



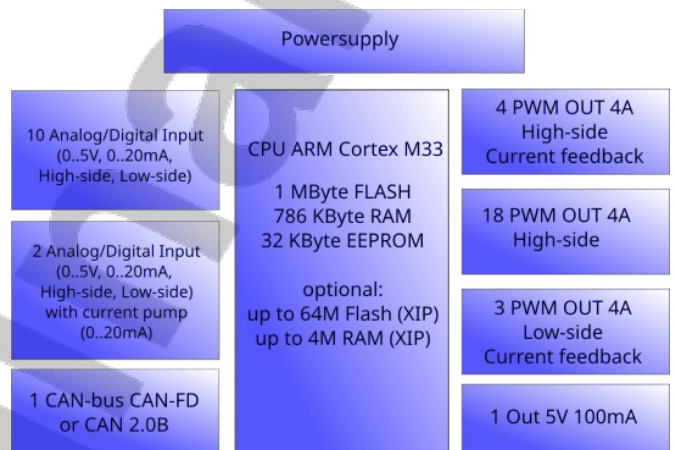
OPERATING CONDITIONS

- Supply voltage: 10 .. 32 Vdc
- Operating temperature range: -40 .. +70 °C
- Storage temperature range: -40 .. +85 °C
- Max. humidity level: 95%
- Protection grade: IP68 (with connector plugged)
- Weight: 720 g

CERTIFICATIONS

- UNECE 10/05 : E3
- IP6K8 according to ISO20653:2013

BLOCK DIAGRAM



OVERVIEW

The DCU-A unit is a programmable controller designed to be used on industrial vehicles and suitable to operate in harsh conditions (wide temperature range, water, dust, vibrations, etc.).

The unit is able to read a wide range of analog and digital sensors and can drive the actuators directly. All outputs are Puls Wide Modulated (PWM), 4 High-side and 3 Low-side Outputs have an integrated current feedback.

The DCU-A is equipped with an standard slave software to be used as I/O Controller on a CANOpen network (2.0B or CAN-FD).

On request the DCU-A can be programmed in C/C++ for stand-alone application.

SPECIFICATIONS

- CPU: ARM cortex M33 Clock 160MHz (STM32U5xx)
- Internal Memory: 786 kByte RAM, 1 MByte Flash (optional 2 MByte)
- External Memory: 32 kByte EEPROM
- Optional up to 4 Mbyte RAM and 64 Mbyte NOR Flash on QSPI bus with XIP (eXecute In Place) functionality
- Optional RTC with SuperCap
- CAN-bus: CAN-FD or CAN 2.0B (11 bit or 29 bit identifiers), with programmable baud-rate from 125 kbit/s to 8 Mbit/s, CANOpen protocol (optional: J1939, ISOBUS)

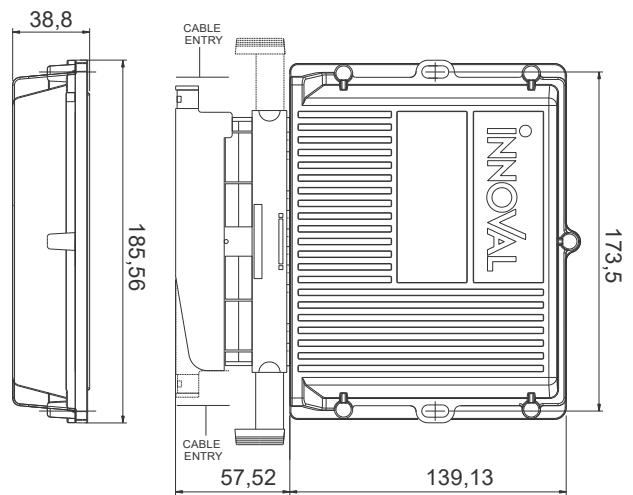
OUTPUTS

- 4 high-side PWM outputs (4A max.) with current feedback, self diagnosis and short circuit protection
- 18 high-side PWM outputs (4A max.) with short circuit protection
- 3 low-side PWM outputs (4A max.) with current feedback, self diagnosis and short circuit protection (can be used as current feedback for high-side PWM outputs)
- 1 output 5Vdc/100mA for sensor supply

INPUTS

- 10 analog / digital inputs, 14 bit resolution, programmable range (0..20mA, 0..5V, high-side, low-side) 4 usable as RPM / Frequency inputs (max. 2kHz)
- 2 analog /digital input, 14 bit resolution with integrated current source (0mA..20mA) and programmable range (0..20mA, 0..5V, high-side, low-side)
- 2 digital inputs selectable high-side, low-side used for CANopen Node ID selection in HW

MECHANICAL DRAWING



Remark: cable exit is possible on both sides