining Flight Time of the Aircraft	Displays the current remaining battery level and estimated remaining flight time of the aircraft.
2	MSL Altitude	Refers to the current altitude of the aircraft relative to the mean sea level (MSL).

3	Aircraft Position	Displays the current position of the aircraft, which can help you observe the approximate position between the aircraft and the remote controller.
4	Aircraft Heading	Displays the current nose orientation of the aircraft. If the aircraft is no longer visible in the line of sight, the aircraft can be controlled to return to the home point based on the position and heading of the aircraft.
5	Gimbal Direction	Displays the current gimbal orientation of the aircraft.
6	Vertical Altitude	Refers to the current vertical altitude of the aircraft relative to the take-off point.
7	Vertical Speed	Refers to the current vertical flight speed of the aircraft.
8	Remote Controller Location	Displays the current position of the remote controller, which can help you observe the approximate position between the aircraft and the remote controller.
9	Home Point	Refers to the set home point of the aircraft.
10	Horizontal Distance	Refers to the current horizontal distance from the aircraft to the take-off point.
11	Horizontal Speed	Refers to the current horizontal flight speed of the aircraft.
12	Aircraft Battery	Displays the real-time remaining battery level of the aircraft in the dynamic circular battery bar.

6.7 "Map" Interface

On the main interface of the Autel Enterprise App, click the " " icon in the corner of the "Map" preview interface, or click the "Map" mini window in the lower-left corner after entering the "Zoom Camera" interface, "Thermal Camera" interface, or "Wide Angle Camera" interface, to enter the "Map" full-screen interface.
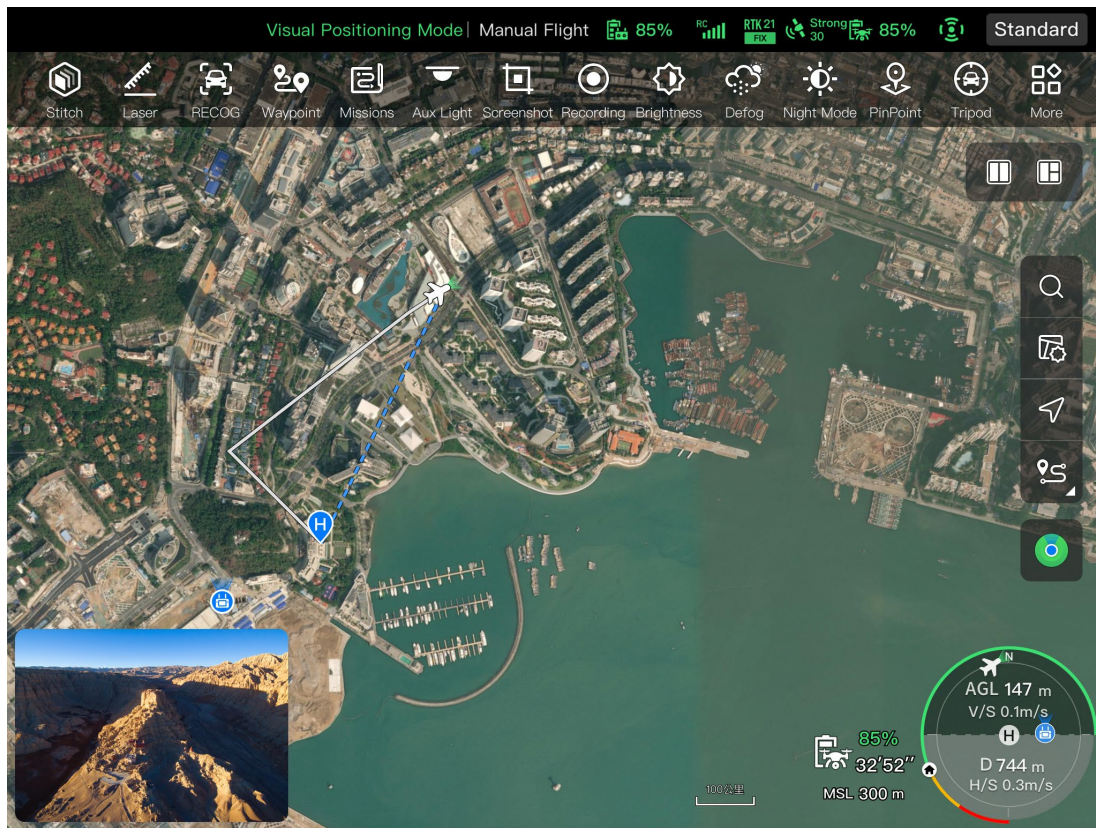
Fig 6-13   "Map" Interface

