

# P3 Payload 50MP & 100MP

Unmatched Inspection Productivity  
Ready-for-flight with DJI M300



PHASE**ONE**

# P3 Payload for high productivity inspections

The Phase One P3 Payload is an integrated plug-and-play solution for the DJI M300 drone. It is designed to maximize the productivity of the most demanding inspection projects where time, safety, and image details are paramount for success.

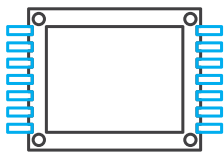
The P3 Payload for DJI M300 leverages the DJI ecosystem for mission planning and execution to provide a flexible solution with the highest quality imagery.

The P3 increases your inspection productivity through its ease of installation, superior data output, and uncompromised image details.

Equipped with a medium format Phase One iXM camera and a sensor that is 1.7 times larger than other cameras, it captures more details in each frame. In addition, iXM cameras boast the highest dynamic range and have a variety of lens options ranging from 35mm to 150mm, the latter being the longest option available for small UAVs.

Boost your inspection mission productivity, speed, and efficiency with the P3 Payload.

Try our P3 Payload with your DJI M300 - Ready-for-flight system.



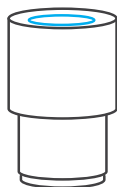
## **Best in class sensor performance**

Make the most out of every flight



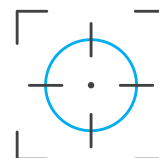
## **Largest image sensor**

Capture more in every shot



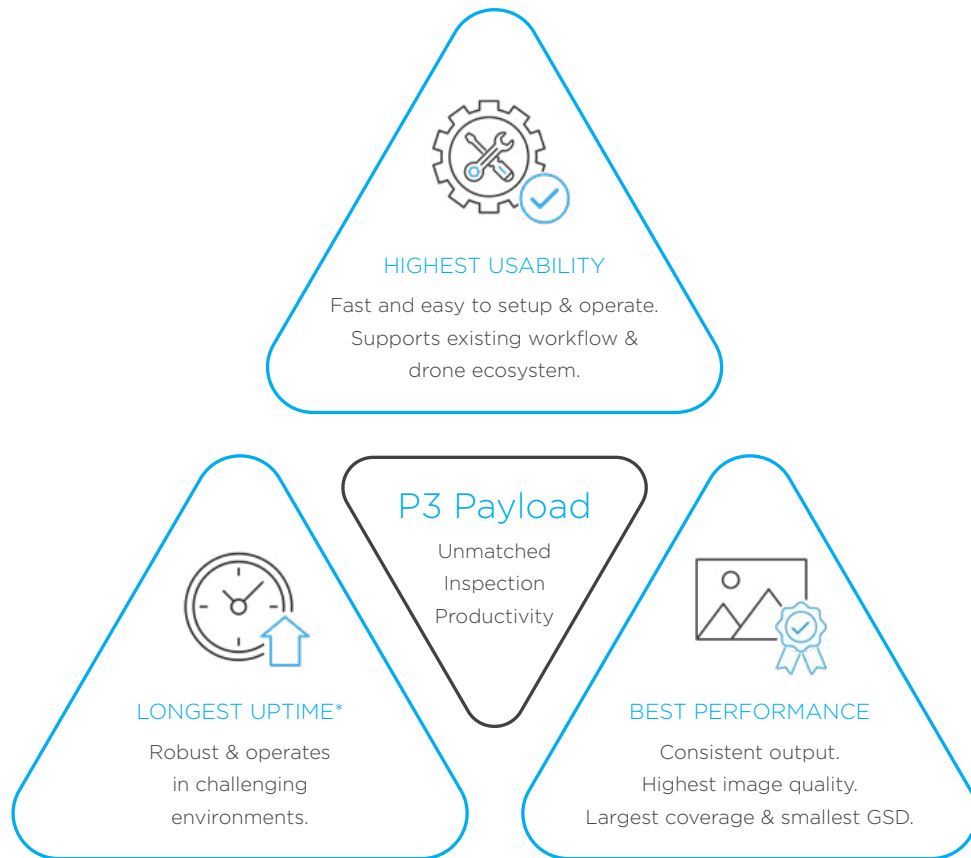
## **Longest focal length 150mm lens**

Get more details from a distance



## **Smart focusing**

Make every shot count



\*Measure of system reliability, expressed as the percentage of time a machine has been working and available

# Integrated workflow with DJI M300

High usability through a seamless integrated workflow with DJI ecosystem for mission planning, execution and post processing.



