



ProViu[®] Mirror – Camera monitor system for optimized fuel efficiency and increased safety





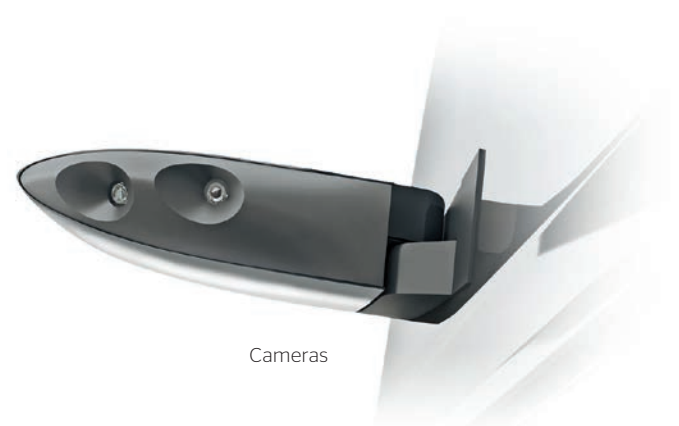
Automotive compliant HD displays and cameras.

The positioning of the reliable and perfectly matched system components enables not only an extended viewing area due to the integration into the A-pillar of the vehicle but also ideal readability and reduced aerodynamic resistance due to the replacement of the wing mirrors.

On each side of the vehicle two imagers are installed at different angles in a camera arm to get a proper viewing angle. All four cameras are controlled by a video processing controller with internal camera and display diagnostic. The 12.3" displays are integrated into the A-pillar on both sides of the vehicle in order to make optimal use of the space in the cabin. They provide sharp and detailed images due to high definition technology, ideal readability and anti-reflection thanks to the special anti-reflection coating and even full operating condition when the doors of the vehicle are open.

Both camera arms are foldable to maximize safety and minimize cabin damage in case of an accident. The images delivered by the camera module are presented in split screen appearance exactly as they would appear on conventional wing mirrors. The images are transferred via LVDS (low voltage differential signal) in order to guarantee a low latency. Thanks to the dual camera system different angles on each side of the vehicle are monitored and blind spots are significantly reduced.

Cameras



Camera Specification

Camera

Imager	High Definition and High Dynamic Range
Resolution	2 imagers per each side; 1 M pixel
Size (mm)	26 x 26 x 46; miniturized cameras
FOVH	60° & 100°
IP-Class	IP69K
Interface	LVDS

Driving experience and advantages.

During the advanced engineering phase the ProViu®Mirror camera monitor system has continuously been tested. The Continental Innovation-Truck equipped with the ProViu®Mirror technology put the system to the test over a ten thousand kilometer run for more than 12 months and demonstrated its reliability and innovation.

Besides its clear advantages in safety and efficiency the ProViu®Mirror technology provides real added value to driver's comfort. Test reports show that drivers benefit from the system after a short setting-in period. Additional intelligent software algorithms can reduce the necessity for head movements of the driver.

Moreover the quality of the display as emphasized by the test drivers provides ideal readability from the very first minute of its use. The system considerably reduces dazzle effects from vehicles behind and enables better visibility at dawn.

Advantages at a glance

- Reduced fuel consumption (1 % - 2 %)
- Minimized blind spots
- Extended viewing area
- Sharp image quality
- Ideal readability and anti-reflection
- Full operating condition even when doors are open
- Well working under low light conditions
- Lower cost of ownership
- Basis for further safety increasing features like overtaking assistant

Display



Display

Display Specification

Display Controller

TFT-Panel	IPS
Resolution	HD
Size	12.3"; 308 mm x 129 mm
Qualification	Automotive Grade
Thermal Concept	Passive cooling

ProViu®Mirror - Camera monitor system for wing mirror replacement.

Increased safety and reduced fuel consumption with ProViu®Mirror camera technology for replacing wing mirrors in commercial and special vehicles.

Continental is one of the world's few manufacturers with the necessary know-how for every component of a trendsetting camera monitor technology which can replace wing mirrors. With ProViu®Mirror the vehicle safety and efficiency will be significantly increased: the driver can benefit from an extended viewing area due to the integration of displays into the A-pillar of the cabin, this will also reduce aerodynamic resistance due to the replacement of the traditional wing mirrors.

As one of the biggest automotive display consumers worldwide and one of the market leaders for front viewing cameras, Continental holds the essential expertise for camera monitor applications such as our trendsetting wing mirror replacement.

We develop and manufacture camera modules in-house and also have the capability and resources to function in

the role of a system integrator, providing video processing capabilities with in-house optics experts and ongoing development projects for cameras and algorithms.

To produce a maximum secure system, the application is being considered ASIL (Automotive Safety Integrity Level) relevant. Continental developed a hazard and risk analysis based on use cases, identified relevant items and defined safety goals. As a result a technical safety concept for the complete system is derived. The system is inherently safe and will transfer to a safe mode in case of an outfall or partial failure. Furthermore the ProViu®Mirror system fulfills the standard ISO 16505.

Continental combines all the necessary know-how for ProViu®Mirror components under one roof, providing many years of experience in the field of safety relevant product's application.

One source for all components

- Application know-how for safety relevant products
- Camera application expertise
- Display competence
- System integration experience
- Control unit proficiency
- Knowledge of video processing and camera projects

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