airpixel.cz

AIR Commander
ENTIRE

Wired Geotagging r3

USER'S MANUAL

Before using this product, carefully read all product documentation and retain it for future reference.

GeoTagging overview

GeoTagging mode is enabled via MENU -> Logging mode, where you can select "SD Card" option for saving GPS/RTK data to the SD card in the Entire's microSD slot, or "Direct (EXIF)" for direct upload of coordinates into the EXIF of photos in the camera. In "Direct (EXIF)" mode.

No USB camera control is available (only Infra-Red commanding) in geotagging modes.

Direct (EXIF) mode & SD Card mode

- Camera must be set up into "Mass storage" USB mode, WiFi control is available in this mode for newer Sony cameras (A7R3, A7R4, A6600, RX100V, RX100VI). WiFi control will be lost during USB connection (after takeoff and after landing). Entire will re-establish WiFi connection back once USB will be disconnected.
- Photo triggering available via MavLink bus for the Pixhawk drones, or via PWM for DJI drones.
- IR commands are also available for cameras with IR port (whole Sony A7 series)
    - ISO, Exposure correction, MENU (and navigation), Photo review, Zoom, Video start/stop
- No matter if "Direct(EXIF)" or "SD Card" mode is selected, text backup version is copied to SD card of the Entire (if inserted). If "Direct(EXIF)" mode is selected, backup TXT file is also copied to SD card of the Camera. Third copy of geotag data is available for download in the Entire's web configuration (CONTROL -> "Download GeoTag backup file").

Photogrammetry

Capture detection

Accuracy of the exact capture time is highly important. AIR Commander Entire triggers the capture via multiport USB or IR commands (user selectable). Even the trigger is highly reliable, in the real world there is still option of failure of camera AF or other system, which causes missing photo in the log row. Missing photo will cause overrun and wrong information on all next photos. We have two options for the user.

- **"HotShoe sync"** mode - suggested option. Additional bracket is used to sense the photo trigger from the Flash connector on the camera body. Extremely accurate in time precision and also avoids missed captures.
- **"Predefined delay"** mode - less accurate option, which actually does not sense if the real capture has happen. However especially for the multiport triggering the time accuracy is pretty good.

GPS / RTK selection

AIR Commander Entire selects automatically the RTK coordinates if they are available at the DJI API input. If they are not available, GPS is used automatically.

Photogrammetry

Wired GeoTagging connection - DJI

For the GeoTagging mode the AIR Commander Entire must be connected to the Camera via Sony

Multiport Cable (this is frequently mismatched, please check photos at the end of the manual), and also must be

connected to the DJI Flight Controller API connector. Cable set for API connection is available at the

Shop. There are few options about triggering of the camera during mission.

a) *Using DJI Remote (RSS) (suggested)* – in this option you MUST use the HotShoe sensor and you can skip lines marked

   *.

b) Using the Entire's internal functions of timed triggering or distance trigger functions (also suggested). You can skip

   lines marked *****.

c) Using F port triggering. In this mode you have to follow all lines of bottom process.

- **Step 1(DJI) -** Wiring

  o   Remove the top plastic cover of DJI M600 Center Frame

  o   *****Connect SBUS cable to the F3 port of your A3/N3

  o   Connect API cable to the API connector of your A3/N3

        SEE THE PICTURES ➔

- **Step 1 (PixHawk)** – Wiring

  o   Connect the PixHawk cable to the Cube Telem 1 or 2

- **Step 1a –** Wiring

    o   Thread the cables down through the body of the drone

- **Step 2 (DJI) –** Wiring
    o   SBUS and API Cables threaded through the center frame now must be connected into the Extension BOX. Use UNI-1 for SBUS (PWM) and any of ports UNI 2/3/4 for DJI API cable.
   o   DATA port of the Extension BOX needs to be connected by UNI cable to the Entire

- **Step 2 (PixHawk) –** Wiring
    o   At PixHawk you have two options depending on used flight stack (ArduCopter/PX4).
    o   For ArduCopter you need to connect the only the Telem1 or Telem2 or GPS1 (needs connector rework) to the Extension BOX. Triggering and camera control can be done via MavLink or HereLink buttons (Solex app) or our Android app.
    o   For PX4 flight stack camera trigger needs to be done via PWM from flight controller. Use SBUS/PWM Cable for connection to PixHawk.


Photogrammetry

- **Step 3 -** Wiring
    - o UNI Cable from the Extension BOX DATA port needs to be connected to the Entire r3 port UNI A, B or C. For the Entire r2 only PORT A is suggested.
    - o Because UNI Cable is usually not long enough to pass the distance from the drone body to the gimbal, you can use Joining unit to interconnect two UNI cables.
    - o Joining units also does a safety guard to avoid wire interruption.


- **Step 4 –** Extension BOX

    - o Remember to configure PORT A, B or C (depending on your selection) in the Entire's menu to "Extension BOX" mode.
    - o Once Extension BOX is properly connected and configured in the Entire, STATUS LED of the Extension BOX will start blinking GREEN and Entire overview page will show selected port highlighted as "Online". Also you will get four new ports available for input.
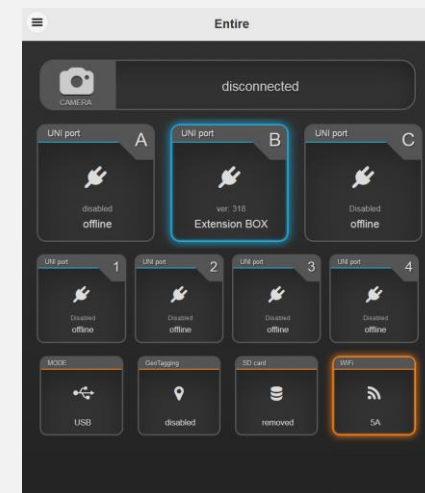
- **Step 5 –** HotShoe sync (optional)
    - o Insert HotShoe connector into HotShoe of your Camera
    - o Connect HotShoe cable to EXT port of the Entire
    - o Red wire from the cable connect to the pin of HotShoe connector.
    - o IR LED should be mounted at the Camera IR sensor. If not necessary, you can disconnect pins of the LED from the EXT connector and use single red wire only.
    - o Remember to turn ON the HotShoe sensing in the Entire's configuration
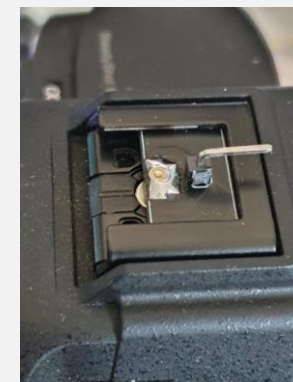
- **Step 6 (DJI) –** Configure SDK

