

Karko Product Overview

Design Engineering for Mobility



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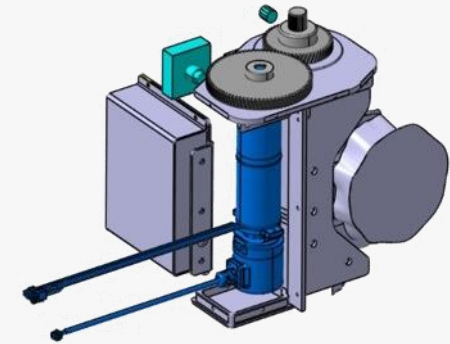
Autonomous Steering Control Device

For passenger cars, commercial vehicles (buses and trucks) and other mobility (golf carts, etc.)

Main Features	
Passenger car & commercial & other mobility	Vector control (400 deg/s)
Takeover function	Steering angle info support



[Type 1] For passenger cars and commercial vehicles (bus)



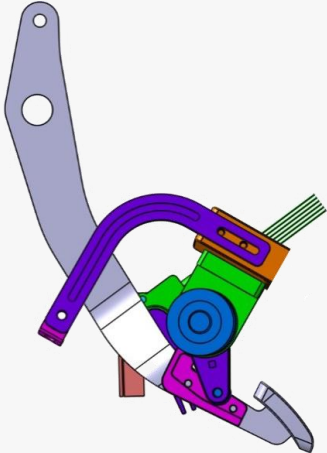
[Type 2] For commercial vehicles (trucks)

In order to use the manual mode for general driving and the automatic mode for autonomous driving as a hybrid system, a separate lateral control device is installed to control the existing steering system. The structure design according to the steering method is included, and if it is a C-type, it is mounted on the column shaft, if it is a R-Type, it is mounted on the rack, and if it is hydraulic, it is installed after converting to an electronic system. The device controls the steering MDPS or the hydraulic pump. Protocols such as steering angle and takeover signal are provided, and functions such as speed control, acceleration change, communication environment setting, motor overload warning, etc. are included.

Autonomous Speed(Braking) Control Device

For passenger cars, commercial vehicles (buses and trucks) and other mobility (golf carts, etc.)

Main Features	
Electronic & hydraulic & air type	Stepping power control & ABES
Takeover function	Pedal position info support



The device is installed on the side where the pedal is stepped on. In other words, the actuator and the existing system were designed to be in a non-binding state so as not to violate the safety problem. It is a structure that automatically restores to the original state when a fault signal is input to the controller when the actuator does not operate by selecting a gear ratio that automatically returns to the original phase by spring force. Protocols such as brake position, driver takeover signals are provided. As for the hardware features, the brake precision driving and durability are improved by eliminating friction with the brake guide bracket by fastening the cam follower.

Autonomous Speed(Acceleration) Control Device

■ For passenger cars, commercial vehicles (buses and trucks) and other mobility (golf carts, etc.)

Main Features	
Electronic mobility applicable	Voltage range : 0.75~4.1[V]
Takeover function	Redundant safety system

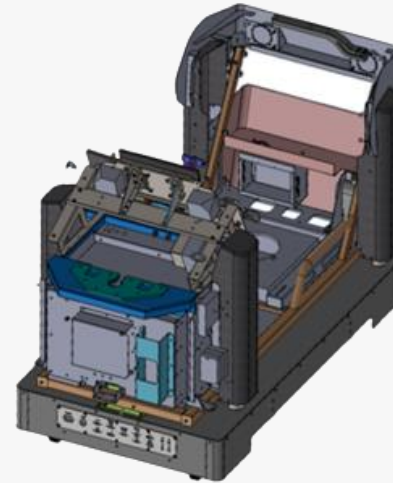


In the case of steering and braking control, there is a change in the physical structure, but since the accelerator itself is electronic, voltage is applied to the dual port after drawing the electronic line. When it is not in autonomous driving mode, it is connected like the original system, and in autonomous driving mode, the embedded controller is designed in the form of acceleration control by applying voltage as CAN information is received. Controls the APS from 0.75[V] to maximum 4.1[V]. That is, it controls acceleration/deceleration by adjusting the value corresponding to the allowable voltage range of 0.75~4.1[V] with software.

Autonomous Vehicle Remote Control System

Based on LTE communication

주요 특징	
Autonomous /Manual/Remote mode switching available	Autonomous dynamic control (steering/speed /shifting)
Auxiliary control (lamps, etc.)	System feedback control



This system remotely controls autonomous vehicles when emergency situations and disasters happen while road traffic. It operates through data communication using networks such as LTE or 5G with autonomous vehicles on the road. When the images from the autonomous vehicle's front camera and the vehicle driving information are transmitted to the system, the information is displayed on the system's front monitor and cluster, and the driver's operating information such as steering, speed, and shifting information is transmitted to the vehicle to enable driving.

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