DATASHEET

Trimble MX50

MOBILE MAPPING SOLUTION

THE MX50 ADVANTAGE

- Practical Mobile Mapping system combining precise LiDAR data and immersive panoramic imagery
- State-of-the-art Trimble® LiDAR technology integrated with a proven and reliable mobile platform
- Accurate point cloud for applications such as road surfaces, highway maintenance or asset management
- Simple system installation and intuitive browser-based operation
- Complete field-to-finish workflow, provided by Trimble—capture, process, extract, and share

Learn more:
geospatial.trimble.com

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ELECTRICAL DATA

Power supply input voltage	12 V-DC (12 V–16 V)
POWER CONSUMPTION	
Typical	150 W (max 350 W @ startup)

SYSTEM COMPONENTS

Sensor unit	Included
Control unit	Included
Power unit	Included
GNSS Azimuth Measurement System	Included
Roof rack	Included, standard cross bars not included
Transport box	Included
Field software	TMI, browser-based, no installation necessary
Cable, battery to power unit	5 m
Cable, power unit to control unit	3 m
Cable, control unit to sensor unit	5 m
Data storage	1 set (1 x 2 TBytes SSD, removable)
Control interface	Tablet or Notebook, Wi-Fi or LAN cable, byod

MX50 LASER SCANNER

Number of laser scanners	2
Laser class	1, eye-safe
EFFECTIVE MEASUREMENT RATE[1]	320 kHz and 960 kHz
Scan speed (Dual Head system)	240 scans/sec
Maximum range, target reflectivity > 80%[2]	80 m
Minimum range	0.6 m
Maximum number of targets per pulse	1
Accuracy[3] / precision[4]	2 mm / 2.5 mm @ 30 m
Field of view	full 360°[5]

EMBEDDED TRIMBLE GNSS-INERTIAL SYSTEM

ACCURACY - NO GNSS OUTAGES (POST PROCESSED)[6]	
X, Y Position (m)	0.020
Z Position (m)	0.050
Velocity (m/s)	0.005
Roll and Pitch (deg)	0.015
Heading (deg)[7]	0.025
ACCURACY - 60 SECOND GNSS OUTAGE (POST PROCESSED)[6]	
X, Y Position (m)	0.320
Z Position (m)	0.130
Roll and pitch (deg)	0.020
Heading (deg)[7]	0.030
ACCESSORIES	
DMI[6, 8]	yes, optional

CAMERAS

Camera type	No	Mounting	FoV	Focal length
Spherical camera, 30 MP (6 x 5 MP)	1	fixed	90% of full sphere	4.4 mm
Capture modes	by distance or by time at 10 fps max.			

3RD PARTY HARDWARE INTEGRATION OPTIONS

Synchronization output at sensor unit	1 (NMEA + PPS)

ENVIRONMENTAL CHARACTERISTICS

Maximum vehicle speed for data acquisition	110 km/h (68 mph)
IP rating	IP64 (sensor unit)
System Operating temperature	0 °C to +40 °C
Storage temperature	–20 °C to +50 °C
Relative humidity (operating)	20 % to 80 %
Relative humidity (storage)	20 % to 95 %

PHYSICAL CHARACTERISTICS

Dimensions sensor unit	0.54 m x 0.55 m x 0.57 m
Weight sensor unit	23 kg
Dimensions roof rack	1.13 m x 0.60 m x 0.31 m
Weight roof rack	18 kg

1 Rounded values
2 Typical values for average conditions.
3 Accuracy is the degree of conformity of a measured quantity to its actual (true) value.
4 Precision is the degree to which further measurements show the same results.
5 Dual head system provides a full 360° field of view. Each laser covers 346°.
6 With DMI option.
7 With GAMS option, 2 m baseline.
8 One sigma values, with DMI option, post-processed using base station data. Typical performance. Actual results are dependent upon satellite configuration, atmospheric conditions and other environmental effects.

Specifications subject to change without notice.

Contact your local Trimble Authorized Distribution Partner for more information

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