

imajbox® 3

TECHNICAL SPECIFICATIONS

IMAJBOX® 3TX+

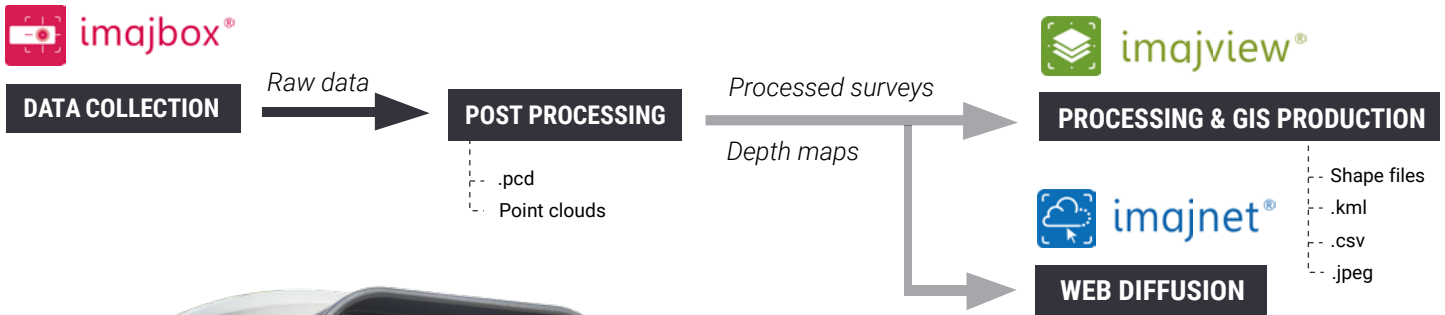
THE MOST ADVANCED IMAJBOX® OF THE RANGE

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	VERTICAL ACCURACY
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 (50ohms load)
- 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: $\pm 480^\circ/s$
In-run bias stability: $6.25^\circ/hr$
Angular random walk: $0.3/\sqrt{hr}$
- Accelerometers: Dynamic range: $\pm 18g$
In-run bias stability: $0,1mg$
Velocity random walk: $0.029m/sec/\sqrt{hr}$

IMAGE SENSOR

- Sensor: Single CMOS Global Shutter 8,9MP
- Resolution: Standard: 4096×2160 pixels
Cropped for high speed: 2200×2160 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
- 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: $-10^\circ C$ to $40^\circ C$

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