Leica DMC III
Breaking new ground. Always.

+25,000 PIXELS

World’s largest swath

Based on the all-new CMOS sensor, specifically engineered for airborne applications, the Leica DMC III mapping solution is breaking new ground. With the most efficient workflow available, this camera offers the world’s largest swath generated by a single frame capturing 25,000+ pixels across.

CMOS

Revolutionary CMOS technology

The Leica DMC III is the first large format camera using CMOS sensor technology reaching beyond the limitations of traditional CCD technology. The sensor captures more information with 100% increase in dynamic range and unsurpassed image quality thanks to less image noise and almost zero blooming.

Most efficient & intuitive workflow

The intuitive common data processing platform RealWorld features a simple yet powerful workspace that allows the user to easily manage even the largest data sets. Starting from data download, raw QC to basic data management, it guides you through the sensor-specific processing steps.

- when it has to be right
Leica DMC III product specifications

### PAN
- Pixel across track: 25,728
- Pixel along track: 14,592
- FoV across track: 57.2°
- FoV along track: 34.4°
- Focal length: 92 mm
- Pixel size: 3.9 μm
- GSD@500m: 2.1 cm

### MS
- Pixel across track: 8,956
- Pixel along track: 6,708
- FoV across track: 61.7°
- FoV along track: 48.2°
- Focal length: 45.0 mm
- Pixel size: 6.0 μm
- GSD@500m: 6.7 cm

### GENERAL
- B/H: 0.25
- Number of camera heads: 5
- PAN: colour resolution: 1 : 3.1
- Frame rate: 1.9 sec
- Colour channels: R,G,B, NIR
- Resolution per pixel: 14-bit
- FMC, mechanical: Yes
- Dynamic range (CMOS): 78 dB
- Onboard storage: 9.6 TB to store up to 7900 images
- Weight: 63 kg
- Power consumption: 280 W, camera incl. MM30 storage modules
- Altitude non pressurised: 25,000 ft (7,620 m)
- Operating temperature: Camera control electronic 0 °C to +40 °C, upper part - 20 °C to + 40 °C, lower part

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### MAXIMUM GROUND SPEED

<table>
<thead>
<tr>
<th>GSD</th>
<th>60 % forward overlap</th>
<th>80 % forward overlap</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 cm</td>
<td>161 kts</td>
<td>81 kts</td>
</tr>
<tr>
<td>4 cm</td>
<td>213 kts</td>
<td>108 kts</td>
</tr>
<tr>
<td>5 cm</td>
<td>267 kts</td>
<td>135 kts</td>
</tr>
<tr>
<td>6 cm</td>
<td>325 kts</td>
<td>162 kts</td>
</tr>
<tr>
<td>7 cm</td>
<td>370 kts</td>
<td>189 kts</td>
</tr>
<tr>
<td>8 cm</td>
<td>431 kts</td>
<td>215 kts</td>
</tr>
<tr>
<td>10 cm</td>
<td>541 kts</td>
<td>271 kts</td>
</tr>
<tr>
<td>12 cm</td>
<td>640 kts</td>
<td>319 kts</td>
</tr>
<tr>
<td>15 cm</td>
<td>781 kts</td>
<td>406 kts</td>
</tr>
<tr>
<td>20 cm</td>
<td>1,074 kts</td>
<td>537 kts</td>
</tr>
<tr>
<td>25 cm</td>
<td>1,343 kts</td>
<td>671 kts</td>
</tr>
<tr>
<td>30 cm</td>
<td>1,611 kts</td>
<td>806 kts</td>
</tr>
</tbody>
</table>

**Maximum ground speed 80 % forward overlap**

![Graph showing maximum ground speed 80% forward overlap](image)

