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## **STMicroelectronics Collaborates with Eyeris on Integration of Global-Shutter Sensor Solution for Automotive In-Cabin Monitoring**

*Combines ST's industry-leading RGB-IR Global-Shutter sensor technology with Eyeris' AI-based portfolio of Deep Neural Networks to advance automotive safety and comfort*

**Geneva, Switzerland and Palo Alto, CA, June 30, 2021-- STMicroelectronics (NYSE: STM),** a global semiconductor leader serving customers across the spectrum of electronics applications, today announced a cooperation with Eyeris, a world leader in vision-based Artificial Intelligence (AI) software and in-cabin sensor fusion technologies. The collaboration focuses on extending ST's Global-Shutter sensor to in-cabin sensing applications with Eyeris' advanced portfolio of Deep Neural Networks for a comprehensive visuospatial understanding of the entire vehicle interior. This advanced perception supports safety and convenience features including Driver Monitoring Systems (DMS), Occupant Monitoring Systems (OMS), child presence detection, object recognition, gesture control, and activity prediction.

ST's 2.3 Megapixel VG5761 Global-Shutter sensor features high linear dynamic range of up to 98 dB for sharp, crisp images. The sensor can capture images inside a vehicle under all lighting and environmental conditions. Combined with Eyeris' in-cabin sensing technology, the sensor can be used for Eyeris' DMS with accurate eye-gaze tracking, especially from non-frontal camera locations such as rearview mirror, overhead console, and center stack areas. In parallel, the sensor also enables Eyeris' OMS with accurate tracking of body key-points, height, width, size, posture, movements, and orientation. Furthermore, the ST sensor enables Eyeris for accurate child presence detection, and recognition of common vehicle interior objects under the widest range of lighting conditions. The technological integration from ST and Eyeris delivers substantial in-cabin safety, comfort, and convenience benefits for all occupants.

*"ST is committed to making vehicles and e-mobility safer and working with Eyeris on their in-cabin sensing AI using our Global-Shutter imaging technology is a valuable example of what top innovators focused on an important challenge can do,"* said Dominique Barbier, Head of U.S. Technical Marketing, Imaging Division, STMicroelectronics.

The VG5761 Global-Shutter image sensor offers two memory zones that allow double-image storage which, in addition to contributing to the high dynamic range, supports background removal without lag effects and additional processing by the host system. In its RGB-IR version, ST's image sensor uses high MTFs (Modulation Transfer Functions) at near-infrared (IR) wavelengths as well as through the RGB channel to monitor the full in-cabin scene under a broad range of lighting environments while featuring the capability to accurately analyze interior safety-critical Regions Of Interest (ROIs) with great detail – like the driver's eyes and the occupants' body key-points -- to detect the earliest signs of driver drowsiness or distraction and occupants' body posture. The sensor's high-performance capability combined with Eyeris' AI-based algorithms help automakers personalize restraint controls and passive vehicle safety systems.

*“In combining Eyeris’ portfolio of Deep Neural Networks with ST’s Global-Shutter imaging technology, we’ve assembled a state-of-the-art solution for in-cabin sensing and a useful template for the industry towards advancing cockpit safety and comfort,”* said Modar Alaoui, founder and CEO, Eyeris.

Since 1999, ST has been an industry leader in the design and manufacture of imaging sensors. The current product portfolio covers the spectrum of specialized image sensors encompassing entry-level VGA to several-Megapixel sensors. ST provides a wide range of optical sensing solutions and continues to enhance its customers’ products with CMOS image sensors, Time-of-Flight solutions, Ambient Light Sensors, and CIS foundry services. Mastering all aspects of the imaging chain, ST is well placed to offer both standard products and custom design services to key customers and has demonstrated success with several custom sensors, embedded ISPs, and optical modules already on the market.

### **About STMicroelectronics**

At ST, we are 46,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An independent device manufacturer, we work with more than 100,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and 5G technology. Further information can be found at [www.st.com](http://www.st.com).

### **About Eyeris**

Headquartered in Palo Alto, Calif., with an R&D lab in Mountain View, Calif., Eyeris is a world leader in vision-based Artificial Intelligence (AI) software for in-cabin sensing, and pioneer of the world’s first in-cabin sensor fusion AI. For efficient inference, Eyeris uses a wide range of automotive-grade AI-enabled processors, as well as modern AI chips. Eyeris is a winner of several automotive awards at the AutoSens Awards and TU Automotive Awards for the last six years, including “Most Innovative In-Cabin Perception Application,” “Best Automotive Safety System,” and “Best Product for Commercial Market for driver and occupants monitoring AI.” Eyeris holds the world’s largest in-cabin dataset for vehicle interior monitoring solutions. Visit [www.eyeris.ai](http://www.eyeris.ai).

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