Electric vehicle power control unit

Tapas Boot is a bootloader solution by Sigra that supports booting multiple automotive grade processors. The company also offers an electric vehicle power control unit for the complete powertrain. Both support CAN.

The electric vehicle power control unit comes in an aluminum housing (Photo: Sigra)

The bootloader Tapas Boot is compliant with ISO 14229, which specifies data link independent requirements of diagnostic services. It allows a diagnostic tester (client) to control diagnostic functions in an on-vehicle electronic control unit (ECU, server) such as an electronic fuel injection, automatic gear box, anti-lock braking system, etc. connected to a serial data link embedded in a road vehicle. The system supports CAN communication.

The company also provides Tapas Desktop, a Windows application which communicates with the installed Tapas Boot, and allows the user to flash up to three different independent executables at the same time. It gives the user the authority to choose one executable to be the active one, and another to be the safe mode one in case the active one fails.

Sigra (Germany) also offers an electric vehicle power control unit, which manages the complete powertrain. The control unit features a microcontroller designed for automotive safety applications to provide high performance. This control unit utilizes a Matlab/Simulink-based software development process to speed up the algorithm development by using automatic code and document generation. The flexible hardware design allows for customization of functionalities per customer specifications. The unit offers three CAN interfaces, 32 digital and 10 analog inputs, as well as 20 digital outputs.