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.

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

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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.
**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
- Operating altitude: 30 m AGL–1600 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% – 90% Non-condensing
- Weight: 42 kg
- Dimensions: 30 W x 64 L x 48 H cm

Available options . . . Integrated medium-format digital frame camera

**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
- Weight: 43 kg
- Dimensions computer: 44 W x 54 L x 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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