### FLYING HEIGHT AND SWATH WIDTH

<table>
<thead>
<tr>
<th>GSD</th>
<th>Flying height (m)</th>
<th>Flying height (ft)</th>
<th>Swath width</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 cm</td>
<td>708 m</td>
<td>2,322 ft</td>
<td>783 m</td>
</tr>
<tr>
<td>5 cm</td>
<td>1,179 m</td>
<td>3,870 ft</td>
<td>1,306 m</td>
</tr>
<tr>
<td>10 cm</td>
<td>2,359 m</td>
<td>7,739 ft</td>
<td>2,611 m</td>
</tr>
<tr>
<td>15 cm</td>
<td>3,538 m</td>
<td>11,609 ft</td>
<td>3,917 m</td>
</tr>
<tr>
<td>20 cm</td>
<td>4,718 m</td>
<td>15,479 ft</td>
<td>5,222 m</td>
</tr>
<tr>
<td>25 cm</td>
<td>5,897 m</td>
<td>19,349 ft</td>
<td>6,528 m</td>
</tr>
<tr>
<td>30 cm</td>
<td>7,077 m</td>
<td>23,218 ft</td>
<td>6,528 m</td>
</tr>
<tr>
<td>33 cm</td>
<td>7,785 m</td>
<td>25,540 ft</td>
<td>6,817 m</td>
</tr>
<tr>
<td>35 cm</td>
<td>8,256 m</td>
<td>27,088 ft</td>
<td>9,139 m</td>
</tr>
<tr>
<td>40 cm</td>
<td>9,436 m</td>
<td>30,958 ft</td>
<td>10,445 m</td>
</tr>
<tr>
<td>45 cm</td>
<td>10,615 m</td>
<td>34,827 ft</td>
<td>11,750 m</td>
</tr>
</tbody>
</table>

**Flying height and swath width**

![Graph showing flying height and swath width](image)

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Leica Geosystems AG
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- when it has to be right
Leica ADS100
Airborne digital sensor – airborne evolution

NEW WITH
120 mm
FOCAL LENGTH

Increased image quality
With its unique features, the Leica ADS100 is designed to meet the 21st century airborne imaging needs. A full multispectral colour swath width of 20,000 pixels in RGBN guarantees the highest data acquisition efficiency, and full colour RGBN in the forward, nadir and backward offers more flexibility for stereo interpretation.

Reduced flight time
The Leica ADS100 product family continues to lead the way in airborne evolution. The improved cycle time allows you to acquire smaller GSD at faster speed, and the 120 mm focal length increases ground resolution, making the ADS100 SH120 the perfect sensor for urban mapping and high altitude data collection applications.

Fastest processing speed
The Leica ADS100 features embedded Novatel SPAN GNSS/IMU with tightly coupled processing to reduce fuel consumption. End-to-end workflow from mission planning with Leica MissionPro to orthophoto and point cloud generation with Leica XPro let you collect and process data at the highest level of performance.

- when it has to be right
Leica ADS100 product specifications

CHARACTERISTICS OF DATA ACQUISITION

**Focal plate (FPM)**
Total of 13 CCD lines with 20,000 pixels each in three line groups (forward, nadir, backward), pixel size 5um, TDI stages selectable 1, 2, 4, 8, 15 (1/2, 1/4, 1/8, 1/16 @ Cycle time > 1 ms)
Two tetrachroid beamsplitters in forward (14°), full colour RGBN and backward (10.4°), full colour RGBN one bi-tetrachroid in nadir, full colour RGGBN (green staggered)

**Dynamic range of CCD**
72 dB

**Resolution A/D converter**
14-bit

**Data channel**
16-bit

**Data compression**
Lossless 14-bit

**Recording interval per line**
> 0.5 ms

**SPECTRAL RANGE**

**Spectral range**
Red, green, blue, near-infrared

**Spectral bands**

- **Red**: 619 – 651 nm
- **Green**: 525 – 585 nm
- **Blue**: 435 – 495 nm
- **NIR**: 808 – 882 nm

**OPTICS DO120**

**Field of view (FoV)**

- **SH100**: Forward 65.2° across track
- **Nadir**: 77.3° across track
- **Backward**: 71.4° across track

- **SH120**: Forward 36.9° across track
- **Nadir**: 45.2° across track
- **Backward**: 41° across track

**Focal length**

- **SH100**: 62.5 mm
- **SH120**: 120 mm

**F-number**
4

**Registration accuracy**
1 um

**Lens design**
Telecentric lens design. Maintains position and width of filter edges over whole FoV. Thermic and pressure compensation for high accuracy.

