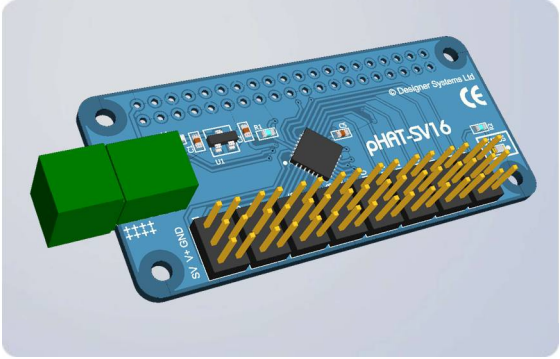
pHAT-SV16

16 Analogue Servo Driver with speed control

for Raspberry-Pi boards



pHAT-SV16 is a fully featured sixteen [16] servo motor driver with advanced control features. Specifically designed for the Raspberry-Pi Zero (other Raspberry-Pi boards fully supported) the pHAT-SV16 features high speed I^2C communication for easy project integration.

pHAT-SV16 supports the majority of analogue servos by providing a wide pulse width range of 0.50mS to 2.50mS with 8uS per step accuracy and also provides global activation of new servo position, soft-start & movement complete registers for superior control.

pHAT-SV16 also provides address selection jumpers to allow up to four [4] boards to be connected to a single Raspberry-Pi board allowing control of up to sixty-four [64] servos.

pHAT-SV16 has applications in robotics, including quadruped, hexapod and octopod robots, process control & sensor manipulation when used in conjunction with standard analogue RC servos

Key Benefits

- ✓ Sixteen [16] analogue servo driver outputs
- ✓ Individual speed control on each servo with 255 speed settings
- ✓ Global activation and movement complete status allows all servos to move together
- ✓ Screw terminal servo power connection with wide supply range of 3 ~ 8.5VDC (ideal for 7.4V Lithium battery)
- ✓ I^2C interface to Raspberry-PI Zero freeing GPIO for other applications
- ✓ Fully compatable with all Raspberry-Pi boards.

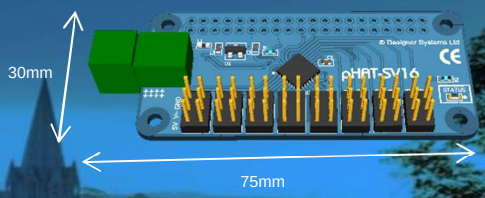
Sixteen [16] Servo Drive

7.4V Lithium Battery compatible

Fully Raspberry-Pi compatible

pHAT-SV16

16 Analogue Servo Driver with speed control



Servo Driver

Servo motors:

16 x Analogue (standard)

Servo Voltage:

5.0V ~ 7.4V

Servo Power:

6 Amps (stalled)

Control Features:

Enable/Disable

Soft Start

Position with speed control

Position complete flag

Reverse

Connection:

16 x 3pin 2.54mm header

Electrical

Supply Voltage:

5.0VDC from Raspberry-Pi

Power Consumption:

20mA max.

Connection:

40pin Raspberry-Pi header

Servo Voltage:

3.0V ~ 8.5VDC

Servo Current:

6Amps max.

Connection:

3.5mm pitch pluggable screw terminal

I²C Interface

I²C level:

3.3V

I²C pullup:

None (within Raspberry-Pi)

I²C speed:

100kHz and 400kHz

Connection:

40pin Raspberry-Pi header

General Features

I²C Address solder jumpers

Temperature range: -20°C ~ +50°C

Dimensions: 75 x 30 x 10mm

Weight: 14g approx.

Approvals

RoHS Compliant

CE (Europe)

UKCA (UK)

Address: 11 Castle Street, Truro, Cornwall, TR1 3AF, United Kingdom
Tel: +44 845 5192306 Direct: +44 1872 262000 Email: sales@designersystems.co.uk