  -

  - o Connect the drone via USB to DJI Assistant
  - o Select A3 / N3 unit
  - o In the MENU select "SDK"
  - o Configure Baud rate 230400 (default)
  - o Timestamp 1Hz
  - o Attitude Quaternions 100Hz
  - o Position 100Hz
  - o RTK 100Hz (If RTK is used)
  - o Gimbal Data 100Hz
  - o Flight Status 100Hz
  - o *All other fields set as "Do Not Send"*
 - o Click to Enable API if not enabled
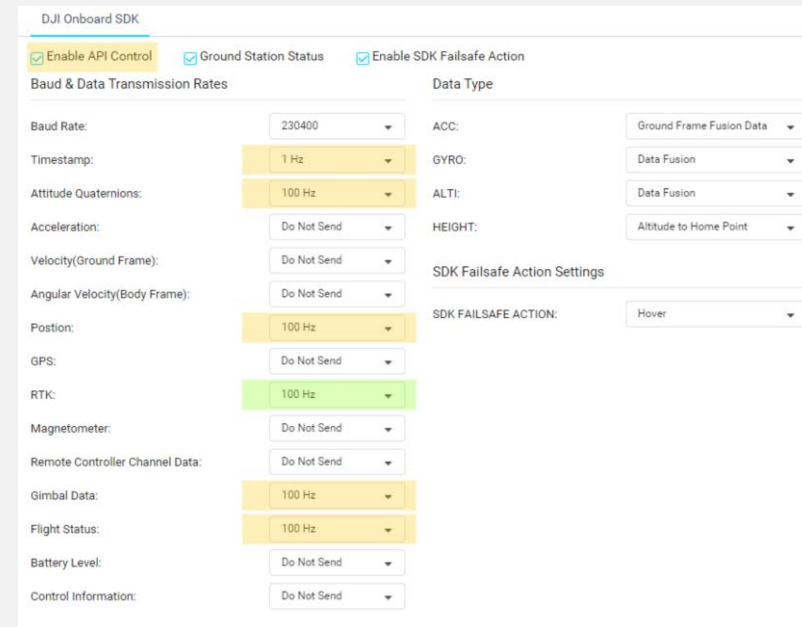
- **Step 6 (PixHawk) –** Configure Telem port

  -

  - o Configure proper Telemetry port to the budrate of 1 500 000bps
  - o Configure proper Telemetry port to the MavLink2 protocol
 - o See the end of this manual for (suggested) configuration (GeoTagging connection – PixHawk)

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- Step 7 (DJI) - *Assign F port for Shutter
  - o *In the MENU select "Tools"
 - o *Switch to "Function Channels"
  - o *Select port F3 as Shutter

Photogrammetry
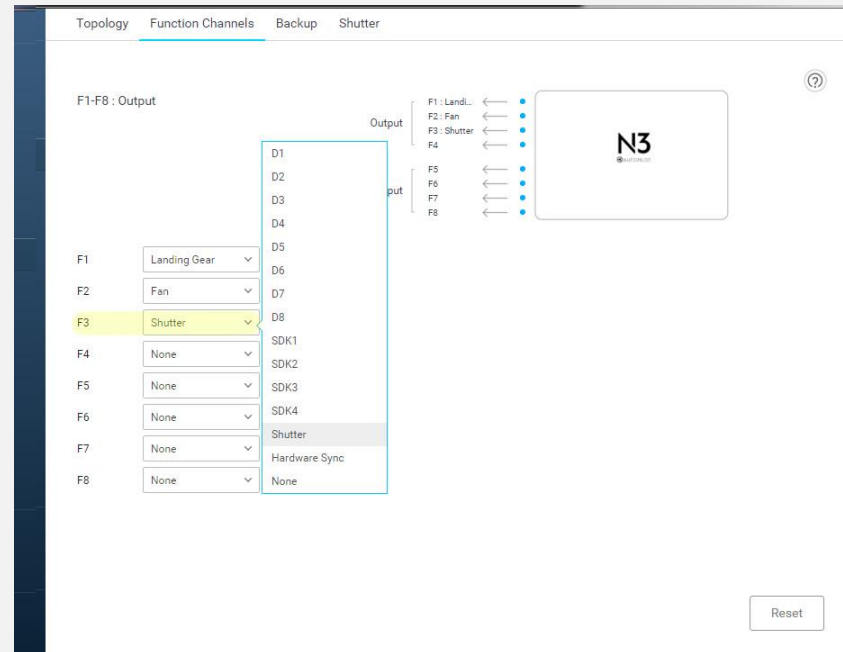
- Step 8 (DJI) – *Configure Shutter*

  -

    o *Switch to "Shutter" page
    o *Configure
        ▪ Shutter Trigger PWM to 1900
        ▪ Shutter Default PWM to 1000
        ▪ Shutter PWM frequency 50Hz
        ▪ Shutter PWM Active 400ms
   o *PWM signal connection is suggested to UNI-1 port of the Extension BOX
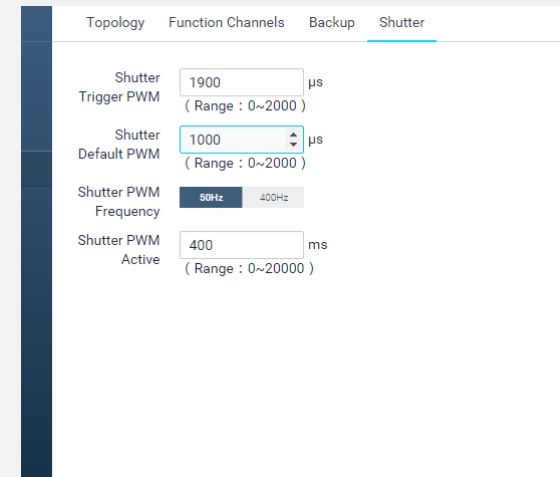
  for DJI M300 PWM triggering is not available

