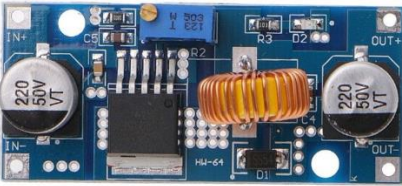
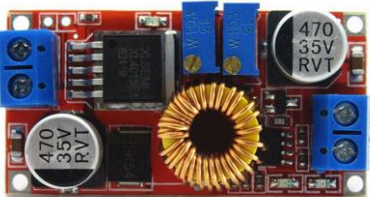
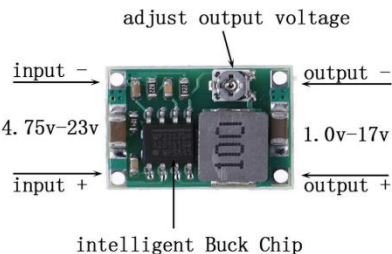


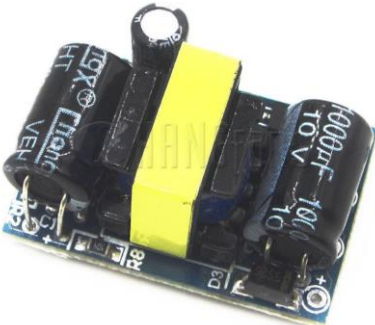



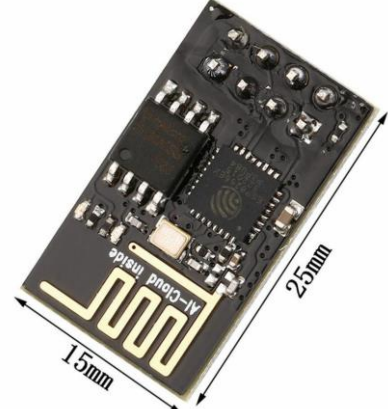





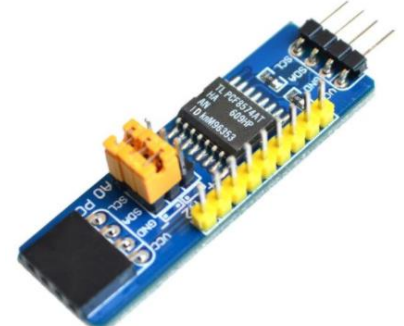
Image	Type	Name	Sold at	Specs / Reviews
	Current regulator	Voltage Regulator XL4015 Step Down Switching DC-DC Converter 36V/5A Arduino	https://www.ebay.com/itm/Voltage-Regulator-XL4015-Step-Down-Switching-DC-DC-Converter-36V-5A-Arduino/132837996745?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	Specifications: Chip: XL4015 Input voltage range: 4-38V DC (Note: input voltage not exceeding 38V) Output voltage range: 1.25-36V DC (adjustable) Output current: 0-5A, recommended for use in 4.5A. Output power: 75W Working temperature: -40~+85°C Operating frequency: 180KHz Efficiency: 96% (max) Short circuit protection: yes(limit current 8A). Over temperature protection Input reverse polarity protection: None (if required, high current diode in series with the input). Size: 54x24mm/2.13x0.94"
size:51.2*26.2mm 	Current regulator	5A DC- DC Constant Current Voltage Regulator Step Down Converter 5V 12V 24V	https://www.ebay.com/itm/5A-DC-DC-Constant-Current-Voltage-Regulator-Step-Down-Converter-5V-12V-24V/192555939561?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	Input Voltage Range: 5~32VDC Input reverse polarity protection: None Output Voltage Range: 0.8-30VDC adjustable Output Current: 0-5A adjustable High Efficiency: up to 95%
Mini DC Step Down Regulator 	Current regulator	3A Mini DC-DC step down converter volt regulator 5V-23V to 3.3V 6V 9V 12V M.US	https://www.ebay.com/itm/3A-Mini-DC-DC-step-down-converter-volt-regulator-5V-23V-to-3-3V-6V-9V-12V-M-US/362959165220?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	Module nature: non-isolated buck Rectification mode: synchronous rectification Input voltage: 4.75V-23V Output voltage: 1.0V-17V Output current: peak 3A, long time 1.8A Conversion efficiency: 96% (highest) Switching frequency: 340KHz Output ripple: 30mV (when no load) Load adjustment rate: +-0.5% Voltage regulation rate: +-2.5% Working temperature: -40°C+85°C

