

Phase One iXM-GS120

Unbeatable shutter speed for blur-free,
astonishingly detailed images.



PHASE**ONE**

Capture every detail

For customers who need to capture images of the finest details of rapidly moving objects, the Phase One iXM-GS120 camera captures the details at the highest speed possible due to its electronic global shutter.

Unlike other solutions, the unrivalled dynamic range and image quality enables those details to be captured even under highly unfavorable lighting and environmental conditions, ensuring you capture the data you need under any circumstances.

The iXM-GS120 camera has a remarkable seven frame-per-second capture rate, high dynamic range, and large pixel count, thanks to its electronic, global shutter CMOS sensor. Especially suited to high-velocity terrestrial applications, such as road and wind turbine inspections, the iXM-GS120 unlocks the ability to capture extremely fine details during motion. On these high value projects, deploying the iXM-GS120 saves massive costs, reduces field costs, lowers health and safety risks and negates costly delays caused by traffic control or turbine shutdown.

With the fastest electronic shutter speed currently on the market, you can set the iXM-GS120 exposure time up to 1/16,000 of a second. Combine this with a mighty 12,768 x 9,564-pixel count and you get astonishingly detailed images with no motion blur or other distortions.

Its high dynamic range of 76-80 db comfortably manages light conditions at both ends of the spectrum and everything in between. Whether capturing images directly the sun or down dark tree-lined roadways; all is capture in balanced detail.

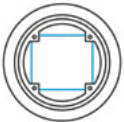
Because its global shutter is non-mechanical, the camera has no moving parts. This makes the iXM-GS120 robust and extremely long-lasting with low-to-no maintenance. It is durable enough to function in temperature extremes.

The iXM-GS120 weighs a mere 630 grams and so is easy to carry and mount across a range of platforms. It supports a large range of lenses and field-tested system integrations.

Cutting-edge imaging technology designed and built for the demanding needs of high quality imaging in demanding conditions. iXM-GS120 offers a wide area high resolution camera with high sensitivity, low noise and, minimal integration time, for diverse inspection and mapping applications.

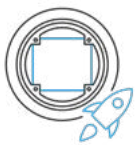


Key benefits



No mechanical shutter required

The iXM-GS120's electronic global shutter means that there are no moving mechanical parts in the camera. This makes the iXM-GS120 extremely robust and long-lasting with low-to-no maintenance.



The fastest electronic shutter speed currently on the market

Set exposure times up to 1/16,000 of a second to capture perfect still frames of fast-moving objects or stationary objects while travelling at speed with no distortion.



High dynamic range

Varying light conditions are no problem for the iXM-GS120. Its high dynamic range means it captures exceptionally detailed images at both ends of the light spectrum and everything in between.



Large number of pixels

Its 12,768 x 9,564-pixel count captures images of very large area in incredible quality and detail.

iXM-GS120

Technical specifications

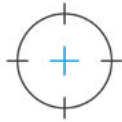
		iXM-GS120
Specifications	Sensor type	CMOS Global Shutter
	Spectral range	350nm - 1000nm
	Dynamic range (dB)	80
	Pixel size (µm)	3.45
	SNR ratio	105:1
	Sensitivity (ISO)	200
	Global Shutter speed (sec)	1/16000
	Global shutter efficiency (dB)	92
	Color options	Color or Monochrome
	Filter options	IR-Cut or clear glass
	Resolution	12768 x 9564
	Max. field of view (°)	63
	Continuous frame rate (Hz)	6 (maximum frame rate)
	Burst frame rate (Hz)	12
	Raw file compression 14bit (MB)	120
	Raw file compression 12bit (MB)	95
2K Live video	Max. field of view (°)	21
Interface	Image data	Ethernet 10G (Fiber/ Copper), USB3
	API	Phase One SDK, Mavlink
	H/W signals	Inputs: Trigger, dark calibration Outputs: Camera ready, MEP
	Internal storage	CF Express, up to 1TB**
Power	Input (VDC)	12-30
	Max. power consumption (W)	20

Mechanical	Dimensions - excluding lens (mm)	90x90x67
	Weight - excluding lens (g)	630
	Interface	8x M4 threads
	Weight with RS lens adaptor (g)	1000
Operating conditions	Humidity (%)	15 - 95 (non-condensing)
	Weather protection	IP53
	Temperature (°C)	-10 to +40
	Storage temperature (°C)	-55 to +85
	EMI	EN61000, EN55024, EN55032
	FCC	Part 15, class A, subpart B
Lenses	RSM Lenses	35mm, 80mm, 80mmAF, 150mmAF, 300mmAF
	RS Lenses	50mm, 70mm, 90mm, 110mm, 150mm MK II, 180mm