- Step 9 – Entire configuration – Extension BOX
    o Click to "UNI port B" bar at the overview page
    o In new window select the Extension BOX mode
    o Bar should become highlighted "online" after few seconds (or orange for FW update – DO NOT DISCONNECT)
    o Extension BOX should start blinking GREEN (Active)
    o At the overview page you should now get four new UNI ports available (1/2/3/4)

- Step 10 – Entire configuration – DJI / PixHawk
    o (PixHawk only) Open MENU –> Miscellaneous (Other) –> Mavlink baudrate set to 1 500 000.
    o Click to "UNI port 3" bar and in new window select DJI or MavLink (depending on your flight controller). Port should become "online" in few seconds.
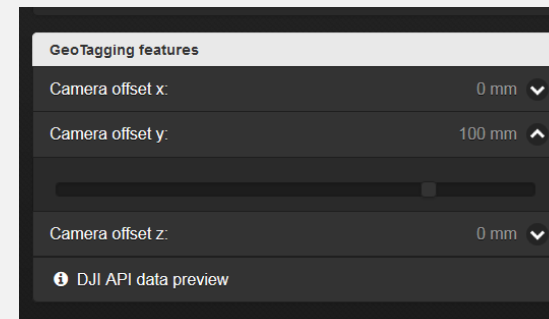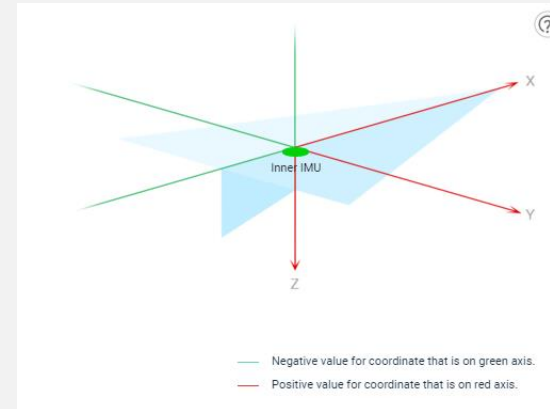
Photogrammetry
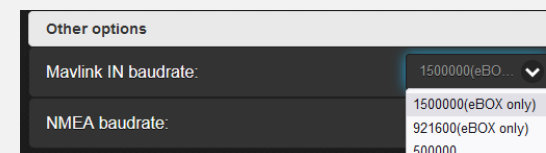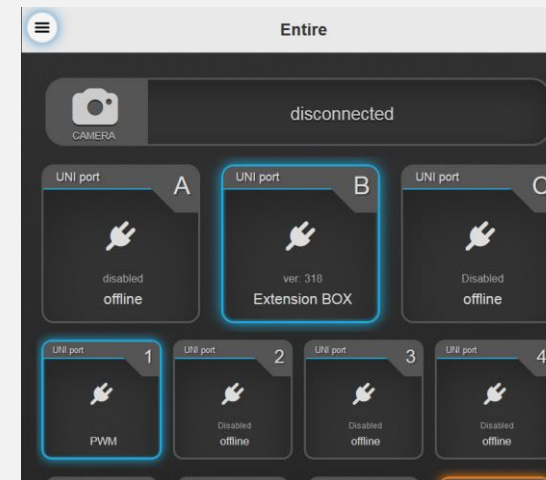
- **Step 11 -** Check the connection
  - o Connect the Entire's WiFi
  - o Open configuration page
  - o Open MENU -> Miscellaneous
  - o From the list select "DJI API data preview"
  - o In the popup you should get similar data if the GPS / RTK has enough signal.
  - o Data preview popup is real-time and should change as drone / gimbal moves.

- **Step 12 –** Configure Entire
  - o Switch UNI-2/3 or 4 to DJI mode (depending on your selection of DJI API connection)
  - o *Switch UNI-1 to PWM mode
  - o *Open Menu – SBUS mapping
  - o *Select "Trigger photo" in "Functions" section
  - o *Assign Cannel to #1 (channel one is PWM input)
  - o *Configure trigger to upper half of the range
  - o *White arrow will move slightly. When shutter button on DJI Transmitter is pressed, white arrow should move into blue part of slider and the Entire should now trigger photo.
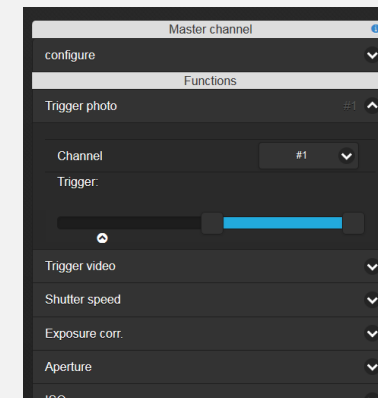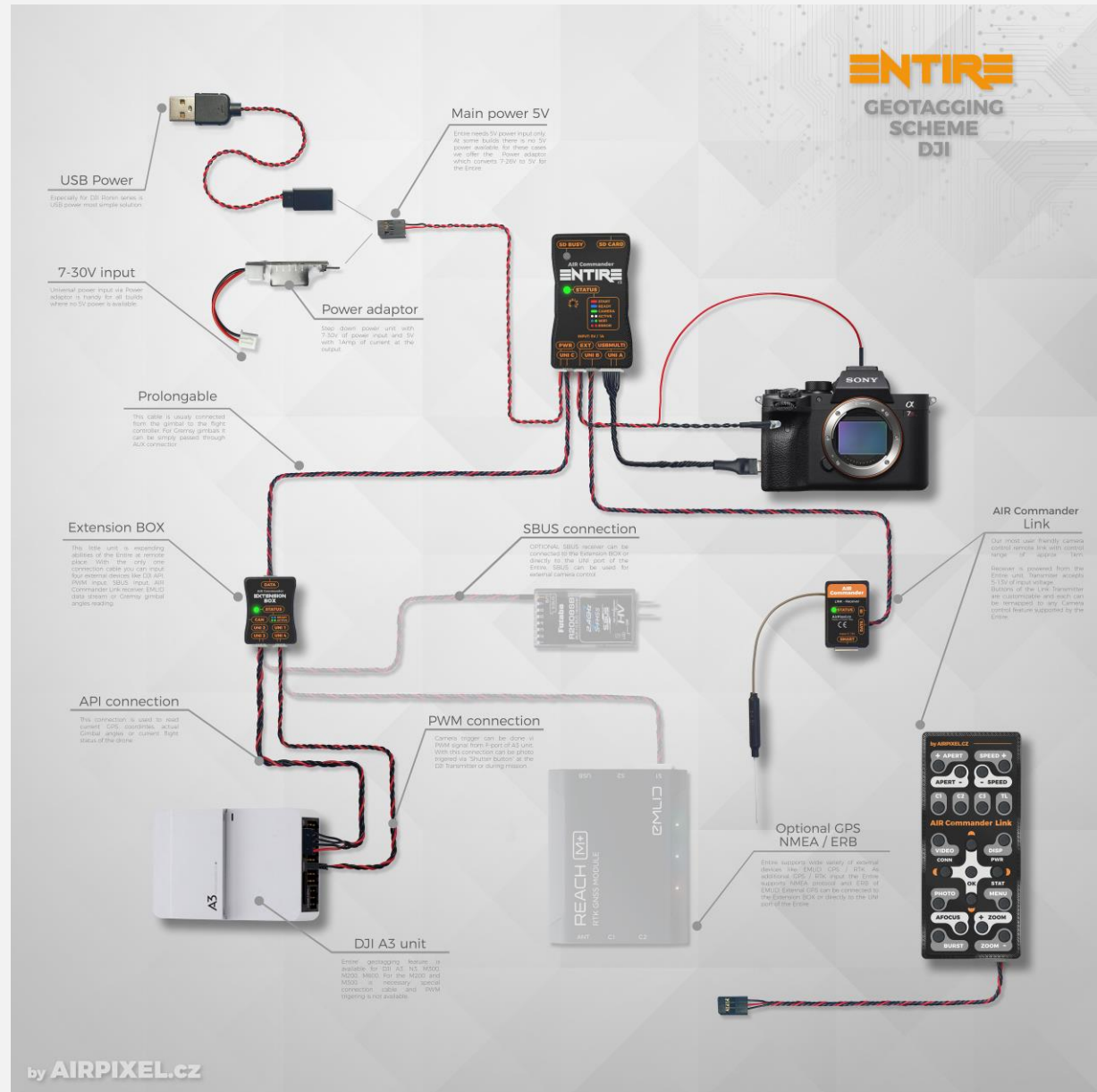
Step 11 - Calibration

