



# Even more safety with our safety assistance systems.

## Mercedes-Benz S1R Sideguard Assist, Basic Sideguard Assist system and SurroundView system.

Mercedes-Benz can increase road safety and even save lives.

Our standard, retrofittable Mercedes-Benz S1R Sideguard Assist and the Basic Sideguard Assist system (available as a genuine accessory) can support the driver with short range sensors in confusing turning maneuvers. In addition, the modular SurroundView system (also available as a genuine accessory) can reduce blind spots around the truck to a minimum. This makes the working area around the vehicle more manageable.



S1R Sideguard Assist



SurroundView system

## The systems in comparison.



S1R Sideguard Assist/Basic Sideguard Assist system



SurroundView system

Visual warning	Yes
Acoustic warning	Yes
Picture/monitor	No
Camera	No
Radar sensor	Yes

Visual warning	No
Acoustic warning	No
Picture/monitor	Yes
Camera	Yes
Radar sensor	No

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## Mercedes-Benz S1R Sideguard Assist

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# Mercedes-Benz S1R Sideguard Assist for retrofitting

For Actros, Antos, Arocs and Econic (from the year of construction 2017 onwards).



# Safety - a valuable asset.

### Warning against collisions with cyclists, other vehicles or pedestrians.

The S1R Sideguard Assist is an important assistance system of Mercedes-Benz. Driver encounters challenging traffic situations in cities and residential areas. They have to pay attention to traffic lights, signs, oncoming and cross traffic and at the same time keep an eye on other road users at the sides, especially on the passenger side. This is possible in all weather conditions and at any time of day or night. In addition, the traffic situation can change within seconds. Furthermore, pedestrians, cyclists or drivers of e-scooters that are on the side of the vehicle are not always aware that a truck driver may not be able to see them. However, they are particularly at risk as unprotected road users in the event of a collision.

The Mercedes-Benz S1R Sideguard Assist can be retrofitted to Mercedes-Benz Actros, Arocs, Antos and Econic from year of construction 2017 onwards depending on the model. The fully integrated Sideguard Assist can warn the driver visually and acoustically of dangers when turning in critical situations with restricted visibility. Even more: It takes the tracking pattern of the semitrailer into account and can warn of potential collisions with stationary obstacles such as traffic lights or lampposts identified by the system. It can also support the drivers during lane changes. The visual and acoustic signals provide the driver with valuable time to react. Two short-range radar sensors installed on the frame on the passenger side in front of the rear axle of the truck form the heart of the system. They cover a complete lane with a width of 3.75 m over the entire length of a truck trailer combination of 18.75 meters plus two meters in front of and up to one meter behind the vehicle.

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#### Clever warning concept in two stages.

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With its two-stage warning system, the sideguard assist helps to defuse critical traffic situations. To this end, two short range sensors constantly monitor the passenger side – along the entire length of the vehicle (up to maximum 18.75 m), and even 2 m in front of and 1 m behind the vehicle as well as over a lane width (approximately 3.75 m).



Effective collision warning when turning or changing lanes.

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#### Note

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The Mercedes-Benz S1R Sideguard Assist, which is identical to series production, can use two short range sensors to support the driver during confusing entering and exiting manoeuvres. It is available for Actros, Antos, Arocs and Econic left-hand drive vehicles (Z5X) from 02.01.2017 and Econic right-hand drive vehicles (Z5W) from 01.08.2017. Please contact your Mercedes-Benz partner for binding information on whether your vehicle is suitable for retrofitting.

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#### Sideguard Assist, permanently active (S6F)

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The S1R Sideguard Assist can't be switched off in the onboard computer via the menu "settings" through the driver so the system is permanently active (available only in conjunction with S1R).

Article designation	Part number
Sideguard Assist, permanently active (S6F)	<a href="#">A 000 827 96 59</a>

## S1R Sideguard Assist

# Support in complex urban traffic.

**The objective: always informed, warned if necessary.**

If there is a moving object in the monitoring zone on the passenger side, a yellow, triangular LED lights up in the A-pillar on the passenger side in the driver's line of sight. When there is danger of collision, the LED light flashes red multiple times with increased brightness, then stays red after two seconds. An additional warning tone sounds from radio speakers on the side of the hazard in case of danger of collision.

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**The system also reacts to standing persons.**

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Less common, but just as serious: turning accidents with stationary cyclists or pedestrians. The assistant also warns of acute risk of accident with stationary persons and objects. An immediate warning is given in form of a red LED display immediately when an acute risk of accident is detected (within the system limits). This function only detects hazards within the tracking pattern of the vehicle. This function is not a parking assistance system: It is not designed for parking maneuvers.

