

Parts Export

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Total Parts: 177

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	COC-00005-A	Sticky Notes Pad	CO - Consumables	3M, Hopax	The Self-Adhesive Sticky Note Pad is used for quick notes, reminders, labeling, and task organization. It features a smooth writing surface with repositionable adhesive that sticks securely and removes cleanly without residue. Commonly used in offices, schools, electronics labs, workshops, and project planning, it helps improve organization, communication, and workflow efficiency in daily tasks.	Product Type: Adhesive Sticky Notes Pad Note Size: 3x3 Inch Sheet Count: 50 Pages Color: Multi-color	sticky notes • post-it notes • memo pad • adhesive notes • office stationery • study notes
No Image	EDM-00005-D	Arduino Shield	ED - Electronic Device	Arduino, Keyes, DFRobot, Seeed Studio, Generic	The Arduino UNO ProtoShield is an expansion board for Arduino UNO that breaks out all I/O pins for easy prototyping. It allows building custom circuits using soldering or a mini breadboard and supports both through-hole and SMD components. It is widely used for circuit testing, prototyping, and embedded system development.	Breadboard Points: 170 Breadboard Size: 4.8×3.4 cm Shield Size: 7×5.4 cm	DIY • Electronics • pcb • arduino shield • prototyping shield • uno shield • development
No Image	EMC-00003-A	NodeMcu	EM - Electronic-Electrical Modules	Espressif Systems, Ai-Thinker, NodeMCU	The ESP8266 NodeMCU CH340 board is a WiFi-enabled microcontroller based on the ESP8266 chip for IoT applications. It offers onboard processing, GPIO support, and built-in wireless connectivity. It is widely used in IoT projects, smart devices, automation systems, and wireless sensor applications.	Processor: L106 32 bit Processor speed: 80MHz to 160MHz Flash memory: 4MB Analog to digital: 1 input with 1024 resolution Maximum concurrent TCP connection: 5 GPIOs: 17 Transfer rate: 110 Kbps to 460800 Kbps Input voltage supply: 4.5V to 9V Communication interface voltage: 3.3V Current consumption: 10uA-170mA	NodeMCU • ESP8266 • WiFi Module • IoT Development Board • ESP8266EX • Wireless Module
	EMX-00001-A	Arduino Uno R3	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 electronics projects. It features 14 digital I/O pins, 6 analog inputs, a 16 MHz clock, USB interface, and operates at 5V. It is widely used in education, prototyping, robotics, 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
No Image	EMX-00002-A	Arduino nano	EM - Electronic-Electrical Modules	Arduino, Gravitech, RobotDyn, Keyestudio, DFRobot	The Arduino Nano is a compact microcontroller board based on the ATmega328. It offers digital and analog I/O in a small breadboard-friendly form factor. It is widely used in embedded systems, robotics, IoT projects, and educational electronics.	Microcontroller: ATmega328 Flash Memory: 32 KB (ATmega328) of which 2 KB used by bootloader SRAM: 1 KB or 2KB EEPROM: 512 bytes (ATmega168) or 1 KB (ATmega328) Clock Speed: 16 MHz Digital I/O Pins: 14 (of which 6 provide PWM output) Analog Input Pins: 8 DC Current per I/O Pin: 40 mA Operating Voltage: 5V Input Voltage: 7 - 12 V (5V model)	ATmega328P • Arduino Nano • Microcontroller Board • Development Board • IoT
No Image	EMX-00003-A	Arduino Mega	EM - Electronic-Electrical Modules	Arduino, Elegoo, RobotDyn, Keyestudio, DFRobot, Waveshare	The Arduino Mega 2560 is a microcontroller board based on the ATmega2560. It offers 54 digital I/O pins, 16 analog inputs, multiple serial ports, and is designed for complex projects requiring high I/O and memory. It is widely used in robotics, automation, IoT systems, and large-scale embedded applications.	Microcontroller Chip: ATmega2560 Analog I/O Pins: 16 Digital I/O Pins: 54 (of which 14 provide PWM output) Flash Memory: 256 KB of which 8 KB used by bootloader SRAM: 8 KB EEPROM: 4 KB DC Current per I/O Pin: 40 mA DC Current for 3.3V Pin: DC Current for 3.3V Pin Operating Voltage: 5V Input Voltage: 7V to 12V Input Voltage (limit): 6V-20V	Development Board • Arduino Mega • ATmega2560 • Embedded Systems • IoT Board

