

Press release

Assistance system by and for machine manufacturers: 360° person recognition for greater work safety and efficiency

- Liebherr's components product segment adds AI-based human detection to its 360° surround camera system
- The new edition offers users a significant increase in image quality and robustness
- In this way, the digital assistance system supports machine operators in their daily tasks and considerably improves efficiency and work safety

At Bauma 2025, Liebherr-Components will be presenting the most recent version of its 360° surround view system. With the new generation of cameras and displays, the company is equipping its solutions with advanced, even more powerful components. It is also possible to retrofit existing machine fleets with the system.

Baden (Switzerland), February 10, 2025 – Whether wheel loaders, dumpers or combine harvesters, 360° camera systems turn out to be part of standard equipment on mobile machines. When it comes to detecting people on a construction site, manoeuvring on narrow and dusty roads or optimising harvesting processes, a perfect view of the machine and its surroundings is always crucial.

However, image quality, robustness in harsh environments and long-term availability are the factors that make the difference in day-to-day work and determine the real benefit of a viewing solution. High-resolution camera systems by Liebherr provide operators of mobile machines in all sectors with detailed images, whether from a 360° perspective or zoomed in as a single camera view. This does not only make work more efficient and comfortable, but also helps to prevent accidents and damage to property.

Since its market launch in 2002, the 360° surround view system by Liebherr-Components has already been used on various machines in different industries, for example by the dump truck manufacturer Bergmann. The Liebherr team in Lindau (Germany) with its extensive experience in this field, is now presenting a new and improved version that is even better tailored to the needs of machine operators.

Relevant details at a glance

Liebherr has always relied on its own in-house technologies for digital cameras and displays. One of the most important improvements of the new system version is the use of the latest generation of digital

cameras and displays. Based on the experience of three generations in the field and the knowledge of the special requirements that construction machinery places on components, the new camera has been adapted even more precisely to the needs of its users. This applies in particular to image quality and robustness.

Full HD resolution of up to two megapixels allows the operator to see all relevant details at a glance in a single 360° image. This means that any errors in the work process, for example during harvesting, can be detected early and corrected more quickly. The camera's mechanics have also been optimised to withstand the harsh operating conditions that mobile machinery is exposed to on a daily basis, such as frost, dust and strong vibrations. Measuring 50 x 50 millimetres, the camera takes up very little space in a machine and does not require a glass front.

Added intelligence with AI-based human detection

Whether in the agricultural, construction or municipal sector, preventing accidents caused to people is a top priority on site. By integrating a human detection system that visually warns the driver about someone entering the danger zone, the original application is expanded from a pure machine and area monitoring system to a digital assistance system for accident prevention. This is an important step towards the much-needed improvement of occupational safety on construction sites. The danger zone is defined upon system calibration and can be adjusted later, if necessary.

LiXplore® Detect for human detection is available as an option for the 360° system. Its high reliability is based on the full HD resolution of the new cameras and the processing power of the new display controller. In combination with sensors, many other applications will be possible in the future, such as the automatic and preventive sorting of diseased plants during harvest or the optimal distribution of the amount of fertiliser (precision farming).

Calibration and retrofitting

Quick and easy calibration of the system by means of four calibration mats enables existing machine fleets to be retrofitted. Once a machine is equipped, the rest is done in a short time. Liebherr supports its customers with comprehensive product training during implementation. They also offer consultancy services, such as an analysis or recommendation on where the cameras can be placed best. Here too, customers benefit from Liebherr's vast experience and expertise in the special requirements of the industry.

Liebherr will be presenting the new version of the 360° surround view system at this year's Bauma from 7 to 13 April on booth 326 in hall A4.

About Liebherr-Components AG

In this segment, the Liebherr Group specialises in the development, design, manufacturing of high-performance components in the fields of mechanical, hydraulic and electric drive and control technology. Liebherr-Component Technologies AG, based in Bulle (Switzerland), coordinates all activities in the component product segment.

The extensive product range includes combustion engines, injection systems, engine control units, axial piston pumps and motors, hydraulic cylinders, slewing bearings, gearboxes and winches, switchgear, electronic and power electronics components and software. The high-quality components are used in cranes and earthmoving machinery, in the mining industry, maritime applications, wind turbines, automotive engineering or in aviation and transport technology. Synergy effects with other product segments of the Liebherr Group are used to drive continuous technological development.

About the Liebherr Group

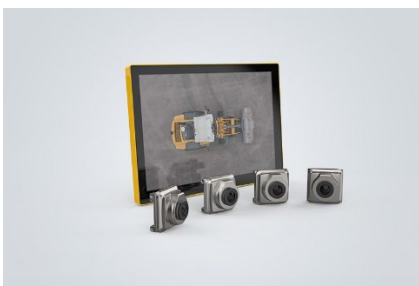
The Liebherr Group is a family-run technology company with a highly diversified product portfolio. The company is one of the largest construction equipment manufacturers in the world. It also provides high-quality and user-oriented products and services in a wide range of other areas. The Liebherr Group includes over 140 companies across all continents. In 2024, it employed more than 49,000 staff and achieved combined revenues of over 11.6 billion euros. Liebherr was founded in Kirchdorf an der Iller in Southern Germany in 1949. Since then, the employees have been pursuing the goal of achieving continuous technological innovation, and bringing industry-leading solutions to its customers.

Images



liebherr-digital-surround-view-system-lixplore-birds-eye.jpg

Threshing from a different perspective: The new generation of cameras and displays take the image quality and performance of Liebherr's 360° surround view system to the next level.



liebherr-lixplore-birds-eye-retrofitting-solution.jpg

LiXplore® Bird's Eye ist als Nachrüstlösung konzipiert. Damit lässt sich schnell und einfach eine ganze Maschinenflotte mit dem 360°-System ausstatten – ideal für eine Vielzahl von Arbeitsmaschinen und Nutzfahrzeugen aller Branchen.

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Published by

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Baden / Switzerland
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