



Trimble MX9

MOBILE MAPPING SOLUTION

KEY FEATURES

- ▶ Very high point cloud density with complimentary immersive imagery
- ▶ State of the art Trimble® GNSS and Inertial technology
- ▶ Dual and single laser configuration available to match customer needs
- ▶ Lightest and most compact premium mobile mapping system
- ▶ Simple installation and browser based operation from any smart device
- ▶ Compatible with existing Trimble software and workflows
- ▶ Enhanced remote support capabilities
- ▶ Supported by Trimble Business Center Mobile Mapping for efficient data processing
- ▶ Trimble MX software for feature extraction workflows and data publishing

Learn more:
geospatial.trimble.com/MX9



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MX9 SYSTEM		
Effective measurement rate ¹	Dual laser	Single laser
	2 MHz	1 MHz
	1.5 MHz	750 kHz
	1 MHz	500 kHz
	600 kHz	300 kHz
Scan speed	500 scans/sec	250 scans/sec
Number of laser scanners	2	1
Laser Positions	Adjustable in 3 horizontal and 3 vertical positions	

MX9 LASER SCANNER				
Laser class	1, eye-safe			
EFFECTIVE MEASUREMENT RATE ¹	300 kHz	500 kHz	750 kHz	1 MHz
Maximum range, target reflectivity > 80% ²	420 m	330 m	270 m	235 m
Maximum range, target reflectivity > 10% ²	150 m	120 m	100 m	85 m
Maximum number of targets per pulse	practically unlimited			
Minimum range	1.2 m			
Accuracy ³ / precision ⁴	5 mm / 3 mm			
Field of view	360° "full circle"			

EMBEDDED TRIMBLE GNSS-INERTIAL SYSTEM		
IMU-Options	AP60	AP40 ⁵
ACCURACY - NO GNSS OUTAGES (POST PROCESSED) ⁶		
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	0.020
Heading (deg) ⁷	0.015	0.020
ACCURACY - 60 SECOND GNSS OUTAGE (POST PROCESSED) ⁶		
X, Y Position (m)	0.100	0.120
Z Position (m)	0.070	0.100
Roll and pitch (deg)	0.005	0.020
Heading (deg) ⁷	0.015	0.020
ACCESSORIES		
GAMS	yes, optional	
DMI ^{5,8}	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
5 MP side looking camera ⁹	2	adjustable (in horizontal and vertical positions)	H: 53,1° V: 45,3°	8.5 mm
5 MP backward/downward looking camera ⁹	1	fixed	H: 53,1° V: 45,3°	8.5 mm
Capture modes	by distance or by time at 10 fps max.			

ELECTRICAL DATA		
Power supply input voltage	12 V-DC (12 V-16 V)	
POWER CONSUMPTION		
	Dual laser	Single laser
Max	350 W	250 W
Typical	280 W	200 W

SYSTEM COMPONENTS	
Sensor unit	included
Control unit	included
Power unit	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 (2 x 2 TBytes SSD, removable)
Control interface	Tablet or Notebook, WiFi or LAN cable, byod

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)
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	0.62 m x 0.55 m x 0.62 m
Weight sensor unit (dual laser unit)	37 kg
Weight sensor unit (single laser unit)	31 kg
Dimensions roof rack	1.03 m x 0.48 m x 0.28 m
Weight roof rack	18 kg

- 1 Rounded values, selectable by measurement program.
- 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 Single laser version has only the AP40 option.
- 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.
- 9 Only available with dual laser version.

Specifications subject to change without notice.



Contact your local Trimble Authorized Distribution Partner for more information

NORTH AMERICA
Trimble Inc.
10368 Westmoor Dr
Westminster CO 80021
USA

EUROPE
Trimble Germany GmbH
Am Prime Parc 11
65479 Raunheim
GERMANY

ASIA-PACIFIC
Trimble Navigation
Singapore PTE Limited
3 HarbourFront Place
#13-02 HarbourFront Tower Two
Singapore 099254
SINGAPORE

