

Phase One Industrial

Fully Integrated Drone Solution



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The use of drones and UAV-based platforms in the aerial imaging market is increasing rapidly, and remote sensing is becoming a preferred method for acquiring qualitative aerial data.

Phase One Industrial, a leading provider of aerial imaging solutions, designed a fully integrated and powerful drone solution with DJI M600 and M600 PRO aerial platforms that expands the operational capabilities of our customers. The new drone solution offers an easy and safe aerial access to challenging areas, a larger surface coverage in a single flight, a higher resolution images and an opportunity to acquire aerial data with a cost effective, and efficient tool.

Phase One's drone solution combines state-of-the-art hardware and software components:



[Phase One Medium Format Camera kit](#) - 50 MP or 100 MP metric cameras with a wide range of lenses. With its small size and weight as low as 1.25 kg, Phase One cameras are easily integrated into DJI's M600 and M600 PRO, providing users, for the first time, with the advantages and the high quality of medium format cameras.



[DJI's M600 /M600 PRO](#) - a flying platform designed for professional aerial photography and industrial applications. The M600 PRO is easy to set up and ready to use in a short time. Its Ronin-MX gimbal provides full control and functionality with solid locks, flexible rotation and direct connection to the flight control system.



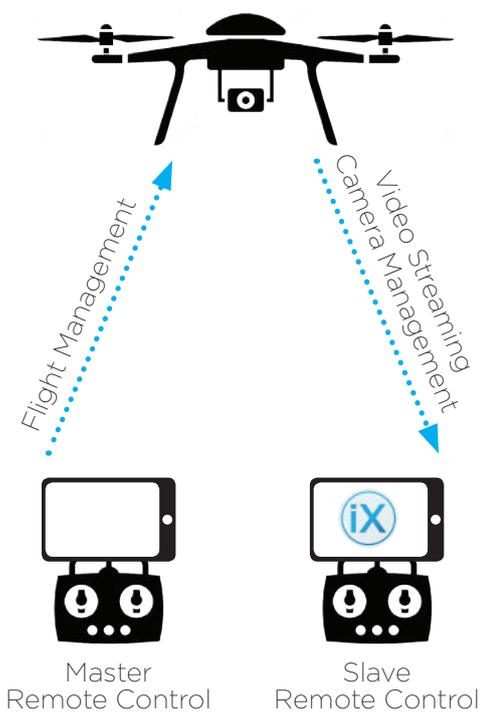
[Phase One's new iX Capture Mobile application](#) - a uniquely designed assisting application for iOS, enabling remote management of the camera. The application allows complete and easy control of the camera via DJI's remote control system, with an intuitive and friendly user interface.

The application offers diverse operating modes, including:

- Video Streaming
- Auto or Manual Capture settings to determine the values of the ISO, shutter speed and aperture
- Auto capture mode to enable image capturing by waypoints, fix distance or by time intervals
- Camera control via DJI Lightbridge 2 dials



Captured by:  **Lufthansa Aerial Services** ©
Powered by Lufthansa Consulting



Unique Features

- 100MP and 50MP metric aerial cameras
- Smart triggering of the camera by waypoints / fixed distance / fixed time
- Support for mission planning applications (such as DJI Ground Station pro) - for waypoints missions
- Geo-tagging of all images' location and gimbal position
- Dual remote controllers (drone and camera) enable each operator (UAV pilot and camera operator) to focus on their respective mission goals
- Industrial-grade build of the camera and aerial lenses, all of which are designed specifically for tough use in harsh environments

Complete Visibility Across Dynamic Environments

Phase One drones solution opens the door to new mission types and applications. Whether for inspection projects or for photogrammetry, map-making and homeland security purposes, the combination of the M600 / M600 PRO and Phase One medium format cameras enable users to offer professional results, higher quality of images, larger coverage of the surface in shorter time - without any risks.

Mapping Solution

Phase One offers a professional, flexible and precision-driven solution that simplifies surveying and mapping processes, and provides professionals with unlimited and ultimate aerial data, while saving time and reducing costs and manpower.

Our medium format metric cameras allows you to effortlessly execute mapping missions, capture high-resolution images and create 2D and 3D maps. It provides invaluable aerial data to industries like 3D Cities, land and resource management, agriculture, mining, forestry and environmental monitoring & research, and more.



Roads & Bridges Inspection (Civil Engineering)



Geospatial products allow for more effective planning, construction, and maintenance of infrastructure projects, including roads and bridges. Effective inspection of aging infrastructure and fast identification of fundamental weaknesses (such as concrete delamination) is crucial, since it effects directly the transportation networks and the safety of public users.

Phase One's platform provides an advance tool for roads and bridges monitoring that helps executing such projects in shorter time, with minimal risk for people or disruption for traffic flow.

Wind Turbine Inspection



Wind turbines, often located in remote areas, require millimeter-sized damage spotting in order to detect, react to and repair problems quickly and with minimal influence on the turbine performance or the environment.

