

KEY FEATURES

- Up to 400 kHz laser pulse rate
- Scan speed up to 200 Hz
- Full waveform digitization
- 45 – 60 degree field of view
- Roll compensation (software based)
- LiDAR operating altitude up to 1600 m AGL
- Integrated flight management system
- Portable storage system
- Integrated medium-format digital frame camera with fully integrated forward motion compensation (FMC)
- Image resolution up to 3 cm (with medium-format frame camera)

BENEFITS

- Integrated software workflow for laser and imagery data
- Compact, complete system
- High-quality data capture
- Flexible deployment scenarios
- Pilot only operation

PERFECTLY INTEGRATED SOLUTION PRODUCING VERY DENSE POINT CLOUDS AND GEOREFERENCED ORTHO IMAGES FOR YOUR MOST CHALLENGING AERIAL MISSIONS

The Trimble® Harrier 68i is an advanced corridor mapping system with a 400 kHz blasting pulse repetition rate to generate extremely dense point clouds in combination with high-quality, georeferenced ortho images.

The perfect integration of wide-angle full waveform digitization laser equipment, medium-format digital frame camera, direct georeferencing and flight management make the Harrier 68i the ideal solution for wide area mapping, powerline mapping, pipeline monitoring, corridor mapping, aerial survey and other demanding remote sensing operations. The built-in full waveform digitization features of the Harrier 68i enable comprehensive vertical information to be extracted from the acquired echo signals.

The integrated digital medium-format frame camera has been designed to generate geometrically and radiometrically consistent high-quality RGB digital imagery.

The Harrier 68i Multiple-Time-Around Technology allows multiple laser pulses and echoes in the air, thus increasing the point density of the mission.



Trimble Harrier 68i Corridor Mapping System

SPECIFICATIONS

Sensor Head Specifications

Beam deflection	Rotating polygon
Pulse repetition rate	80 kHz–400 kHz
Field of view	45 degrees to 60 degrees (max)
Measurement rate	266 kHz @ 60 degree 200 kHz @ 40 degree
Operating altitude	30 m AGL–1 600 m AGL
Beam divergence	≤ 0.5 mrad
Range capture	Full waveform digitization
Intensity capture	16 bit dynamic range for each echo
Scan frequency	10 Hz to 200 Hz
Eye safety class	Class 3R
Swath width	83% of op. altitude (45 degrees)
Range resolution	0.020 m
Vertical accuracy	<0.15 m (absolute)
Horizontal accuracy	<0.25 m (absolute)
Scan pattern	Parallel lines
Temperature	0 °C to +40 °C (operation) –10 °C to +50 °C (storage)
Humidity	0% to 85% non-condensing
Weight	42 kg
Dimensions	30 W × 64 L × 48 H cm

Available options Integrated medium-format digital frame camera
Portable storage system

Digital Camera Specifications (Option)

Model	Trimble AC P65+
Operating altitude	0 to 10,000 ft AGL
Field of view	Different lenses can be selected for this camera
Array size	60 MP
Channels	Three (RGB)
FMC	Fully integrated
Max. Exp. rate	Down to 2.8 sec.
Image pixel size	Down to 0.03 m
Image scales	1:250 to 1:10,000
Calibration	Geometrical and Radiometrical

Computer Rack Specifications

Log time	>8 h
Power	28 V DC, 22 A max.
Temperature	0 °C to +40 °C (operation) –10 °C to +50 °C (storage)
Humidity	0% – 90% Non-condensing
Positioning system	Applanix POS/AV
Weight	43 kg
Dimensions computer	44 W × 54 L × 40 H cm

Vibration isolated case mounts directly on the aircraft floor

Operations and Applications

- Corridor mapping and wide area mapping, aerial survey and remote sensing
- High-resolution ortho images, rapid response, pipeline monitoring, power line mapping, corridor mapping, city models, common LiDAR projects, detailed analysis and studies, target classification
- Helicopter and aeroplane operation
- Uninterruptible power supply provides the system with consistent power even through aircraft power glitches.

Data Processing

- Trimble TopPIT software package for pre- and post- processing of LiDAR data and true-ortho images generation
- Trimble TopPIT has a robust dataflow and workflow for both LiDAR and aerial imagery data.

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