

Press Release



FEV Turkey Engineers Develop Level 4 Automated Driving Functions for TRIGGER Electric Utility Vehicles

Media Contact
Marius Strasdat
T +49 241 5689-6452
strasdat@fev.com

www.fev.com



Istanbul, Turkey, July 2021 – FEV Turkey engineers have developed automated driving functions for TRIGGER, a new generation of battery electric service vehicles, which are aimed at cargo and people transportation in various commercial and industrial settings. Production will take place at TRIGGER’s facility in Bursa, Turkey.

In their original, non-autonomous state, the TRIGGER vehicles offer a load capacity of 700 kg (1,543 lbs.) and the ability to tow as much as two tons. When loaded, the 3.1 meters long TRIGGERs can handle a gradient of up to 17 percent and offer turning circles of 2.8 meters in diameter for superior maneuverability. TRIGGER vehicles come with two speed modes to select fast or slow velocities. A full charge can be obtained in just six hours with a traditional main current of 220V, and the Quick-Drop battery pack makes for efficient serviceability.

With their robust infrastructure, powertrain, suspension, brake, and steering systems, TRIGGER Pro series vehicles represented an ideal platform for FEV Turkey’s engineers to provide, install and calibrate hardware and software that ultimately provide Level 4 automated driving features.

Based on extensive experience and simulations, FEV Turkey’s sensor set for TRIGGER’s vehicles consists of seven LiDAR sensors, one radar device and one camera. Thanks to this setup, the vehicle can detect a 360 degree surrounding environment,

separate moving objects up to 80 meters away, and calculate the probability of collision. Thanks to the high-resolution camera and AI-based image processing algorithms, the ability to parse features such as lanes, pedestrians, and obstacles allows the vehicle to move more safely in heavy traffic environment.

“New technologies are rapidly changing mobility, and here electrification, automated driving and connectivity elements stand out. Collecting experiences on the TRIGGER vehicle helped a great deal to accelerate R&D outputs,” said Dr. Taner Göçmez, Managing Director of FEV Turkey. “Also, FEV Turkey used TRIGGER vehicles for the development of highly automated driving functions to enable vehicle self-operation in a geo-fenced area. In addition, a wide range of Level 2 functions are in focus as well. These include advanced emergency braking, adaptive cruise control with stop and go function, lane keeping assistant, blind spot detection, parking assistant and forward collision warning.”

Autonomous driving tests of the TRIGGER prototypes are scheduled to take place in Bilişim Vadisi. Thanks to the software infrastructure and FEV designed connection module, the vehicle will be controlled over the internet network and critical data will be collected in a cloud environment.

"After developing automated driving functions for several other automotive and commercial applications, the TRIGGER vehicle project aligns perfectly with our goal to advance safe, sustainable, and easy-to-operate mobility solutions," said Göçmez. "This is an excellent example of leveraging global resources to enhance technological capabilities in Turkey."

“There is a great demand abroad for the advanced and environmentally-friendly vehicles we are producing. By adding elements such as smart driving and AI features to the existing

vehicles, we aim to increase our export target in 2022 and believe they will be well-received in the global market," said Saffet Çakmak, Founding Partner of TRIGGER.



FEV Turkey's engineers installed and calibrated hardware and software, providing TRIGGER vehicles with Level 4 automated driving features.

Source: FEV Group

About FEV

FEV is a leading independent international service provider of vehicle and powertrain development for hardware and software. The range of competencies includes the development and testing of innovative solutions up to series production and all related consulting services. The range of services for vehicle development includes the design of body and chassis, including the fine tuning of overall vehicle attributes such as driving behavior and NVH. FEV also develops innovative lighting systems and solutions for automated driving and connectivity. The electrification activities of powertrains cover powerful battery systems, e-machines and inverters. Additionally, FEV develops highly efficient gasoline and diesel engines, transmissions, EDUs as well as fuel cell systems and facilitates their integration into vehicles suitable for homologation. Alternative fuels are a further area of development.

The service portfolio is completed by tailor-made test benches and measurement technology, as well as software solutions that allow efficient transfer of the essential development steps of the above-mentioned developments, from the road to the test bench or simulation.

The FEV Group currently employs 6,300 highly qualified specialists in customer-oriented development centers at more than 40 locations on five continents.

About FEV Turkey

FEV Turkey provides turnkey engineering solutions in the automotive sector in the areas of vehicle development, software, automated driving, conventional and electrical propulsion systems development. The company is part of FEV Group and was established in December 2011 and operates from ITU ARI Teknokent, Technopark Istanbul, Bilisim Vadisi and METU Technopark offices. With its experienced 220 experts, it provides professional engineering services to local and global innovative engineering and R&D projects in the field of vehicle and propulsion systems.

About TRAGGER

With more than 20 years of engineering and design experience and expertise in the automotive field, TRAGGER provides solutions to the needs of different service areas with 100% new generation electric vehicles. TRAGGER New Generation Electric Service Vehicles, which have been brought to life by combining advanced engineering, R&D and design since 2018, are produced in Bursa, Hasanağa Industrial Zone. TRAGGER Pro Series vehicles with their ideal dimensions and high working performance, stand out as the most ideal vehicles of their segment for cargo transportation and maintenance services, especially at airports, factories, closed areas, campuses, and ports. TRAGGER T-Car for transfer purposes, on the other hand, has the ability to transport personnel and cargo in touristic facilities, hotels, holiday villages, campuses, city hospitals, airports, factories, closed areas, ports.