## Existing platforms – Instant payback

P3 for DJI M300 provides:

- Maximum utilization and uptime of your existing M300 fleet by enabling new applications
- Increased productivity through an extended lens offering
- Turnkey integration with the DJI Pilot App eliminating the need to retrain of your pilots
- Mechanical integration: quick release with minimum cables

# Integration Specifications

## Camera setting

- ✓ Set focus peaking threshold
- ✓ Set ISO
- ✓ Set shutter speed
- ✓ Set aperture
- ✓ Set exposure compensation
- ✓ Toggle auto exposure (AE)
- ✓ Set focus distance
- ✓ Toggle auto and manual focus (AF/MF)
- ✓ Show histogram
- ✓ Set camera limitations: focus distance, SS, A or ISO (with CaptureOne & iXM Capture)

## Operation modes

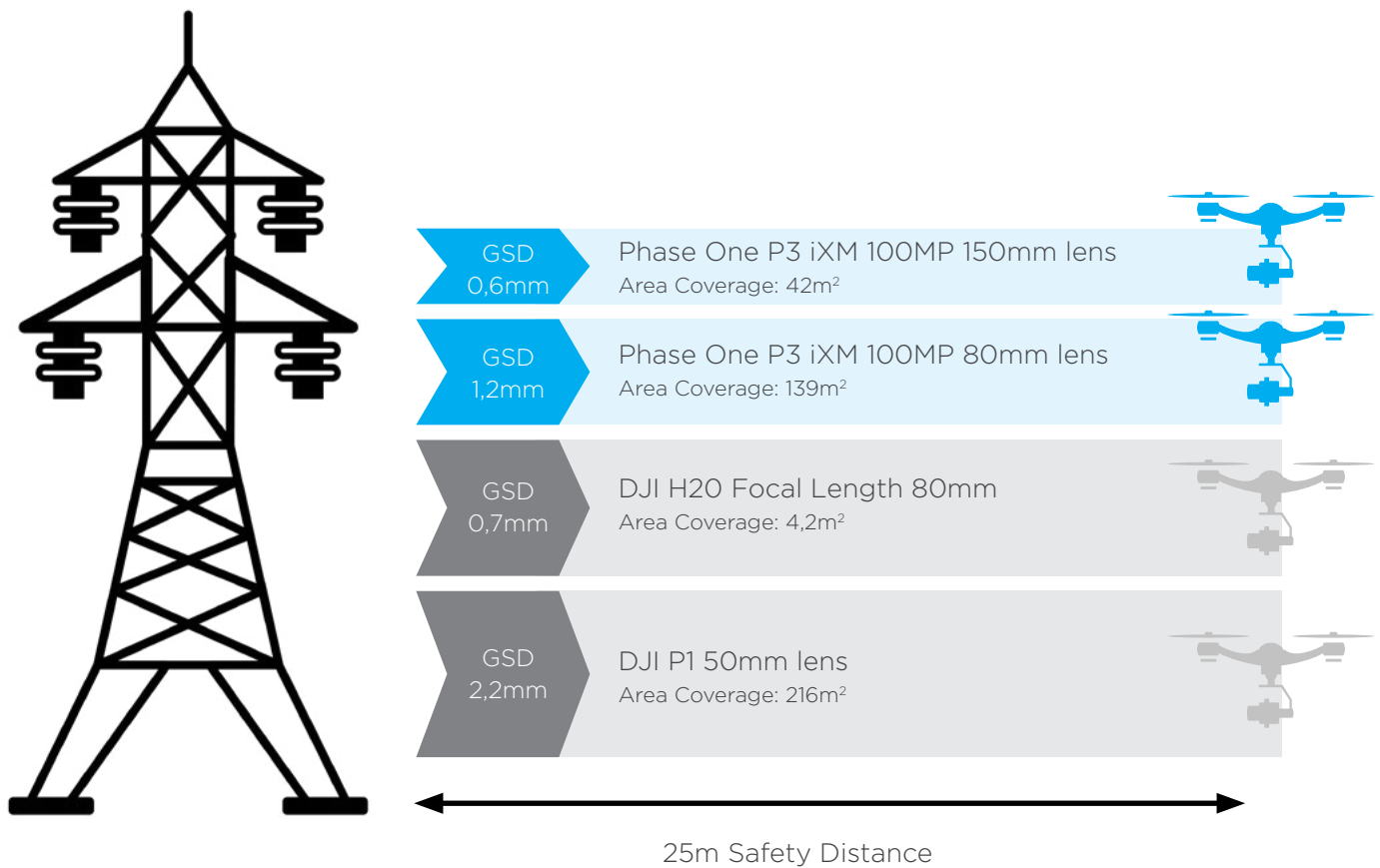
- ✓ Dual & single operator mode
- ✓ Lock & follow mode
- ✓ Support for manual flight with DJI Smart Controller
- ✓ Support for mission flight with DJI Smart Controller
  - ✓ Oblique flight mode
  - ✓ Record flight

