

## PRESS RELEASE

Innovation on the automatic passenger counting (APC) market

### **Dilax SLS-1000: optical sensor based on structured light technology**

**Berlin, April 20, 2021 – Dilax, a specialist in APC system solutions for local and regional public transport, announces the launch of the Dilax Structured Light Sensor (SLS-1000). The optical 3D sensor for automatic passenger counting in public transport operates on the basis of structured light technology: a laser projector module generates a dot pattern that changes depending on the distance of a person or object from the sensor's optical module. Based on the dot pattern's distortions, the camera generates a depth image from which a 3D profile of a person or an object is created. These 3D profiles do not have to be anonymized afterwards – as is the case with other technologies – because they are already created anonymously. The new Dilax SLS-1000 sensor thus meets the highest data protection standards. The structured light technology is patented by Dilax.**

Urban mobility is becoming increasingly complex. People use public transport for various reasons – to get to their workplaces, schools and universities or to reach leisure facilities. Thus, local authorities enable societal participation. For this participation to be truly open to everyone, local authorities and transport organizations have to recognize and acknowledge their passengers' individual needs. Unlike GPS or Wi-Fi data generated by large technology companies, data from automatic passenger counting (APC) systems in public transport vehicles shows local movement and distribution information in real time. Based on this, vehicle occupancies can be managed actively, e.g. for promoting social distancing by sharing live occupancy data on the next train with passengers or for planning capacities for special mobility needs, such as boarding with a wheelchair or bringing a bicycle on board.

#### **Artificial intelligence supports inclusive mobility**

The new sensor counts the number of people entering and exiting a vehicle with a counting accuracy of 99 percent. It distinguishes between adults and children. The new structured light technology is now able to recognize different objects such as bicycles and wheelchairs as well. Counting and object detection function reliably even in difficult lighting conditions such as darkness or overexposure. The object data includes not only the number of objects, but also their height and movement direction. The sensor learns to recognize objects on the basis of artificial intelligence. Besides bicycles and wheelchairs, further object classes will be added in the future: currently, the sensor is being trained to identify and count baby strollers as another object class. New object classes can be added later via a firmware update.

Based on the data obtained with the structured light technology, public transport operators, transport associations and local public transport planners will be able to develop new services for passengers. For example, it is possible to specifically display available wheelchair spaces in the current or next vehicle. It can also be used to already direct the distribution of passengers and objects on the platform to enable comfortable passenger transfers.

“We are very excited to announce the launch of our new sensor. Only local data lets us understand how people really move around the city with public transport,” says Thorsten Kies, Managing Director and CEO at Dilax. “Via anonymous, local data, we can look at our cities

differently and ask ourselves: how can we make them better together?” And Robert Selle, Managing Director and CFO at Dilax, adds, “In its history, Dilax has shaped the market of automatic people counting again and again – with the Dilax SLS-1000, we're doing it with even more focus on people's needs in an industry where everything evolves around efficiency and accuracy.”

The Dilax SLS-1000 was developed entirely at our Dilax headquarters in Berlin. This means that the sensor can be seamlessly integrated and combined with the rest of Dilax's product portfolio. Production is carried out with partners from Berlin and Brandenburg. The new sensor is certified for use in buses and trains.

#### Further information:

- Registration for the online launch event  
<https://www.Dilax.com/de/newsandevent/sensing-with-care>.  
Caption for the included photo:  
*The Dilax Structured Light Sensor (SLS-1000) is an optical sensor for automatic passenger counting in public transport.*
- Further images and product information are available on request.

#### About Dilax

Dilax Intelcom GmbH is an internationally recognized specialist for APC system solutions for local and regional public transport. The medium-sized company develops and produces hardware and software to improve public mobility services with precise data. 130 employees work at Dilax's headquarters in Berlin. Combined with the locations in France, Switzerland, Spain, Great Britain, the USA and Canada, a total of 160 people are employed at Dilax.

Dilax is considered to be the inventor of automatic passenger counting. Since 1988, the Berlin-based company has been developing and implementing its own hardware for automatic passenger and object detection. Dilax sensors are used in over 1,800 cities worldwide. They detect how people move in urban spaces – in public transport on buses, trams, subways and commuter trains as well as in airports, shopping centers. Analytical software solutions complement the product portfolio.

Dilax's international customers include transport operators, transport associations and vehicle manufacturers, well-known brands and shopping centers as well as project developers, urban planners, architectural offices and local authorities. Dilax hardware and software solutions are used to design cities for people based on local data – with inclusive mobility, dynamic workspaces, worlds of experience for shopping and entertainment, and public spaces that invite all people to be part of the city. For further information visit <https://www.Dilax.com/de>

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