

Trimble® Access™ Aerial Imaging Software

Version 2.2.6
Revision A
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Legal Information

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Aerial Imaging Software Version 2.2.6

These Release Notes contain information about the Trimble® Access™ Aerial Imaging software version 2.2.6.

This version of Aerial Imaging is backward compatible with projects created in Aerial Imaging version 2.x.x.

Changes to hardware support

- Aerial Imaging version 2.2.6 does not support the ZX5. If you are using a ZX5 rover with an earlier version of the Aerial Imaging software, you **should not** update to this version.
- The MicaSense RedEdge 3 sensor is now available for the UX5 AG rover, and is no longer available for the UX5 rover. Blocks and flights using the UX5 rover and MicaSense RedEdge 3 sensor in Aerial Imaging version 2.2.5 will be correctly translated to the UX5 AG rover and MicaSense RedEdge 3 sensor in Aerial Imaging version 2.2.6.

UX5 AG rover maintenance procedures are provided in the *Maintenance* section of the software.

Safety improvements and fixes

- The eBox now triggers the automatic landing procedure when it detects issues with:
 - airspeed sensor readings
 - pressure altitude sensor readings
 - servos, based on the elevon trim values
- The eBox now detects a motor failure at takeoff and immediately triggers a safe landing procedure.
- The eBox now detects significant pressure altitude drifts since launch and takes this into account during landing to reduce any over- or undershoot.
- An extra warning message now appears to make sure that the eBox is in standby mode after the flight has finished.
- The satellite warning or error message now also appears after arming but before launching the system.
- It is no longer possible to set a FLY TO location near or beyond the geofence.
- The flight now turns red when the landing circle crosses an avoidance zone.
- A warning message to disconnect the battery now appears if the post-flight checklist is canceled before the *Disconnect the battery* step.

New features

- The firmware maintenance section of the software now allows you to check and update the gBox firmware. New gBox firmware is part of the Aerial Imaging software package.
- The dashboard now displays the wind speed and direction measured in the eBox. A warning message appears during flight if the landing heading is not set into the measured wind direction.
- You are now informed when a new Aerial Imaging version is available (Internet access is required).
- It is now possible to toggle the online map view (Google Maps only) between satellite, road, and terrain view.

Enhancements

- The warning threshold of the difference between the number of trigger events from the eBox to the camera and the number of feedback events from the camera to the eBox has increased from 10% to 20%. Investigations clearly showed that a warning threshold of 10% is too conservative. A dataset can still be successfully processed when the number of missing images is more than 10% but less than 20%.
- The blur threshold, which results in the minimum required shutter speed (*Prepare the camera step* of the flight checklist) is now optimized based on results from extra performance tests.
- The dashboard now displays the remaining flight time. This value is an estimate and is calculated based on the rover speed and remaining waypoints, and becomes more accurate as the flight progresses.
- The download of gBox log files is no longer blocked when the download of eBox log files fails.
- The low battery error appearing during the flight checklist now automatically disappears when the battery is replaced with a fully charged one.
- Entering a block during flight is now accompanied by a voice message.
- An audible signal is now played when the eBox firmware update is finished.
- The automatic save actions have been reviewed and improved.
- It is now possible to delete flights that have been flown.
- It is now possible to select the preferred CSV delimiter in the *Settings*.
- To ensure that a flight with a geofence can be simulated on the tablet that is not near the flight area, the center of the geofence moves to the takeoff location during simulation.
- The geofence is disabled when exporting the simulated flight trajectory.
- The flight summary now explicitly mentions when a takeoff or landing location is not fixed.
- The algorithm to calculate the surface area of a rectangular shape is now more accurate.
- The handling of warning messages that appear when searching for an invalid location on the map is improved.
- Some error messages regarding saving a project are updated for clarity.

- A *Disconnect the battery* step now appears in the following maintenance procedures:
 - Check the firmware version
 - Replacing the GNSS antenna
 - Replacing the drive unit
- An extra step to disconnect the download cable now appears at the end of the *Replacing the drive unit* maintenance procedure.
- An extra step to connect the PWR/TRIG cable to the eBox now appears in the MicaSense RedEdge 3 Adapting the payload bay maintenance procedure.
- The *Check the elevon response* step of the flight checklist now better explains what needs to be checked.
- The maintenance procedure *Replacing a winglet or a winglet screw* is now called *Replacing a winglet*.
- The maintenance procedure *Checking the trigger and eBox feedback events* is now called *Checking the trigger and feedback events*.
- *Channel id* is now replaced by *Network ID* in the *Binding the modem and eBox maintenance procedure* for clarity.
- The date set on the tablet is now displayed in the footer.
- Several user interface and layout changes in the software increase clarity and visibility:
 - The layout of the dashboard has been reorganized.
 - The default "New folder" name is now highlighted on a tablet so that you can immediately start typing to change the name.
 - Several icons have been updated.
 - Several images have been updated.
 - Several checklist pages have been updated.
 - The enabled/disabled status of several buttons is now more consistent.
 - In the *External GNSS* setting, the value of the *Baud rate* is greyed out when the *Port* is set to *Auto detect*.
 - A * is added to a setting that has been changed but has not yet been accepted.
 - When an item in a list is deleted, the item above the deleted one is now always selected. When the deleted item is the top item, the new top item is selected.
 - It is now possible to view the entire name of a project, flight or block, even when the name is very long.