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	TLM-00005-A	Micro longnose Plier	TL - Tools	Proskit, Taparia, Jakemy, tanley	Micro long nose pliers are compact precision hand tools designed for electronics repair, PCB assembly, wire bending, and handling small components. Their slim, pointed jaws allow easy access to tight and confined spaces, making them ideal for detailed work. Commonly used in robotics, DIY electronics, jewelry making, and maintenance tasks, they provide accurate control and reliable performance.	Size: 4.5 inch – 5 inch Handle Type: Soft Grip / Anti-slip Usage: Precision Gripping & Wire Bending	DIY Tool • Needle Nose Plier • Mini Plier • Micro Long Nose Plier • Precision Plier • Electronics Tool • Jewelry Plier
	TLM-00005-B	Long Nose Pliers	TL - Tools	Taparia, Stanley, Bosch, Proskit	Long nose pliers are versatile hand tools designed for gripping, bending, holding, and cutting wires in electronics, electrical work, jewelry making, and DIY applications. Their long, narrow, pointed jaws provide easy access to confined spaces and enable precise handling of small components. Durable and comfortable to use, they are essential tools for repair, assembly, and maintenance tasks.	Handle Type: Insulated Grip Length: 5 inch – 8 inch Usage: Wire Bending, Gripping, Cutting	DIY Tool • Long Nose Plier • Needle Nose Plier • Electronics Plier • Mini Plier • Precision Tool • Wire Handling Tool
	EDD-00003-B	RGB LED Module	ED - Electronic Device	Jameco ValuePro, Jameco ValuePro, Adafruit Industries	5mm high-brightness RGB LED module with a common anode configuration. Emits red, green, and blue light, allowing a wide range of colors through color mixing. Suitable for status indicators, Arduino projects, decorative lighting, educational experiments, displays, and DIY electronics. Easy to interface with microcontrollers for dynamic lighting and visual effects.	Manufacturer: Generic Model Type: Common Anode RGB LED Package: 5mm Round (Clear Lens) Color: Red, Green, Blue Configuration: Common Anode Brightness: High Current Consumption: Low Operating Voltage: 2.0–3.2V (per color) Forward Current (mA): 20 (per channel) Power Efficiency: High Luminous Output, Low Heat Material: Epoxy Resin, Gold Wire Leads Mounting Type: Through Hole Item Size: 5mm Shipping Weight: 0.001 kg Shipping Dimensions (L × W × H): 1 × 1 × 1 cm	RGB LED • 5mm LED • Indicator LED • Through Hole LED • Common Anode LED
No Image	EDT-00001-F	CO Gas Sensor	ED - Electronic Device	Hanwei Electronics, Winsen, Figaro Engineering	The Carbon Monoxide Sensor is a gas detection device used to detect and monitor carbon monoxide (CO) levels in the air. It helps identify hazardous CO concentrations and improve safety. It is widely used in gas alarm systems, air quality monitoring, smart homes, industrial safety, and IoT applications.	Sensor Type: Carbon Monoxide (CO) Gas Sensor Target Gas: CO (Carbon Monoxide) Operating Voltage: 5V DC Warm: up Time: 20–48 hours initial, few minutes per cycle Detection Range: ~20–2000 ppm (typical)	Carbon Monoxide Sensor • CO Sensor • Gas Detector • MQ-7 sensor • toxic gas sensor
	EMS-00004-B	Sound Detector	EM - Electronic-Electrical Modules	Keyes Electronics, DFRobot, AZDelivery	The Sound Detector Module (Blue) is a microphone-based sensor used to detect surrounding sounds and convert them into electrical signals. It typically combines an electret microphone with an LM393 comparator to provide both analog and digital outputs. The module is widely used in sound-activated switches, noise monitoring, voice-triggered systems, robotics, automation, and Arduino-based projects.	Product Type: Sound Detection Sensor Model: KY-038 / KY-037 Main IC: LM393 Comparator Operating Voltage: 3.3V – 5V DC	Sound Detector Module • KY-038 Sound Sensor • LM393 Sound Sensor • Microphone Sensor Module