## Data

- ✓ Store metadata
  - ✓ Time
  - ✓ Position
  - ✓ Altitude
  - ✓ Speed
  - ✓ Drone orientation
  - ✓ Payload orientation
  - ✓ Lens focus position
  - ✓ Laser Range Finder ranging
- ✓ Support RTK GPS



# Longest focal length 150mm lens



## Longer distance - more details - increased safety

- The lens offering increases the productivity and ensures safe operation, without compromising on image quality
- All Phase One lenses are factory-calibrated to the highest quality standards
- Best coverage to GSD ratio



*The P3 Payload allows the installation of the industry-leading iXM-100 to be partnered with the competent specifications of the DJI M300. The P3 enables our customers to utilize the best camera technology on one of the most capable platforms available in our industry, whether for inspection or mapping applications.*



**James Pick**

Business Development Manager, Coptrz

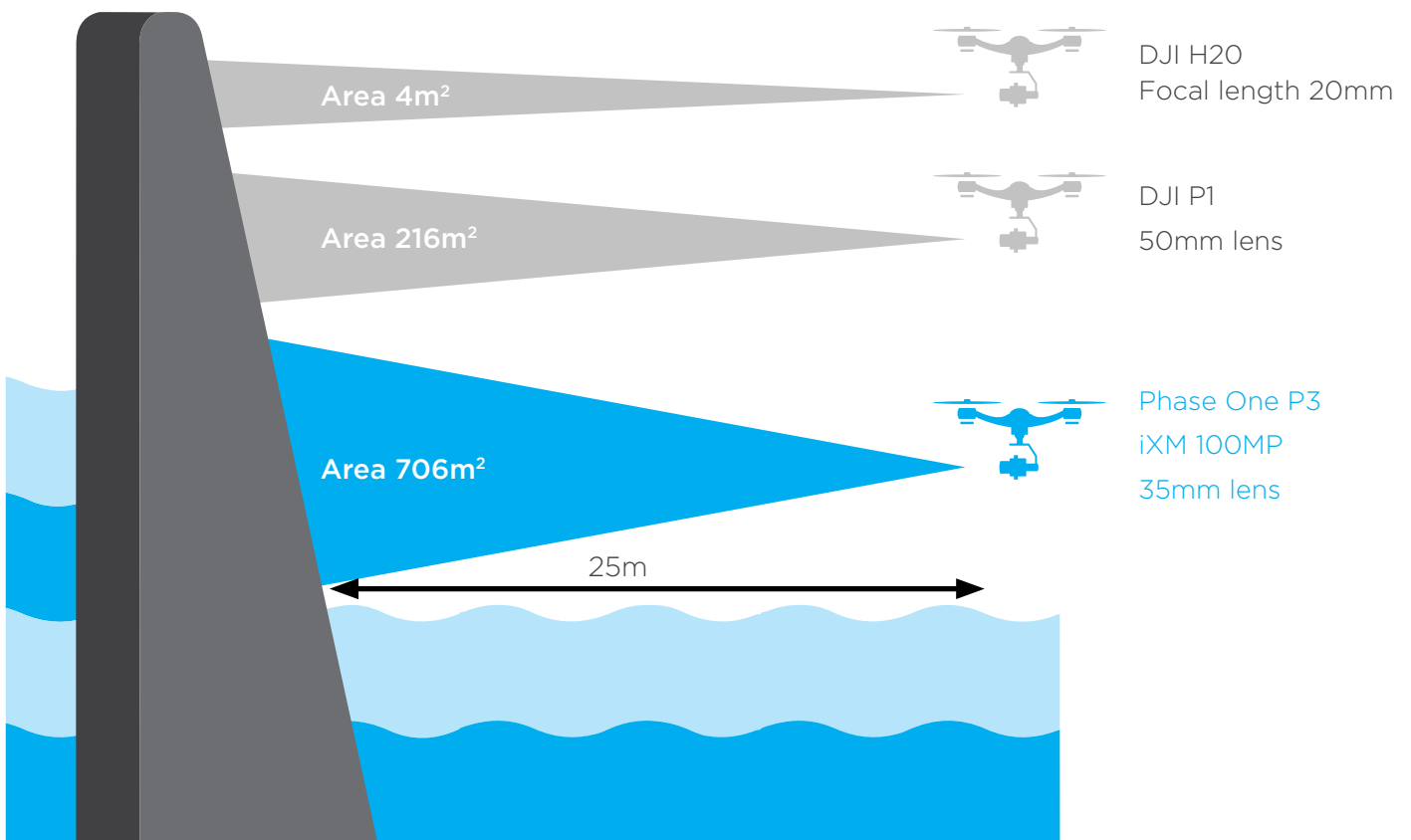