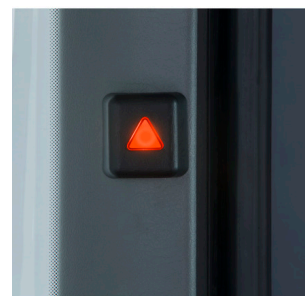


If there is immediate danger of collision, the Sideguard Assist will warn the driver.

Mercedes-Benz retrofitting



Installation components for retrofitting the S1R Sideguard Assist, e.g. for Econic



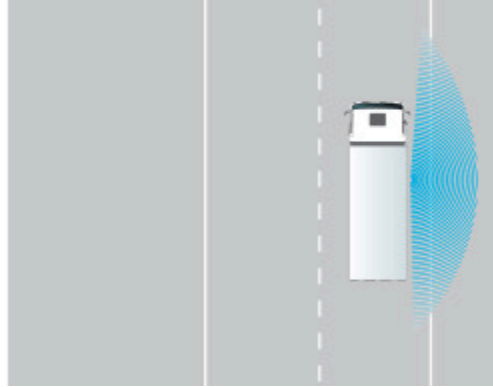
Draws the driver's attention to the danger zone: yellow or red warning light in the A-pillar.

## S1R Sideguard Assist

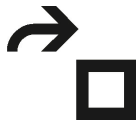
# The Sideguard Assist can support you during various traffic maneuvers.

During reverse travel, the system is automatically deactivated and no monitoring takes place. During subsequent forward travel, the trailer monitor is inactive for approx. 100 m straight travel until the articulation angle is initialized again and the tracking pattern calculation for the trailer or semi-trailer can be restarted.

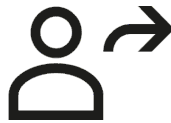
### S1R Sideguard Assist



The warning zone covers the complete system length of a maximum of 18.75 m. This strip is even extended to two meters in front of the truck and one meter behind it.



Turning with stationary persons and objects inside the tracking pattern



Turning with moving persons and objects



Driving at low speeds (tracking pattern monitoring up to 36 km/h)



Standstill, for example when loading and unloading



Starting off



Lane change

# Mercedes-Benz Genuine Accessories, Basic Sideguard Assist system

For Atego as well as Actros, Antos and Arocs that cannot be retrofitted with the Mercedes-Benz S1R Sideguard Assist.





## Basic Sideguard Assist system

# More safety while turning.

### Now tested and released for Mercedes-Benz Trucks.

The Basic Sideguard Assist system is an object recording system to avoid collision on the basis of a 24-GHz radar system. The system can increase the safety of unprotected road users when turning over the passenger side of medium and heavy commercial vehicles (> 3.5 t). In this case, the driver is informed and warned both visually and acoustically if a moving object is located in the lateral monitoring zone.

The radar sensor uses frequency modulation to measure speed, reflectivity (back reflection), angle and other parameters of several target objects simultaneously. This makes it possible to distinguish between unprotected road users and other objects. In contrast to ultrasonic-based systems, there are far fewer false alarms. The driver thus receives a reliable aid that increases safety when turning.



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#### Note

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The Basic Sideguard Assist system can be retrofitted on Atego, Antos, Actros and Arocs 5/4.

## Proven and reliable technology.

The system distinguishes between moving and stationary objects.

If a cyclist, a pedestrian or another vehicle is in the detection zone, the driver is given a visual warning via the LED display on the A-pillar and can intervene immediately. If the turn signal indicator is active, there is an additional warning tone. With a field of view of up to +/- 85°, the detection zone covers an area approximately 12 m long and 3 m wide next to the vehicle.



**Technical data of radar sensors:**

Frequency range	24 Ghz
Operating voltage	9 - 33 Volts
Dimensions	103 mm x 124 mm x 33 mm
Temperature range	-40 °C to +85 °C
Vibration resistance	25 G
Protection class	IP69K

**Technical data of display:**

Power supply	Via radar sensor
Dimensions	50 mm x 27 mm
Temperature range	-40 °C to +85 °C
Protection class	IP65K

The radar sensor is insensitive to environmental influences such as rain, snow and dirt and works day and night. It has a permanent integrated self-test function (BIST). False alarms caused by stationary objects, such as traffic signs or trees, are reduced to a minimum.

