See the World with a Bird's-eye View: Interactive 360° High-Resolution Aerial Imaging

Serious about LiDAR and innovation, California based Phoenix LiDAR Systems, was established in 2012, and soon launched their first commercial UAV LiDAR system. The company specializes in custom, survey-grade mapping & post-processing solutions designed to collect detailed, 3D topographic information for the engineering, construction, mining markets, and more. Lead by Grayson Omans, CEO, Phoenix LiDAR continues to drive innovation in the industry, integrating the latest hardware and building automation software for every stage of laser mapping.

In March 2019, Phoenix LiDAR Systems partnered with German based Black Forest Motion, experts in camera motion control, to offer their customers next-level technology solutions. Black Forest Motion fills a niche by providing motion controlled applications ranging from time-lapse and Giga-pixel photography to fully autonomous turntable photogrammetry scan setups.

360° Imaging - An All Round Improvement

Until now drone solutions have made 360° aerial imaging accessible to many. However, low quality and lack of detail in images result in a limited practical usability. Customers now want to view interactive 360° high-resolution images captured from greater heights to provide wider coverage at faster speeds for processing and stitching. Post-production, images use cloud based storage, accessible from anywhere with an internet connection.

"Phase One Industrial's 150MP imaging technology completes the Phoenix Vision360 solution as it meets all our requirements, plus its compact size and weight allow for easy integration with our UAV based platforms."

-Grayson Omans, CEO of Phoenix LiDAR

Zoom in from Hundreds of Feet in the Air

Phase One Industrial cameras offer backside-illuminated CMOS sensors with high sensitivity, fast capture rates, and ultra-high resolution. Medium-format provides a wide surface coverage and better image sharpness, allowing the end-user to zoom right into the stitched images in order to see the finest details such as road signs, safety hazards, and archeological digs from hundreds of feet in the air.

"Imagine putting binoculars on the standard aerial image capture tools you're currently using. Then imagine the numerous management and safety applications that become available to you"

-Patrick Ketterer, CEO of Black Forest Motion.

Business Gains with Giga-pixels

"360° Aerial images have never been sharper, the Phoenix Vision360 process is built around a technology stack comprising of two layers: the drone and imaging control technology. The highly optimized imaging control technology allows Phoenix Vision360 to capture data for some of the largest aerial images with a drone flight-time of less than 10 minutes. Image stitching processing and hosting is cloud-based, allowing users to view interactive 360° high-resolution aerial images (30 million megapixels – Giga-pixel technology) from any location whether close to the site or from an office in another city" says Omans.

360° high-resolution aerial imaging benefits businesses by improving:

• Budget management - through identifying unused resources

• Personnel management - increasing cost efficiency through real-time progress updates.

• Asset management - identify machinery and read serial numbers without disturbing the work-site.

• Job safety - able to clearly pinpoint occupational hazards.

"We've had construction site managers request the ability to easily identify equipment asset ID numbers on the ground from safe distances, and Phoenix Vision360 allows them to do that from a drone 600 feet away."
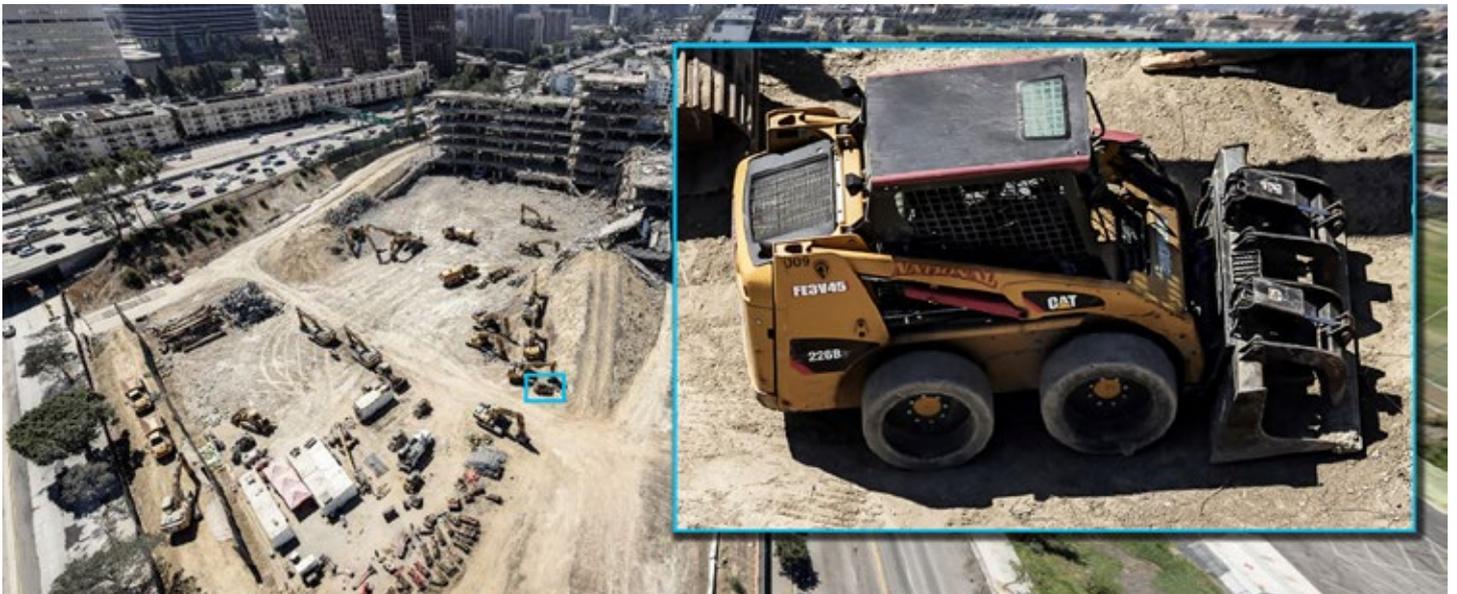
-Grayson Omans, CEO of Phoenix LiDAR.

Phase One Industrial medium-format sensor technology integrated with Phoenix LiDAR result in minimizing project time and costs, risk to people, and work-site disruptions. Business growth is easily achieved with Vision360 as improvements and investment opportunities can be clearly identified including:

• Utility managers - infrastructure inspection and corridor mapping.

• Construction companies - remote site management and progress documentation.

• Real estate developers – identification of plots of land for development.

• Archeologists – identification of hidden artifacts, academic research, and virtual tours with the disturbance of foot traffic to the site.

Test the Phoenix Vision360 Image Viewer here:

https://www.phoenixlidar.com/vision360/

Phoenix Vision360 with Phase One Industrial iXM-100
Image Courtesy of Phoenix LiDAR

Asset Management - Track Serial Numbers
Image Courtesy of Phoenix LiDAR

About Phase One Industrial

Phase One A/S is based in Copenhagen with offices in New York, London, Cologne, Tel Aviv, Tokyo, and Hong Kong. Phase One Industrial is a division of Phase One and is dedicated to research, development, and manufacture of specialized industrial and airborne cameras, aerial imaging systems, and specialized solutions from flight planning and management to image capturing and processing software to meet the unique requirements of aerial photography users.

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

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