o   Optionally you can preset the offset of the
     camera
o   Open the MENU -> Miscellaneous
o   Scroll down to GeoTagging features
o   And insert X, Y, Z offsets.
o   When GPS is used, offset is counted from
     body center (if correct offset is configured in
     the FC). If your flight controller does not have
     configured antennas offsets, configure offset
     from the camera to the antenna.
o   When RTK is used, offset must be counted
     from Antenna A
o   Offset is in millimeters!

Negative value for coordinate that is on green axis.
Positive value for coordinate that is on red axis.

Photogrammetry

Geotagging overall wiring scheme

([Higher resolution image online](#))

GeoTagging connection – PixHawk – Extended configuration

The Entire needs GPS data stream from the PixHawk for geotagging purposes. Entire is able to request GPS data stream from the PixHawk automatically per each session. This process is however sometimes problematic. Instead of automatic communication establishment, you can setup GPS data stream manually. This is most reliable solution for Entire GeoTagging.

- Connect your PixHawk to PC and connect it via Mission Planner

- Open Settings Bookmark

- From left MENU select FULL PARAMETER LIST

- Find item named SR1_POSITION or SR2_POSITION depending on telemetry port of your choose and enter value of 50 *

- Find item named SR1_EXTRA1 or SR2_ EXTRA1 depending on telemetry port of your choose and enter value of 10

- Find item named SR1_EXTRA3 or SR2_ EXTRA3 depending on telemetry port of your choose and enter value of 1

- All other SR1_xxx or SR2_xxx items must be set to 0 for reliable communication

- Confirm by enter and click to WRITE VALUE on the right

- From this time, GPS stream is enabled for all future flights

- Optionally you can check your MavLink connection by manual action Trigger Camera NOW. Clicking to "Do Action" should trigger photo on the Entire if all wiring and configuration is OK.

* (Mission Planer can give you warning that value is out of range, confirm that by OK)

SR1_ADSB	0	Hz
SR1_EXT_STAT	0	Hz
SR1_EXTRA1	10	Hz
SR1_EXTRA2	0	Hz
SR1_EXTRA3	1	Hz
SR1_PARAMS	0	Hz
SR1_POSITION	50	Hz
SR1_RAW_CTRL	0	Hz
SR1_RAW_SENS	0	Hz
SR1_RC_CHAN	0	Hz

Photogrammetry
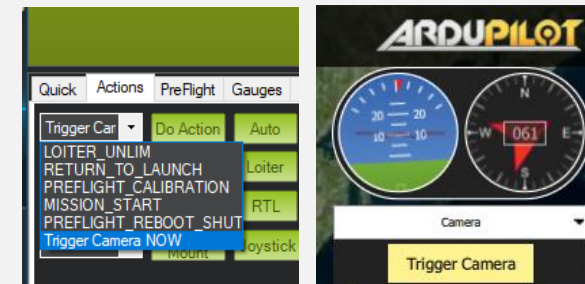
GeoTagging process

Once all setup is done, you are ready for first tests. You can use a Simulator feature in the DJI Assistant application to check if all works all expected.

1. Presumptions:
   a. Sony Camera is connected to the Entire via Multi-Port cable ->
   b. Control Mode is set up to USB
   c. Logging Mode is configured as Direct (EXIF)
   d. Camera is turned into Mass Storage USB connection mode.
   e. If the camera has two memory card slots, <u>use only one</u>.
   f. Configure the camera for saving JPG or RAW, <u>Not both.</u>

2. Default STATUS LED color in this configuration is BLUE and camera disconnected.

3. Immediately after takeoff, Entire will start blinking WHITE– Active GeoTagging session initialization.

4. Entire will automatically trigger photo capture and connect the via USB to scan actual SD folder/files order

5. Once the process of starting GeoTagging session is correctly done, STATUS LED will start blinking GREEN slowly, camera will be disconnected and you are ready to go. If RED blinking appears, GeoTagging has failed.

Photogrammetry

6. During the flight:
    a. You can trigger photos automatically (in planned Mission mode) or manually via DJI trigger (PWM) or via AIR Commander Link or via SBUS. If you use HotShoe sync, you can also trigger camera by any other third-party trigger (DJI Remote RSS).
    b. Received command makes STATUS LED blink shortly white
    c. Recognized camera capture is signalized by short blink of blue.

