

imajbox® 3

TECHNICAL SPECIFICATIONS

IMAJBOX® 3SX+

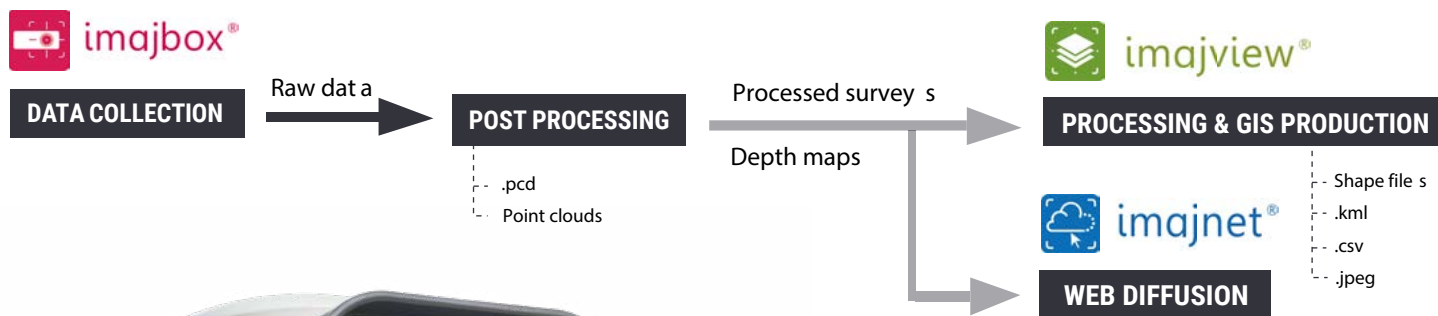
FOR PRECISION ROAD MAPPING

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

A versatile tool

Mounted on car or trucks, 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.

GNSS RECEIVER

Multi constellations multi frequencies high precision GNSS receiver

GPS: L1, L2C
GLONASS: L1, L2
Galileo: E1, E5b
BeiDou: B1, B2
QZSS: L1, L2

Supported real time modes:
 Standalone, dGNSS*, RTK*

MODE	HORIZONTAL ACCURACY (RMS)	VERTICAL ACCURACY (RMS)
Standalone	1,5m	
dGNSS	0,7m	1,5m
RTK	1cm + 1ppm	1cm + 1ppm

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

Time to first fix:
 Cold start < 30s
 Warm start < 2s

ANTENNA

- Integrated RTK grade L1/L2 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: $\pm 480^\circ/s$
 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**
 4096x2160 pixels
- Auto-trigger**
 Inter distance of image acquisition configurable (from 0,5m to 10m)
- Maximum Frame rate**
 10fps
- 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:
 imajing browser
 imajing 3D Pro
 imajing 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**
 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