**Flying height multiplier**

- **SH100**: 12,500 : 1, 10 cm GSD = 1,250 m AGL
- **SH120**: 24,000 : 1, 10 cm GSD = 2,400 m AGL

**MECHANICAL INTERFACE**

**Sensor head**

- **Weight, height, diameter**
  - **SH100**: 50.5 kg with CUS6 IMU, 67 cm, 39 cm
  - **SH120**: 46.5 kg with CNUS5H IMU, 67 cm, 39 cm

**Camera controller CC33**

- **Weight with MM30**
  - 6.5 kg
  - 300 x 260 x 140 mm, usable with Leica RCD30 series, Novatel SPAN embedded

**Mass memory MM30**
Solid state drive 1,600GB per MM30, Standard ¾" slot, weight 0.5 kg, removable, portable

**Leica operator console OC60**
12.1” touch-screen with 1024 x 768 resolution, sunlight readable

**Leica pilot display PD60**
6.5" screen with 1024 x 768 resolution, quick access buttons

**Interface stand IS40**
IS40 stand fits RC30 NAV-sight installation

**IMU integrated in sensor head**
Novatel SPAN CNUS5H IMU integrated

**GNSS/IMU system**
Novatel SPAN embedded in CC33 (GPS, GLONASS and BeiDou)

**Mount**
New Leica PAV100 high performance gyro-stabilised mount with adaptive control

**Total weight installed**

- **SH100**: ~120 kg
- **SH120**: ~130 kg

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Leica Geosystems AG
www.leica-geosystems.com
Leica CityMapper
More information, smarter decisions

Capture more
Leica CityMapper is the world’s first hybrid airborne sensor specifically designed for urban mapping. One sensor provides oblique and multispectral nadir imagery as well as LiDAR data. Collect all you need to create any 2D or 3D geospatial data product essential for smart city applications. Discover the most efficient way to capture airborne data in urban areas.

Process faster
Leica HxMap is the high-performance multisensor workflow featuring the industry’s fastest data throughput. Process the data captured with the CityMapper in one simple, intuitive user interface and generate the SmartBase, a comprehensive geospatial base layer, at the push of a button. HxMap is modular, scalable and upgradable specific to your needs.

Work smarter
By combining the CityMapper with HxMap, Leica RealCity offers the foundation to make smart decisions in rapidly changing urban environments. It is the fastest and most efficient way to create all geospatial information layers. The SmartBase consists of up-to-date and highly accurate 2D products and 3D models, all generated from simultaneously acquired data.

- when it has to be right
**Leica CityMapper product specifications**

(preliminary)

### CITYMAPPER POD

| Consists of | 1 x Leica RCD30 CH82 multispectral camera in nadir view, 1 x Leica Hyperion LiDAR unit |
| IMU | SPAN CNSS-H, no export license required US ECCN 7A994 |
| Height / diameter | 747 mm / 408 mm |
| Weight | 65 kg |

**SOFTWARE**

- **Mission planning**: Leica MissionPro
- **Flight navigation & sensor operation**: Leica FlightPro
- **Post-processing**: Inertial Explorer – GNSS/IMU processing software Leica HMap

