# SICK launches solid state safety solution for line-guided small vehicles

scanGrid2 boosts the productivity of small autonomous AGCs thanks to safe solid state LiDAR technology

**Waldkirch, February 2021 – The scanGrid2 safe multibeam scanner from SICK is the first of its kind in the world. The compact sensor uses a novel and in-house developed solid state LiDAR technology to increase the productivity, in particular, of small autonomous and line-guided transport vehicles, so-called Automated Guided Carts (AGCs). Certified as a Type 2 / SIL 1 safety sensor according to IEC 61496-3, the scanGrid2 can protect hazardous areas up to performance level c and can be used for collision avoidance. An app and cloning function also ensure a high level of usability and fast commissioning of the sensor solution.**

SICK employed its novel and in-house developed solid state LiDAR technology for the first time when developing its first scanGrid2 safe multibeam scanner. “We are seeking to offer manufacturers of autonomous and line-guided AGCs, in particular, a cost-effective safety solution that they can use to boost the productivity of their applications. Specifically, this means increasing the speed or payload of the vehicles, or being able to eliminate mechanical barriers such as fences”, explains Marco Faller, Strategic Product Manager at SICK AG. Conventional safety laser scanners are often not a suitable solution for these very simple and exceptionally cost-effective small vehicles for economic reasons. Users have therefore often been faced with the choice of limiting the speed or payload of their AGC or avoiding operating them in unfenced areas in order to minimize the risks associated with the vehicles. scanGrid2 now offers users new possibilities for successfully increasing the productivity of their small autonomous and line-guided carts. Thanks to the rapid return on investment, switching to a safety sensor is now a viable option with initial installations showing productivity increases between 50 and 70%.

Reduced to the essentials, scanGrid2 offers users exactly those functions they require for safe operation: the sensor safely detects objects of a variety of sizes within the freely configurable protective field zones, can evaluate multiple fields, and can execute configurable monitoring cases. A warning field zone extending up to four meters beyond the safe working range can be employed for non-safety actions. The solid state LiDAR technology is based on the principle of time-of-flight measurement and eliminates all moving parts. Instead, the device uses only semi-conductor elements in conjunction with geometrically arranged optics modules to span a protective field of 150 degrees. Within the defined protective field zone, scanGrid2 can solve Type 2 classified, performance level c safety requirements in the context of safety applications.

**App and cloning function ensure a high level of usability and fast commissioning**

“When it comes to the use of safety sensors, easy configuration, fast commissioning, and diagnostics are the key aspects our customers are looking for. Ensuring fast servicing also saves valuable time and money,” explains Faller. That is why SICK redesigned the configuration and diagnostics features. Besides the tried-and-proven infrastructures and tools such as the Safety Designer software, the engineers at SICK have implemented an additional Near Field Communication (NFC) interface. This, in conjunction with the Safety Assistant app, enables diagnostics to be performed on the sensor quickly and easily, e.g., via a smartphone. The advantages of this approach are also readily apparent during commissioning or servicing: sensor configurations can be transferred wirelessly and easily from one sensor to another thanks to a cloning function in the app.

Images: ScanGrid\_Product\_0093313  
The scanGrid2 safe multibeam scanner uses a solid state LiDAR technology to increase the productivity, in particular, of small AGCs.

Image: ScanGrid\_Appl\_0093322  
scanGrid2 is a cost-effective safety solution for manufacturers of small autonomous and line-guided AGCs. It enables the speed or payload of the vehicles to be increased, or mechanical barriers such as fences to be eliminated.

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SICK is one of the world’s leading solutions providers for sensor-based applications in the industrial sector. Founded in 1946 by Dr.-Ing. e. h. Erwin Sick, the company with headquarters in Waldkirch im Breisgau near Freiburg ranks among the technological market leaders. With more than 50 subsidiaries and equity investments as well as numerous agencies, SICK maintains a presence around the globe. In the 2019 fiscal year, SICK had more than 10,000 employees worldwide and a group revenue of around EUR 1.8 billion. Additional information about SICK is available on the Internet at [http://www.sick.com](http://www.sick.com/) or by phone on +49 (0)7681202-4183