This project is a turning point in the technological transformation of Ficosa and reaffirms its leadership in vision systems, marking a milestone in the automotive industry worldwide

Ficosa develops and manufactures the digital rear-view system of the Audi e-tron, the first automobile to market with this technology

The digital rear-view system developed by Ficosa, which uses cameras and displays instead of the traditional external side mirrors, offers a whole new driving experience that is safer, more efficient and more comfortable

The Audi e-tron, which integrates Ficosa's digital rear-view system, will hit the market in late 2018

This system has been developed and manufactured at the Viladecavalls Technology Centre (Spain) and the Wolfenbüttel Centre (Germany)

28 September 2018.- Ficosa, top-tier global provider devoted to the research, development, manufacturing and marketing of high-technology vision, safety, connectivity and efficiency systems for the automotive and mobility sectors, has worked with Audi to launch, within the e-tron model, the first digital rear-view system that will hit the European market.

This ground-breaking vision system developed by Ficosa, also known as CMS (Camera Monitoring System), is made up of cameras and displays that replace the traditional external side mirrors, providing a new driving experience that is safer, more efficient and more comfortable. This vision system is comprised of two cameras, integrated into the sides of the car's chassis, and two tactile displays inside the doors.

The launch of an automobile with the exterior digital rear-view system is a milestone in the automotive industry. In this regard, the Audi e-tron is expected to hit the market in late 2018.

In the words of **Javier Pujol, CEO of Ficosa**: *"Rear-view systems are Ficosa's core business, so being the first to launch a CMS to the European market is a turning point in our technological transformation process. In this way, we've not only proven our ability to take advantage of our know-how in vision but we've also blazed the trail, being the first to reach this accomplishment that will revolutionise the automotive industry."* And he adds: *"It is an honour for Ficosa that Audi, one of the most renowned automobile manufacturers in the world, has trusted our expertise in vision to develop and manufacture this solution".*

Safer, more efficient and more comfortable driving

Through this vision system, the cameras – which are attached to the vehicle using folding wings – send a very low-latency image signal to the two tactile 7-inch OLED displays inside the vehicle. Thanks to the tactile display, users will be able to manually adjust the cameras.

The digital rear-view mirror also significantly improves the driving experience and safety of the vehicle, offering users multiple advantages such as a broader field of vision, no blind spots, more efficient fuel use by improving the vehicle's aerodynamics, no glare and better night-time vision, among others.

The system also includes advanced functions like automatic camera calibration to properly adapt to any situation or warnings that appear dynamically over the image to give the driver information, such as alerts of other vehicles nearby before overtaking. Furthermore, the CMS also enables the detection of anything that could obstruct the system or get it dirty.

The cameras also come with high dynamic range (HDR) sensor with LED flicker mitigation technology developed by Omnivision Technologies. This sensor mitigates flickering to ensure outstanding image quality under any lighting or temperature conditions.

CMS also transforms the current image of the cars, changing the appearance of the inside and outside of the vehicle and offering up new design options.

Technological transformation

The digital rear-view system has been developed by Ficosa's ADAS Business Unit and is manufactured at the Viladecavalls Technology Centre (Spain), while the wings supporting the cameras on the outside of the vehicle have been manufactured at the Wolfenbüttel Centre (Germany). More than 90 engineers specialized in fields like optics, software and hardware, have worked on the CMS project.

For more than ten years, Ficosa has been devoting great efforts to researching and developing the digital rear-view system, evolving prototypes until reaching a product for mass production with better features than traditional rear-view mirrors.

In recent years, the company has undergone a significant technological transformation in the areas of vision, safety, efficiency and connectivity. This conversion has entailed a substantial increase in the company's engineering team, which has taken on more than 400 members over the past three years. Ficosa currently employs more than 1,000 engineers worldwide.

Javier Pujol highlights: *"Launching the first CMS entails recognition of the huge effort the whole team at the company has made to lead the transformation of the automobile in e-mobility, connected and autonomous cars. This achievement also reaffirms our commitment to bringing the car of the future to today."*

About Ficosa

Ficosa is a global company devoted to the creation of high-technology vision, safety, efficiency and connectivity solutions for the industry, with the desire to contribute to society through our commitment to technological innovation, human values and energy efficiency. Founded in 1949 and based in Barcelona, Ficosa currently has

more than 10,500 employees in 19 countries worldwide in Europe, North and South America, Asia and Africa, with consolidated sales of €1.208 billion in 2017. The rear-view system (interior/side mirror) is Ficosa's main business, known worldwide and recognized by top global OEMs. www.ficosa.com

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