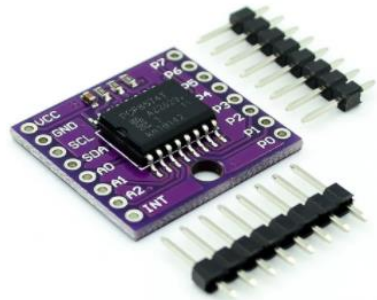
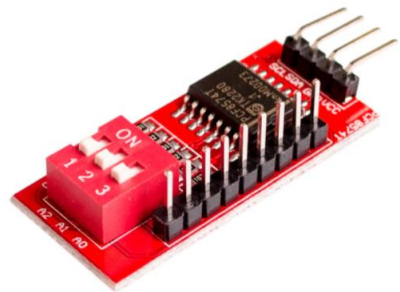
	Current regulator	1.2A DC-DC Buck Step-down Converter Volt Regulator 4.5V-24V to 3V 3.3V 5V 9V 12V	https://www.ebay.com/itm/113706883072	Chip: MPS MP2359 Input voltage: 4.5V-24V Output voltage: 3V-15V (default 5V) Buck efficiency: up to 92% Output current: 1.2A max Low standby current: <0.1uA Overcurrent protection, over temperature protection Procurement of advanced high current inductors, small Schottky fast diodes. DS = low is on standby; empty / VIN is enabled; connectable switch control. VIN: input Positive; GND common ground, VO: output positive, DS cannot connect. Size: 13*11*3.8mm
	Current regulator	DC-DC Step Up Converter MT3608 Booster Power Supply Step-up Module Boost P6W2	https://www.ebay.com/itm/DC-DC-Step-Up-Converter-MT3608-Booster-Power-Supply-Step-up-Module-Boost-P6W2/264994769376?hash=item3db2eb49e0:g:nMIAAOSwla9fSpxt	Maximum output current: 2A Input voltage: 2~24V Maximum output voltage: 28V Efficiency: 93% Size: approx. 36mm*17mm*14mm Color: as picture shows Quantity: 1/5pcs How to use: the module of the IN+ and - after 2~24v, IN adjusting the potentiometer can adjust output voltage, output voltage is greater than the input voltage
	Power Supply	AC-DC Power Supply Module Buck Converter Step Down Module Replace/Repair ATF	https://www.ebay.com/itm/AC-DC-Power-Supply-Module-Buck-Converter-Step-Down-Module-Replace-Repair-ATF/192628636860?ssPageName=STRK%3AMEBIDX%3AIT&var=492768621735&trksid=p2057872.m2749.l2649	5V / 0.7A

	Power Supply	AC-DC 5V 700mA 3.5W Power Supply Buck Converter Step Down Module for Arduino	https://www.ebay.com/itm/1pc-AC-DC-5V-700mA-3-5W-Power-Supply-Buck-Converter-Step-Down-Module-for-Arduino/183413473551?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	5V / 0.7A
	Power Supply	AC-DC Power Supply Module Buck Converter Step Down Module Replace/Repair ATF	https://www.ebay.com/itm/AC-DC-Power-Supply-Module-Buck-Converter-Step-Down-Module-Replace-Repair-ATF/192628636860?ssPageName=STRK%3AMEBIDX%3AIT&var=492768621736&trksid=p2057872.m2749.l2648	5V / 2.5A
	Power Supply	AC-DC 12V 5V 24V 9V Power Supply Buck Converter Step Down Module for Arduino	https://www.ebay.com/itm/AC-DC-12V-5V-24V-9V-Power-Supply-Buck-Converter-Step-Down-Module-for-Arduino/253176674644?ssPageName=STRK%3AMEBIDX%3AIT&var=552271234263&trksid=p2057872.m2749.l2649	5V / 1.5A
	Power Supply	AC-DC 12V 1.5A 5V 2A Switching Power Supply Module Bare Circuit 100-265V to 12V 5V Board TL431 regulator for Replace/Repair	https://www.aliexpress.com/item/4000992241059.html?spm=a2g0s.9042311.0.0.46594c4d2A3fRM	12V / 1.5A