	MMC-00004-A	USB A to B Cable	MM - Mechanical Module	MWduino	USB Type-A to Type-B data cable designed for Arduino UNO and other compatible development boards. Provides reliable data transfer and stable 5V power for programming, debugging, and communication. Features a compact 30cm length and durable construction, making it ideal for students, hobbyists, prototyping, embedded systems development, and educational electronics projects.	Item Type: Data Cable Color: Blue Cable Length: 30 cm USB Type: Type-A to Type-B Weight: 19 g Shipping Weight: 0.025 kg Shipping Dimensions (L × W × H): 9 × 7 × 2 cm	USB Cable • USB A to B • Arduino Cable • Printer Cable • UNO Programming Cable
No Image	COC-00001-B	Foam Tape	CO - Consumables	3M, Tesa, Nitto Denko, Avery Dennison, Hi-Bond	The Foam Tape Roll (50mm x 6mm) is a durable adhesive foam tape used for sealing, mounting, insulation, and vibration damping. It provides strong adhesion with cushioning that absorbs shocks and reduces noise. It is widely used in DIY projects, automotive work, electronics mounting, and professional installations.	Color: Black Thickness: 6mm Material: EVA Foam Length: 5 Meter Width: 50mm	Foam Tape • Double Sided Tape • EVA Foam Tape • PE Foam Tape • Acrylic Foam Tape

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	COC-00006-A	Sandpaper Sheet	CO - Consumables	3M, Norton Abrasives	The Abrasive Sandpaper Sheet is used for smoothing, polishing, finishing, and surface preparation. It works on wood, metal, plastic, and other materials. It is commonly used in DIY projects, fabrication, electronics enclosures, and industrial finishing.	Product Type: Abrasive Sandpaper Sheet Abrasive Material: Aluminum Oxide / Silicon Carbide Grit Range: 60 – 3000 Grit Sheet Size: Standard 9x11 Inch	sandpaper • abrasive paper • sanding sheet • polishing paper • surface finishing
	COC-00007-A	Soldering Flux	CO - Consumables	Generic / OEM, Noel, Welfix, Mechanic, Pro'sKit	Soldering Flux Paste is used to improve solder flow and create strong, clean solder joints. It reduces oxidation and helps solder stick properly. It is commonly used in PCB work, wire connections, and electronics repair.	Item Type: Soldering Flux Paste Net Weight: 10 g Color: White / Yellow (as per brand batch) Usage: PCB, Wires, Electrical Components Packaging Type: Small Plastic Container	Flux Paste • 10g • Soldering Flux • PCB Repair • Low Smoke
	COC-00008-A	Desoldering Wick	CO - Consumables	Noel Solder Wire, Hakko, Velleman, Pro'sKit	Desoldering Wick (Solder Braid) is a copper mesh used to absorb and remove molten solder from PCB joints. It is commonly used for desoldering components, cleaning pads, and circuit repair in electronics work.	Material: Copper (Braided with Flux Coating) Width: 2.5 mm Usage: PCB Desoldering / Rework Shipping Weight: 0.008 kg Shipping Dimensions: 8 × 5 × 2 cm	Desoldering Wick • Solder Braid • 2.5mm • Copper • Flux Coated • PCB Rework • DIY • Repair • Lab Use
	COE-00001-A	Battery	CO - Consumables	Duracell, Energizer, Panasonic	The 9V Battery is a portable power source used in electronic devices like toys, sensors, smoke detectors, flashlights, and wireless systems. It provides stable DC voltage and is widely used in DIY projects, embedded systems, and backup power applications.	Nominal Capacity (mAh): 400-500 Nominal Voltage (V): 9 Compatibility: Toys, Smoke Alarms, Transistors Length (mm): 25 Width (mm): 15 Weight (g): 36	9V Battery • DC Battery • Alkaline Battery • NiMH Battery • Power Supply • Battery Pack
	COE-00001-C	Panasonic Battery	CO - Consumables	Panasonic	The Panasonic CR2025 is a 3V lithium coin cell battery designed for compact electronic devices. It offers long-lasting, stable power and is commonly used in key remotes, watches, calculators, medical devices, and small electronics.	Battery Type: Lithium Coin Cell Battery Size: CR2025 Chemistry: Lithium Manganese Dioxide (LiMnO ₂) Nominal Voltage: 3 V Nominal Capacity: 165 mAh Diameter: 20 mm Height: 2.5 mm Termination Style: Pressure Contacts Operating Temperature: –30°C to +60°C Weight (Unit): 2.3 g Shipping Weight: 0.008 kg Shipping Dimensions: 9.2 × 7.5 × 1 cm	CR2025 Battery • 3V Coin Cell • Lithium Battery • Panasonic Battery • Button Cell
