

# 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**.

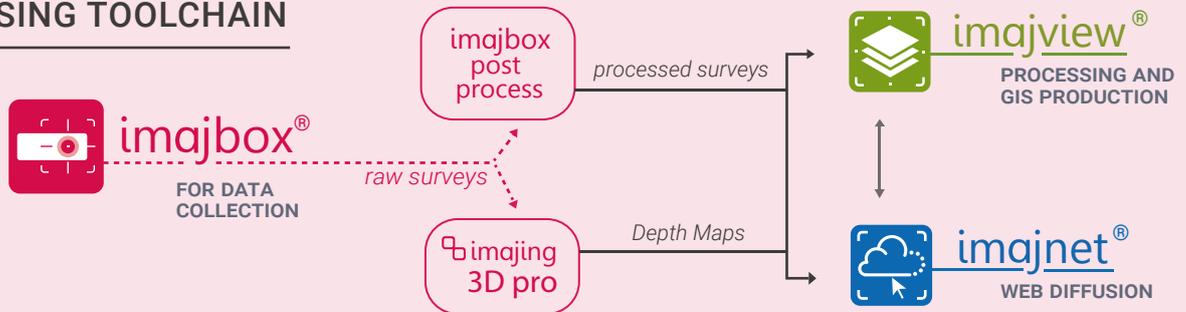
Punctual, recurrent or nation wide projects, **imajbox® is the tool to survey up to date data**.



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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		
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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.