Table 6-7   Interface Button Details

No.	Icon	Name	Description
1		Search Map	When the remote controller is connected to the Internet, click this icon and enter the desired location name in the "Search Map" edit box. Based on the selected location, the map interface will switch to display the map of the corresponding location.
2		Map Type	Click this icon to adjust the map display style to a standard map or a hybrid map and set "Display/Clear Flight Path". ➢ Standard: 2D map. ➢ Hybrid: 2D map and satellite map combined.
3		Orientation Lock	This icon indicates that the display direction of the map is locked. When the remote controller is rotated, the display direction of the map will not change accordingly. Click this icon to unlock the display direction of the map of the current remote controller.
4		Orientation Unlock	This icon indicates that the display direction of the map is unlocked.

|			When the remote controller is rotated, the display direction of the map will change accordingly. Click this icon to lock the display direction of the map of the current remote controller.
5		Overview	Click this icon to simultaneously locate the positions of the remote controller, the home point, and the aircraft on the map.
6		Remote Controller Location	Click this icon to locate the position of the remote controller on the map.
7		Home Point Location	Click this icon to locate the position of the home point on the map.
8		Aircraft Position	Click this icon to locate the position of the aircraft on the map.
9		Re-center	If the map is moved from the current positioning point to another location, this icon will appear on the right side of the screen. Click this icon, and the map will quickly return to the current positioning point.
10		Aircraft Search	When the aircraft is lost, you can click this icon to query the location information of the lost aircraft.