7. In the moment of landing, Entire STATUS LED will start blinking GREEN fast -> Process of Coordinates download has begun.

8. Camera will be connected via USB and new photos will be tagged by appropriate coordinates / gimbal angles.

9. Once process is done successfully, STATUS LED turns into BLUE solid. This means, that there were no errors during the flight or download. If STATUS LED turns to blink RED, there were one or more errors.

10. In the "Direct EXIF" mode, the Entire will try to save backup GPS log to the Entire's SD card if inserted. Another backup GPS log file can be downloaded via Entire's web configuration. Format of the GPS log file is:
    "File name, Latitude, Longitude, Altitude, gimbal roll, gimbal pitch, gimbal yaw"

Photogrammetry

Camera control & geotagging at once for Sony

USB connection of Sony cameras can be used for Geotagging (in MASS STORAGE mode), or for control in PC REMOTE mode. Not both. If you will use only USB (Multiport) connection and IR commanding for geotagging, you will get Photo trigger (multiport), Video trigger (multiport), Zoom (multiport), MENU access and navigation (left/right/up/down/OK) via IR commands.

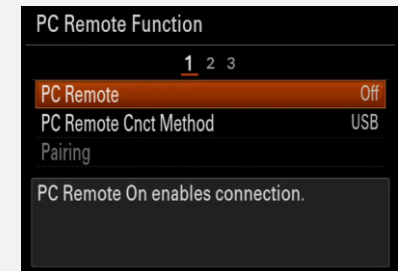Option 1)
Full control and geotagging via WiFi & USB
This feature is available only at newer cameras without Smart Memories apps. We tested
- RX100V, RX100VII, RX100VIII,
- A7R3, A7R4
- A6600, A6400

With this option you will do camera control via WiFi and USB (Multiport) will be used only for geotagging, triggering and zooming. IR connection is also suggested to be mounted together with WiFi & USB connection for MENU access.

- Disable geotagging if you already enabled this feature
- Set Camera to MASS STORAGE USB mode
- Enable WiFi control in the camera (Ctrl /w SmartPhone)
- Switch Entire to WiFi control mode
- Manage Entire to connect the Camera WiFi hotspot (Do a scan, select camera's hotspot, write down password)
- Entire's Status LED should go GREEN (and you should have control above camera
- Enable Geotagging and run Geotagging check

If you will struggle in Entire->Camera WiFi connection, please refer to the Camera control manual for more info.

Option 2) (Suggested)
Full control and geotagging via SmartPlug & USB

This feature is available only at cameras with support for external control via battery-grip.
- A7 series (all cameras from series)
    - o   For cameras with NP-FW50 battery use A7 SmartPlug
    - o   For cameras with NP-FZ100 battery use A9 SmartPlug
- A9, A1 series (all cameras from series)
    - o   Use A9 SmartPlug
- A6xxx, A5xxx, RX1x, RX100x are NOT supported to be controlled via battery slot.

With this option you will get full control above the camera by simulation of battery grip via SmartPlug and all other control is done via IR & Multiport.
-
- Set Entire to USB control mode and Enable GeoTagging
- Set camera to MASS STORAGE USB mode
- Insert SmartPlug to the camera battery slot
- Connect data cable from the SmartPlug to the Entire PORT B
- Configure PORT B in the Entire to "SmartPlug" mode.
- Connect power to the SmartPlug (12-14,5V)

-

Entire will automatically use SmartPlug in cases where no other control is available. If you have swapped Aperture / Speed control, please swap function of "wheels" in the camera MENU. As SmartPlug controls directly front and rear wheels rotation, most probably you have swapped these functions in the camera.
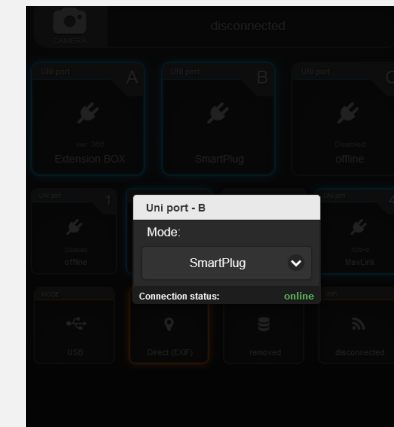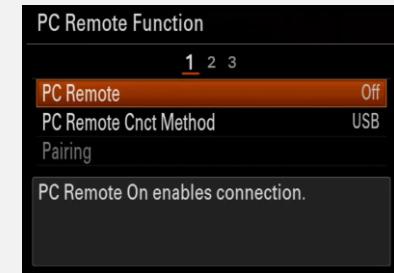
Controlling of ISO and Exposure correction in Geotagging & SmartPlug mode (option2)

SmartPlug A7 or A9 can directly control rotation of front wheel, rear wheel, press C1 and C2 buttons and trigger halfpress and fullpress of shutter button. Following lines shows how to control ISO and Exposure correction with these functions directly, without necessity to enter menu and toggle there. Option A and B will allow you to control ISO/Exp.Corr. via Entire's functions ISO+- and Exposure Cor+-

There are serval ways to achieve this functionality:
a) Good for older cameras (like A7R2) where is no option to use (opt b)
- Open Camera MENU and navigate to "Custom Key Settings"
- Navigate to "Custom Button 1" and set to ISO
- Navigate to "Custom Button 2" and set to Exposure Comp.
- Open Entire's MENU and navigate to Miscellaneous -> Sony
- Open "SmartPlug ISO Control" and set to Older
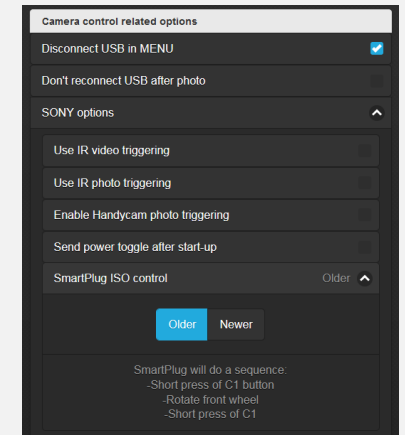
b) Good for Newer cameras (like A7R4)
- Open Camera MENU and navigate to "Custom Key Settings"
- Navigate to "Custom Button 1" and set to "My Dial 2 during Hold"
- In the submenu select Front dial alternative to ISO
- Navigate to "Custom Button 2" and set to Exposure Comp.
- Open Entire's MENU and navigate to Miscellaneous -> Sony
- Open "SmartPlug ISO Control" and set to Newer
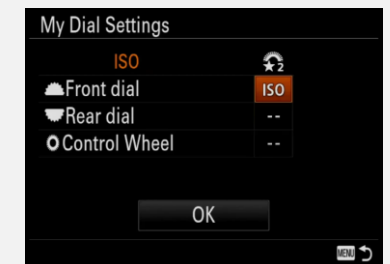
c) Custom solution
- Instead of these two pre-defined solutions a) and b), you can also map ISO / Exp.Corr. function in the camera to ANY button controllable via Entire (Left/Right/Up/Down/OK/C1/C2). Then once triggered via one of this buttons, simply navigate up/down in the camera mini-menu.

