



Uncompromisingly robust: The ECU2-HD, ensures optimal control of the injection system for reliable engine operation. It performs reliably even under challenging environmental conditions, which is underlined by a **IP6K9K rating** with connected cable harness.

It masters extreme operating temperatures **from -40°C up to +125°C**.

Thus, the control units also qualify for safe operation in restricted space with low airflow and strong heat generation, thanks to fuel or liquid cooling. They are suitable for direct mount on the engine. Standardized communication interfaces allow easy integration.

The control unit is suitable for diesel engines with up to 12 cylinders. As a cascaded solution, it controls up to 20 cylinders.

The ECU2-HD matches perfectly to the **KOHLER Engine Common Rail System**. The control unit fulfills the functional safety requirements of function chains according to international safety standards. Due to the **integrated self-diagnosis**, the ECU2-HD checks itself, which facilitates maintenance. Integrated fuel cooling ensures safe and reliable operation of the ECU2-HD, even in case of strong heat generation.

FEATURES

- Combined control of engine and exhaust gas treatment
- 12 power outputs for injector activation
- Control of up to 20 cylinders in cascaded use
- Suitable for direct mount on the engine
- High functionality of self-diagnostic for a safe operation
- Standardized communication interfaces: J1939, UDS
- Functional safety according to EN ISO 13849
- Temperature range from -40°C to +125°C
- Robust and reliable in harsh conditions
- Platform for EU Stage IV / V, Euro V / VI and EPA Tier 4f

TECHNICAL DATA

Microcontroller	Freescale SPC56xx Family
Frequency	256 MHz
Memory	4 MB Flash 256 kB RAM internal 4 MB RAM external (optional) 128 kB EEPROM external
Digital inputs	10 x configurable logic levels
Analogue inputs	2 x configurable 0–5 V / 0–25 mA 17 x 0–5 V 14 x 0–33 V
Resistance inputs	19 x resistance 0–50 kΩ
Frequency inputs	2 x Hall speed sensor 8 x universal frequency measurement range 0.5 Hz to 10 kHz
Constant voltage outputs	12 x 5 V 2 x 12 V 11 x UBATT
PWM outputs	10 x half bridge configuration with current measurement
Digital outputs	12 x high-side 8 x low-side
Controlled analogue outputs	1
Power outputs for injectors	12 x split into four stages
Communication interfaces	4 x CAN according to ISO 11898-2, thereof one galvanically isolated
Plug	DEUTSCH DRC 280 Pins (4 x 70)
Dimensions	334 x 296 x 85.9 mm (without strain relief clamp)
Weight	5.4 kg
Housing	Die-cast aluminium
Rated voltage	+24 V
Operating temperature	-40 °C to +80 °C with air cooling -40 °C to max. +125 °C with fuel cooling
Flammability	UL 94 V-0
IP rating	IP6K9K with and without connected cable harness