	Micro controller	D1 Mini NodeMcu 4M bytes Lua WIFI Development Board ESP8266 by WeMos TEUS	https://www.ebay.com/itm/D1-Mini-NodeMcu-4M-bytes-Lua-WIFI-Development-Board-ESP8266-by-WeMos-TEUS/312715205793?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	
	Micro controller	NodeMcu Lua WIFI Internet Things development board based ESP8266 CP2102 module	https://www.ebay.com/itm/NodeMcu-Lua-WIFI-Internet-Things-development-board-based-ESP8266-CP2102-module/311721893268?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	
	Micro controller	ESP8266 Serial WIFI Wireless Transceiver Module Send Receive AP+STA ESP-01 US	https://www.ebay.com/itm/ESP8266-Serial-WIFI-Wireless-Transceiver-Module-Send-Receive-AP-STA-ESP-01-US/152149532770?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	
	Sensor - Microphone	GY-MAX4466 electret microphone amplifier MAX4466 adjustable amplifier module	https://www.ebay.com/itm/1pc-GY-MAX4466-electret-microphone-amplifier-MAX4466-adjustable-amplifier-module/183696382813?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	

	Cooling Fan	4cm Mini DC Brushless Chassis Graphics Card CPU Cooling Fan 40mmx40mmx10mm	https://www.ebay.com/itm/2Pcs-4cm-Mini-DC-Brushless-Chassis-Graphics-Card-CPU-Cooling-Fan-40mmx40mmx10mm/193290749390?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	Voltage: 12dvc Bearing Type: Sleeve Connector: 2pin(2.0) Applicable for: CPU Fan, SB/NB Fan Dimension: Approx.40*40*10mm/1.57"*1.57"*0.39"
	RTC	DS3231 ZS042 AT24C32 IIC Module Precision RTC Real time Clock Memory	https://www.ebay.com/itm/Arduino-DS3231-ZS042-AT24C32-IIC-Module-Precision-RTC-Real-time-Clock-Memory/382715203141?ssPageName=STRK%3AMEBIDX%3AIT&trksid=p2057872.m2749.l2649	3.3 – 5.5 V, I2C (SDA+SCL)
	Sensor - Motion	HC-SR501 Infrared PIR Motion Sensor Module for Arduino Raspberry pi	https://www.ebay.com/itm/HC-SR501-Infrared-PIR-Motion-Sensor-Module-for-Arduino-Raspberry-pi/401598066562?ssPageName=STRK%3AMEBIDX%3AIT&var=671340309473&trksid=p2057872.m2749.l2649	https://components101.com/sensors/hc-sr501-pir-sensor
	Sound amplifier	TDA2030A Audio Amplifier Module Power Amplifier Board AMP 6 ~12V 1*18W	https://www.ebay.com/itm/TDA2030A-Audio-Amplifier-Module-Power-Amplifier-Board-AMP-6-12V-1-18W/322634016547?hash=item4b1e7c6723:g:CqcAAOSwi1BZeyan	