GeoTagging accuracy

Accuracy of whole process has been kept in each step of the creation process.

- Capture sensing accuracy
  HotShoe sensor has maximum delay of 5ms. If the drone flies at speed 5m/s, error will be approx. 2,5cm (1 inch).

- GPS / RTK receiving
  RAW RTK or GPS update is received by drone only 5-10 times per second. Drone Flight controller uses smart algorithms to estimate drone position in time between real measurements. We are reading data from the Flight controller 100 times per second (each 10ms). Also Entire applies smart post process using history positions and future positions (positions received after the capture) to estimate real capture coordinates.

- EXIF accuracy
  EXIF is written with extremely high accuracy of 0.00000001 degree, which is approx. 1mm accuracy in the distance. Altitude is saved with 0.1mm accuracy.

- Real-time GPS post process
  Our filtering methods is available in three stiffness steps. Post process is aimed to linearize all the movement of drone. Algorithm uses history GPS positions and future positions (measured after the capture) to estimate real capture position. Higher stiffness is good for long straight flights without changing of flight direction. High stiffness is also great for flights, where photographs are made while drone is hovering. For flights in rounds with small radius or other non-straight flight please use low stiffness or disable the filter.

Photogrammetry

MavLink control

Instead of AIR Commander Link system and SBUS input for controlling of the Entire you can also use MavLink.

If you have PixHawk as drone flight controller, you can use MavLink telemetry channel for remote commanding of the Entire (and Camera).

Our plugins are compatible with QGroundControl and Mission Planner application.

Aperture and Shutter-Speed control are not accessible during geotagging session. ISO is available only as custom key shortcut mapped to the arrows Left/Right/Down. Once GeoTagging is disabled all features can be used for camera control.

QGroundControl

1. Download our QGroundControl plugin (supported up to v3.5.6)

2. open QGroundcontrol application

3. in the top menu click to "Widgets"

4. select "Custom commands"

5. at the bottom of new window select "Load Custom Qml file"

6. select file "entire_qgc.qml" included in this ZIP

7. Plugin will be loaded as per image, click to the button will now be executed on your camera.
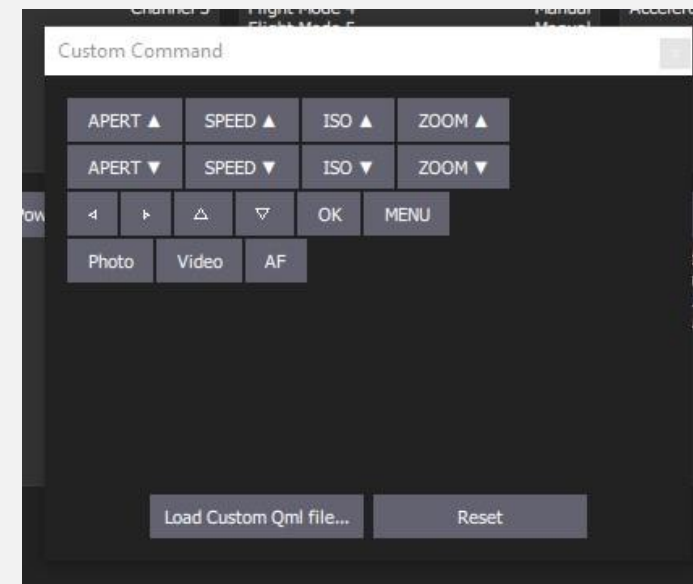
The Entire must be updated to the minimum FW 1.079 for this feature.

Photogrammetr

Mission Planner plugin

1. <u>Download</u> our Mission Planner plugin

2. Unzip and copy all files to Mission Planner plugins path

   Path: "C:\Program Files (x86)\Mission Planner\plugins"

3. Open Mission Planner application

4. In few seconds new tab will appear
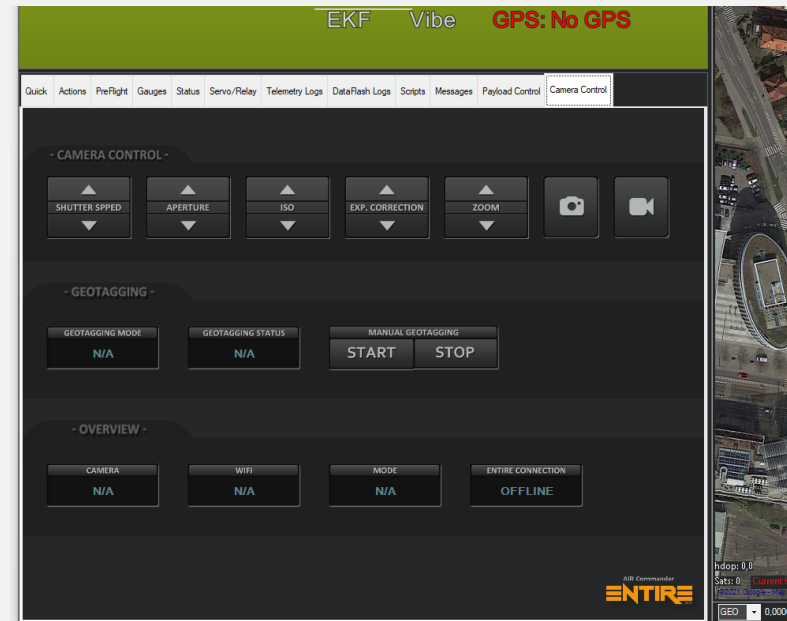
HereLink internal Android application – MavCam for HereLink

If you have HereLink as remote controller for your drone, you can
use MavCam for HereLink - our new Android application.

