

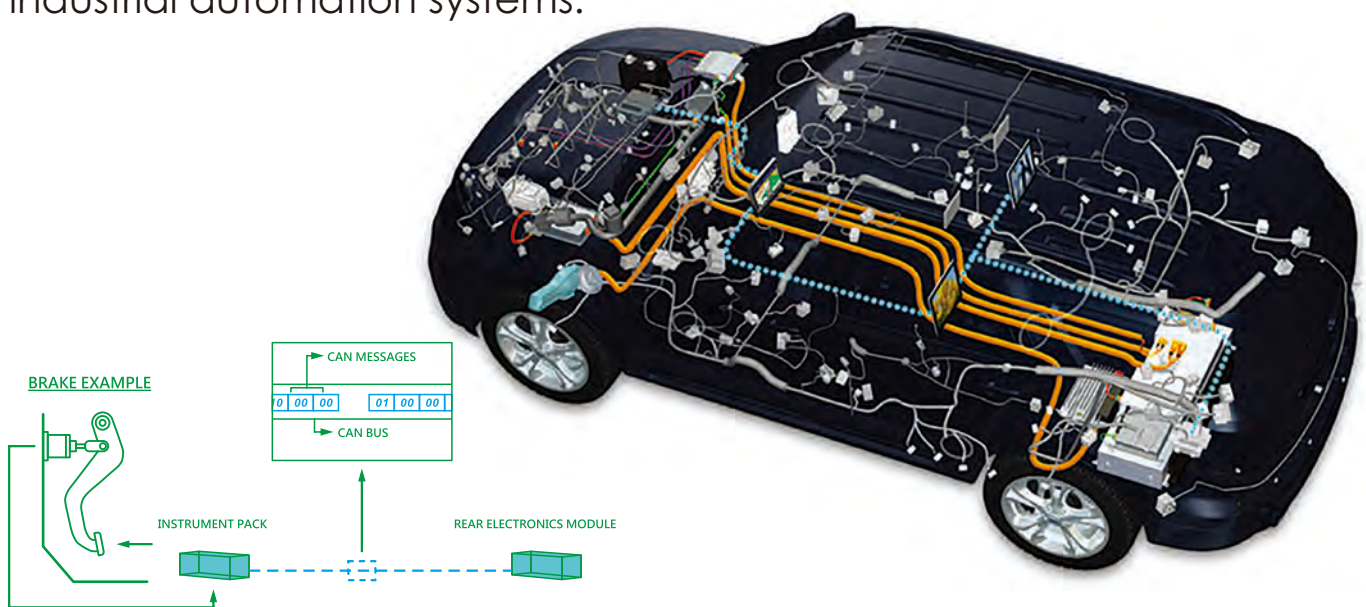
A blue rectangular box with white text containing the model number 'KL-810'. The box is positioned over the top left portion of the training system image.A blue rectangular box with white text containing the title 'Smart CAN BUS Training System'. The box is positioned over the bottom center portion of the training system image.

With the rapid growth of automotive electronics applications, electronic control technology has been widely used in vehicles, and the demand for professional skills in vehicle inspection, repair and maintenance has also increased.

KL-810 Smart CAN BUS Training System is especially designed for cultivating professionals in the automotive repair & maintenance services industry. From the basic knowledge in various vehicle sensors, signal transmission and reception, to CAN BUS network serial communication and control training, the learning structure and the step-by-step operations in experiments assist students to learn not only from the theory but also in-laboratory practices.

CAN BUS - The Key Communication Technology in the Electric Vehicle Industry

Controller Area Network (CAN) is an automotive communication protocol that allows electronic control units (ECUs) to communicate with one another without a host computer. Every ECU (node) sends and receives messages through CAN BUS protocol, thereby reducing wiring connections and the complexity of the system. With high reliability and high transmission efficiency, CAN BUS has become an important communication standard for today's automotive and industrial automation systems.



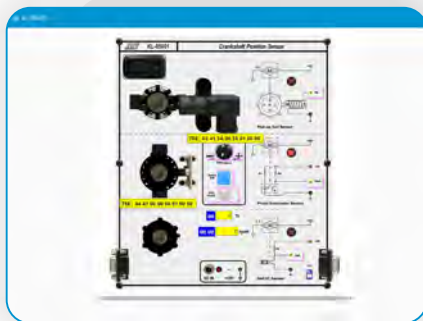
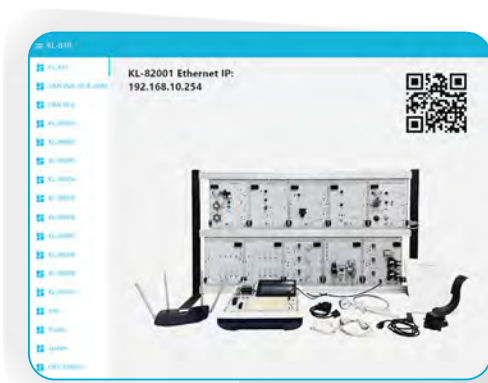
System Features

- It provides teaching and training on sensor measurement and actuator operation control used in automobiles.
- It consists of the training for electronic control unit (ECU) basic maintenance and CAN BUS network serial port communication.
- The system is connected by CAN BUS cables, and has a flexible equipment expansion mechanism, which can carry out diversified integrated experiments.
- In order to provide a CAN BUS network design and development environment, the training experiment platform is equipped with DB9 and OBD-II connectors, and it simulates the 12V power supply of a car battery.
- Experimental modules provide digital or analog electronic signals for diagnostics and testing.
- The open-sourced HMI host supports CAN BUS software development and programming.

Human Machine Interface (HMI) Platform

The HMI platform is connected to the experiment modules by CAN BUS, so students can monitor the changes of the system during experiments. The HMI platform also allows multiple computer systems and mobile devices to connect to it via network services, realizing remote teaching and learning.

Although CAN BUS is mostly used for vehicle communication, it also contains a large amount of data from vehicles. Through the extended application of platform network services, the smart application combining the Internet of Things (IoT) and CAN BUS can be realized.



Module with fault switch

Each module is equipped with a 4-bit DIP switch, for teachers to make various settings and for students to practice troubleshooting skills.