### CAMERAS

#### LEICA HYPERION LIDAR UNIT

- **Laser wavelength**: 1,064 nm
- **Laser divergence**: 0.25 mmrad (1/e^2)
- **Pulse repetition frequency**: Up to 700 kHz
- **Return pulses**: Programmable up to 15 returns, including intensity, pulse width and angle under curve and slowness waveform attributes
- **Full waveform recording option at down-sampled rates**
- **Operation altitude**: 300 - 2,500 m AGL
- **Scanner pattern**: Oblique scanner, various scan patterns
- **Scan speed**: Programmable up to 100 Hz (6,000 RPM)
- **Field of view**: 40°
- **Swath width**: Up to 70% of flight altitude
- **Point density**: Typically 8 points per square metre at 1,000 m altitude
- **Ranging accuracy**: < 2 cm RMS
- **Vertical accuracy**: < 6 cm 1σ
- **Horizontal accuracy**: < 25 cm 1σ
- **Dimensions L x W x H**: 252 x 190 x 485 mm
- **Weight**: 12 kg

#### CAMERA & LIDAR CONTROLLER CC33

- **CC33**: Controls all camera heads and LiDAR unit, includes deeply coupled GNSS/IMU solution
- **Weight (without MM30)**: 6.1 kg
- **Dimensions L x W x H**: 300 x 260 x 140 mm
- **Processor**: 64-bit WIN7, RGB RAM, 32 GB Flash, USB 2.0, SATA
- **Memory**: Leica MX30 solid state drive 2,400 GB
- **Mass memory**: Leica HxMap
- **Mass memory weight**: 0.5 kg; removable and portable
- **Mass memory capacity**: Joint volume 4.8 TB, > 4.5 h of data collection at max. rate

#### PERIPHERALS

- **Sensor mount**: Leica PAV100 HeavyLoad gyro-stabilised mount for high-performance data acquisition
- **Setup**: 673 x 512 x 168 mm
- **Weight**: 38 kg
- **Pod lifter**: Leica PodLifter HeavyLoad to lift up the entire Leica CityMapper pod for takeoff and landing, 20 kg
- **Operator display**: Leica C650 12.1” screen with 1024 x 768 resolution, designed for installation with Interface Stand IS40
- **Pilot display**: Leica F660 6.3” screen with 1024 x 768 resolution, designed for cockpit mounting

#### ENVIRONMENTAL

- **Pressure**: Non-pressurised cabin up to ICAO 15,000 ft
- **Humidity**: 0% to 95% RH according ISO7173 (non-condensing)
- **Operating temperature**: -10 °C to 40 °C
- **Storage temperature**: -40 °C to 70 °C

#### ELECTRICAL

- **Avg. power consumption of complete system**: 600 W / 28 VDC
- **Max. peak power consumption of complete system**: 1,000 W / 28 VDC
- **Fuse on aircraft power outlet**: 1 x 50A

#### STANDARDS


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Invisible laser radiation, avoid eye or skin exposure to direct or scattered radiation. Class 4 laser product in accordance with EN/IEC 60825-1:2014.

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Leica Geosystems AG

www.leica-geosystems.com
Leica SPL100
Highest efficiency over large areas

Highest efficiency
The Leica SPL100 single photon LiDAR sensor reaches the highest efficiency for large area mapping. This airborne system is best used for state and country wide projects and acquires data at the lowest cost per data point. By collecting 6 million points per second using 100 output beams, the SPL100 is up to 10 times more efficient than any conventional LiDAR sensor.

Fastest processing
SPL100 data is processed using the HxMap high-performance multisensor (LiDAR and imaging) post-processing workflow. This software features the highest data throughput, by eliminating the limitations of single workstation processing. The workflow accelerates data delivery, and reduces training costs. HxMap is modular, scalable and upgradable specific to your needs.