1) Unzip file MavCamHL.apk
2) Copy file to microSD card
3) Insert SD card to your Herelink
4) Click to notification - "New SD card detected"
5) Select "USE as portable storage" and confirm NEXT and DONE
6) Re-open notification area, click to "SD Card for transferring photos and media"
7) Click to MavCamHL.apk
8) Allow external sources if necessary
9) Install
10) Open app
11) Confirm "drawing over other apps" (this needs to be done only first time)
12) Click home button
13) In right bottom corner open list of installed applications
14) Run MavCam

MavCam for HereLink – tips and tricks

MavCam for HereLink is easy app, however there are few features
which are not clear at first look.

Main handle is used as shortcut to other menus via Swiping:

1)   *SWIPE RIGHT - MavCam configuration*

2)   *SWIPE UP – Camera configuration (Shutterspeed / Aperture / etc.)*

  • Camera configuration panel has small handle at right edge, which
  will expand panel with information about Entire status, and Entire
  configuration

3)   *SWIPE LEFT – hide MavCam*

  • Hide MavCam. This is handy when you need to use software
  keyboard, where sometimes MavCam interfere with ENTER key.
  Swipe up in the middle of bottom screen to re-open MavCam.

Zoom and focus panel is scrollable:

  When you opened Camera control panel, there is a few exposure tools. One of them is ZOOM. ZOOM handle
  reacts to PLUS or MINUS clicks as all others, but you can also swipe the ZOOM icon in the center to the left or
  right. Swiping left or right will give you proportional zoom control if camera supports this feature.
  If your camera supports proportional focusing, you can also use this sliding approach for focus tool (currently
 supported only for PhaseOne cameras).
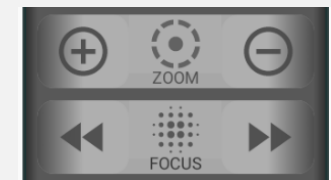
MavCam for HereLink – Using with external control (QGC / MissionPlanner / UgCS / etc.)

MavCam uses UDP port 14552 in the HereLink so this port cannot be shared with external application. For these cases, where external control needs to be gained, MavCam forwards all data to new UDP port 14562. Please configure your external application to use 14562 port instead of default 14552. MavCam must be running to gain control via 14562!

QGC external configuration for cases of share in local network (not directly connected to the HereLink hotspot)

- Click to Q icon in top left corner

- Application settings

- Comm Links

- Add

- Fill name

- Check "automatically connect on start"

- Type UDP

- Port 14562

- IP: IP of your HereLink in local network

- Click - Add Server

- Confirm OK

- Select new port and click Connect
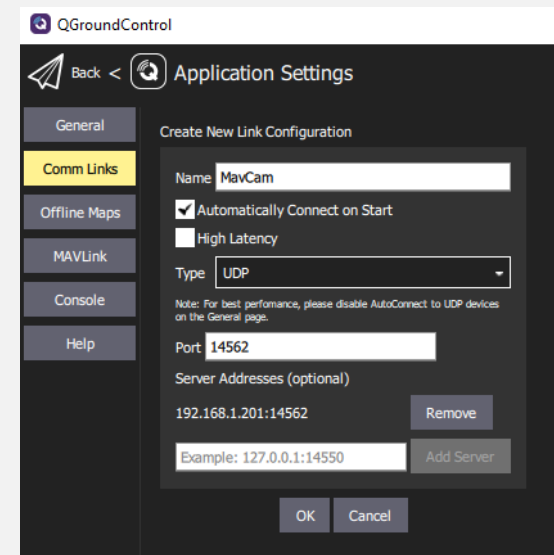
MissionPlanner external configuration for cases of share in local network (not directly connected to the HereLink hotspot)

- Open MissionPlanner

- Connection mode UDPCI

- Click Connect

- Fill IP of your HereLink in local network

- Fill port 14562

- Confirm OK
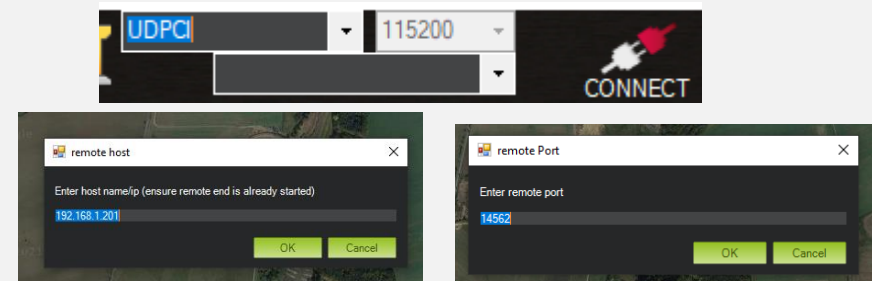
UgCS external configuration for cases of share in local network (not directly connected to the HereLink hotspot)

- Open UgCS configuration file ("C:\Program Files (x86)\UgCS\bin\vsm-ardupilot.conf")

- Search for part beginning #Vehicle can be connected via UDP.

- Fill there UDP options:

  o connection.udp_in.1.local_port = 14550

  o connection.udp_out.1.address = IP of your HereLink in local network

  o connection.udp_out.1.port = 14562


```
42  # Vehicle can be connected via UDP.
43  # UDP port which will listen for incoming mavlink messages.
44  connection.udp_in.1.local_port = 14550
45  connection.udp_out.1.address = 192.168.1.201
46  connection.udp_out.1.port = 14562
47
```
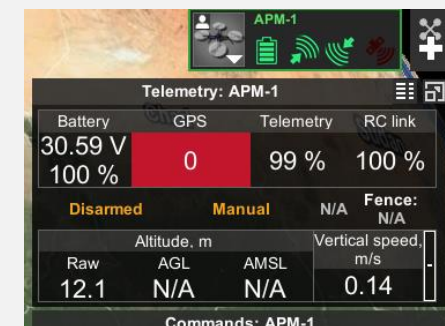
Android application (HereLink)

If you have HereLink as remote controller for your drone, you can also

use our new Android application for Entire control.

