imajbox® 2

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
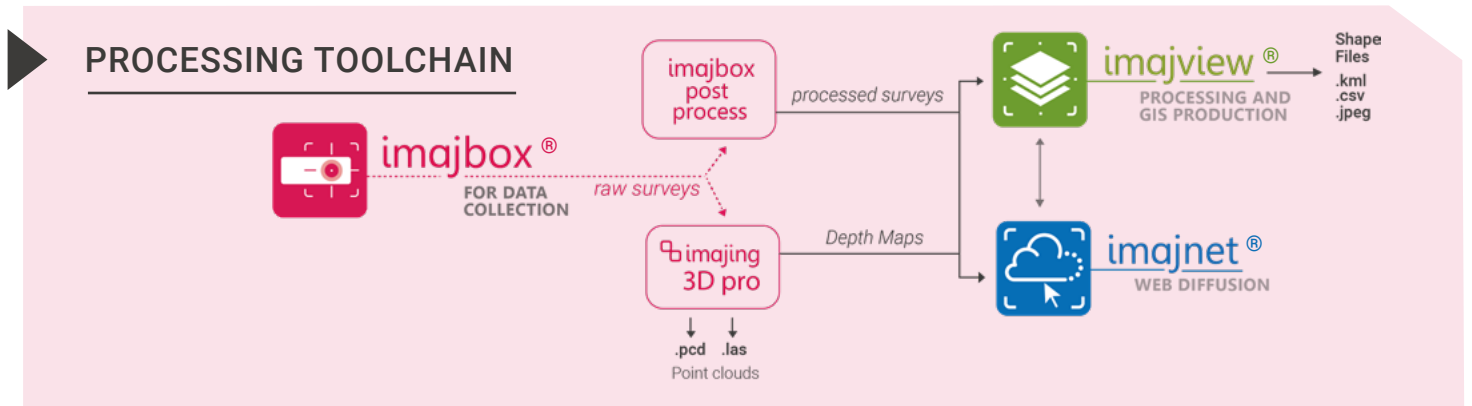Easy mounting in all orientations with a tripod succion pads.

→ 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.**

imajing
www.imajing.eu

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PROCESSING TOOLCHAIN

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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.

IMAGE PROCESSING

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

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.

	L	S	T	Twin S	Twin T
Survey type	🚗	🚗🚆🚢		🚗	🚗🚆🚢
Image sensor	5 MPX CCD				
HFoV	80°			120° or 2x80°	
IMU	DX2	DX3		DX2	DX3
Maximum speed survey (km/h)	130	180		130	180
Data volume (MB/km range)					
GNSS mode compatibility and related planimetric absolute accuracy* — Standalone - 2m CEP	●	●	●	●	●
SBAS - 1m CEP	●	●	●	●	●
DGNSS - 50cm DRMS		●	●	●	●
PPP - 30 DRMS		○	○	○	○
RTK - 20cm DRMS		○	○	○	○

● internal
○ external

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

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