	COE-00002-A	Hookup Wire Kit	CO - Consumables	Plusivo	The Assorted 30AWG Silicone Hookup Wire Kit is a flexible wiring set for electronics and prototyping. It includes multiple colored wires, heat shrink tubes, and accessories for easy circuit building. It is widely used in Arduino projects, robotics, and embedded system wiring.	Brand: Plusivo Item Type: Hookup Wire Kit Wire Gauge: 30 AWG Conductor Material: 0.08 mm Tinned Copper (Stranded) Insulation Material: Silicone Rated Voltage: 300 V Rated Temperature: 200°C Wire Length: 20 meters per color (6 colors) Total Wire Length: 120 meters Weight: 285 g Shipping Weight: 0.27 kg Shipping Dimensions (L × W × H): 15 × 7 × 7 cm	Hookup Wire • Silicone Wire • Stranded Wire • 30AWG • Prototyping • Electronics
	COE-00003-A	Hook-Up Wire	CO - Consumables	Alpha Wire, Belden, Adafruit	The Single Strand Hook-Up Wire is an electrical conductor used for circuit connections in prototyping, PCB wiring, robotics, and embedded systems. It provides reliable conductivity and flexible routing for low-voltage applications. It is commonly used in Arduino projects, DIY electronics, control circuits, and signal/power connections.	Wire Type: Single Strand Hook Up Wire Conductor Material: Copper Wire Gauge: 22AWG – 26AWG Rated Voltage: 300V Temperature Rating: 80°C	Breadboard Wire • Jumper Wire • hook up wire • single core wire • copper wire • PCB wire
No Image	EDD-00001-A	Laser Diode Module	ED - Electronic Device	OSRAM, Sharp, Rohm, Mitsubishi, Generic	The Mini 650nm 6mm 5mW Laser Dot Diode Module is a compact red laser emitter used in electronics and robotics projects. It operates on 3–5V DC and produces a focused laser dot. It is commonly used for alignment, sensing experiments, and Arduino-based educational and DIY projects.	Item Type: Laser Module Voltage Rating (V): 5 Weight (g): 2 Operating Temperature (°C): -10 to 50 Rated Power (mW): 5mW Wavelength (nm): 650	laser diode • laser • light emitter • optical • semiconductor • electronic device

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	EDD-00002-A	Red LED	ED - Electronic Device	Generic	Red Light Emitting Diode (LED) used as a visual indicator in electronic circuits and projects. Features a 10mm DIP package that emits bright red light with low power consumption and long operating life. Ideal for TVs, monitors, telephones, computers, status indicators, prototyping, educational experiments, DIY electronics, and general-purpose electronic applications.	Case/Package: DIP Diameter (mm): 10 Mounting Type: Through Hole Lens Appearance: Transparent Color: Red Forward Voltage (V): 2 Forward Current (mA): 30 Shipping Weight: 0.001 kg Shipping Dimensions (L × W × H): 1 × 1 × 1 cm	Red LED • Indicator LED • Through Hole LED • DIP LED • 10mm LED
	EDD-00002-D	Blue LED	ED - Electronic Device	Generic	Blue Light Emitting Diode (LED) used as a visual indicator in electronic circuits and projects. Features a 3mm round transparent package that emits bright blue light with low power consumption and long operating life. Ideal for TVs, monitors, telephones, computers, DIY electronics, prototyping, educational experiments, and professional applications.	Mounting Type: Through HoleThrough Hole LED Size (mm): 3 No. of Pins: 2 Color: Blue Head Shape: Round Shipping Weight: 0.001 kg Shipping Dimensions (L × W × H): 1 × 1 × 1 cm	Indicator LED • Through Hole LED • 3mm LED • DIP LED • Blue LED • Round LED
	EDD-00003-A	RGB LED Module	ED - Electronic Device	ED Series / XINGLIGHT, XINGLIGHT	5mm RGB LED module with a common cathode configuration and transparent lens for vibrant multi-color illumination. Combines red, green, and blue LEDs in a single through-hole package, enabling a wide range of colors through color mixing. Ideal for indicator panels, Arduino projects, DIY electronics, decorative lighting, visual feedback systems, and educational applications.	Manufacturer: XINGLIGHT Model No.: XL-A524SURSYGC Package: Plugin, D = 5mm Forward Current (mA): 20 Color Temperature: - Peak Wavelength (nm): 640 (Red) 572 (Green: Yellow) Luminous Intensity (mcd): 600 (Red) 550 (Green: Yellow) Lens Color: Colorless Transparent Diode Configuration: Common Cathode Wavelength – Dominant (nm): 635–640 (Red) 565–575 (Green: Yellow) Operating Temperature (°C): - 20 ~ +85 Illumination Color: Red, Green-Yellow Viewing Angle: 30° Lamp Holder Type: 5mm Round Head Power (mW): 50 Forward Voltage (Vf): 2.3V (Red) 2.4V (Green: Yellow) Mounting Type: Through Hole Compliance: RoHS	RGB LED • 5mm LED • Common Cathode LED • Indicator LED • Through Hole LED