6.8 Camera Interfaces

6.8.1 Camera Function Area
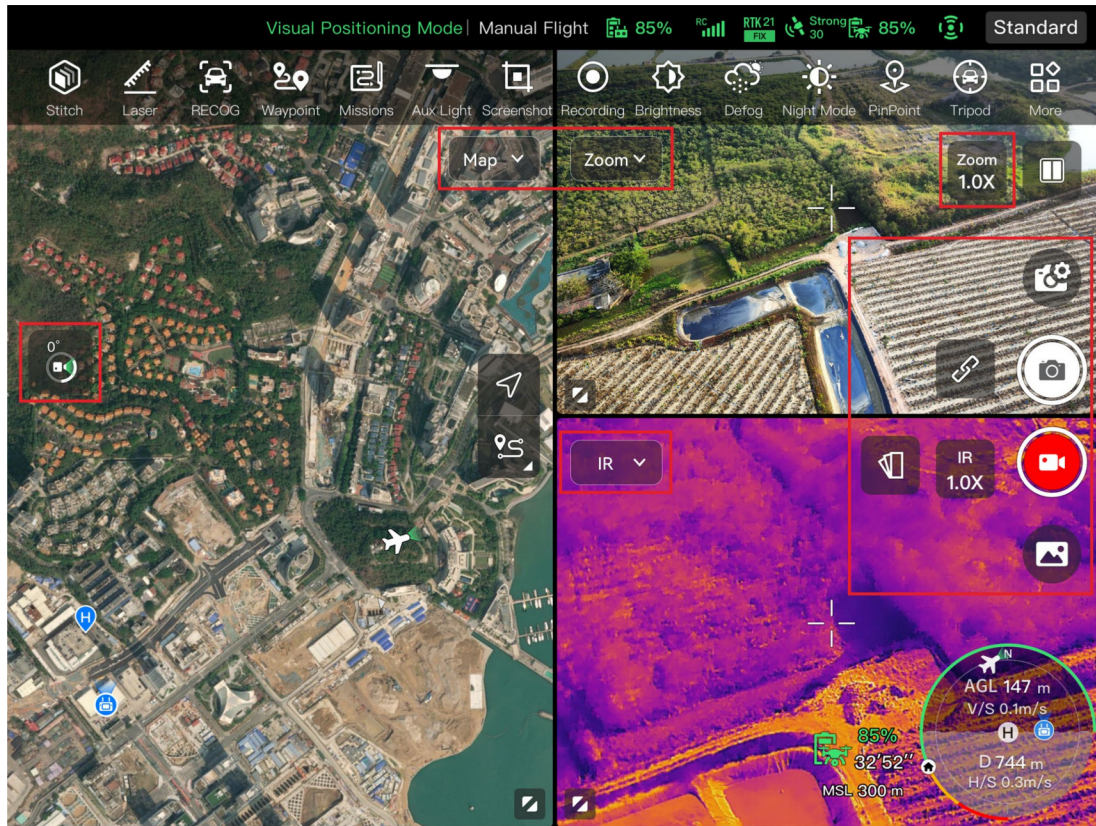
Fig 6-14   Camera Function Area

Table 6-8   Camera Menu Details

No.	Icon	Meaning	Description
1	Zoom	Switch to Zoom Camera	On any camera interface, click this icon to enter the zoom camera interface.
2	IR	Switch to Thermal Camera	On any camera interface, click this icon to enter the thermal camera interface.
3	Wide	Switch to Wide Angle Camera	On any camera interface, click this icon to enter the wide angle camera interface.
4		Camera Settings	Click this icon to view and set parameters related to the gimbal camera.
5		Photo	Click this icon to take a photo.
6		Video	Click this icon to start recording.

7		Album	Click this icon to view materials from the aircraft's album and the local album and download or delete them.
8	Zoom 1.0X	Zoom Camera Zoom	On the "Zoom Camera" interface, click this dynamic icon to adjust the zoom factor of the zoom camera.
9	IR 1.0X	Thermal Camera Zoom	On the "Thermal Camera" interface, click this dynamic icon to adjust the zoom factor of the infrared thermal imaging camera.
10	Wide 1.0X	Wide Angle Camera Zoom	On the "Wide Angle Camera" interface, click this dynamic icon to adjust the zoom factor of the wide angle camera.
11		Linked Zoom	Click this icon to adjust the zoom factor of zoom and thermal camera simultaneously, resulting in the synchronous enlargement or reduction of camera images. The zoom camera will be adjusted to 1.8x automatically, the thermal camera will be adjusted to 1.2x.
12	0°	Gimbal 0°	Click this icon, and the gimbal returns to the horizontal centering state.
13	45°	Gimbal 45°	Click this icon, and the gimbal rotates obliquely downward, forming an angle of 45° with the horizontal direction.
14	90°	Gimbal 90°	Click this icon, and the gimbal rotates directly downward, forming an angle of 90° with the horizontal direction.

On any camera interface, click the " 📷⚙ " icon to enter the "Camera Settings" interface. On the "Camera Settings" interface, you can perform the following operations:

■ **View Photo Properties**

On the "Camera Settings" interface, click the " 📷 " icon to view the size and format of (zoom/wide angle) photos.

■ **Set Video Properties**

On the "Camera Settings" interface, click the " ■◀ " icon to view the resolution, frame rate, and format of (zoom/wide angle) videos and set video encoding.

➤ Video encoding options are H.264 and H.265. The default option is H.264.

■ **Set Infrared Shooting**

On the "Camera Settings" interface, click the " IR " icon to view the size and format of infrared photos or videos and set the image mode and radiometric measurement function.

● Set Image Mode

Two image modes are available, that is, "Manual" and "Auto".

> ➢ If the "Manual" mode is set, you can adjust the "Contrast" and "Brightness" by entering a value or clicking the numbers on the left and right sides.

● Turn On/Off Radiometric Measurement

Click the button to the right of "Radiometric Measurement" to turn on or off the radiometric measurement function.

