Parts Export

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Total Parts: 15

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	**EMA-00001-A**	Liquid Crystal Display with Serial I2C	EM - Electronic-Electrical Modules	MWduino / Generic, KEYESTUDIO, SunFounder	16x2 character LCD module with integrated I2C interface for simplified wiring. Blue backlight with white characters for clear and high-contrast visibility. Ideal for Arduino, Raspberry Pi, and embedded systems requiring compact data display.	Model: Other LCD Model No.: LCD1602 Display Type: 16 × 2 Character LCD Backlight Color: Blue Character Color: White I2C Address: 0x27 Input Voltage (V): 5 Length (mm): 36 Width (mm): 80 Height (mm): 18 Weight (g): 35 Shipping Weight: 0.037 kg Shipping Dimensions (L × W × H): 8 × 5 × 3 cm	LCD1602 • 16x2 LCD • I2C LCD Display • Arduino Display • Character LCD Module
	**EMA-00003-B**	WS2812B 8-Bit RGB NeoPixel LED Module (8× 5050 LEDs)	EM - Electronic-Electrical Modules	Worldsemi Co., Ltd., Generic / OEM	The WS2812B 8-Bit RGB LED Module features 8 individually addressable 5050 RGB LEDs with integrated driver ICs. It operates on 5V and uses a single-wire communication protocol for precise color and brightness control. Ideal for programmable lighting, animations, IoT devices, and Arduino-based creative projects.	LED Model: WS2812B Package Type: 5050 SMD Number of LEDs: 8 Color Type: Full-Color RGB Bit Depth: 8-bit per channel (24-bit RGB total) Operating Voltage: DC 5V Control Interface: Single Data Line (Serial) Communication Protocol: One-Wire Timing Protocol PCB Color: White Mounting Type: Solderless / Plug-and-Play Length (mm): 105 Width (mm): 10 Height (mm): 6 Weight (g): 8 Shipping Weight: 0.01 kg Shipping Dimensions (L × W × H cm): 12 × 8 × 1	Arduino Compatible • WS2812B • NeoPixel Module • 8 LED RGB • 5050 SMD • Addressable LED • 5V RGB Strip • Programmable LED
	**EMA-00006-B**	Passive Buzzer Module	EM - Electronic-Electrical Modules	ED Series / Generic Compatible, KEYESTUDIO, SunFounder, DFRobot	Passive buzzer module designed to generate variable tones using PWM or frequency control. Operates from 1.5V to 15V DC and produces tones in the 1.5–2.5 kHz range. Ideal for alarms, alerts, Arduino projects, and microcontroller-based sound applications.	Model: Passive Buzzer Module Operating Voltage (VDC): 1.5 – 15 Max Operating Current (mA): 25 Tone Generator Frequency Range (kHz): 1.5 – 2.5 Mounting Type: PCB Mount Pin Pitch: 2.54 mm Compatibility: Arduino / Microcontrollers Length (mm): 15 Width (mm): 19.7 Height (mm): 10 Weight (g): 1 (approx.) Shipping Weight: 0.01 kg Shipping Dimensions (L × W × H): 6 × 4 × 2 cm	Passive Buzzer • KY-006 Module • Arduino Buzzer • PWM Buzzer • Sound Module
	**EMA-00008-A**	Single Channel Relay Module (12V, High/Low Level Trigger)	EM - Electronic-Electrical Modules	Single Relay, Generic / OEM	The Single Channel 12V Relay Module allows low-voltage microcontrollers to safely control high-voltage AC or DC loads. It supports both high-level and low-level trigger modes and includes status LEDs for operation indication. Ideal for home automation, motor control, IoT systems, and industrial switching applications.	Model: Relay Module Number of Channels: 1 Operating Voltage (VDC): 12 Trigger Type: High-Level / Low-Level Trigger Relay Contact Rating (AC): 10A @ 250V AC Relay Contact Rating (AC Alternate): 15A @ 125V AC Contact Type: COM, NO (Normally Open), NC (Normally Closed) Interface: 2.54 mm Header Pins Output Connection: 3-Pin Screw Terminal Indicators: Power LED + Relay Status LED Length (mm): 50 Width (mm): 25 Height (mm): 20 Weight (g): 16 Shipping Weight: 0.025 kg Shipping Dimensions (L × W × H cm): 7 × 4 × 3	Arduino Compatible • 12V Relay Module • Single Channel Relay • High/Low Trigger • Songle SRD-12VDC-SL-C • SPDT Relay • 10A 250VAC • IoT Switching Module