Fine detail
Combining the SPL100 and HxMap, Leica RealTerrain offers the productivity launch pad for even the largest LiDAR mapping projects. Creating high-density point clouds, it provides the information needed for applications such as large terrain, flood zone and disaster mapping. Professionals can now base their decisions on the most detailed elevation data, at competitive costs.
Leica SPL100 product specifications

**SCANNER**

**Components**
- 1 x Leica SPL100 LiDAR unit
- 1 x Leica RCD30 CH82 multispectral camera

**IMU**
- SPAN CUS6

**Dimensions**
- 858.8 L x 530.1 W x 611.9 H mm

**Weight**
- 83.8 kg

**LIDAR UNIT**

**Beam configuration**
- 10 x 10 array

**Laser wavelength**
- 532 nm

**Laser divergence**
- 0.08 mrad (1/e² per beam, nominal)

**Laser pulse width**
- 400 psec

**Laser optical output**
- 5 W average

**Eye safety**
- NOHD < 300 m

**Pulse repetition frequency**
- 60 kHz (6.0 MHz effective pulse rate)

**Return pulses**
- Up to 10 returns per channel per laser shot including intensity

**Operation altitude**
- 2,000 - 4,500 m AGL

**Scanner pattern**
- Oblique scanner

**Scan speed**
- Programmable up to 25 Hz (1,500 RPM)

**Field of view**
- 20°, 30°, 40° or 60° fixed

**Point density**
- Typically 20 points / sqm at 4,000 m AGL

**Vertical accuracy**
- < 10 cm 1σ

**Horizontal accuracy**
- < 40 cm 1σ

**IMAGING UNIT**

**Camera Head**
- Leica RCD30 CH82

**Lense**
- Standard
  - Leica NAT-D 80 mm
  - 35.9° FOV across track, 27.4° FOV along track

- Optional
  - Leica NAG-D 50 mm
  - 53.8° FOV across track, 41.8° FOV along track
  - Leica SAT-D 150 mm
  - 19.5° FOV across track, 14.8° FOV along track

**SYSTEM ELECTRONICS**

**Components**
- 1 x LiDAR Controller
  - 1 x Camera Controller CC33

**Dimensions**
- 597.0 L x 508.0 W x 454.1 H mm

**Weight**
- 21.8 kg

**LiDAR CONTROLLER**

**Function**
- Recording raw scanner data

**Mass memory**
- 2x removable 63.5 mm SSD, 480 GB each

**Mass memory capacity**
- 1.0 TB, > 4.0 h of data collection

**CAMERA CONTROLLER CC33**

**Function**
- Controls camera head and LiDAR data logging, includes deeply coupled GNSS/IMU solution

**Mass memory**
- Leica XM30 solid state drive, 600 or 960 GB each
  - CC33 holds up to 2 XM30

**Mass memory capacity**
- Joint volume 1.2 or 1.9 TB, > 4.0 h of data collection at typical frame rate

Please refer to the Leica RCD30 Series data sheet for additional specifications.

**PERIPHERALS**

**Sensor mount**
- Leica PAV100 Heavy Load gyro-stabilised mount for high-performance data acquisition

**Dimensions**
- 673 L x 532 W x 168 H mm

**Weight**
- 38 kg

Please refer to the Leica PAV100 Series data sheet for additional specifications.

**Operator display**
- Leica OC60 12.1" screen with 1024 x 768 resolution, designed for installation with Interface Stand IS40

**Pilot display**
- Leica PD60 6.3" screen with 1024 x 768 resolution, designed for cockpit mounting

**LiDAR control laptop**
- Dell Inspiron, 15-inch display, 1920 x 1080 resolution, Windows 7, solid state disc

**ENVIRONMENTAL**

**Pressure**
- Non-pressurised cabin up to ICAO 18,000 ft

**Humidity**
- 0% to 95% RH according ISO7137 (non-condensating)

**Operating temperature**
- -0 °C to 40 °C

**Storage temperature**
- -10 °C to 55 °C

**ELECTRICAL**

**Avg. power consumption of complete system**
- 600 W / 28 VDC

**Max. peak power consumption of complete system**
- 1,000 W / 28 VDC

**Fuse on aircraft power outlet**
- 1 x 40 A

**STANDARDS**


**SOFTWARE**

**Mission planning**
- Leica MissionPro

**Flight navigation & sensor operation**
- Leica FlightPro

**Post-processing**
- Leica HxMap – image and LiDAR download, image development and point cloud generation
  - Inertial Explorer – GNSS/IMU processing