> ➢ If this function is turned on, you can set the image enhancement, isotherm, emissivity, and temperature alarm.
> ➢ If this function is turned off, both "Radiometric Measurement Mode" and "FFC " cannot be set.

1. Turn On/Off Image Enhancement

Click the button to the right of "Image Enhancement" to turn on or off the image enhancement function.

> ➢ If this function is turned on, you can enter a value in the edit box below or drag the slider left or right to set the image enhancement value. The larger the value, the clearer the image details.

2. Set Isotherm

Four isotherm statuses are available, that is, "Off", "Human", "Fire", and "Custom".

> ➢ If "Custom" is selected, you can set the minimum and maximum temperature of the radiometric measurement range.

3. Set Emissivity

Enter a value in the edit box to the right of "Emissivity" or drag the slider below left or right to adjust the emissivity value.

4. Turn On/Off Temperature Alarm

Click the button to the right of "Temperature Alarm" to turn on or off the temperature alarm function.

> ➢ You can set the minimum and maximum temperature for temperature alarms.

■ Advanced Settings

On the "Camera Settings" interface, click the "···" icon to perform advanced settings for the camera:

● Select Camera

Click "Select Camera" to select the lens used for shooting from the list of lenses of the gimbal camera. You can select one or more lenses.

> ➢ After a shooting lens is selected, when you click the "📷" or "🎥" icon, the selected lens will simultaneously take photos or record videos. For unselected lenses, the shooting function will be unavailable.

● Set Grid

> Three grid styles are available, which can assist with picture composition during shooting. You can select one or more grid styles.
> ➢ When multiple grid styles are selected, the grid styles will be superimposed and displayed on all camera interfaces.

● Set Defog

Defogging can make the shooting or recording scene more transparent and enhance color contrast and is used to eliminate the "fogging phenomenon" in the picture or the lack of picture clarity caused by smog.

> ➢ Three defog intensities are available, that is, "Weak", "Medium", and "Strong". The stronger the defog intensity, the darker the image.

● Turn On/Off Stamps/Subtitles

Click the button to the right of "Stamps/Subtitles" to turn on or off the stamps/subtitles function.

> ➢ If this function is turned on, you can set the time stamp, latitude & longitude and altitude, and aircraft SN functions. Once this function is enabled, the shot images will include the set stamp.

● Turn On/Off Arm Lights (When Shooting)

Click the button to the right of "Turn off arm lights when shooting" to turn on or off this function.

> ➢ If this function is turned on, the arm lights will be turned off when shooting.
> ➢ If this function is turned off, the arm lights will be turned on when shooting.

● Turn On/Off Pre-recording

Click the button to the right of "Pre-recording" to turn on or off this function.

> ➢ If this function is turned on, the aircraft will start recording 15 seconds in advance (click the "■◀" icon).

💡 Tip
● The pre-recording function can prevent missing important shots when the aircraft is flying rapidly.

● Turn On/Off Histogram

Click the button to the right of "Histogram" to turn on or off the histogram function. The histogram can display the distribution of pixels in the images captured by the camera, thereby reflecting the exposure of the images.

> ➢ If the histogram function is turned on, a floating "Histogram" window will be generated on the screen of the remote controller, and you can drag the "Histogram" window to any area on the screen. Click the "Close" button in the upper-right corner of the window to turn off the histogram function.

● Set Storage Location

You can choose "SD Card" or "Internal Storage" as the storage location. Also, you can view the storage status of "SD Card" and "Internal Storage" and click "Format" on the right side to format the corresponding storage location.

● Reset Camera Parameters

Click the "Reset" button to the right of "Camera Reset" to restore the camera parameters to default settings.

● View Camera Model

You view the gimbal camera model.

6.8.2 "Zoom Camera" Interface

On the main interface of the Autel Enterprise App, click the " ◤ " icon in the corner of the "Wide Camera" preview interface, or click the " Zoom " icon after entering the "Thermal Camera" interface or "Wide Angle Camera" interface, to enter the "Zoom Camera" full-screen interface.