

Reprogramming ECUs wirelessly

Vector's VN8810 is a diagnostic hardware device for various applications involving vehicle diagnostics. With the device, ECUs can be reprogrammed in standalone mode. It has a CAN high-speed channel with CAN FD support.

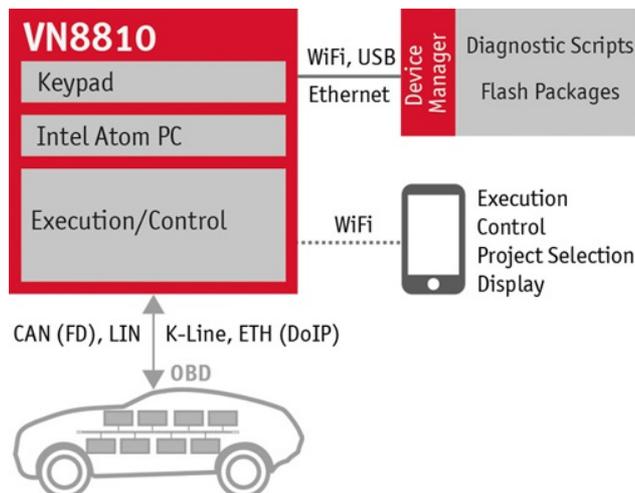
With the diagnostic device, access to the vehicle is achieved via the OBD socket. The reprogramming of ECUs and the execution of diagnostic scripts is handled by one single hardware device. The VN8810 operates autonomously in standalone mode because it incorporates a small PC. Additionally, the device serves as an access point for remote diagnostics.

The high-speed CAN channel can reach data-rates of 2 Mbit/s, for CAN FD up to 8 Mbit/s. Once flash packages or scripts have been transmitted, the VN8810 executes them autonomously in standalone mode or optionally controlled via a smartphone or tablet. In addition, the device serves as the access point for remote diagnostics. As a result, users can diagnose vehicles directly and interactively without having to be on site.

One possible application of the diagnostic device is during long shipping periods. If vehicles are transported on ships and a new software is released during the shipping process, the vehicles' ECUs can be flashed while still on the ship. If the diagnostic device is attached to a vehicle's OBD socket, the ECU can be reprogrammed in standalone mode. The process can be initiated via the keypad or via Wifi.



VN8810 with keypad, status LEDs, and Wifi antennas (Photo: Vector)



Application areas include ECU reprogramming and diagnostic script execution (Photo: Vector)

For reprogramming, flash packages (configuration and data) are transmitted via USB, Ethernet, or Wifi from the PC to the device. Once connected to a vehicle, the user controls and tracks the reprogramming via the keypad with status LEDs - or alternatively with a smartphone or a tablet. Diagnostic scripts in C# can be developed on the PC and transmitted to the diagnostic device.

Another function is planned: In the case of interactive remote diagnostics, the device as a diagnostic access point will replace the classic diagnostic tester and act as a network interface. Using a remote service on the Internet, the device will communicate diagnostic requests and responses between the vehicle and the remote diagnostic software Indigo Remote.

Vector (Germany) participates in the Bauma 2016, from April 11 to 17 in Munich. The company can be found at the joint CiA stand in hall A5, stand 339.

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