

HARRIER 56/G4

Full Waveform Digitization LIDAR Mapping System



Get the real details: Wide-angle full waveform digitization Laser-Scanner combined with a calibrated digital camera.

System Description

HARRIER 56/G4 sets a new edge on digital image acquisition and LIDAR scanning. Whenever your customer asks to get the real details you need the HARRIER 56/G4.

The combination of the wide-angle full waveform digitization Laser-Scanner Riegl LMS-Q560 and a medium-format digital frame camera makes this system the perfect tool for corridor mapping, aerial survey and remote sensing. The full waveform digitization features of the HARRIER 56/G4 enable the user to extract the most comprehensive vertical information from the acquired echo signals.

The HARRIER 56/G4 integrated digital camera has been designed to generate geometrically and radiometrically consistent high-quality colour and CIR digital imagery.

The camera is also apt to be operated stand-alone in order to serve medium-altitude aerial image projects for mapping or photogrammetric applications, thus doubling the usage of the HARRIER56/G4.

Key Performances

- Up to 240 kHz laser pulse rate
- Full waveform digitization
- 45 degrees field of view (configurable up to 60 degrees)
- LIDAR operating altitude up to 1 200 m
- Integrated flight management system
- Portable storage system
- Integrated medium-format digital frame camera
- Image resolution up to 3 cm
- Cost effective solution

Customer Benefits

- Compact system
- Complete solution
- Competitive advantage
- Flexible usage
- Integrated workflow for LIDAR data and image data processing

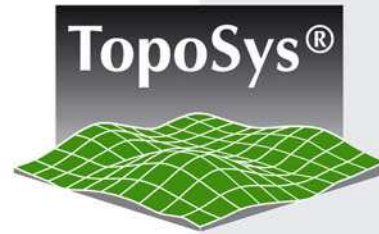


Specifications subject to change without notice.
Errors and omissions are excepted.
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TopoSys GmbH: Precision Is Our Dimension

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Sensor Head Specifications

Laser scanner:	Riegl LMS-Q560
Beam deflection:	Rotating polygon
Field of view:	45 degrees to 60 degrees (max)
Measurement rate:	120 000 Hz (45deg.) 160 000 Hz (60deg.)
Operating altitude:	30 m – 1 200 m
Beam divergence:	0.5 mrad
Range capture:	Full waveform digitization
Intensity capture:	16 bit
Scan frequency:	10 Hz to 160 Hz
Eye safety class:	Class 1
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 – +40 °C (operation) -10 – +50 °C (storage)
Humidity:	0 % – 90 % Non-condensing
Weight:	32 kg (+10 camera)
Dimensions sensor:	64 × 30 × 48 cm
Vibration isolated case mounts directly on the aircraft floor	
Available options:	Integrated medium-format digital frame camera Integrated flight management system Portable storage system

Digital Camera Specifications (Option)

Model:	Applanix DSS or Rollei Metric AIC Pro
Operating altitude:	0 – 6 000 m

Field of view:	45 degrees (60 opt.)
Array size:	22 / 39 MP
Channels:	Three (RGB or IGB)
Max. Exp. rate:	Down to 2.5 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, 20 A max.
Temperature:	0 – +40 °C (operation) -10 – +50 °C (storage)
Humidity:	0 % – 90% Non-condensing
Positioning system:	Applanix POS/AV Novatel SPAN
Weight:	42 kg
Dimensions computer:	54 × 50 × 44 cm
Vibration isolated case mounts directly on the aircraft floor	

Operations and Applications

Corridor mapping and area mapping, aerial survey and remote sensing

All kind of 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

Data Processing

TopPIT software package for pre- and post-processing of LIDAR data and true-ortho images generation

Harmonized data flow and workflow for LIDAR and imagery data