1.   <u>open</u> our manuals page and download MavCam – our Android control app.
2.   Install app to your phone / tablet
3.   Power up your HereLink unit and enable HereLink's WiFi hotspot
4.   Manage your phone WiFi to connect HereLink's hotspot
5.   Once connected launch MavCam application
6.   If all connection / configuration is proper link icon in top right will become green

DJI LB2 control

You can use your DJI controller to manipulate your camera remotely. The Entire's configuration is basically the same as for any other SBUS input. For full camera control via DJI LB2, you have to use DJI Expansion KIT, which is connected to the DJI Transmitter via CAN and expands the amount of "sticks" and "knobs" of your standard DJI Transmitter. All you need is:

- Follow the DJI manual for the DJI Expansion KIT installation

- Use DJI Assistant to map sticks or knobs to unused F-ports of your A3/N3 flight controller's output

- Use any PWM-SBUS converter and connect all desired F-port outputs to the converter

- Connect converter's SBUS output to the SBUS input of the Entire

- Now you have all DJI Expansion KIT sticks movement directly in the Entire, and you are free to use them for control of any camera feature
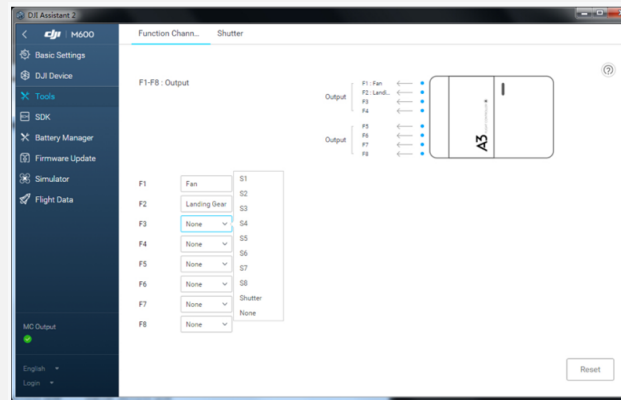
LightWare range finder connection

For some usage scenarios is important to have information about distance of photographed object from the camera. For example, when you need to measure length of cracks in the concrete dam. For this purpose we've implemented LightWare rangefinders compatibility and direct geotagging of the distance value to the EXIF during geotagging.

1) Connect the LightWare range finder to the Entire port A/B/C as per this wiring. Power for the rangefinder will be provided by the Entire.
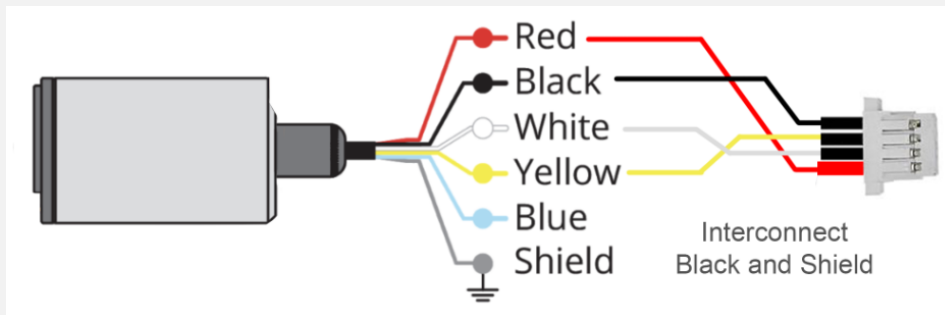
2) Open Entire's GUI and configure port to LightWare. Port should go "online" in few seconds.

3) Once port is online, value measured at the moment of the capture will be stored in the EXIF as "SubjectDistance" during process of geotagging.

4) For this purpose range finder should be mounted close to the camera and aimed to the center of the image

Tag name	Value
	---- **IFD0** ----
ImageDescription	
Make	SONY
Model	ILCE-7RM2
XResolution	350
YResolution	350
ResolutionUnit	inches
SubjectDistance	0.33 m

Cables for wired geotagging

DJI API cable
(only 3pin connected)

PixHawk cable
(only 3pin connected)

UNI cable (4pin)
(two lengths available)

EXT cable (3pin)

SBUS/PWM cable (4pin)

HotShoe connector

Multiport USB cable
(Entire connector is fully connected at Multiport cable!)

FAQ

- **GeoTagging starts properly (Entire is blinking green slow), however after landing the Entire turns to error (red blinking)**

    This kind of issue is mostly related to the file name and folder naming in the camera. The Entire is prepared to the default setting with folder name DCIM/100MSDCF and photo name in format "DSC1234.ARW" or "_DSC1234.JPG". If your camera does not name folders and files in this format, please reconfigure it back to the default.

    If previous suggestion does not help, check if the SD card is formatted (sometimes SD cards contains files from another cameras which makes troubles).

- **WiFi hotspot disappear after few minutes**

    The Entire's WiFi is extremely sensitive to input power stability. If you have issues with hotspot disappearing, your power input is most probably too weak. You have to take in mind, that once USB is connected to the camera, power consumption of the Entire can be as high as 1.8A! (depending on your camera model) If you have no other option to power the Entire, you can disable the USB camera charging (via the Camera menu).

- **All my configuration seems to be correct but camera is still "Disconnected".**

    In the geotagging mode, the camera is disconnected for most of time. Camera is shortly connected via USB multiport only after takeoff and after landing. Even during USB connection, camera is not highlighted as "Connected". You can still get basic control of IR commands (MENU/arrows/OK) and LANC commands (ZOOM/video trigger), because these are enabled by default for all the cameras.

- **GeoTagging works, but some photos has wrong GPS or missing GPS information at all.**

    This issue is mostly caused by wrong API SDK configuration in the DJI Assistant. Double check if all fields remarked at page 6 are configured properly (even these "Do not send"). Wrong API configuration leads into mismatch in data receiving or mistakenly recognized drone landing situation.

    Most of users checks the GPS information, or RTK when not installed. GPS must be set as "Do not send" and also RTK if not installed.

FAQ

This MANUAL will never be complete.

If you are missing some information please feel free to write us to:

Info@airpixel.cz

Warranty

All warranty and post-warranty service provides manufacturer at www.airpixel.cz. If any malfunction or non-usual behavior occur, stop using device and contact manufacturer at info@airpixel.cz.

Manufacturer

AIRPIXEL.CZ
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Prague 10
100 00
Czech Republic

Made in Czech Republic

Legal