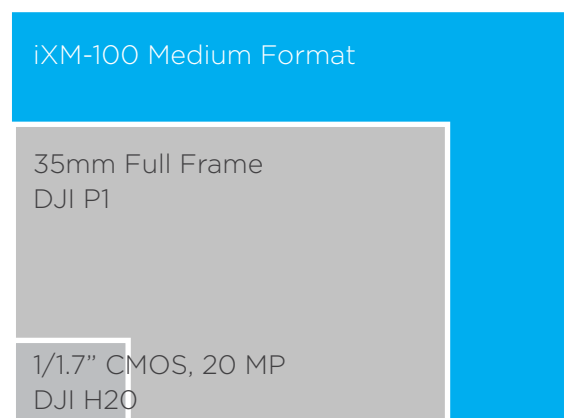
Image courtesy of Eyefly B. V., Netherlands

# Largest image sensor



## More coverage - fewer images - faster missions

The iXM medium format sensor has been the bench mark for many years for high-resolution aerial photography. This medium format sensor is 1.7 times larger than a standard 35mm full-frame sensor, which translates directly into inspection productivity.



“

We used the P3 for DJI with Phase One's iXM 100MP camera for a dam inspection. It is a small and compact system and with the given endurance of the DJI M300 drone we could easily double the outcome and productivity compared to another camera used previously. As we inspected the water side of the dam, best possible productivity was essential to complete the job in time. Furthermore, the image quality and detail level is a class of its own. The integrated system made it easy to operate and we were able to use the P3 system out of the box with our M300.