	**EMA-00009-A**	ISD1820 Voice Recording & Playback Module with Mic and Speaker	EM - Electronic-Electrical Modules	Nuvoton Technology Corporation, Generic / OEM	ISD1820 Module, Voice Recorder, 10s Audio, Playback Module, Onboard Mic, 8Ω Speaker, Arduino Compatible, Sound Board . The ISD1820 Voice Recording Module allows up to 10 seconds of audio recording stored in non-volatile analog flash memory. It features an onboard electret microphone, push-button controls, and supports external triggering via microcontroller.	IC Chip: ISD1820 Operating Voltage (VDC): 3 – 5 Recording Duration: Up to 10 seconds Memory Type: Non-Volatile Analog Flash Microphone: Onboard Electret Microphone Speaker: 8 ?, 0.5W Speaker Cable Length (cm): 20 Speaker Diameter (mm): 40 Control Options: Push Buttons or Microcontroller Digital Pin Interface: 2.54 mm Header Pins Length (mm): 42 Width (mm): 33.5 Height (mm): 11.5 Weight (g): 20 Shipping Weight: 0.022 kg Shipping Dimensions (L × W × H cm): 8 × 6 × 3	Arduino Compatible • ISD1820 Module • Voice Recorder • 10s Audio • Playback Module • Onboard Mic • 8? Speaker • Sound Board
	**EMC-00004-A**	HC-05 6-Pin Wireless Serial Bluetooth Module with Button	EM - Electronic-Electrical Modules	HC Series / Generic Compatible, Waveshare, KEYESTUDIO, SunFounder	The HC-05 Bluetooth Module is a 6-pin wireless serial communication device designed for UART-based data transfer between microcontrollers and Bluetooth-enabled devices. Operates in the 2.4GHz ISM band using GFSK modulation and supports both Master and Slave modes. Supports AT command configuration and includes an onboard push button for AT mode entry.	Operating Voltage: 3.6V – 6V DC Input Current: 50 mA Operating Frequency: 2.4 GHz ISM Band Modulation Type: GFSK (Gaussian Frequency Shift Keying) Emission Power: 4 dBm (Class 2) Receiver Sensitivity: -84 dBm at 0.1% BER Maximum Range: 10 meters (typical) Interface Pins: EN/KEY, VCC, GND, TXD, RXD, STATE AT Command Support: Yes Onboard Button: Yes (AT Mode Selection) Length (mm): 43 Width (mm): 16.5 Height (mm): 7 Weight (g): 5 Shipping Weight: 0.01 kg Shipping Dimensions (cm): 5 × 3 × 1	HC-05 • Bluetooth Module • UART Bluetooth • 6-Pin Bluetooth • Master Slave Module • Arduino Bluetooth

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	**EMP-00001-C**	12V 2A SMPS Power Adapter	EM - Electronic-Electrical Modules	Generic / OEM, Mean Well, Delta Electronics, LEICKE	12V 2A Switched Mode Power Supply (SMPS) adapter designed to provide stable and regulated DC output. Converts AC 100–240V input to 12V DC output with low losses and high efficiency compared to conventional linear power supplies. Suitable for powering Arduino boards, routers, LCD displays, DC motors, audio equipment, TV boxes, mini electronics, and other devices requiring up to 2A current.	Input Voltage: 100–240V AC Output Voltage: 12V DC Maximum Output Current: 2A Output Connector Size: 5.5 × 2.5 mm Polarity: Center Positive Operating Temperature: -25°C to +60°C Shipping Weight: 0.02 kg Shipping Dimensions: 10 × 6 × 6 cm	12V Adapter • 12V 2A Power Supply • SMPS Adapter • AC-DC Adapter • 5.5x2.5mm Power Adapter