Our large area sensors provide a close and detailed look at all turbines parts (including the blades) that can prevent a sudden failure by detecting impending damage and signs of wear in advance and improve maintenance strategies.

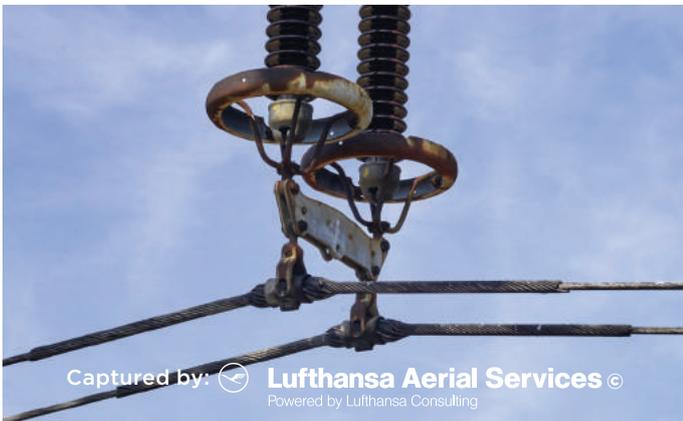
Railway Inspection

One of the major problems that railroads have faced since the earliest days is the prevention of failures in track. There is a significant number of potential problems possible and the task of inspecting the thousands of miles of track stretching across the land has to be performed with speed to avoid traffic interference.

We offer a platform that enables predictive maintenance that not only reduces the costs and the risky operations of ground teams, but also increases the speed and precision of data collection.



Power Line Monitoring



Power line inspection using drones is taking off as the ultimate solution, as it can cover immense portions of surface in each flight and provide accurate visualization of the power line components as well as surrounding objects.

Phase One drones solution enables a faster and more accurate collection of visual information, and allows power companies to focus on faultfinding, effective repairing and strategic constructions and maintenance planning, while minimizing the risks to surveying teams.

Pipeline Inspection

Pipeline infrastructures must be constantly monitored due to the potential threat to lives and economic losses. The Oil & Gas companies' demand for a reliable and rugged inspection tool is fully addressed by Phase One's drones solution, which provides maximum coverage and operational flexibility to operators. It enables fast assessment of the pipes' condition, precise identification of erosion, exposed pipes, vegetation overgrowth and much more, and helps decision makers with prioritizing maintenance and repair mission.



Technical Specifications

	iXU-RS 1000	iXU 1000	iXU 150
Resolution	100 MP - 11608 x 8708		50 MP - 8280 x 6208
Dynamic range	>84 db		
Aspect ratio	4:3		
Pixel size	4.6 micron		5.3 micron
Sensor size effective	53.4 x 40.0 mm		43.8 x 32.9 mm
Light sensitivity (ISO)	50-6400		100-6400
Lens mount	Phase One RS	Phase One SK	
Shutter speed	Leaf shutter up to 1/2500 second	Leaf shutter up to 1/1600 second	
Shutter control	1/3 f-stop increments		
Interfaces	USB 3.0, DJI flight controller		
HDMI output	1920 x 1080 - 25p/30p 1280 x 720 - 50p/60p		
GPS/IMU support	DJI on board		
Data storage	Compact flash card Type I/II including UDMA 6 and 7		
Capture rate*	2.0 sec/frame		0.85 sec/frame
RAW file compression	IIQ large: 100 MB IIQ small: 65 MB		IIQ large: 50 MB IIQ small: 33 MB
Lens + technology optimizes	Color cast; Light falloff; Chromatic aberration; Fringing; Sharpness falloff; Lens distortion		
Output formats	Phase One RAW, TIF, JPG		
Post processing	iX Capture Capture One Pro		
NIR	Also available without IR cutoff filter		
Connection to Gimbal	Ronin MX Gimbal		
Power input	Ronin MX battery		
Maximum power consumption	10 W		
Weight iXU-RS (excluding lens)	0.930 kg/2.05 lb	0.930 kg/2.05 lb	0.750 kg/1.7 lb
Weight (Including lens)	50 mm: 1.700 kg/3.7 lb	80 mm: 1.430 kg/3.15 lb	80 mm: 1.250 kg/2.8 lb
Approvals	FCC (Class A), CE, RoHS		
Operating conditions			
Temperature	-10° to 40°C (14° to 104°F)		
Humidity	15 to 80% (non-condensing)		

*Capture rate in IIQ-S file format





About Phase One

Phase One A/S is based in Copenhagen with offices in New York, London, Cologne, Tokyo, Tel Aviv and Hong Kong. Phase One Industrial is a division of Phase One and is dedicated to research, development and manufacturing of advanced hardware and imaging software solutions that meet the unique requirements of aerial photography users.

To find out more about Phase One products, please visit www.industrial.phaseone.com and set up an appointment with one of our aerial photography experts for a demonstration.

*DJI M600 and DJI M600 PRO are trademarks of SZ DJI Technology Co., Ltd

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