



PRESS RELEASE

2015 Frankfurt Motor Show: Magneti Marelli for the Alfa Romeo Giulia Quadrifoglio

Magneti Marelli's technological contribution to innovation and safety with the CDC (Chassis Domain Control) control unit and with front and rear lighting, infotainment, suspensions, exhausts and engine control components.

The Queen of the Frankfurt Motor Show, the new Alfa Romeo Giulia Quadrifoglio, has adopted distinctive technologies designed in conjunction with Magneti Marelli.

Magneti Marelli is making an important contribution, first and foremost within the area of **electronic systems**: at the forefront is the **CDC** (Chassis Domain Control) electronic control unit, the "brain" of the car, and the new **infotainment** system equipped with an 8.8 "black panel" TFT (Thin Film Transistor) display which integrates innovative "optical bonding" technologies designed for perfect display readability.

The **CDC** is the electronic control unit developed by Magneti Marelli that represents the "brain" of the on-board electronics and optimises handling and performance. Specifically, the CDC is a "supervisor" which adapts the car set-up dynamically and in real-time, based on the data from inertial sensors that measure the vertical, lateral and longitudinal accelerations and rotation. The system anticipates and manages critical situations, informing in advance the specific control units involved in the electronic system through the vehicle networks.

The CDC control unit increases driving comfort and safety by predictively adopting control and management protocols that coordinate the action of the *Alfa DNA*, of the *Torque Vectoring* (the system that allows the rear differential to separately control the torque for each wheel), of the *Aero Splitter* (the electro-mechanical system that dynamically manages the downforce, which is the aerodynamic force that enables car road grip, and of the *Active Damping Control* (adaptive electronic suspensions), as well as the control of the stability, the chassis, the braking system, the steering and the driving assistance.

Again in the context of **electronic systems**, Magneti Marelli has developed for the Alfa Romeo Giulia Quadrifoglio the multimedia **infotainment** system and the Connect 3D Nav navigation system with an 8.8" total black "TFT display". The system uses Genivi open source technology and responds to automotive performance and robustness criteria. Based on Linux language, it integrates the connection with the electronic control network of the car. Aiming at the objective of the "connected car", the Alfa Romeo Giulia infotainment system offers a sophisticated set of features and functionalities including the features of media player, navigation system and the management of vehicle parameters. The heart of the system is a latest-generation HMI (Human-Machine Interface) developed with HTML5 programming language where management of the system primarily takes place via the Rotary Pad and through the 8.8" TFT display on the car dashboard.

Navigation is characterised by high-resolution maps with 3D and high-speed elements for the calculation of routes and by Dead Reckoning technology that even follows the route in areas not covered by a GPS signal. The 8.8" TFT display also shows the vehicle settings,



the diagnostics, the parking assistant control, highlighting the type of set-up associated with the Alfa DNA, and interaction with the CAN network for the collection and exchange of data.

Moreover the display is fully integrated within the design of the dashboard, thanks to the innovative optical construction of the clear black plastic mask that is coupled with the TFT display through a process of "optical bonding". This procedure consists of a peculiar bonding of two surfaces which, allowing more effective filtering of the light, results in increased brightness and readability of a display. This technology thus provides a "total black" curve mask that is aesthetically harmonised with the car dashboard. In practice, from the user's perspective, the image of the display appears on the surface of the dashboard with an excellent level of viewing and contrast.

With regard to **lighting** systems, Magneti Marelli has collaborated with Alfa Romeo to produce the headlamps and headlights of the Giulia, distinctive and characteristic design elements of the car. The Giulia Quadrifoglio headlamps are made with Xenon technology equipped with AFS (Adaptive Frontlight System) technology and with a 35W lighting module, a solution that increases the lighting capability by 200% compared to standard halogen headlamps, thus ensuring greater safety when driving. The LED technology is adopted for position lights, DRL (Daytime Running Light), cornering lights and for the indicators. The LED rear tail lights, a synthesis of stylistic and technological excellence, identify the rear of the car uniquely and distinctively, further enhancing the straight and dynamic line of the car.

Magneti Marelli produced the components of the front and rear **suspensions**, the **exhaust system**, the **pedal board** and the **plastic parts** .

A **Magneti Marelli** corner will be present within the Alfa Romeo stand at the Frankfurt Motor Show where the functions of the infotainment system of the Alfa Romeo Giulia Quadrifoglio will be demonstrated .

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Magneti Marelli produces advanced systems and components for the automobile industry. With 89 production units, 12 R&D centres and 26 application centres in 19 countries, more than 38,000 employees and a turnover of 6,5 billion Euro in 2014, the Group supplies all the major carmakers in Europe, North and South America and the Far East. The business areas include Electronic Systems, Lighting, Motor Control, Suspension Systems and Shock Absorbers, Exhaust Systems, Aftermarket Parts & Services, Plastic Components and Modules, and Motorsport. Magneti Marelli is part of FCA