Resolved issues

- Several issues that resulted in a shutdown or freeze of the Aerial Imaging software are now resolved.
- Several issues with downloading an offline map are now resolved.
- Entering a very large number in the heading field of a takeoff or landing no longer results in a freeze of the Aerial Imaging software.
- An issue where frequent intermittent communication loss resulted in a freeze of the Aerial Imaging software is now resolved.

- An issue where you could expand the properties of a block that is being drawn but the application would freeze, is now resolved.
- The trigger and feedback events monitored during the flight checklist are no longer taken into account during the flight.
- An issue where the connection types between blocks in a flight were incorrect after reordering the blocks is now resolved.
- An issue where the connection types were not correct in the exported flight overview is now resolved.
- The kml/gpx export of the simulated flight trajectory no longer has a systematic overshoot.
- An issue where the proxy server did not receive the login credentials from the Aerial Imaging software is now resolved.
- An issue where the project name was removed after editing is now resolved.
- The maximum number of items in a shapefile is now set to 1000 (it was unlimited). This avoids the need for excessive computing power in the Aerial Imaging software and a possible freeze. An error message appears when importing a shapefile with more than 1000 items.
- An issue where the thumbnail of a project displayed nothing is now resolved.
- An issue where you needed several attempts to set a FLY TO point is now resolved.
- An issue where the flight time exceeds the maximum value warning did not always appear is now resolved.
- The takeoff route of a copy of a flown flight is now editable.
- An issue where the wrong error message appeared in the *Unbinding the modem and eBox maintenance procedure* is now resolved.
- An issue where the warning messages did not appear when the overlap value crosses the 80% or 60% threshold is now resolved.
- An issue where changing the overlap from a value lower than 60% to a value between 60 and 80% did not result in a warning message, is now resolved.
- The triggering of the camera now stops when the corresponding maintenance procedure is canceled.
- An issue where the Add and Delete button for the takeoff location were disabled is now resolved.
- It is no longer possible to reduce a rectangular or ellipsoidal shape to a single point.
- An issue where the estimated flight time of a copied flight did not correspond with the flight time of the original flight is now resolved.
- The correct error message now appears when saving a project when you do not have write access to the Projects folder.
- An issue where importing a project created with a newer version of the Aerial Imaging software triggered the wrong error message is now resolved.
- An issue where the *Flight checklist* tab was disabled after saving a flight is now resolved.
- Unexpected error messages no longer appear when simulating a flight after executing the pre-flight checklist up until the ARM step.
- Several issues are resolved where error messages regarding the flight checklist appeared during simulation.

- It is no longer possible to return to the previous step once you are at the *Connect the modem* page in the maintenance procedure *Adapting the payload bay*.
- Several user interface and layout issues are now resolved:
 - It is now possible to deselect a takeoff or landing location on the map when the properties are expanded.
 - Several issues where the keyboard blocked the entry field are now resolved.
 - Text alignments are now consistent.
 - Several scaling and layout issues for the Microsoft Surface Pro4 tablet, or similar, are resolved.
 - Icons are centered where needed.

Installation information

Installing the software and licenses on the GCS

Before you use your controller, you must install the applications and licenses using the Trimble Installation Manager. If you have:

- Never installed the Trimble Installation Manager, go to www.trimble.com/installationmanager for installation information.
- Previously installed the Trimble Installation Manager, you do not need to reinstall it because it updates itself automatically. Select *Start / All Programs / Trimble Installation Manager* to start the Installation Manager.

For more information, click *Help* in the Trimble Installation Manager.

Note – *An update of the Aerial Imaging software usually includes an eBox firmware update. The update is triggered during the flight checklist and can take up to 30 minutes.*

Updating office software

When you upgrade to version 2.2.6, you must also update your office software.

When you upgrade the controller using the Trimble Installation Manager, the office software on the computer that has the Trimble Installation Manager installed is also upgraded.

To upgrade other computers that were not used to update the controller, install the Trimble Installation Manager onto each computer and then update the office software.

Documentation

The *Aerial Imaging Help* is "context-sensitive." To access the Help, tap **?** at the top of the screen. A list of Help topics appears, with the relevant topic highlighted.