

imajbox®

Portable mobile mapping system



PRESENTATION

imajbox® is a compact and portable mobile mapping system designed for high speed and massive geo referenced data collection along transportation and linear networks.

A response to many issues :

- GIS and mapping
- Infrastructures assessment
- Engineering studies
- Linear referencing system
- Management of maintenance
- Work control
- Planning and budgeting
- Monitoring



ACCURATE

Proprietary algorithms to process sensors raw data : GNSS, INS, vision for a continuous and accurate spatial positioning.



SIMPLE

Independant, standalone and autocalibrated.



PRODUCTIVE

High speed surveys for large scale data collection.



CONNECTED

Controlled by Wi-Fi and connectors for external sensors integration.



ADJUSTABLE

Easy mounting in all orientations with a tripod succion pads.



A VERSATILE TOOL

Mounted on cars, trucks, trains or boats, imajbox® can survey **from few to thousands of kilometers**.

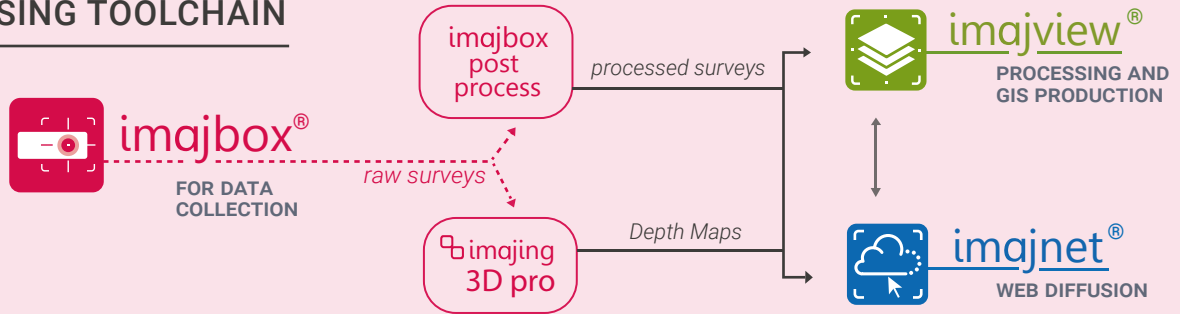
Punctual, recurrent or nation wide projects, **imajbox® is the tool to survey up to date data**.



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PROCESSING TOOLCHAIN



➔ POSITIONNING TECHNOLOGY

imajbox® merges data from a set of sensors to ensure accurate and continuous positioning – a factory calibrated inertial measurement unit (IMU), a GNSS receiver, a barometric sensor – and operates a patented self-calibration algorithm using the image flow.

The positioning is ensured even in case of complete loss of GNSS signals and complex environment thanks to :

- **dead reckoning** : propagation of the last known position that allows the geo-positioning upkeep.
- **mitigation of multi-path GNSS signal** involved in positioning errors.

➔ imajing IMU

DX2 is the second generation of **imajing mems IMU**. It combines accuracy, repeatability and robustness. Its factory calibration enables a compensated **temperature drift from - 40°C to + 70°C**, a **controlled drift** and a **regular auto-recalibration**. It is combined with **inhouse image flow tracking technology**.

DX3 is an improved version of DX2 IMU with **filtering model** adapted to the specific dynamic of trains and boats.

DX4 is the highest end IMU to be combined with RTK positioning solutions.

➔ IMAGE PROCESSING

imajbox® has a **80° or 100° high quality** with **factory calibrated lens** to remove optical distortion in photogrammetry.

imajbox® optimal **sense processing** automatically renders in all daily conditions of light and speed : natural colors, deep depth of field or sharp and detailed images.

| | | IMAJBOX® 2 | | | | | IMAJBOX® 3 | | |
|--|---------------------|------------|---|-------|--------|--------|-----------------|-------------|-----|
| | | L | S | T | Twin S | Twin T | S | T | TX |
| Survey type | | — 🚗 — | | 🚗 🚂 🚢 | | 🚗 🚂 🚢 | | 🚗 — 🚗 🚂 🚢 — | |
| Image sensor | | 5 MPX CCD | | | | | 8,9 MPX CMOS GS | | |
| HFoV | | 80° | | | | | 100° | | |
| IMU | | DX2 | | DX3 | DX2 | DX3 | DX3 | | DX4 |
| Maximum speed survey (km/h) | | 130 | | 180 | 130 | 180 | 180 | | 306 |
| Data volume (MB/km range) | | 250 | | | 500 | | 500 | | |
| GNSS mode compatibility and related planimetric absolute accuracy* | Standalone - 2m CEP | ● | ● | ● | ● | ● | ● | ● | ● |
| | SBAS - 1m CEP | ● | ● | ● | ● | ● | ● | ● | ● |
| | DGNSS - 50cm DRMS | | ● | ● | ● | ● | ● | ● | ● |
| | PPP - 30 DRMS | | ○ | ○ | ○ | ○ | | | ● |
| | RTK - 20cm DRMS | | ○ | ○ | ○ | ○ | | | ● |

* Accuracy is given for objects positioned up to 20m from camera according to positioning solution, in open sky.