1 Max. operating altitude is achieved at ≥10% reflectivity (e.g. dry asphalt) and 100% laser output
2 Accuracy and point density stated in the table is acquired @4,000 m AGL, 100 m/s aircraft speed
3 The 1σ value represents the 68% confidence interval. Typically, the RMSE value is equal to 1 accuracy value
4 Vertical and horizontal accuracy estimations are based on the integrated SPAN system and a GPS error of 5 cm

Visible laser radiation, avoid eye or skin exposure to direct or scattered radiation. Class 4 laser product in accordance with EN/IEC 60825-1:2014.

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Airborne Topographic LiDAR Solutions
Efficiency & accuracy

- when it has to be right

Leica Geosystems
Leica ALS80 & DragonEye – efficiency & accuracy for all applications

Real-world efficiency is what defines your ability to execute survey projects quickly and accurately. With five system offerings, each providing outstanding flexibility, you will find the one that meets your needs and helps you to excel on the contracts you need to fulfil tomorrow and beyond. Whether your application involves providing detailed, high-point-density city models or covering vast expanses of remote terrain with big terrain relief, Leica Geosystems topographic LiDAR systems deliver best-in-class efficiency with the highest pulse rates at all flying heights.

You work in the real world with real environments and real targets. The topographic LiDAR sensor family offers options for high temperature operations up to 40 °C and flying heights to 5,000 m AGL. All systems provide sensitivity to capture even low reflectivity targets like recently paved roadways or small features like shield wires on power transmission corridors.

Efficiency from low to high altitudes

Leica DragonEye features on-the-fly, waveform-to-range data conversion without extra data storage and ground processing burdens. Leica ALS80 features time-proven, accurate, discrete return range and intensity data measurement with models capable of operation up to 5 km flying height and covering nearly 8 km swath, all with real world, low reflectivity targets. Both systems feature high-speed workflows to complement their industry-leading acquisition speeds.

Different scans for different plans

Leica DragonEye, with its unique oblique scan pattern, is ideal for low-aspect-ratio urban environments and utility mapping where high detail on vertical surfaces is needed. Leica ALS80, with adjustable FOV and 3 planar scan patterns, provides ultimate flexibility and altitude capability. Both offerings provide effective pulse rates up to industry leading 1.0 MHz for maximum data acquisition productivity and reduced flight times.

One flight, more unique data products

Both sensors feature fully integrated imaging systems. The unique Leica RCD30 camera is available in a variety of resolutions and focal lengths, and in 3-band or 4-band variants, allowing you to tailor the imaging sensor to precisely suit your mission. All systems offer optional full-waveform recording capabilities for specialised applications while also providing high quality point cloud data fused with image data for ultimate flexibility in decision making.
**WIDE-AREA MAPPING WITH LEICA ALS80**
- High AGL capability and wide FOV range for large-area coverage
- Outstanding pulse rates at all flying heights for maximum productivity
- Small beam divergence increases planimetric accuracy, even from maximum flying heights
- Adjustable FOV and scan patterns for ultimate flexibility in point density over any terrain type

**CITY MODELLING WITH LEICA DRAGONEYE**
- Oblique scan with each surface measured from multiple vantage points enhances detail on vertical surfaces
- Fused RGB imagery allows easier separation of vegetation near buildings, producing cleaner building models
- PAV100 gyro-stabilised mount installation minimises the need for side overlap, maximising efficiency at low flying heights typical for city modelling
- Low range jitter for smooth building models

**PIPELINE (ALL MODELS)**
- High point density for proper modelling and localisation of pipelines
- High accuracy at high point density for easy detection of erosion around supporting structures and access paths
- Wide swath capability for acquisition of entire right-of-way without multiple flights
- High scan rates allow data acquisition from low-cost fixed-wing aircraft

