

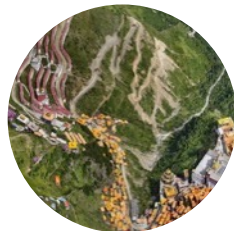


mdMAPPER
1000DG 3D

GE industrial drone line

COLLECT DATA AND CREATE 3D MODELS OF STRUCTURES, BUILDINGS AND NEIGHBORHOODS.

mdMapper1000DG 3D is a fully integrated drone mapping system that can be used for high wall mapping and 3d modeling.





**MODEL FINE DETAILS, TEXTURE
AND ALL SIDES OF STRUCTURES IN
3 DIMENSIONS.**

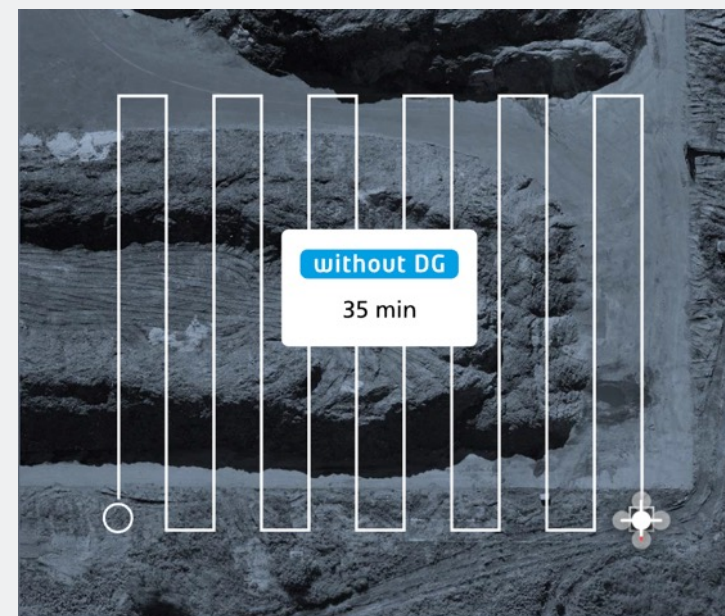
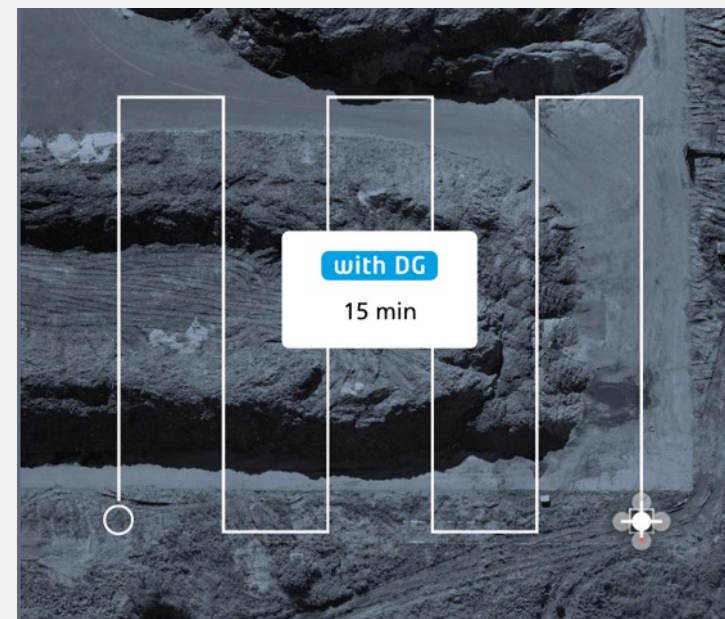
The time tested microdrones md4-1000 aircraft is perfectly integrated with direct georeferencing an incredibly powerful oblique camera, as well as mdivinity data processing modules, workflow, training and support.

Five sensors capture data from multiple angles, to ensure high quality artifact-free imaging.

