

Trimble Indoor Mobile Mapping Solution (TIMMS)

THE OPTIMAL FUSION OF TECHNOLOGIES FOR CAPTURING SPATIAL DATA OF INDOOR AND GNSS-DENIED SPACES

TIMMS is a manually operated push-cart designed to accurately model interior spaces without accessing GPS. It consists of 3 core elements: LiDAR and camera systems engineered to work indoors in mobile mode, computers and electronics for completing data acquisition, and data processing workflow for producing final 2D /3D maps and models. The models are "geo-located", meaning the real world position of each area is known.

With TIMMS a walk-through of an interior space delivers full 360 degree coverage. The spatial data is captured and georeferenced in real-time. Thousands of square feet are mapped in minutes, entire buildings in a single day.

TIMMS is ideal for applications such as situational awareness, emergency response, and creating accurate floor plans. All types of infrastructure can be mapped, even those extending over several city blocks:

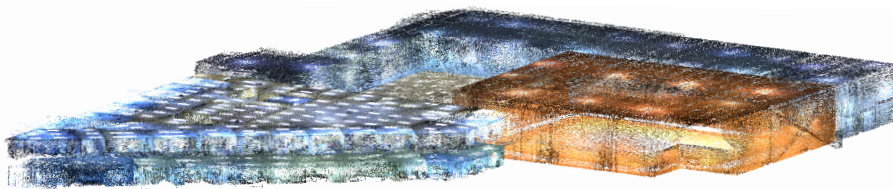
- ▶ Plant and factory facilities
- ▶ High-rise office, residential, and government buildings
- ▶ Airports, train stations and other transportation facilities
- ▶ Music halls, theatres, auditoriums and other public event spaces
- ▶ Covered pedestrian concourses (above and below ground) with platforms, corridors, stair locations and ramps
- ▶ Underground mines and tunnels

YOUR BENEFITS

- ▶ High efficiency, accuracy and speed
- ▶ Lower data acquisition cost for as-builts
- ▶ Reduced infringement on operations

Key Features

- ▶ No need for GNSS
- ▶ Little or no LiDAR shadowing
- ▶ Long-range LiDAR
- ▶ Self-contained
- ▶ Simple workflow
- ▶ Use survey control for precise georeferencing



TIMMS TRIMBLE INDOOR MOBILE MAPPING SOLUTION

TIMMS COMPONENTS

Mobile Unit & Camera
 TIMMS acquisition system
 Inertial Measurement Unit (IMU)
 POS Computer System (PCS)
 LiDAR Control Systems (LCS)
 Scanner Characteristics
 Supported scanners include:
 Trimble TX-5
 FARO Focus X-130, X-330, S-70-A, S-150-A, S-350-A
 Spherical camera (6 camera configuration)
 Field of View (FOV) >80% of full sphere
 2 MegaPixel (MP) per camera
 Six (6) 3.3 mm focal length
 1 meter/second (Up to 4 FPS)
 Operator and logging computer
 16 batteries (8 + 8 spare)
 2 battery chargers

SOFTWARE COMPONENT

Realtime monitoring and control GUI
 Post-processing suite – TIMMS Spatial Processor

SYSTEM DELIVERABLE

Georeferenced trajectory in SBET format
 Georeferenced point cloud in ASPRS LAS format
 Georeferenced spherical imagery in JPEG format
 Georeferenced raster 2D floorplan in GeoTIFF format

USER SUPPLIED EQUIPMENT

PC for post processing
 Windows 7 or Windows 10 64-Bit OS
 Minimum of 300 GB of disk
 32 GB of RAM required (64 recommended)

USER SUPPLIED SOFTWARE

Basic LiDAR processing tools: recommended functionality
 LAS import compatible
 Visualization
 Clipping
 Raster to Vector tools (manual and/or automated)

PERFORMANCE

Onboard power
 Up to 4 hours without charge or swap
 Hot swappable for unlimited operational time
 Data storage
 1 TB SSD
 Operations
 Nominal data collection speed at 1 meter per second
 Maximum distance between position fix 100 meters
 Typical field metrics
 LiDAR point clouds – 1 cm relative to position accuracy*
 Productivity – in excess of 23,000 m² (250,000 ft²) per day

PHYSICAL DIMENSIONS

Height with camera low.....	173 cm
Height with camera high.....	221 cm
Distance to wheel with camera low (front to back).....	80 cm
Distance to wheel with camera high (front to back).....	88 cm
Distance between wheels (outside surface of wheels).....	51 cm
Weight.....	49.5 kg (or 109 lb)



*rms derived by comparison of TIMMS with static laser scan, results may vary according to building configuration and trajectory chosen.

* System performance may vary with scanner type and firmware version. Published values based on X-130.

Contact your local Trimble Authorized Distribution Partner for more information

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