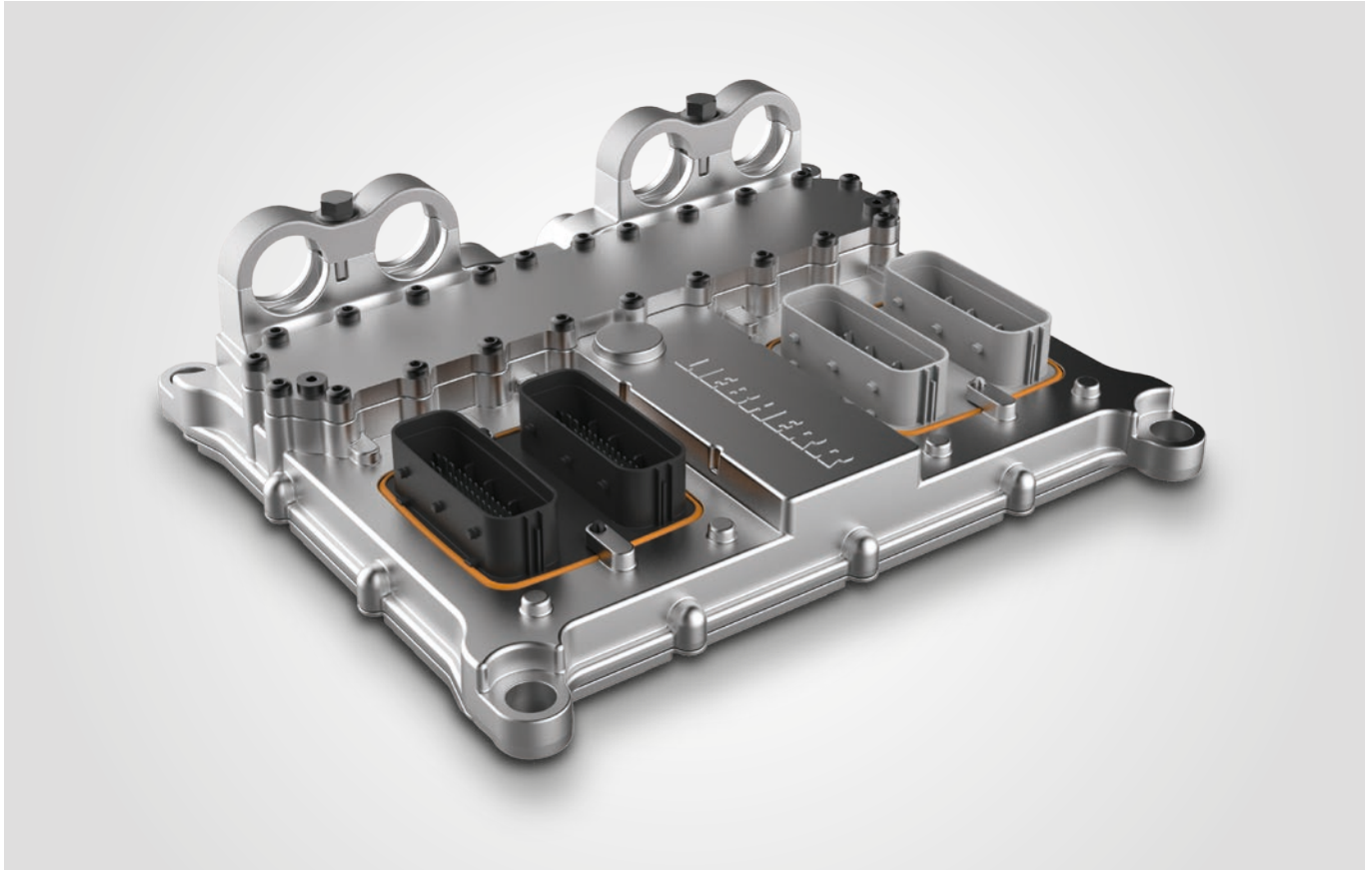


Short Description

Engine Control Unit – ECU2



The Liebherr engine control unit ECU2 for diesel engines with up to eight cylinders is also suitable for stationary gas engines. The engine control unit is perfectly matched to the Liebherr Common Rail Systems. An interface for direct control of the SCR or of the SCRFilter system allows a combined regulation of engine and exhaust gas treatment with only one ECU2. The engine control unit enables the fulfillment of various emission regulations, e.g. EU Stage IV/V, Euro V/VI and EPA Tier 4f. The ECU2 is certified according to road registration ECE-R10. The control unit fulfills the functional safety requirements of function chains according to international safety standards. Due to the integrated self-diagnosis, the ECU2 checks itself, which facilitates maintenance. Integrated fuel cooling ensures safe and reliable operation of the ECU2, even in case of strong heat generation.

Features

- Platform for EU Stage IV/V, Euro V/VI and EPA Tier 4f
- Combined control of engine and exhaust gas treatment
- 8 power outputs for injector activation
- Control of up to 16 cylinders in cascaded use
- Integrated knock control for stationary gas engines
- Suitable for direct mount on the engine
- High functionality of self-diagnostic for a safe operation
- Standardized communication interfaces: J1939, UDS
- KBA ECE-R10 certified
- Functional safety according to EN ISO 13849
- Temperature range from -40°C to +125°C
- Robust and reliable in harsh conditions

Technical Data

Engine Control Unit – ECU2

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 extern
Digital inputs	6x configurable logic levels
Analogue inputs	2x configurable 0–5 V/0–25 mA 15x 0–5 V 9x 0–33 V
Resistance inputs	17 x resistance 0–50 kΩ
Frequency inputs	2x Hall speed sensor 1 x DFM 1 x inductive
Knock sensor inputs	4 (optional)
Constant voltage outputs	10 x 5 V 2x 12 V 7x UBATT
PWM outputs	5x high-side with current measurement 3x half bridge configuration with current measurement 1 x full bridge configuration with current measurement
Digital outputs	6x high-side 7x low-side
Controlled analogue outputs	1
Power outputs for injectors	8x split into four stages
Communication interfaces	3x CAN according to ISO 11898-2, thereof one galvanically isolated 1 x RS232 (optional) 1 x LIN (optional) 1 x LSB
Plug	TYCO MCP 248 Pins (4 x 62)
Dimensions	334 x 296 x 76.5 mm (without strain relief clamp)
Weight	4.7 kg
Housing	Die-cast aluminium
Rated voltage	+24 V
Operating temperature	-40 °C to +80 °C with air cooling -40 °C to +125 °C with fuel cooling
Flammability	UL 94 HB
IP rating	IP6K9K with connected cable harness