

Servo driver for RoboCORE

RoboCORE can drive RC servos via additional servo driver. It is powered from RoboCORE and has internal DC/DC converter, which can deliver up to 3A average current for servos.

The picture below describes the pinout of the Servo driver.



You don't need to understand these signals, just connect the servo driver to the hExt port using two flat cables and servos to the pins on the right side.

Specification

Parameter	Description
Name	Servo driver for RoboCORE
Version	1.0
Number of outputs	12
Power input supply voltage range	6V - 16V
Output voltage for servos	selectable from 5V, 6V or 7.2V
Max. average output current	3A
Max. peak output current	5A
Communication interface	USART
Overcurrent protection	yes
Overtemperature protection	will come with the next firmware version
Firmware upgrade possibility	yes

Address selection

Up to 4 servo drivers can be connected to one hExt port. The IDC flat cable allows to crimp additional connectors anywhere along the cable. In this way, the parallel hExt bus can be created, but the software has to differentiate each individual servo driver.

To achieve that, you have to choose the different address for each driver using jumper. The picture with pinout describes how to set the specific addresses from 0 to 3. Address 0 is set by removing the jumper (or leaving it with one side unconnected, like it is shown on the picture).

LED behaviour

The green LED function is predefined in the firmware. In the current firmware, the green LED statuses are following:

LED Behaviour	Status
OFF	not powered
rarely flashes	powered, but not working
flashes	no high-power supply (+Vin unconnected)
ON	working

Servo supply voltage selection

Servo driver contains the DC/DC converter which lowers the +Vin voltage to the 5V, 6V or 7.2V. These voltages are selectable in software. See details in our [API reference manual](#)