”

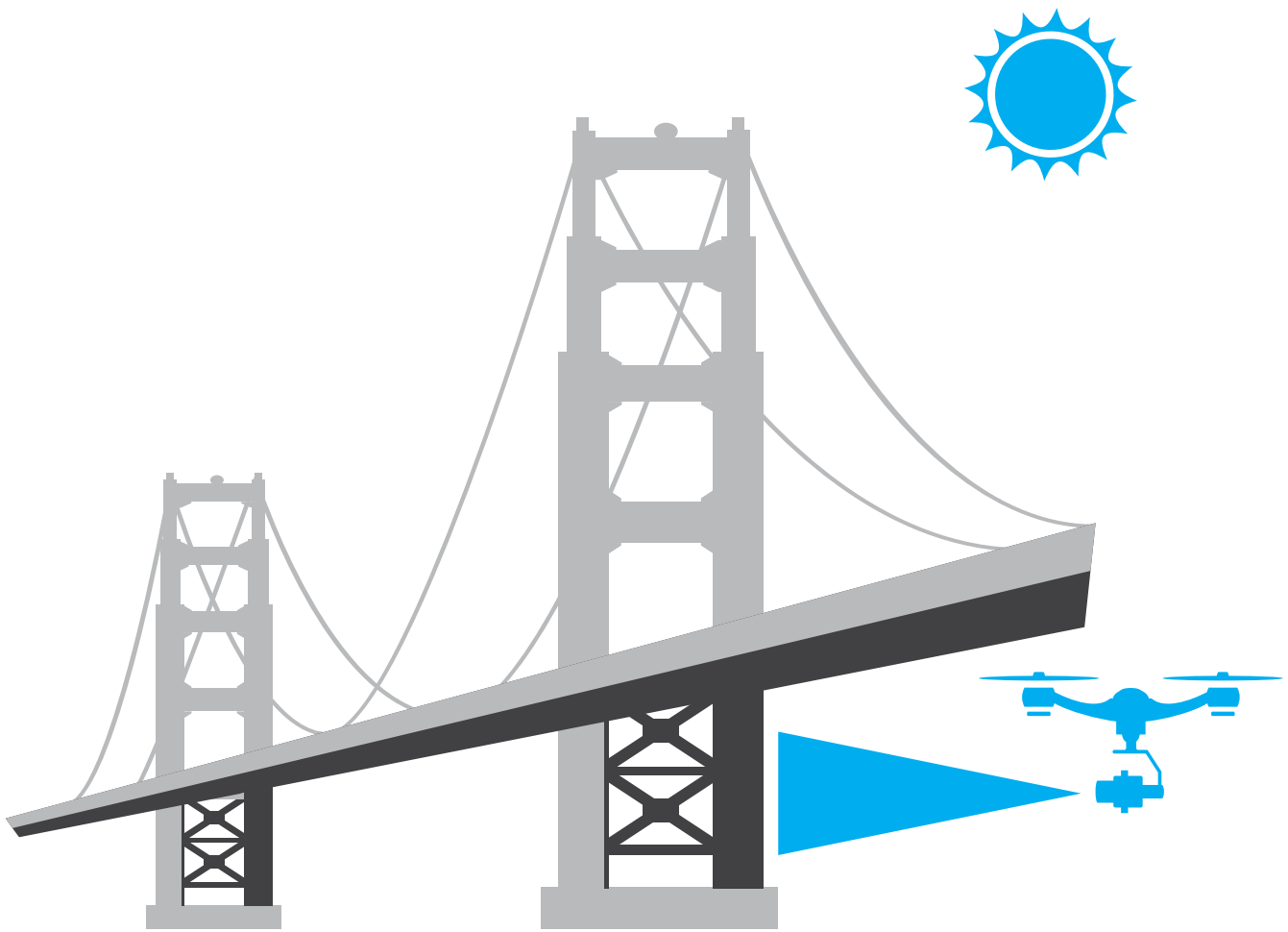
Juri Klusak  
CEO, Orthodrone GmbH





Image courtesy of Orthodrone GmbH (DE) / Axpo Power AG (CH)