	EDD-00004-A	7 Segment Display	ED - Electronic Device	Lite-On Technology, Kingbright, Generic / OEM	The 0.56" 1-Digit 7-Segment LED Display is a single-digit numeric display (0–9) using seven LED segments. It has a common cathode configuration with bright visibility. It is widely used in counters, clocks, meters, Arduino projects, and embedded systems.	Model: 7 Segment LED Display Digit Count: 1 Digit Display Size: 0.56 Inch Configuration Type: Common Cathode Emitting Color: Red Face Color: Black Number of Pins: 10 Forward Voltage (V): 1.8 – 2.2 (Typical for Red LED) Forward Current (mA): 20 (Typical) Mounting Type: PCB Through Hole Characteristics: High Brightness, Low Current Consumption, Easy to Use Length (Inch): 0.56 Shipping Weight: 0.02 kg Shipping Dimensions (L × W × H cm): 6 × 4 × 2	Arduino Compatible • 0.56" 7-Segment • 1 Digit Display • Red LED • Common Cathode • 5161AS • Through Hole • Numeric Display
	EDD-00004-B	7 Segment Display	ED - Electronic Device	Kingbright, Lite-On, Everlight, Broadcom	The Single Digit Common Anode 7-Segment Display is an LED display used to show numeric digits in electronic circuits. It offers bright, low-power number display and is easy to interface with microcontrollers. It is commonly used in Arduino projects, counters, timers, clocks, calculators, and control systems.	Display Type: 1 Digit 7 Segment LED Display Configuration: Common Anode Operating Voltage: 1.8V – 2.2V per Segment Number of Pins: 10 Pins Digit Height: 0.36 Inch – 0.56 Inch	Numeric Display • 7 segment display • common anode display • single digit display • LED display
	EDD-00005-A	Voltage Regulator	ED - Electronic Device	Texas Instruments, STMicroelectronics, ON Semiconductor, Fairchild Semiconductor	The LM7805 Voltage Regulator is a fixed-output regulator that provides a stable 5V DC supply from a higher input voltage. It includes built-in thermal overload and short-circuit protection for reliable operation. It is widely used in Arduino projects, IoT devices, sensor circuits, power supplies, and embedded systems.	Device Type: Linear Voltage Regulator Output Voltage: 5V DC Package Type: TO-92 Input Voltage Range: 7V – 20V Output Current: Up to 100mA	LM7805 • voltage regulator • 5V regulator • TO-92 regulator • linear regulator • power supply IC
	EDD-00005-B	Voltage Regulator	ED - Electronic Device	Texas Instruments, STMicroelectronics, ON Semiconductor, Fairchild Semiconductor	The LM7812 Voltage Regulator is a fixed-output regulator that provides a stable 12V DC supply from a higher input voltage. It includes built-in thermal overload and short-circuit protection for safe operation. It is widely used in power supplies, robotics, Arduino projects, communication modules, and embedded systems.	Device Type: Linear Voltage Regulator Output Voltage: 12V DC Package Type: TO-92 Input Voltage Range: 14V – 30V Output Current: Up to 100mA	voltage regulator • TO-92 regulator • linear regulator • power supply IC • LM7812 • 12V regulator

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EDD-00005-C	Voltage Regulator	ED - Electronic Device	Texas Instruments, STMicroelectronics, ON Semiconductor, Fairchild Semiconductor	The LM7806 Voltage Regulator is a fixed-output regulator that provides a stable 6V DC supply from a higher input voltage. It includes built-in thermal and short-circuit protection. It is widely used in Arduino projects, robotics, sensor circuits, battery-powered devices, and embedded systems requiring regulated power.	Device Type: Linear Voltage Regulator Output Voltage: 6V DC Package Type: TO-92 Input Voltage Range: 8V – 20V Output Current: Up to 100mA	voltage regulator • TO-92 regulator • linear regulator • power supply IC • LM7806 • 6V regulator
