

imajbox® 3

TECHNICAL SPECIFICATIONS

IMAJBOX® 3TX+

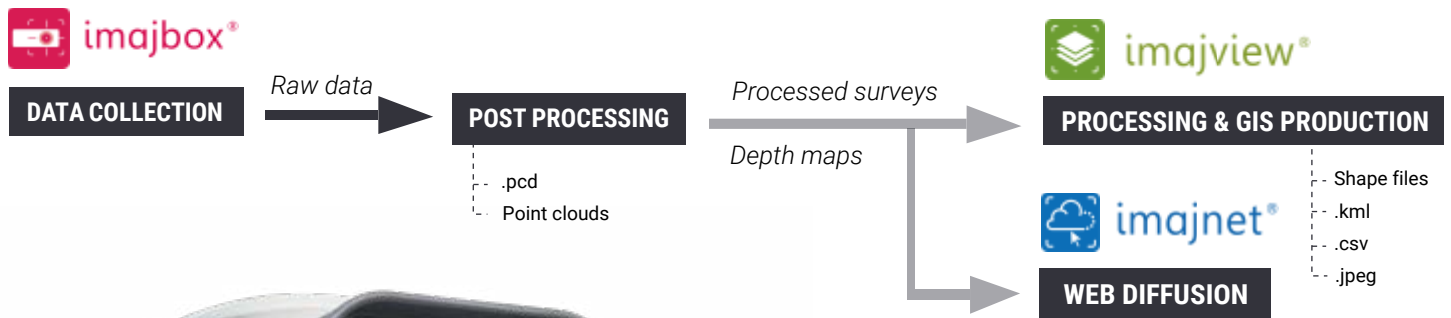
THE MOST ADVANCED IMAJBOX® OF THE RANGE

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**, PPP***(Terrastar)

Supported post processed modes:

Kinematic (Rinex)

| 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

DX4 inertial movement unit 6 axis

Gyroscopes:

Dynamic range: $\pm 480^\circ/\text{s}$

In-run bias stability: $6.25^\circ/\text{hr}$

Angular random walk: $0.3/\sqrt{\text{hr}}$

Accelerometers:

Dynamic range: $\pm 18\text{g}$

In-run bias stability: 0.1mg

Velocity random walk: $0.029\text{m}/\text{sec}/\sqrt{\text{hr}}$

IMAGE SENSOR

Sensor
Single CMOS Global Shutter 8,9MP

Resolution
Standard: 4096x2160 pixels
Cropped for high speed: 2200x2160 pixels

Auto-trigger
Inter distance of image acquisition configurable (from 0,5m to 10m)

Maximum Frame rate
10fps (full resolution)
17fps (high speed mode)

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 (512 GB optional)

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

Kinematic post processing module

imaging InertialVision fusion algorithms

OPERATIONAL LIMITS

Survey speed
0 to 180 km/h
Up to 300 km/h with high speed mode

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
12V / 3A
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 110/240V 12V 3A