## Highest dynamic range



## Extended operations – higher availability

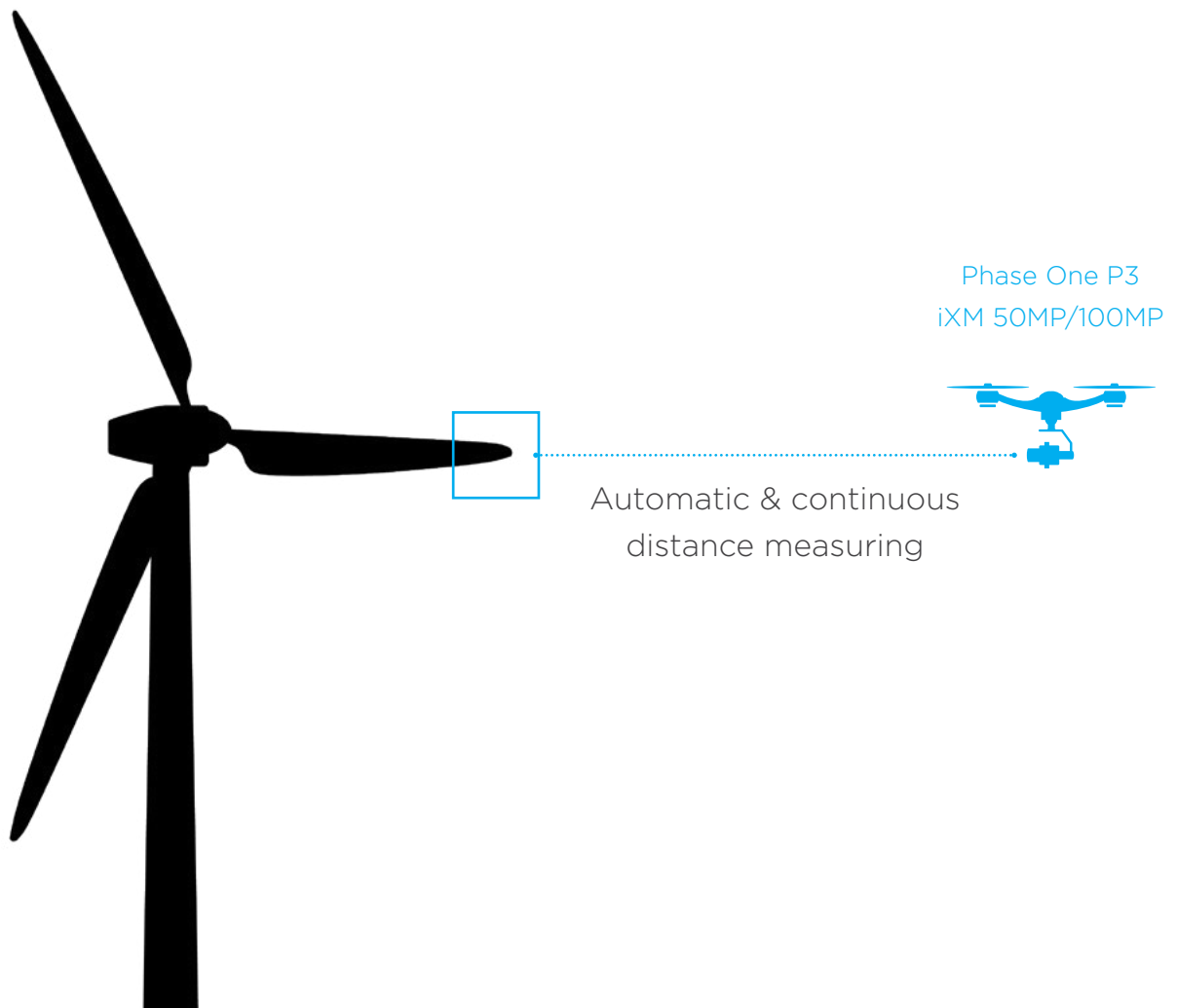
The iXM reaches superior performance in low light & high contrast situations, thanks to its dynamic range of 83dB, low noise, and optimized pixel size.





Image courtesy of Nordic Unmanned AS, Norway

## Smart focus



## Smart focus - sharper images – no repetition

Onsite inspection productivity depends on the ability to capture the correct data. End-to-end productivity means that the data has to constantly be of high quality. Phase One P3 Payload uses a smart focus system to ensure sharpness and consistent image quality.

