

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 UltraCam Panther with its unrivaled flexibility and versatility. The versatile portable platform simultaneously captures full-spherical imagery and video, precision LiDAR 3D data, and highly accurate geopositioning 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.

Whether your customer's interests are in AM/FM, security, forestry, disaster response, construction, real estate, tourism, simulation or virtual entertainment, their need to digitally

capture 3-dimensional data efficiently and accurately is growing exponentially. To capture the world from a street-level perspective, it can be complemented with the car-based mapping system UltraCam Mustang.

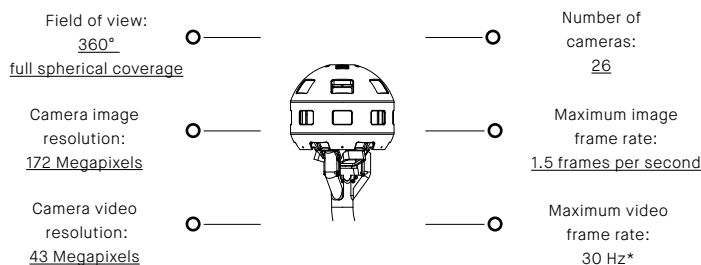
Combined with its unmatched video capability and ultra-high resolution imagery, the UltraCam Panther defines a new class of 3D capture systems.

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

Specifications & details

[Preliminary]

PANORAMIC HEAD

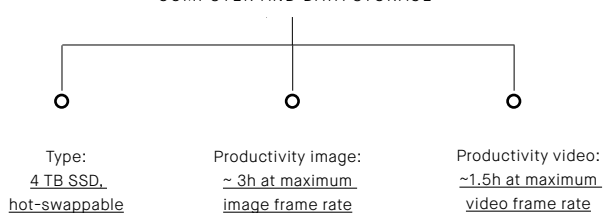


CAMERA

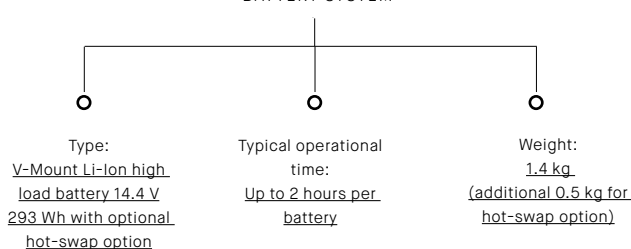
Imaging sensor	CMOS
Sensor size	3,088 x 2,152 pixels
Pixel pitch	1.4 x 1.4 μm
Color filtering type	Bayer Pattern
Focus type	Fixed focus
Focal length	3.24 mm
F-number	2.00
Depth of field	1.5 m to infinity
Optical format	1/3.6 inch

*Note that video modes are limited to <30 min per continuous capture.

COMPUTER AND DATA STORAGE



BATTERY SYSTEM



GLOBAL POSITIONING

Type	Integrated multi-band GNSS-Inertial solution
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VISUAL ODOMETRY

Type	Optional stereo camera system for indoor localization and enhanced outdoor localization in dense cities and covered areas
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GEOMETRY

Type	Rotating multi-beam LiDAR
Field of view	360° (horizontal) x 30° (vertical)
Channels	16
Data rate	300.000 points/second
Maximum range	100 m
Rotation frequency	10 Hz (600 rpm)
Safety	Class 1 eye safe

ACCURACY

Relative accuracy (outdoor and indoor)	3 cm
Absolute accuracy (outdoor)	5 cm
Absolute accuracy (indoor)	Accuracy depends on scene structure, loop closures and track length



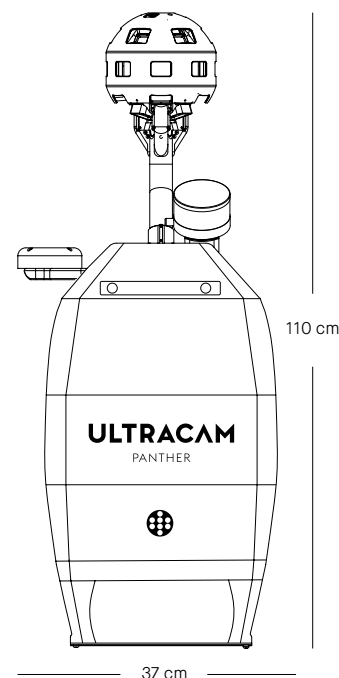
Material: Robust industrial fabric



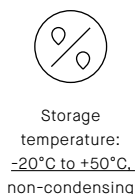
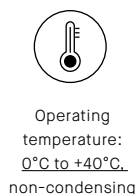
Weight: <16 kg with battery



Dimensions: 110 x 37 x 32 cm



OPERATIONAL SPECIFICATION



DATA FORMATS

Image	JPEG, TIFF, GeoTIFF Camera images (26 x 6.6 Megapixels) 360° x 180° equi-rectangular panorama (1 x 105 Megapixels) Cube-face panorama (6 x 16.7 Megapixels)
Video	MP4 (24, 25, 30 Hz) 360° x 180° equi-rectangular panorama (up to 4k Ultra HD)
Trajectory	Various formats - position and orientation for each cube
Point cloud	Laser File Format (LAS) - coordinates, reflectivity, color images



STREAMLINED EFFICIENCY

UltraMap Terrestrial Essentials, the fully integrated workflow processing software, provides a straightforward workflow and leads to optimal output in all of the numerous areas of the UltraCam Panther's applications.

EXCEPTIONAL QUALITY

Whether capturing panoramic images or 360° videos - the results are always outstanding.



HIGHEST PERFORMANCE

After the data has been captured, it is downloaded and processed with algorithmic capabilities beyond the current state of the art.



IMPRESSIVE EFFICIENCY

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



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