

Gasoline Systems

Electronic control unit Motronic



BOSCH

Invented for life

Electronic control unit Motronic



Customer benefits

- ▶ Full-line product portfolio for all markets and segments
- ▶ Global presence with worldwide local support
- ▶ One single, scalable ECU family for different markets and vehicle segments
- ▶ Potential for extended functionality
- ▶ Flexible integration of customer software

The electronic engine management enables precise, central control of all relevant functions for engine operation. The target is to warrant constant driving behavior and emissions over the engine's useful life.

Task

The electronic control unit collates all requirements on the engine, prioritizes and then implements them. These requirements include, for example, the accelerator pedal position and requirements of the exhaust system on mixture formation.

Function

Torque is used as the key criterion for implementing all requirements. According to this criterion, the air-fuel ratio is adjusted in such a way that the demanded torque is provided as economically and cleanly as possible. It also allows active driving safety systems such as traction control and ESP® to intervene in the engine torque.

Motronic can be used to control internal-combustion engines running on gasoline (port fuel or direct injection), diesel, natural gas (CNG, liquid gas) or ethanol as well as hybrid drives. Standardized communication interfaces and data formats support networking with all vehicle systems which influence the drivetrain.

The electronic control unit variants feature:

- ▶ A common platform for gasoline, flex fuel, CNG and diesel applications
- ▶ Printed circuit board design
- ▶ Diagnostics functions, e.g. for compliance with emission legislation
- ▶ Infineon 32 bit microcontroller
- ▶ Standardized communication interfaces (CAN, FlexRay, SENT, LIN, K-LINE)
- ▶ Highly scalable software and hardware, 4-fold computing power from basic segment to high-end
- ▶ Standardized formats to support software sharing and global development (AUTOSAR, MSR)

Robert Bosch GmbH
Gasoline Systems

Postfach 300240
70442 Stuttgart
Deutschland

www.bosch-automotivetechnology.com

Printed in Germany
292000P13Y-C/CCA-201309-En