**POWER LINE (ALL MODELS)**
- High sensitivity for detection of small ground wires, guy-wires and small vegetation
- Small beam divergence reduces position error on small targets
- High accuracy measurement of ground and vegetation clearance for line re-rating and vegetation management
- Internal and pod installations available for maximum platform flexibility

---

**Cost-saving common sensor platforms**

Leica Geosystems is the only provider offering imaging and LiDAR solutions based on a common sensor platform of system peripherals and software. Users can share components and common operator and pilot interfaces between systems for simple, consistent installation across all airborne sensors, providing synergies in ground handling and operator training regardless of the array of systems employed. Likewise, common mission planning makes it efficient for a small workforce to plan for a wide variety of missions, all from a familiar planning interface. This results in efficient workflow, reduced training and cost savings.
Airborne Bathymetric LiDAR Solutions
Proven productivity

- when it has to be right
Leica Chiroptera II & HawkEye III
– for deep & shallow water surveys

The Leica Chiroptera II and HawkEye III are combined airborne bathymetric and topographic multi-sensor LiDAR systems providing full seafloor coverage and topographic data from onshore. The data delivered by the sensors is completely seamless from the seabed (bathymetry) onto land (topography). Both systems use the unique oblique LiDAR technology that illuminates the seafloor and objects from multiple angles, maximising coverage. The oblique LiDAR technology is superior for object detection and vertical coverage on land and in water.

Leica Chiroptera II is equipped with one bathymetric channel for nearshore surveys down to approximately 15 m depth and has one 500 kHz topographic channel. The Leica HawkEye III combines the performance of the Leica Chiroptera II with an additional bathymetric channel for depth penetration to approximately 50 m. Both systems include an 80 MP Leica RCD30 camera (RGBN).

Poor visibility? No problem.

The Leica Chiroptera II and HawkEye III provide industry-leading maximum depth as well as the ability to punch through water with less than optimal visibility. The LiDAR sensor family is field-proven in applications around the world in a variety of water conditions, including nearshore, at sea and turbid inland waters. Ultimate depth penetration is only possible if both hardware and workflow come together to overcome the challenges of poor water clarity.

Most efficient method for coastal surveys

Perform topographic and hydrographic data collection at the same time. Leica Chiroptera II and HawkEye III incorporate scanners optimised for their respective applications: high-pulse rate topographic scanning for maximum detail and powerful bathymetric scanning to maximise water penetration and obstruction detection. Use Leica Chiroptera II for nearshore and inland waters and Leica HawkEye III for ultimate penetration in deeper waters.

World’s most complete & competitive workflow

Process waveforms and position data, perform calibrations, extract the water surface, correct for refraction, and incorporate four-band camera data, all with one software – the Leica LiDAR Survey Studio (LSS). Increase your work efficiency by incorporating all phases of your project, from mission planning and execution to data delivery in a variety of formats, including fused images, seafloor reflectance, classified point clouds and RGB/CIR images.
RIVER SURVEYS AND INLAND WATERS
- Flood mapping and prediction
- Disaster management
- Geomorphology studies

NEARSHORE CHARTING
- Charting according to S-44 standards
- Onshore, shoreline and seamless data down to the seabed
- Obstruction detection with oblique LiDAR
- Maximum depth penetration in turbid water conditions

SEABED CLASSIFICATION
- Reflectance and intensity data available
- Seabed and substrate classification
- Geology and geomorphology
- Coastal processes and erosion

ENVIRONMENTAL MONITORING
- Marine ecology
- Submerged vegetation and habitat mapping
- Aquaculture: area selection and monitoring
- Hydrodynamics

Cost-saving common sensor platforms
Leica Geosystems is the only provider offering imaging and LiDAR solutions based on a common sensor platform of system peripherals and software. Users can share components and common operator and pilot interfaces between systems for simple, consistent installation across all airborne sensors, providing synergies in ground handling and operator training regardless of the array of systems employed. Likewise, common mission planning makes it efficient for a small workforce to plan for a wide variety of missions, all from a familiar planning interface. This results in efficient workflow, reduced training and cost savings.