

imajbox® 3

TECHNICAL SPECIFICATIONS

IMAJBOX® 3TX

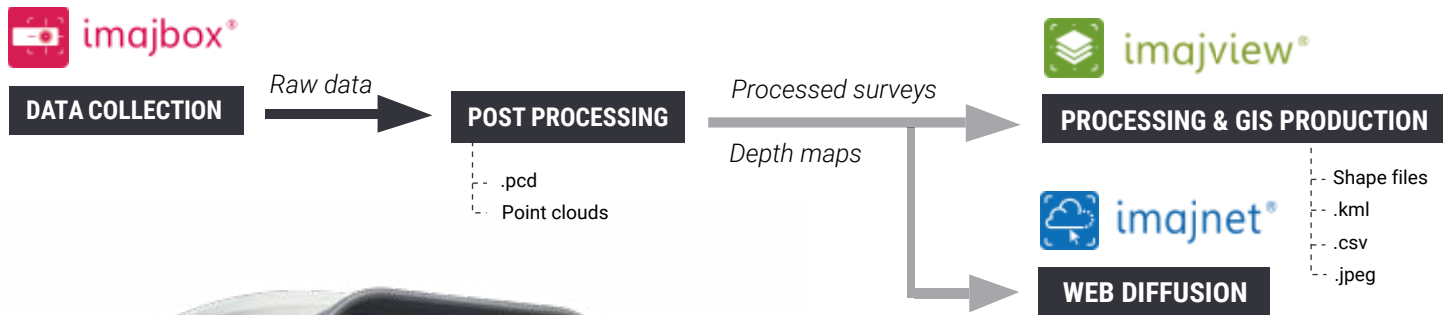
FOR ROAD AND RAIL

Portable mobile mapping system designed to survey linear infrastructures from any vehicle.

A versatile tool

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

Punctual, recurrent or nationwide projects, imajbox® is the perfect tool to survey a network, thus having up-to-date data.



A response to many issues:

- GIS and mapping
- Infrastructure assessment
- Engineering studies
- Linear Referencing System
- Maintenance management
- Work control
- Planning and budgeting
- Monitoring...



ACCURATE

Proprietary algorithms to process sensors' raw data for the continuous and accurate spatial positioning.



SIMPLE

Independent, all-in-one, standalone and autocalibrated. No wiring required.



PRODUCTIVE

High speed survey for a large scale data collection.



CONNECTED

Controlled by WiFi and connectors for external sensors integration.



ADJUSTABLE

Easily mounted in every orientations with the tripod's suction pads.

imajbox® 3 TX

GNSS RECEIVER

- 448 channels for simultaneous tracking of all visible satellites
- GPS: L1, L2, L5
- GLONASS: L1, L2, L3
- Galileo*: E1, E5a, E5b, AltBoc
- BeiDou*: B1, B2
- SBAS: EGNOS, WAAS, GAGAN, MSAS, SDCM (L1, L5)
- QZSS: L1, L2, L5
- Integrated dual channel L-Band receiver
- Supported real time modes:
Standalone, SBAS, dGNSS**, RTK(optional)**, PPP(optional)***

MODE	HORIZONTAL ACCURACY (RMS)	VERTICAL ACCURACY (RMS)
Standalone	1,2m	1,9m
SBAS	0,6m	0,8m
dGNSS	0,4m	0,7m
PPP	4cm	6cm
RTK	0,6cm + 0,5ppm	1cm + 1ppm

*optional.

**requires streaming of NTRIP frames for base stations corrections via WiFi.

***requires TerrastarD subscription.

- Time to first fix:
Cold start < 45s
Warm start < 20s

ANTENNA

- Integrated RTK grade L1/L2/L5 GPS/GLONASS/GALILEO/BEIDOU antenna
- Connector for external antenna (SMA)
Auto-switch to an external antenna
- Patch antenna for external use:
GPS/GLONASS L1/L2 patch antenna
- Interface for lever arm input

IMU

DX3 inertial movement unit 6 axis

- Gyroscopes:
Dynamic range: $\pm 280^\circ/\text{s}$
In-run bias stability: $12^\circ/\text{hr}$
Angular random walk: $0.56^\circ/\text{hr}$
- Accelerometers:
Dynamic range: $\pm 5\text{g}$
In-run bias stability: $0,25\text{mg}$
Velocity random walk: $0.073\text{m}/\text{sec}/\text{hr}$

IMAGE SENSOR

- Sensor
Single CMOS Global Shutter 8,9MP
- Resolution
Standard: 4096×2160 pixels
- Auto-trigger
Inter distance of image acquisition configurable (from 0,5m to 10m)
- Maximum Frame rate
10fps (full resolution)
- Ultra-fast auto-exposure
3 zones presets
- Optimized debayering

OPTICS

- Fixed focus multi-lens
- Deep depth of field
Sharp from 0,5 to 100m from camera
- HFoV
 100°

STORAGE

- Internal SSD
128 GB
- Support for real time external storage via USB3 (Pendrive, HDD, SSD)
- Data management interface for copying from internal SSD to USB
- Support for Ethernet
SAMBA share for accessing internal SSD directly

CONNECTIVITY

- USB 3
- Ethernet
- Wi-Fi host (for web remote control)
- Wi-Fi client (for corrections)

SOFTWARE

- imajbox® is delivered with Post processing software for Windows X64:
imaging browser
imaging 3D Pro
imaging InertialVision fusion algorithms

OPERATIONAL LIMITS

- Survey speed
0 to 180 km/h
- Temperature
 -10°C to 40°C
- Protection level
IP 65

HARDWARE

- Dimensions
Height: 175 mm
Length: 165 mm
Width: 145 mm
- Weight
2 kg
- Power supply
 $12\text{V} / 3\text{A}$
Internal battery for 3h standalone survey
- Package
1 unit delivered in a small fly case
3 suction pads
1 USB Pendrive 128GB
1 external patch antenna (L1/L2)
Security strap
Cigarette lighter power supply cable
AC/DC converter $110/240\text{V} \ 12\text{V} \ 3\text{A}$