Additional benefits and features



120 Megapixels
image data at 6 fps



Geotagged
images



Continuous HD
video stream



1 TB in camera
storage



Camera control and
Image processing SDK



Ready for
remote update



Weather and
dust proof



Secured
connectors



Lightweight
and compact



Low power
consumption

Challenges

Non-stop wind turbine inspection

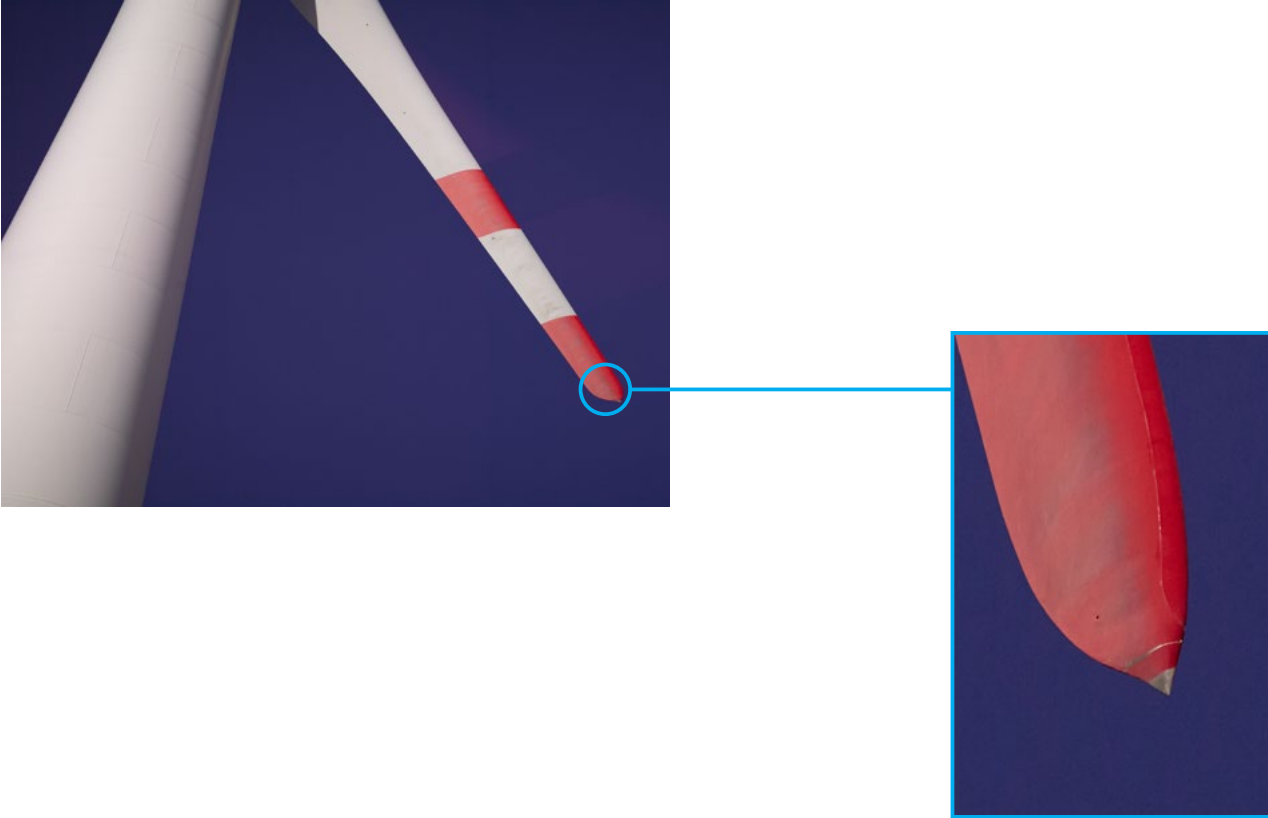


Challenge

Current wind-turbine blade inspection can only be performed by shutting down the operation of the turbine to overcome motion blur from the high-speed rotors. Scheduling this together with the service interruption is extremely costly and inefficient.

Solution

Non-stop wind turbine inspection



Solution

Thanks to the iXM-GS120s's electronic global shutter, you can capture perfect still frames of fully operational turbine blades while they are moving in extremely high resolution. You only need one person and an iXM-GS120 to capture images detailed enough to find small faults and defects. With the iXM-GS120, ground-based wind turbine blade inspections can be performed whenever needed and without interrupting turbine service. This delivers considerable savings in time and money.