	**EMS-00001-A**	MQ-2 Smoke LPG Butane Hydrogen Gas Sensor Detector Module	EM - Electronic-Electrical Modules	Hanwei Electronics Group Corporation, Zhengzhou Winsen Electronics Technology Co., Ltd.	The MQ-2 Gas Sensor Module detects combustible gases such as LPG, methane, hydrogen, alcohol vapor, and smoke. It uses a SnO? sensing element and provides both analog and digital outputs with adjustable sensitivity. Ideal for gas leakage detection, safety systems, and Arduino-based environmental monitoring projects.	Sensor Model: MQ-2 Detection Range: 300 – 10,000 ppm Detectable Gases: LPG, Butane, Propane, Methane (CH?), Hydrogen (H?), Alcohol, Smoke, CO Sensing Material: Tin Dioxide (SnO?) Operating Voltage: 5V DC Digital Output Voltage: 0V or 5V (TTL Logic) Analog Output: Yes Sensitivity Adjustment: Onboard Potentiometer Preheat Time: 20 seconds (minimum) Dimensions (mm): 36 × 20 × 21 Weight (g): 8 Shipping Weight: 0.012 kg Shipping Dimensions (cm): 4 × 4 × 4	Arduino Compatible • MQ-2 Sensor • LPG Gas Sensor • Smoke Detector • SnO2 Sensor • Combustible Gas Module • 5V Gas Sensor • Gas Leakage Detector
	**EMS-00002-A**	DHT11 Temperature and Humidity Sensor Module with LED	EM - Electronic-Electrical Modules	EM Series / Generic Compatible, KEYESTUDIO, SunFounder, DFRobot	Digital temperature and humidity sensor module with calibrated single-wire serial output. Features onboard pull-up resistor and LED status indicator for easy interfacing. Ideal for weather stations, environmental monitoring, and smart automation projects.	Item Type: Sensor Model: DHT11 Temperature and Humidity Sensor Measuring Temperature Range (°C): 0 – 50 Temperature Accuracy: ± 2 °C Humidity Range: 20 – 95 % RH Humidity Accuracy: ± 5 % RH Resolution: 16 bit Output Form: Digital Output (Single Wire Serial) Operating Voltage (VDC): 3 – 5 Operating Current (mA): ? 2.5 Dimensions (L × W × H mm): 31 × 14 × 7.5 Weight (g): 5 Shipping Weight: 0.01 kg Shipping Dimensions (L × W × H cm): 5 × 5 × 2	DHT11 • Temperature Sensor • Humidity Sensor • Digital Temp Sensor • Arduino Climate Sensor
	**EMS-00005-A**	Ultrasonic Distance Sensor (HC-SR04+)	EM - Electronic-Electrical Modules	MWduino / Generic, Elecfreaks, KEYESTUDIO, SunFounder	Ultrasonic distance sensor module using 40kHz sound waves for accurate measurement. Operates on 3.3–5.5V DC with 4-pin interface (VCC, Trig, Echo, GND). Ideal for robotics, obstacle detection, automation, and distance sensing projects.	Power Supply (V): +5V DC Working Current (mA): 15 mA Output Signal: Electrical frequency signal Ranging Distance: 2 cm – 400 cm Distance Resolution: 0.3 cm Measuring Angle: 30° Operating Voltage Range (V): 3.3V – 5.5V Interface Type: 4-pin (VCC, Trig, Echo, GND) Shipping Weight: 0.007 kg Shipping Dimensions (L × W × H): 9 × 6 × 2 cm	Ultrasonic Sensor • HC-SR04+ • Distance Sensor • Arduino Sensor • Obstacle Detection Module
	**EMS-00013-A**	Infrared Obstacle Avoidance IR Sensor Module	EM - Electronic-Electrical Modules	Generic OEM Manufacturer, Keyestudio, HiLetgo, Elegoo, SunFounder	The Infrared Obstacle Avoidance Sensor Module detects nearby objects using reflected infrared light. It uses an IR transmitter–receiver pair with an LM393 comparator to provide a digital active LOW output when an obstacle is detected. Ideal for robotics, smart cars, automation systems, and Arduino-based proximity detection projects.	Sensor Type: Infrared Reflective Obstacle Sensor Operating Voltage: 3.6V - 5V DC Output Type: Digital (Active Low) Main IC: LM393 Comparator Average Current Consumption: 0.06 mA Detection Angle: 35° Detection Distance: 2 cm – 30 cm (adjustable) Interface Pins: VCC, GND, OUT Indicator LED: Yes (Obstacle Detection Indicator) Sensitivity Adjustment: Onboard Potentiometer Dimensions (mm): 48 × 14 × 8 Weight (g): 5 Shipping Weight: 0.01 kg Shipping Dimensions (cm): 5 × 4 × 1	IR Obstacle Sensor • Infrared Reflective Module • LM393 Comparator • Active Low Output • Proximity Sensor • Arduino Compatible • Robot Sensor