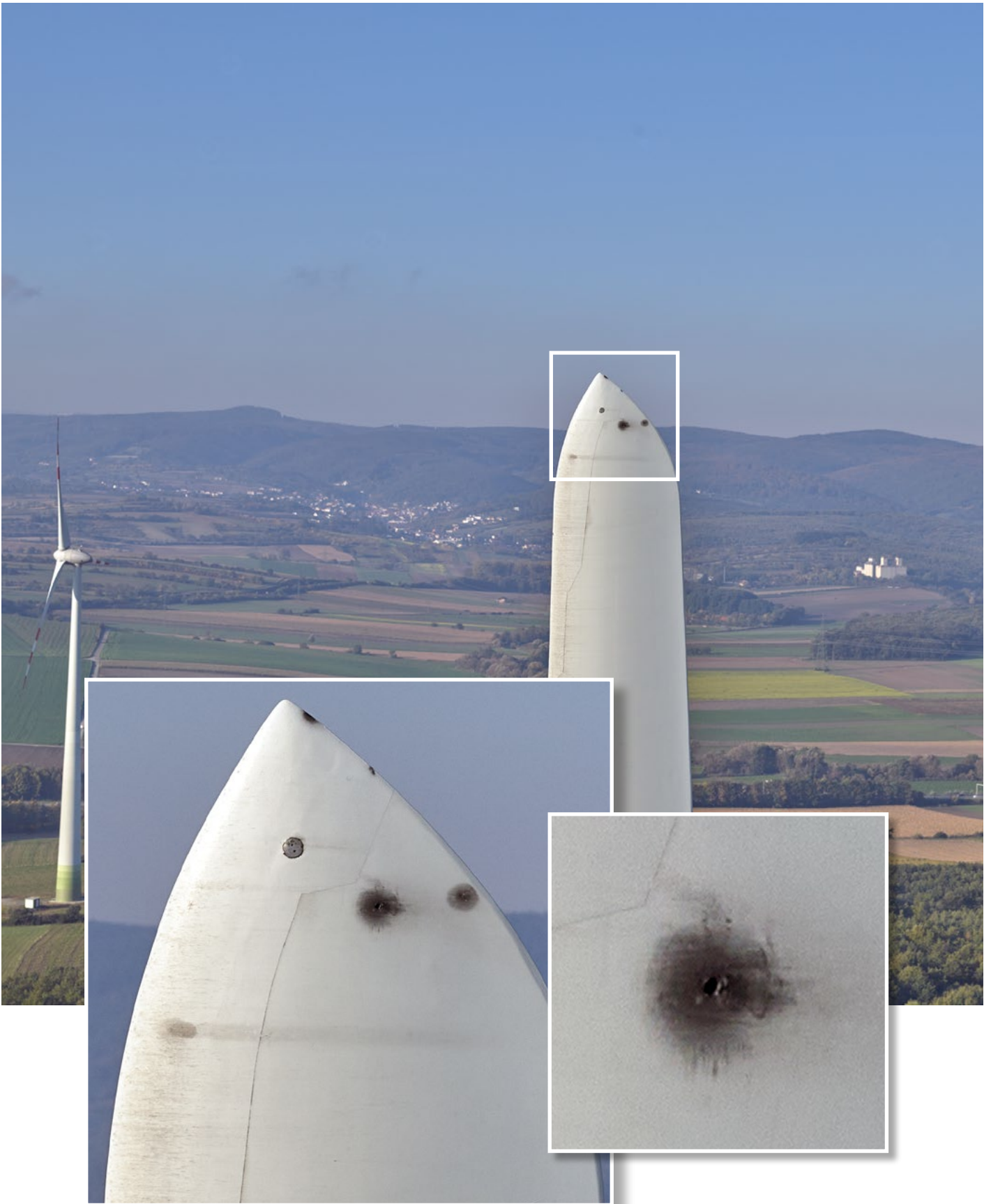


Image courtesy of 4D-IT GmbH, Austria

# Specifications

## General

Supported aircrafts	Matrice 300 RTK
Gimbal type	3-axis (tilt, roll, pan)
Interface to aircraft	Skyport 2.0
Video streaming	1920 x 1080 60p
Weight with iXM-100 and RSM 80mm AF lens (kg)	2,6
Power input (VDC)	17 (from Skyport 2.0)
Max. power consumption (W)	22-24

