OpenMV Servo Shield.

1 Features

- PCA9685 controller.
- 8-channel, 12-bit PWM.
- I2C-bus controlled.
- Internal power-on reset.
- Internal 25MHz oscillator
- Operating supply voltage range of 2.3 V to 5.5 V.
- Low standby current.

2 Description

The Servo Shield enables OpenMV cameras to control up to 8 servos in parallel. It features the PCA9685 Servo Controller which also supports general-purpose PWM. The OpenMV software and IDE includes scripts for controlling the chip for general-purpose PWM and controlling servos.

Device Information

PART NUMBER	BODY SIZE (NOM)
OPENMV-SERVO-SHIELD	1.40 in × 1.05 in

3 Applications

- Self-driving cars.
- Driving RGB LED.
- Support pan-tilt kits.

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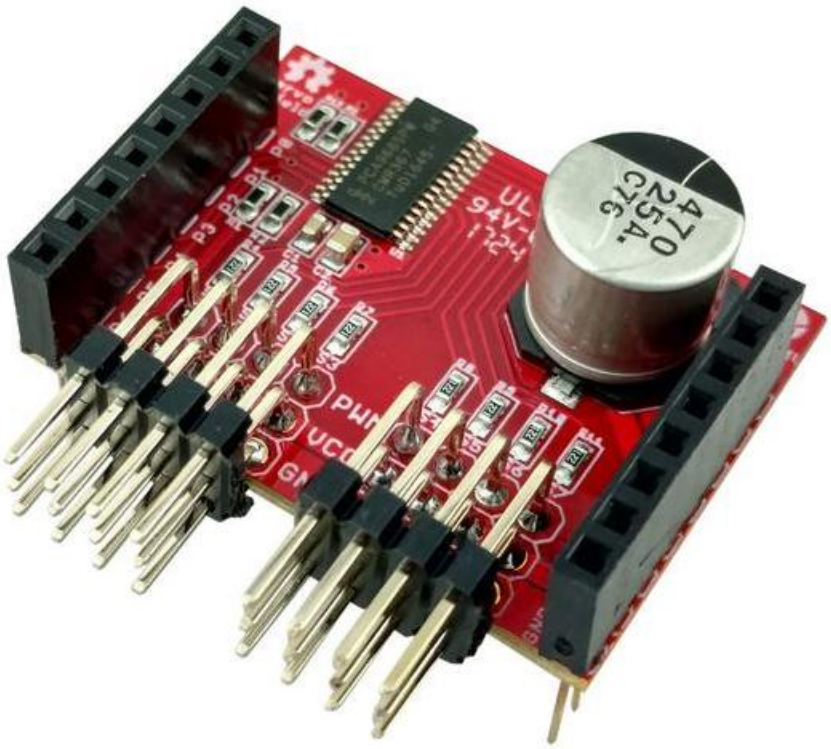

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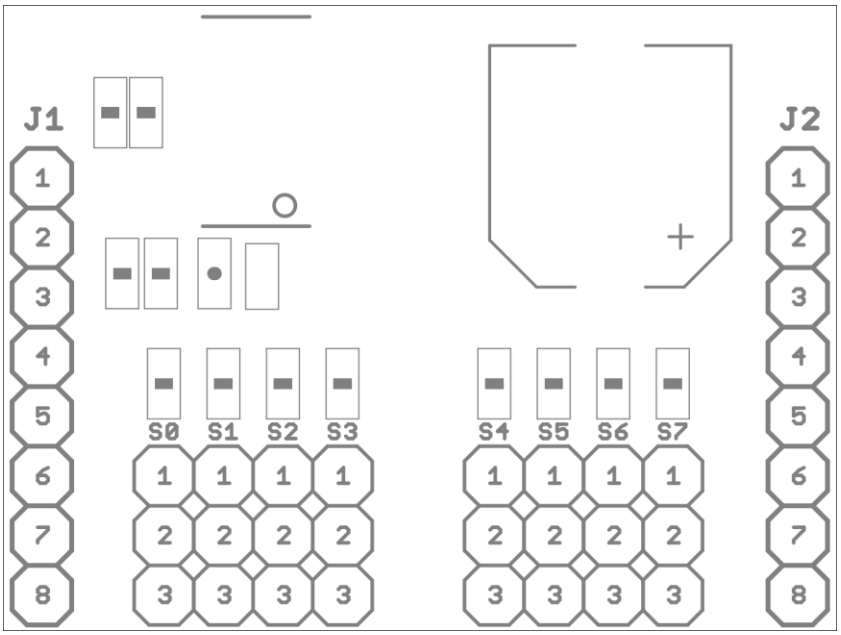

Pin Functions

Pin			Description
Header	No	Name	
J1 Pin Configuration			
J1	1	P0	NC
	2	P1	NC
	3	P2	NC
	4	P3	NC
	5	P4	SCL
	6	P5	SDA
	7	P6	NC
	8	3v3	PCA9685 supply.
J2 Pin Configuration			
J2	1	RST	NC
	2	BOOT	NC
	3	SYN	NC
	4	P9	NC
	5	P8	NC
	6	P7	NC
	7	VCC	Servo input supply
	8	GND	GND
S0-S7 Pin Configuration			
Sx	1	PWM	PWMx
	2	VCC	Servo output supply
	3	GND	GND

5 Electrical Characteristics

5.1 Recommended Operating Conditions

SYMBOL	RATINGS	MIN	MAX	UNIT
V_{cc}	Servo input supply voltage range.	4.8	6.0	V
V_{3v3}	PCA9685 supply voltage range.	2.3	5.5	V
T	Operating Temperature	-40	85	°C

6 Mechanical Information

The following information is the most current data available for the designated device. This data is subject to change without notice and without revision of this document.