DIRECT GEOREFERENCING WILL RISE TO THE OCCASION

With DG, you won't need to install *any* ground control points (unless you want to install 1 or 2 to check your work later for quality control). You'll collect your images and post-process in a fraction of the time. Your projects will require less people and equipment. You'll safely tackle mapping jobs in dangerous locations.

Most important, you'll deliver the best possible accuracy on projects where human safety and your reputation is on the line. Best of all, DG is selectable, AFTER data collection, as a post processing option... so you are only paying for it when your client or project needs it





DON'T NEED DG? PROCESS WITH PPK; IT'S ALL SELECTABLE BY PROJECT NEED WITHIN mdINFINITY!

Microdrones customers asked for a workflow that could deliver excellent results with a handful of ground control points. We listened.

mdMapper1000DG 3D fills an important niche for customers who may not be ready for DG, and are willing to set up 1 – 3 ground control points for their projects; simply post process data in PPK within the flexible mdInfinity cloud or desktop software.

And when your business, projects or services expand to require DG, you simply choose to process your data with DG in the mdInfinity suite.

WHY CHOOSE mdMAPPER1000DG 3D?



Five sensors capture data from multiple angles, to ensure high quality artifact-free imaging. From the real world to your laptop, you'll see 3D models showing all angles, roofs and sides of buildings, as well as the detailed texture of all surfaces.



YOUR JOB WILL BE QUICKER AND EASIER WHEN POST PROCESSING DATA FROM FIVE SENSORS.

You will capture all angles and surfaces of your subject with an integrated array of five cameras, seamlessly working together, and integrated into the processing workflow, all backed with the power of dual IMU direct georeferencing.

YOU WILL COLLECT A MASSIVE AMOUNT OF PHOTOGRAMMETRY DATA AND THE SOFTWARE DOES THE HARD WORK FOR YOU.

With the fully integrated, smart workflow of mdinfinity, the job of producing a complete data set that is georeferenced, geotagged and ready for importation into popular photogrammetry software is easy.

ELIMINATES YOUR NEED TO INSTALL GCPS

while meeting the most precise data requirements.

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ALLOWS YOU TO PERFORM CORRIDOR MAPPING

Thanks to an on-board IMU that measures orientation angles. RTK, PPK, and conventional aerial surveying methods do not measure these angles so corridor mapping becomes a major operational and logistical challenge.

DRASTICALLY REDUCES TIME SPENT

on post-processing and data collection, thanks to an impressively decreased side lap and many other elements.

FURTHER IMPROVES YOUR EFFICIENCY

with industry-leading flight times and resilience against harsh environmental conditions.

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REDUCES OVERLAP AND SIDELAP

With other methods, 80 x 80 is a must. With dg, you can achieve 80 x 40 overlap. Translation: it slashes the time you spend on projects.

ALLOWS YOU TO MEASURE

The 6 parameters necessary for image georeferencing, whereas conventional surveying methods (RTK and PPK) rely on computing all or some of these values. DG reduces time, effort, human error and cost, while improving accuracy.

LETS YOU COMPLETE YOUR PROJECTS WITH LESS

people, time and equipment.

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CAN COVER UP TO 200 AC

(80 ha) in one flight.

ALLOWS YOU TO CONFIDENTLY BID ON INTERNATIONAL PROJECTS.

With international projects, there are bound to be challenging unforeseen constraints that impact access. DG lets you rise above and protect your investment in the project.