<div><div>SERIAL TO PARALLEL 8-BIT SHIFT REGISTER</div><div></div></div>	Digital multiplexer	74HC595 shift register	<div><div>https://www.instructables.com/id/Add-More-Digital-Inputs-and-Outputs-to-Your-Arduino/</div><div>https://www.alldatasheet.com/datasheet-pdf/pdf/12198/ONSEMI/74HC595.html</div><div>https://www.arduino.cc/en/tutorial/ShiftOut</div></div>	<div><div><div><div><div>Q1</div><div>1</div><div>Vcc</div></div><div><div>Q2</div><div>2</div><div>Q0</div></div><div><div>Q3</div><div>3</div><div>DS</div></div><div><div>Q4</div><div>4</div><div>OE</div></div><div><div>Q5</div><div>5</div><div>ST_CP</div></div><div><div>Q6</div><div>6</div><div>SH_CP</div></div><div><div>Q7</div><div>7</div><div>MR</div></div><div><div>GND</div><div>8</div><div>Q7'</div></div></div><div><div>74HC595</div></div><div><div>9</div><div>Q0</div><div>Q7'</div></div></div><div><div>10</div><div>Q1</div><div>Q7'</div></div><div><div>11</div><div>Q2</div><div>Q7'</div></div><div><div>12</div><div>Q3</div><div>Q7'</div></div><div><div>13</div><div>Q4</div><div>Q7'</div></div><div><div>14</div><div>Q5</div><div>Q7'</div></div><div><div>15</div><div>Q6</div><div>Q7'</div></div><div><div>16</div><div>Q7</div><div>Q7'</div></div></div> <div><div>1</div><div>Q1</div><div>Parallel data output (bit-1)</div></div> <div><div>2</div><div>Q2</div><div>Parallel data output (bit-2)</div></div> <div><div>3</div><div>Q3</div><div>Parallel data output (bit-3)</div></div> <div><div>4</div><div>Q4</div><div>Parallel data output (bit-4)</div></div> <div><div>5</div><div>Q5</div><div>Parallel data output (bit-5)</div></div> <div><div>6</div><div>Q6</div><div>Parallel data output (bit-6)</div></div> <div><div>7</div><div>Q7</div><div>Parallel data output (bit-7)</div></div> <div><div>8</div><div>GND</div><div>Ground (0 V)</div></div> <div><div>9</div><div>Q7'</div><div>Serial Data Output</div></div> <div><div>10</div><div>MR</div><div>Master Reset (Active Low)</div></div> <div><div>11</div><div>SH_CP</div><div>Shift Register Clock Input</div></div> <div><div>12</div><div>ST_CP</div><div>Storage Register Clock Input</div></div> <div><div>13</div><div>OE</div><div>Output Enable (Active Low)</div></div> <div><div>14</div><div>DS</div><div>Serial Data Input</div></div> <div><div>15</div><div>Q0</div><div>Parallel data output (bit-8)</div></div> <div><div>16</div><div>Vcc</div><div>Positive Supply Voltage</div></div> <div><div>74HC595 8-Bit Shift Register Pinouts</div></div>
<div><div></div></div>	Proximity & Attitude Sensor	APDS-9930 Proximity & Attitude Sensor GY-9930-LLC I2C ALS RGB For Arduino	<div><div>https://www.ebay.ca/itm/172997132960</div></div>	<div><div>ALS, IR LED and Proximity Detector in an Optical Module</div><div>Ambient Light Sensing (ALS)</div><div>Approximates Human Eye Response</div><div>Programmable Interrupt Function with Upper and Lower Threshold</div><div>Up to 16-Bit Resolution</div><div>High Sensitivity Operates Behind Darkened Glass</div><div>Low Lux Performance at 0.01 lux</div><div>Proximity Detection</div><div>Fully Calibrated to 100 mm Detection</div><div>Integrated IR LED and Synchronous LED Driver</div><div>Eliminates ?Factory Calibration? of Prox</div><div>Programmable Wait Timer</div><div>Wait State Power ? 90 ?A Typical</div><div>Programmable from 2.7 ms to > 8 sec</div><div>I2C Interface Compatible</div><div>Up to 400 kHz (I2C Fast-Mode)</div><div>Dedicated Interrupt Pin</div><div>Sleep Mode Power - 2.2 ?A Typical</div></div>
<div><div></div></div>	Expansion Board	PCF8574 PCF8574T I/O For I2C IIC Port Interface Support Cascading Extended Module For Arduino Expansion Board High Low Level	<div><div>https://www.aliexpress.com/item/32353277284.html?spm=a2g0s.9042311.0.0.27424c4dpT4iag</div></div>	<div><div>This is the I/O extended module, which use for I2C interface, you can use two of the module to extend 8 I/O.</div><div>Support cascading, and you can use at most 8 modules to extend 64 I/O at the same time.</div><div>Can be changed the address by set toggle switch</div><div>PCB Size: 36 x 16mm/1.41*0.62"</div><div>Every 2 seconds, make P0-P7 port output High level, Low level, and put 3 toggle switches to ON, the address of module is 0x27</div></div>



Ultrasonic
speaker

Max 10V
Max 30 mA
Audio range: 2,5-60 kHz
Sound pressure level:
min 90 dB

<https://www.aliexpress.com/item/32857915240.html?spm=a2g0s.9042311.0.0.27424c4dDyEpFy>

B. SPECIFICATION				
No.	Item	Unit	Specification	Condition
1	Operating Volt.	Vrms	MAX. 10	
2	Rated Volt.	Vrms	2.83	
3	Current consumption	mA	MAX 30	at 2.83 Vrms
4	Electrostatic capacity	pF	80,000 ± 30%	at 100Hz
5	Resonant Frequency Range	KHz	2.5-60	
6	Operating Frequency	KHz	20 ± 5	
7	Sound pressure level	dB	MIN. 90	at 2.83Vrms sine wave / 30cm
8	Operating temp.	°C	-20 ~ +60	
9	Storage temp.	°C	-30 ~ +70	
10	Dimension	mm	Φ50.5 x H18.2	See appearance drawing
11	Weight (MAX)	gram	8.0	
12	Housing Material		ABS	
13	Paper Cone		Mylar cone	
14	Environmental Protection Regulation		RoHS	