



## PRESS RELEASE

### Driver assistance automatic systems in Solaris vehicles

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**Advanced driver assistance systems help drivers by performing certain actions before them or in their stead, and thus provide them with invaluable seconds for a proper response. Solaris today offers several solutions of this type. In recent weeks, the CMS (Collision Mitigation System) intelligent braking support system has been implemented on buses from the Urbino family.**

In public transport, the benefits of driver support systems are reaped not only by drivers and passengers, but all residents and road users. That is why in city buses, driver assistance and support functionalities (so-called ADAS, or Advanced Driver Assistance Systems) are an increasingly common feature included in the Solaris offer. The EU legislation has enforced many of these types of systems to the list of mandatory equipment for new buses as of 2022.

#### **Invaluable seconds for a response**

In recent weeks the CMS (Collision Mitigation System) system that initiates automatic braking has been implemented in buses from the Urbino family. Solaris presented this Urbino 18 electric solution at Busworld 2019. When a radar installed on top of the bus detects the risk of a potential head-on collision, the system goes into braking mode, reducing velocity and thus alleviating the consequences of a potential collision. The solution is already used in coaches and has now been applied in city buses. The correct calibration and configuration is of great significance in city buses where - contrary to coaches - there are no safety belts and most passengers ride standing rather than seated. Therefore the braking force is crucial for the passenger safety – and it is an additional challenge the manufacturers are facing.

#### **An enhanced visibility**

Another device and The MobilEye Shield+ system allows the driver to see more thanks to cameras placed outside the vehicle. They detect pedestrians and cyclists who are not reflected in mirrors, which is especially important during turns. In such case the system warns the driver – with acoustic signals and visual alerts. In addition, the device informs the driver about every pedestrian and cyclist within 80 cm from the bus. The MobilEye Shield+ also reacts in cases when changing lanes without adequate signalling beforehand occurs or when no appropriate distance to the vehicle in front is maintained. What is more, the system alerts the driver to collision risks. The device can recognize speed limits and informs the driver about them on the display.

An enhanced visibility is also ensured by the completely re-designed mirrors, or rather cameras which project the image onto screens inside the vehicle. The ingenious design of the MirrorEye installed in lieu of regular rear-view mirrors corresponds to class 2 and 4 visibility (optionally class 5 in the right “mirror”) and this yields a whole range of advantages. Above all, there is no more need to reset and adjust mirrors after a driver switch – the screens and cameras always display the optimal scope regardless of the driver’s height. The width of the vehicle is reduced – which is of great importance on narrow and tight urban streets, and which also considerably reduces the risk of collision or of snagging the mirror on road infrastructure items. What is more, the cameras substantially widen the field of view and they improve the aerodynamics of the vehicle. The warmed cameras do not freeze

nor fog up and, owing to their reduced size, are easier to clean or wash during the daily clean-up of a bus. What is more, the screens can also show distance thresholds of the various bus parts, such as its rear, particular doors or the axle. A horizontal line displayed on the screen eases manoeuvres and parking, and above all renders these procedures safer.

#### **Additional information**

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##### **About our company**

Solaris Bus & Coach sp. z o.o. is one of the leading producers of city and intercity buses in Europe. It focuses in particular on the development of zero-emission vehicles, i. e. electric and hydrogen buses as well as trolleybuses. This has resulted in the widest zero-emission product range in the European market and a leading position in this segment with a market share of 15.2%. Nearly 25,000 Solaris vehicles have been delivered so far and they ply the streets in 850 towns and cities across 33 countries located throughout Europe as well as beyond it. Solaris is part of the Spanish CAF Group (Construcciones y Auxiliar de Ferrocarriles) S.A. From conception, to the design and manufacturing phases, all Solaris buses are produced in Poland. Moreover, all activities undertaken by the manufacturer are in line with the brand's mission, which is reflected in the motto "We are changing the image of public transport". Solaris also actively partners with public transport operators and provides them with comprehensive support in their transition to zero-emission mobility.