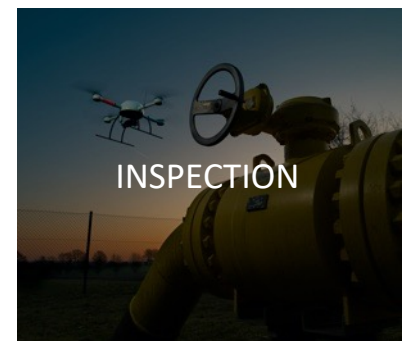
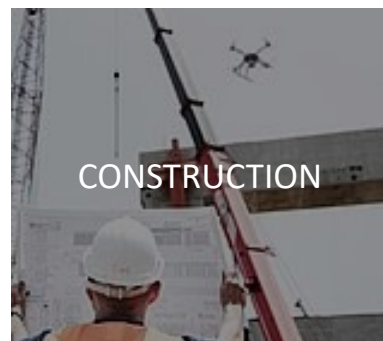
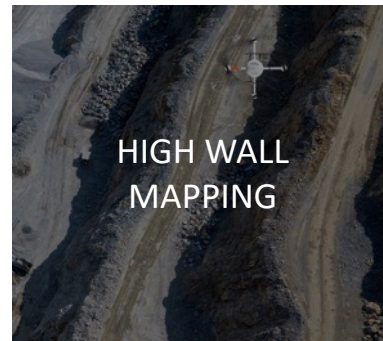
LETS YOU CHECK YOUR WORK FOR QUALITY CONTROL PURPOSES,

which isn't possible with RTK and conventional surveying methods.



WHAT CAN YOU DO WITH IT?

mdMAPPER10000DG 3D is a versatile package that can be used for a wide range of applications. Some of the most common uses are:



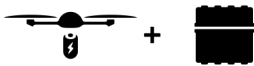
SURVEY EQUIPMENT



microdrones®



md4-1000



Charger, Flight Battery
& Rugged Carrying
Case



Integrated Cooling
Covers



Mag-less
Navigation



LED Light Rings

COMMUNICATIONS



Encrypted Digital
Data Link



mdRC



Extended
Communication Range
Operation



Multiple Tablet
Control



Remote ID Enabled

SURVEY EQUIPMENT



microdrones®

PAYLOAD



5 Integrated
High Resolution Cameras



Applanix APX-15
UAV DG

SURVEY EQUIPMENT SOFTWARE



mdCockpit Tablet Software



Tap & Fly



mdInfinity[∞]

mdaaS

DG ENABLED

PPK ENABLED



mdInfinity

mdINFINITY IS A POWERFUL ECOSYSTEM THAT WILL ENABLE YOU TO QUICKLY AND EFFICIENTLY PROCESS GEOSPATIAL DATA, WITH CONVENIENT PAYMENT OPTIONS.

Available Data Processing Modules:

- [Trajectory processing](#)
- [Georeferencing](#)
- [Boresight calibration](#)
- [Strip adjustment](#)
- [Precision enhancement](#)
- [Point Cloud Direct Colorization](#)
- [FORMap](#)
- Ground Classification



mdInfinity is available in online and desktop versions.

SOLUTION COMPONENTS

Platform

md4-1000

Payload

- Camera: 5 (Sony APS-C Sensor)
- Georeferencing: APX-15 EI UAV

Software

- mdCockpit
- mdInfinity

TECHNICAL SPECIFICATIONS

Takeoff Weight (TOW)

6070 g

System Operational Temperature

-10 °C to 40 °C

System Accuracy

- Photogrammetry:
 - Horizontal: 2-3 pixels
 - Vertical: 3-5 pixels



APPROXIMATE FLIGHT TIME



mdMapper1000DG 3D

Flight Parameters	Area Covered (@120 m) ⁽¹⁾	200 ac (80 ha)
	Camera Model ⁽²⁾	5 (Sony APS-C Sensor)
	Imagery Format	RAW + JPEG
	Resolution	120 MP Combined
	Field of View	130° Symmetrical
	G.S.D. cm/pixel (@120 m)	1.7
	G.C.P.	No
	Overlaps (front/side)	80%/40%
Post-Processing ⁽³⁾	Method	Optimized aerial triangulation / GNSS-Inertial solution
	Orientation	High precision sensor (INS)
	Position	High precision sensor (GNSS)
	Accuracy	2-3 GSD (X,Y) and 3-5 GSD (Z)
Advantages	• No GCP needed • Efficient flight planning – cover greater areas • Efficient post-processing (EO apriori and less images)	

⁽¹⁾ Typical project benchmark comparisons based on missions completed in Canada in 2016
⁽²⁾ The current camera models are listed. These may be replaced by equivalent or better cameras depending on availability from the manufacturer.
⁽³⁾ Using DG single base processing