Challenges

Road inspection



Challenge

Many existing vehicle-mounted Right-of-Way (ROW) cameras used to guide pavement inspection and collect inventories of roadside assets such as signage, traffic barriers and bridges, however the capabilities of these cameras do not always collect all the information that is required. While the data from vehicle-mounted data collection systems provides automated efficiencies for the highway agency by enabling inventories to be updated from the desktop, in many cases field crews still need to travel the road network again to inspect the details for the asset inventory that have been missed. Where asset inventories require the inspection of features such as inventory information stickers or even the condition of the bolts holding up the asset, sending field crews out again is costly, time-consuming and bring health and safety considerations that need to be managed.

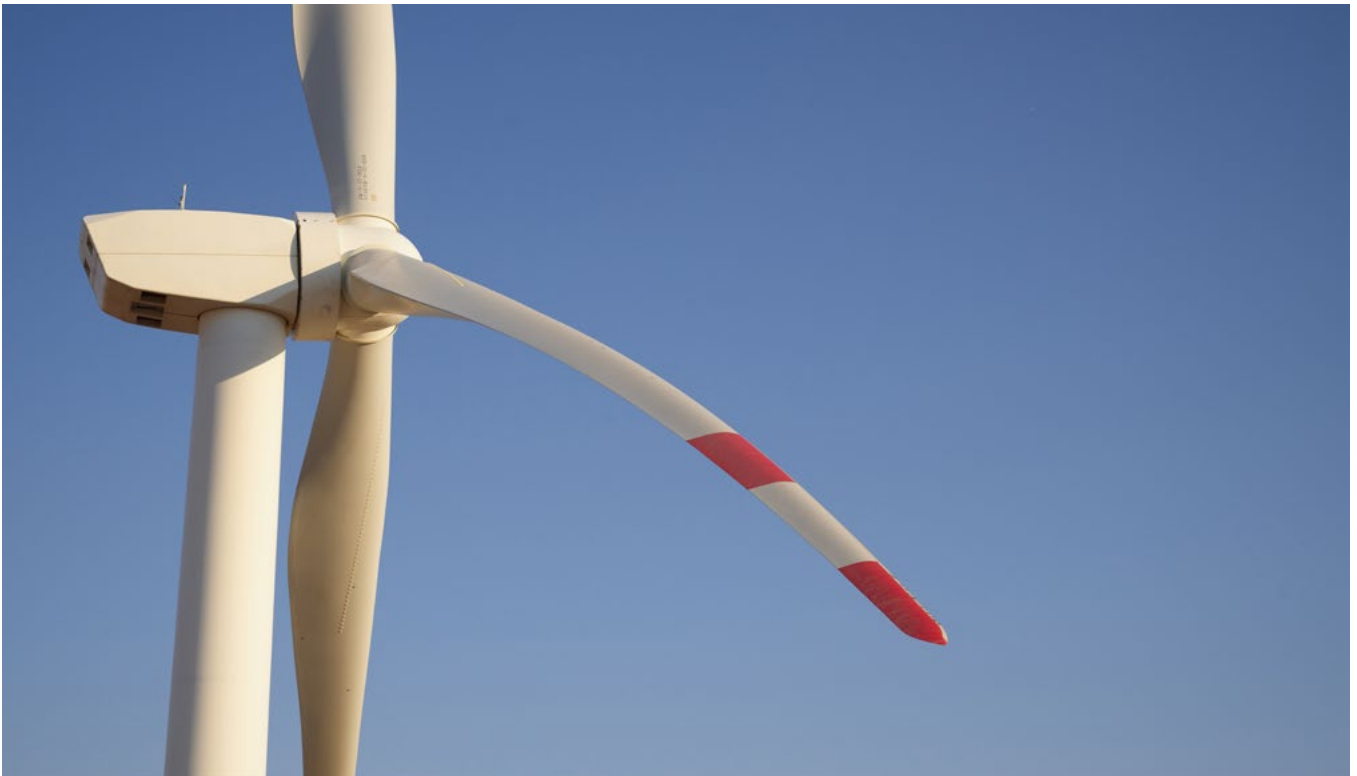
Solution

Road inspection



Solution

The iXM-GS120 has a high frame-rate, electronic global shutter. This means you can drive faster and cover more ground, secure in the knowledge that your images will not only be free of distortions and motion blur, but incredibly sharp and detailed too. For example, it can capture indications of road distress road, read small inventory stickers on road signs, or show the condition of sign securing bolts. Previously, these would have needed a labor intensive, manual on-site inspection. Using GS120 improves productivity and shortens project times significantly, allowing you to save millions of dollars and reduce time spent on project by months and hundreds of person hours through dramatically more information about an asset being seen from the desktop.



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.

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