

VEXCEL
IMAGING

ULTRACAM PANTHER

Redefining 3D Reality Capture





ULTRACAM PANTHER

The most flexible Reality Capture System



The UltraCam Panther enables your business to meet even the most demanding mobile mapping challenges: indoors, outdoors, everywhere!

Take advantage of the industry-first capabilities of the portable UltraCam Panther with its unrivaled flexibility and versatility. With 172 megapixels per full-spherical image, the camera head provides photogrammetric-grade imagery with an unprecedented resolution and image dynamic while always on the move. Combined with complimentary orientation-, LiDAR- and odometry-modules, the system simultaneously captures full-spherical imagery, precision LiDAR 3D data, and highly accurate geo-positioning information in both indoor and outdoor environments. Even without GPS reception, the visual odometry sensor provides uninterrupted and accurate positional information, especially indoors or underground.

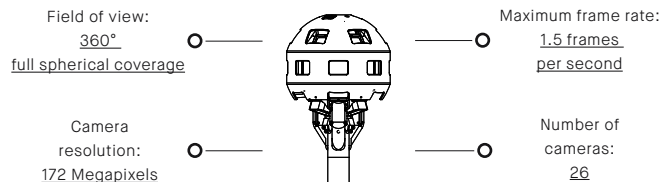
Document, extract and model with a portable and ruggedized system that is easy to deploy, operate and maintain for use in areas such as mobile mapping, facility & asset management to natural resources and safety & security. Its versatility is also evident in the functional design of the UltraCam Panther: The camera unit as well as each individual module are factory adjusted for high geometric accuracy to ensure long-term stability and reliability. Combined with its high accuracy and flexibility, in term of handling and range of usability, the UltraCam Panther defines a new class of 3D capture systems.

The UltraCam Panther offers outstanding flexibility for numerous applications through its technical performance in the areas of image quality, accuracy and ease of use.

Specifications & details

[Preliminary]

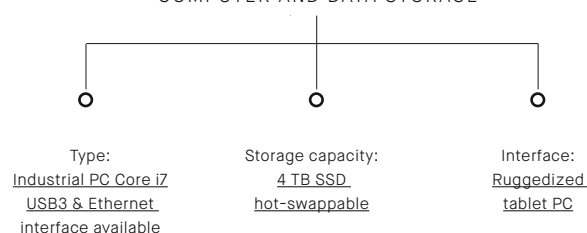
PANORAMIC HEAD



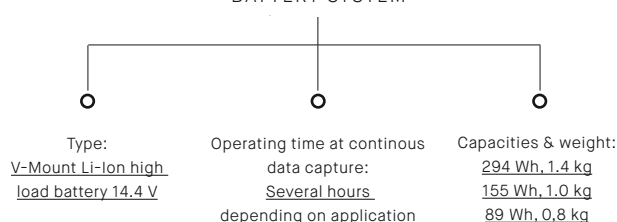
CAMERA

Imaging sensor	CMOS
Sensor size	3,088 x 2,152 pixels
Pixel pitch	1.4 x 1.4 μm
Color filtering type	Bayer Pattern
Focus type	Fixed focus
Focal length	3.24 mm
F-number	2.00
Depth of field	1.5 m to infinity
Optical format	1/3.6 inch

COMPUTER AND DATA STORAGE



BATTERY SYSTEM



MODULES

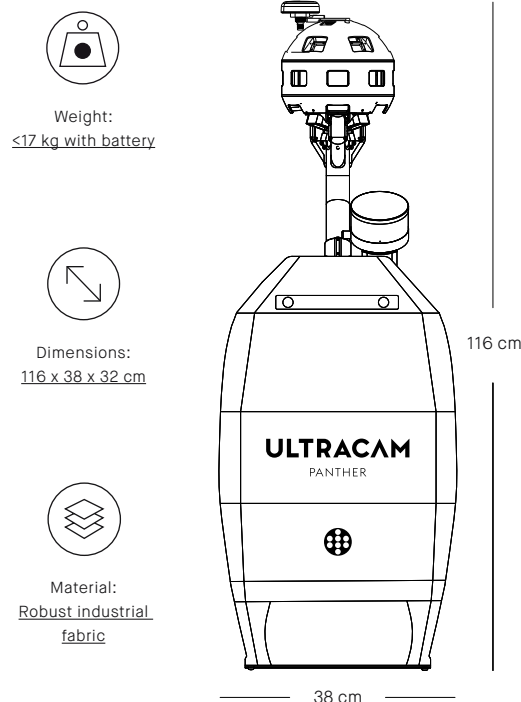
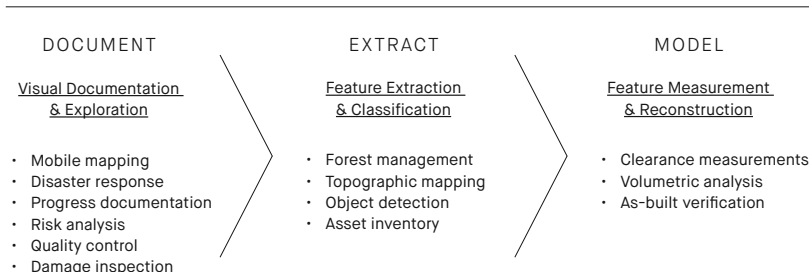
Orientation	Applanix APX-15L
Odometry	Stereo camera system for indoor localization and enhanced outdoor localization in dense cities and covered areas
LiDAR	Velodyne VLP-16

ACCURACY

Relative accuracy (outdoor and indoor)	cm range ¹
Absolute accuracy (outdoor)	cm to dm range ¹
Absolute accuracy (indoor)	Accuracy depends on scene structure, loop closures and track length

¹Accuracy depends on location and user compliance with walking regulations based on application area.

APPLICATION AREAS



OPERATIONAL SPECIFICATION



Operating temperature: **0°C to +40°C**
non-condensing



Storage temperature: **-20°C to +50°C**
non-condensing



IP protection level: **IP52**

DATA FORMATS

Image	JPEG, TIFF Camera images 360° x 180° equirectangular panorama Cube-face panorama
Trajectory	Various formats - position and orientation for each cube
Point cloud	Laser File Format (LAS) - coordinates, reflectivity, color images

² For optimal accuracy, an operating temperature from 5°C to 35°C is recommended.



STREAMLINED EFFICIENCY

UltraMap Terrestrial, the raw data processing software, leads to optimal output in all of the numerous applications.

Ability to export to standard file formats allows data to be easily plugged into existing workflows and business processes.



EXCEPTIONAL QUALITY

Capture the world in more detail, superior sharpness and in higher fidelity than ever before.



IMPRESSIVE EFFICIENCY

Even images with high variations in luminance are exposed perfectly and provide detailed information in every part of the image.

