

System Description

The Customer Identification Device (CID) is an interface for the customer to use on the vehicle to communicate with the EZ Key Electronic Control Unit (ECU). The CID can be used for Remote Keyless Entry (RKE), a Passive Entry (PASE) mode, and a low frequency (LF) link for communication between the end user and the vehicle.

The RKE link is comprised of a control module, containing a receiver, and a CID which transmits the remote keyless entry command. When a switch is pressed, the CID will transmit an RF signal to the vehicle. The ECU on the vehicle then executes the desired command.

The PASE linkage operates with the ECU sending the CID an LF command. The CID receives the LF, then responds sending an RF signal. The ECU receives the CID RF response and sends another LF signal to the CID. The CID decrypts the LF, then sends an encrypted RF command. The ECU decrypts the CID RF response and then allows the door to be opened in the vehicle.

The last mode of operation of the CID is a failsafe mode. If the battery in the CID dies, a transponder mode can be used to start the vehicle. The CID is placed in a pocket, close to the ECU transponder antenna. The ECU supplies an LF field to power the CID. The ECU and the CID then communicate in transponder mode.