



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/mobile-mapping



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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 ¹	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 RATE²	320 kHz and 960 kHz
Scan speed (Dual Head system)	240 scans/sec
Maximum range, target reflectivity > 80 % ³	80 m
Minimum range	0.6 m
Maximum number of targets per pulse	1
Range accuracy ⁴ /Precision ⁵	2 mm/2.5 mm @ 30 m
Field of view ⁶	Full 360°

EMBEDDED TRIMBLE GNSS-INERTIAL SYSTEM

IMU Options	AP60	AP20
ACCURACY—NO GNSS OUTAGES (POST PROCESSED)⁷		
X, Y Position (m)	0.020	0.020
Z Position (m)	0.050	0.050
Velocity (m/s)	0.005	0.005
Roll and Pitch (deg)	0.005	0.015
Heading (deg) ⁸	0.015	0.025
ACCURACY—60 SECOND GNSS OUTAGE (POST PROCESSED)⁷		
X, Y Position (m)	0.100	0.320
Z Position (m)	0.070	0.130
Roll and Pitch (deg)	0.005	0.020
Heading (deg) ⁸	0.015	0.030
ACCESSORIES		
DMI ^{7,9}	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)
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ENVIRONMENTAL CHARACTERISTICS

Maximum vehicle speed for data acquisition	110 km/h (68 mph)
IP rating	IP64 (sensor unit)
System operating temperature	-10 °C to +50 °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 Included in Trimble MX50, Dual, AP20, Spherical+ only. For Trimble MX50, Dual, AP60, Spherical+ GAMS is available as an option.
 2 Rounded values.
 3 Typical values for average conditions.
 4 Accuracy is the degree of conformity of a measured quantity to its actual (true) value.
 5 Precision is the degree to which further measurements show the same results.
 6 Dual head system provides a full 360° field of view. Each laser covers 346°.
 7 With DMI option.
 8 With GAMS option, 2 m baseline.
 9 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.



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