

Successful collaboration with Kookmin University

Kookmin University draws on support from ETAS and ETAS ASCMO to make it to the top in the Formula category of the race car design competition run by the Korean Society of Automotive Engineers.

With the aim of offering practical education in specialized areas, Kookmin University is dedicated to the development of Korea's top-tier Automotive Engineering College. It established the Department of Automobile and IT Convergence in 2014 to cultivate future-oriented talents with consolidated knowledge in computer programming, electrics/electronics, and basic mechanics such as dynamics, thermodynamics, and statics.

on optimization of maximized engine torque and minimized BSFC (Brake Specific Fuel Consumption). KORA generated an ETAS ASCMO model from the measured data, proceeded with global optimization, and extracted calibration maps (injection duration, injection timing, ignition advance), each in accordance with ECU map size. The team then applied, validated, and tested them. Two weeks before the competition, a validation test was con-



KORA is motivated for the Formula SAE.

Since the signing of an MOU (Memorandum of Understanding) with Kookmin University in 2014 for the advancement of the domestic automotive industry, ETAS Korea has closely collaborated with the University, contributing its solutions such as LABCAR and ETAS ASCMO as well as the AUTOSAR portfolio. In 2018, the ETAS ASCMO collaboration achieved a tangible result. ETAS supported Kookmin University students with ETAS ASCMO for their racing competitions at home and abroad. The KOOKMIN RACING (KORA) team, the automotive engineering club of Kookmin University, competed in KSAE (Korea Society of Automotive Engineers) Formula and Formula SAE (Formula Society of Automotive Engineers; short FSAE). FSAE, held by SAE, is the world's biggest student engineering competition. Since the competition judges both performance and energy efficiency, engine calibration simultaneously focused

ducted at the Daegu proving ground. The test proved that the optimized map helped reduce lap time by up to 4 seconds and cut fuel consumption by 0.1 liters over a driving distance of 11 kilometers. The vehicle with the ETAS ASCMO optimized calibration map won first prize in the Formula category in KSAE Formula in August 2018 and ranked third in the Acceleration category (11th in 2017) in FSAE in May 2018.

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