## Software

Flight planning & operation	DJI Pilot application
Processing/editing	Capture One

## Camera

	iXM-100	iXM-50
Resolution	100MP 11664 x 8750	50MP 8280 x 6208
Dynamic range (dB)	83	84
Aspect ratio	4:3	
Aperture range	f/5.6 - f/22	
Pixel size (μm)	3.76	5.3
Effective sensor size (mm)	43.9 x 32.9	
Light sensitivity (ISO)	50 - 6400	100 - 6400
Capture rate (fps)	3	2
Lens mount	Phase One RSM	
Data storage	CF express/XQD card	
Raw file compression	IIQ large: 100MB IIQ small: 65MB	IIQ large: 50MB IIQ small: 33MB
IR cut-off filter	Yes	

## Rangefinder

Max. range (m)	180
Max. effective operating range (m)	90
Accuracy (%)	1
Distance resolution (cm)	1
Photobiological safety	EN60825 class 1



## Gimbal

Mechanical range (°)	Roll: +80.5 to -264.3
	Pan: ±345
	Tilt: -90 to +45
Angular vibration range (°)	± 0.02
Max. power consumption (W)	8-10 (max. 50)
Operation modes	Locked, following
Controlled rotation speed (°/s)	180

## Operating conditions

Approvals	FCC Class A, CE, RoHS
Temperature (°C)	0 to 40
Humidity (%)	15 - 85 (non-condensing)

# RSM Lenses technical specifications

	35mm	80mm	80mm AF	150mm AF
Lens composition	12 elements in 8 groups	8 elements in 5 groups		8 elements in 7 groups
Minimum focusing range	infinity		3m to infinity	10m to infinity
Shutter speed max (sec)	1/2500			
Exposure control	1/3 f - stop increments			
Aperture range	f/5.6 - f/22			
Filter diameter (mm)	58			
Angle of view - Long side (°)	63	30.4		17.1
Angle of view - Short side - (°)	49.4	23		12.9
Entrance pupil to image plane (mm)	72	85		107
Weight - with P3 (kg)	2.5	2.43	2.6	2.7



[Watch the movie](#)

## About Phase One

Phase One A/S is a leading researcher, developer and manufacturer of medium format and large format digital cameras, software, and imaging solutions.

Founded in 1993, Phase One is a pioneer of digital photography and has developed core imaging technologies and a range of digital cameras and imaging modules. Phase One provides the world's highest image quality in terms of resolution, dynamic range, color fidelity and geometric accuracy. As such, the company has grown to become the leading provider of high-end imaging technology across many business segments. This includes both hardware and software for aerial mapping, industrial inspection, and cultural heritage digitization, as well as serving the world's most demanding photographers.

### Phase One A/S

Roskildevej 39  
DK-2000 Frederiksberg  
Denmark  
Tel.: +45 36 46 0111  
Fax: +45 36 46 0222

### Phase One USA

Rocky Mountain Metropolitan Airport  
11755 Airport Way, Suite 216  
Broomfield, CO 80021  
USA  
Tel.: +1 (303) 469-6657

### Phase One Germany

Lichtstr. 43h  
50825 Köln  
Germany  
Tel.: +49 (0)221/5402260  
Fax: +49 (0)221/54022622

### Phase One Japan Co., Ltd.

#401 ARK HOUSE  
17-6 Wakamatsucho  
Shinjuku-ku, Tokyo  
162-0056, Japan  
Tel: +81-3-6380-2506  
Fax: +81-3-6380-2507

### Phase One Asia

Room 1009, 10/F Eight  
Commercial Tower,  
8 Sun Yip Street, Siu Sai Wan  
Hong Kong  
Tel.: + 852 28967088  
Fax: + 852 28981628



[geospatial.phaseone.com](http://geospatial.phaseone.com)

PHASEONE