Basic sideguard assist system

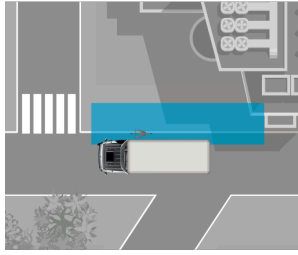
Article designation	Part number
Basic Sideguard Assist system (Atego)	<a href="#">B6 684 8650</a>
Basic Sideguard Assist system (Actros 5/4, Arocs 5/4), not in conjunction with MirrorCam system (F6T)	<a href="#">B6 684 8652</a>
Basic Sideguard Assist system (Actros 5, Arocs 5) with MirrorCam system (F6T) and cab width 2.3 m (F2G)	<a href="#">B6 684 8657</a>
Basic Sideguard Assist system (Actros 5, Arocs 5) with MirrorCam system (F6T) and cab width 2.5 m (F2H)	<a href="#">B6 684 8658</a>

## Common benefits of the systems

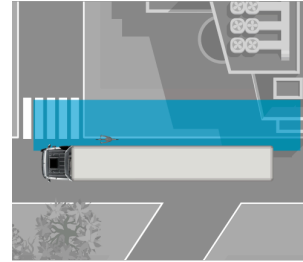
- Collision warning reduces the risk of accidents with other road users when turning, changing lanes and driving away.
- Distinction between moving and stationary objects.
- The radar-based systems also work in fog, darkness and at dawn/dusk
- Radar sensors are insensitive to contaminations
- Proven robust technology

	S1R Sideguard Assist	Basic Sideguard Assist system
Visual warning	Yes	Yes
Acoustic warning	Yes	Yes (if the turn-signal lamp is activated)
Radar sensors	2	1
Tracking curve monitoring	Yes	No
Monitoring zone	Max. length 18.75 m, width 3.75 m, 2 m in front of and up to 1 m behind the vehicle	Max. length 12 m, width 3 m adjacent to the vehicle
Warning while turning	Via steering wheel turning angle	Via turn-signal lamp signal
Warning while backing up	No	Yes

## Comparison of both systems



Atego with the Basic Sideguard Assist system (1 short range sensor covers an area with a width of 3 m and length of 12 m respectively)



Actros with S1R Sideguard Assist (2 radar sensors covers an area with a width of 3.75 m and length of 18.75 m)

The Mercedes-Benz S1R Sideguard Assist is a two-stage warning system. If a moving or stationary object is located in the monitoring zone located on the passenger side, the driver is first informed visually. If there is a risk of collision, an additional visual and acoustic warning is issued. If the two short range sensors detect a stationary obstacle, such as a traffic light or a light pole, when turning in the truck's tracking curve, a visual and acoustic warning is also given, giving the driver the opportunity to apply brakes.

The lateral monitoring zone has a width of 3.75 m. The system is designed to cover the entire length of the entire truck/trailer combination (up to a length of 18.75 m). This strip even extends forwards to two meters in front of the truck and two meters behind the end of the semi-trailer and trailer. It also detects the driver's turning request via the steering wheel's turning angle. During reverse travel, the S1R cornering assist is automatically deactivated and no monitoring takes place.

On the other hand, the Basic Sideguard Assist system has only one radar sensor installed on the frame on the passenger side in front of the rear axle of the truck. The lateral monitoring zone is approximately 12 m long and 2 m wide. When the turn-signal lamp is activated, the driver is additionally warned acoustically of the danger of collision with road users. Stationary, nonsafety relevant objects such as parked cars and traffic signs on the passenger side are ignored. There is no trailer monitoring and no tracking curve calculation for the trailer or semi-trailer. The system is activated while backing up and also issues an acoustic warning if a moving object is detected in the warning zone. The system warns the driver only if the turn-signal lamp is activated.

# Mercedes-Benz Genuine Accessories SurroundView system

Maintain an overview in critical situations.



## SurroundView system

# For a panoramic view.

The modular SurroundView system for all truck model series from Mercedes-Benz.

Truck drivers should never lose sight of the safety of other road users. But in busy urban traffic this poses a real challenge. This is where the optionally available modular SurroundView system comes into play, showing the vehicle surroundings on a 7-inch display. It uses up to four cameras on the vehicle, which are connected by cable to the monitor installed in the cockpit. This way, the driver always has a better overview when backing up, maneuvering and turning.



It can support the driver in entering and exiting intersections, backing up and maneuvering, and increase safety.



The modular SurroundView system merges recordings of the surroundings together onto one monitor, allowing blind spots to be viewed.



Panoramic view for the driver: The SurroundView system can cover the side of the vehicle as well. Up to four cameras can be connected to the monitor.