	**EMS-00017-A**	Light Dependent Resistor (LDR) Module	EM - Electronic-Electrical Modules	EM Series / Generic Compatible, KEYESTUDIO, SunFounder, DFRobot	The LDR Module detects ambient light intensity and provides a digital output based on brightness level. It features an onboard potentiometer to adjust sensitivity and threshold detection. Ideal for automatic lighting systems, Arduino projects, and light-based automation applications.	Model: Light Dependent Resistor Module Operating Voltage (V): 3.3 – 5 Operating Current (mA): 15 Output Type: Digital (DO) Adjustable Threshold: Yes (via Potentiometer) Sensor Type: Photoresistor (LDR) Mounting Hole: M3 Indicator LEDs: Power LED, Status LED Pin Configuration: VCC, GND, DO Length (mm): 36 Width (mm): 14 Height (mm): 8 Weight (g): 3 Shipping Weight: 0.005 kg Shipping Dimensions (L × W × H): 4 × 3 × 2 cm	LDR Module • Light Sensor • Photoresistor Module • LM393 Sensor • Arduino Light Sensor
	**EMS-00019-A**	Soil Moisture sensor	EM - Electronic-Electrical Modules	Sensor Probe Manufacturer, Comparator Module Manufacturer, IC Manufacturer	The Soil Moisture Sensor Module (YL-69 + FC-28) is a resistive soil humidity detection device used to measure water content in soil. It provides both analog (AO) and digital (DO) outputs with adjustable sensitivity using an onboard LM393 comparator. Ideal for smart irrigation systems, plant monitoring, Arduino, and IoT-based environmental projects.	Sensor Type: Resistive Soil Moisture Sensor Operating Voltage: 3.3V – 5V DC Output Type: Analog (AO) and Digital (DO) Digital Output: 0 or 1 (TTL Logic) Measurement Principle: Resistance-based conductivity measurement Sensitivity Adjustment: Onboard Potentiometer (for digital threshold) Probe Dimension: Approx. 6 cm × 3 cm Cable Length: 20 cm Interface Pins: VCC, GND, DO, AO Shipping Weight: 0.02 kg Shipping Dimensions (cm): 8 × 6 × 3	Arduino Compatible • Soil Moisture Sensor • YL-69 • FC-28 • LM393 • Resistive Soil Sensor • Irrigation Sensor

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	**EMS-00020-A**	PS2 Joystick Module Breakout Sensor	EM - Electronic-Electrical Modules	EM Series / Generic Compatible, KEYESTUDIO, SunFounder, DFRobot	Dual-axis analog joystick module used to detect X and Y movement positions. Each axis uses a 10KΩ potentiometer providing 0–5V analog output. Includes built-in push-button switch, ideal for robotics, gaming, and motion control projects.	Model: PS2 Joystick Module Operating Voltage (VDC): 5 Potentiometer Resistance: 10K? (per axis) X/Y Output: Analog (0–5V) Button: Digital (Press-Down) Interface Type: 2.54 mm Pin Header PCB Size (mm): 34 × 32 Compatibility: Arduino / Raspberry Pi / Microcontrollers Lifespan: Long-Life, High-Stability Potentiometers Shipping Weight: 0.015 kg Shipping Dimensions (L × W × H): 6 × 5 × 4 cm	PS2 Joystick • Analog Joystick Module • Dual Axis Sensor • 10K Potentiometer Joystick • Arduino Joystick
	**EMX-00001-A**	Arduino Uno	EM - Electronic-Electrical Modules	Arduino, Elegoo, HiLetgo, Keyestudio	The Arduino Uno R3 is a microcontroller development board based on the ATmega328P, designed for building interactive electronic projects. It features 14 digital I/O pins, 6 analog inputs, a 16 MHz clock, USB connectivity, and operates at 5 V. Compatible with the Arduino IDE and a wide range of shields, it is widely used in education, prototyping, and embedded system development.	Board Type: Uno With Cable: Yes Operating Voltage: 5 V Input Voltage Range: 6 – 20 V Analog I/O Pins: 6 Digital I/O Pins: 14 (6 × PWM) DC Current per I/O Pin: 40 mA Clock Speed: 16 MHz SRAM: 2 KB EEPROM: 1 KB Flash Memory: 32 KB Dimensions (L × W × H): 75 × 54 × 12 mm Weight: 28 g (without cable), 54 g (with cable)	ATmega328P • 5 V Board • 16 MHz Crystal • USB Interface • Microcontroller • Educational Kit • Open-Source Hardware • Breadboard Compatible