The rear view camera can be placed anywhere at the vehicle rear, e.g. on the body, and monitors the area behind the vehicle.

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### Note

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The modular SurroundView system is available as a genuine accessory for left-hand and right-hand drive vehicles.

# Intelligent display in the monitor supports the driver.

## Selective components of the SurroundView system.

Article designation	Part number
7" TFT monitor in the cab	<a href="#">B6 782 1267</a>
Front camera	<a href="#">B6 782 1275</a>
Reversing camera	<a href="#">B6 782 1275</a>
Magnetic footrest	<a href="#">B6 782 1331</a>

### Two additional cameras on the left and right outside of the vehicle

Vehicle	Part number
Up to Actros/Arocs 4, Atego, Antos and Eonic (100° opening angle)	<a href="#">B6 782 1275</a>
Up to Actros/Arocs 4, Atego, Antos and Eonic (120° opening angle)	<a href="#">B6 782 1330</a>
From Actros 5 (100° opening angle)	<a href="#">B6 782 1332</a>
From Actros 5 (120° opening angle)	<a href="#">B6 782 1333</a>
From Actros 5 (100° opening angle) camera with overlay	<a href="#">B6 782 1334</a>
Adapter cable to connect four cameras	<a href="#">B6 782 1335</a>

The cameras of the modular SurroundView system can be switched on either alternately by pressing a button or automatically by control signals (triggers). Particularly practical: If several camera angles are relevant in a particular driving situation, the variable split-screen mode divides the screen into several viewing areas. The driver can determine how the individual camera images are displayed: Either as a single image, picture-in-picture or on a split screen. The camera images are displayed in full size and resolution. Or it uses the default settings.



[B6 782 1267](#)



7" additional monitor for SurroundView

The 7" TFT monitor with LED backlight is designed for ambient temperatures between -30° C and +85° C. It consists of a brightness sensor for automatic day/night switchover, an integrated control unit for automatic trailer recognition as well as an adjustable overlay for distance visualization.

Technical data of monitor:	
Operating voltage	9 - 36 Volts
Resolution	800 x 400 pixels
Monitor dimensions	17,8 cm
Video format	PAL/NTSC (automatic)
Camera inputs	4, several split screen displays possible
Aspect ratio	16:9
Protection class	IP65K

## SurroundView system

### Sturdy camera.

Our multi-cables – for a good connection.

We offer multi-cables in lengths of 5 m, 11 m, 16 m and 21 m that are fully configured with plugs. The connector is also equipped in the protection class IP69K. The cables are resistant to oil, gas and UV rays.



B6 782 1280



Cameras on the left and right outside of the vehicle

The highly robust camera housing with integrated heating is water-proof and is also suitable for high-pressure cleaners (protection class IP69K). For Actros you can select between cameras with and without guides.

Technical data of cameras:	
Protection class	IP69K
Alignment	flexibly adjustable
Temperature range	-40° C - +80° C
Operating voltage	10 - 36 Volts
Camera dimensions	65 mm x 59 mm x 50 mm
Aperture angle	100° / 120°



# Additional information

## Legal information on the active safety assistance systems:

- Safety assistance systems support the driver in critical driving situations and can, under ideal conditions, reduce or even prevent accidents within the system limits.
- These safety assistance systems are intended to support the driver. This notwithstanding, the driver has a duty to adapt his driving behavior and in particular his speed to traffic and weather conditions and to be alert at all times because every system has system limits. This applies in particular to environmental situations that are unfavorable for detecting objects (e.g. obstacles concealed by fences or similar, or very poorly reflecting objects with a low reflection cross-section).
- Therefore, the driver of the vehicle has overall responsibility for all road traffic at all times. Safety assistance systems can support him in this task only to the extent of their technical capabilities.

Your local Mercedes-Benz service partner can provide you with further information. They can offer you individual and custom-made solutions tailored to your vehicles.

## Government money for your vehicle fleet

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Do you have any questions on the funding program or do you want help in filling out your application? Your Mercedes-Benz service partner is there for you.



## Mercedes-Benz Trucks Genuine Accessories

Provide your genuine vehicle with genuine accessories. A wide range of extras both big and small make your working day better, safer, more comfortable and more efficient. The current accessories catalog is available from your Mercedes-Benz dealer and on [www.mercedes-benz-trucks.com](http://www.mercedes-benz-trucks.com).



Advantages at a glance:

- Comfortable and practical in daily life
- Extensive and individual range
- Mercedes-Benz quality at attractive prices
- Economical and safe to use
- Tested and approved by Mercedes-Benz





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