	EDK-00001-A	Capacitor	ED - Electronic Device	Nichicon, Panasonic, Rubycon, Nippon Chemi-Con	The Electrolytic Capacitor is a polarized component used for energy storage, voltage filtering, smoothing, and power supply stabilization. Its high capacitance makes it ideal for power supplies, amplifiers, motor drivers, Arduino projects, industrial electronics, and embedded systems.	Capacitor Type: Aluminum Electrolytic Capacitor Capacitance Range: 1µF – 10000µF Voltage Rating: 6.3V – 450V Operating Temperature: -40°C to +105°C	electrolytic capacitor • aluminum capacitor • polarized capacitor • filtering capacitor
	EDK-00002-A	Capacitor Kit	ED - Electronic Device	Generic, Murata, TDK, KEMET	The Capacitor Kit is a set of passive electronic components used to store electrical energy. It includes multiple capacitor values and is commonly used for filtering, smoothing, timing, and energy storage in electronic circuits. It is widely used in Arduino projects, power supplies, and embedded systems.	Quantity: 100pcs (5 each per Value) Voltage: 50V	Electronics • passive • capacitor • ceramic • capacitor set
	EDK-00003-A	Transistor Kit	ED - Electronic Device	ON Semiconductor, Fairchild Semiconductor, Toshiba, NXP Semiconductors	The TO-92 Transistor Kit is a collection of commonly used NPN and PNP transistors in the TO-92 package for switching, amplification, and signal processing. It is ideal for prototyping, circuit development, Arduino projects, robotics, sensor interfacing, motor control, educational electronics, and DIY applications.	Package Type: TO-92 Transistor Types: NPN and PNP Operating Voltage: Up to 60V Current Rating: Up to 800mA Current Rating: Up to 800mA	transistor kit • TO-92 transistor • NPN transistor • PNP transistor • semiconductor kit • switching transistor
	EDK-00004-A	Resistor Kit	ED - Electronic Device	Generic	This 600-piece metal film resistor kit includes 30 common values with 20 pieces each. It features 1/4W rating and 1% tolerance for accurate and reliable performance. It is commonly used in Arduino projects, prototyping, repairs, and DIY electronics.	Manufacturer: Generic Model Name: 600 pcs. Metal Film Resistor Assorted kit – 30 Kinds Power Rating: 1/4W Tolerance (%): 1 Material Type: Metal Film Package Type: Axial Lead Temperature Stability: High (Better than Carbon Film) Noise Level: Low Frequency Suitability: Suitable for RF and High-Frequency Applications Number of Values: 30 Total Quantity: 600 pcs Quantity per Value: 20 pcs Shipping Weight: 0.001 kg Shipping Dimensions (L × W × H): 1 × 1 × 1 cm	Ideal for prototyping • learning resistor color codes • testing • and circuit experiments.
	EDK-00005-A	Switch Kit	ED - Electronic Device	Omron, C&K, E-Switch	The Electronic Switch Kit is a collection of assorted switches, including push buttons, tactile, toggle, slide, and rocker switches. It provides reliable circuit control and user input for Arduino projects, robotics, embedded systems, IoT devices, DIY electronics, and prototyping applications.	Product Type: Electronic Switch Assortment Kit Switch Types: Push Button, Toggle, Slide, Rocker, Tactile Operating Voltage: 3V – 250V Current Rating: Up to 5A	Tactile Switch • switch kit • push button switch • toggle switch • slide switch • rocker switch
	EDM-00001-A	Tactile Switch	ED - Electronic Device	OMRON, E-Switch	This tactile push button switch kit includes 12×12×7.3mm momentary ON-OFF switches for reliable circuit input. Rated for 12V DC and 120mA, they provide good tactile feedback. The kit includes 25 color-coded keycaps and a storage box, making it ideal for Arduino projects, prototyping, DIY electronics, and educational use.	Item Type: Micro Switch Model: Tactile Push Button Switch Operation Mode: ON-OFF Contact Type: Momentary Current Rating: 120mA Operating Voltage: 12V DC Switch Type: Push Button Material: Metal and Plastic Mounting Type: Surface Mount Button Size (mm): 12×12×7.3 Operating Temperature (°C): -25 to +70 Lifespan: ~1000 Cycles Box Dimensions (mm): 127.1 × 68.3 × 21.9 Weight (g): 55 Shipping Weight: 0.06 kg Shipping Dimensions (L × W × H): 13 × 7 × 3 cm	Tactile Switch • Push Button • 12x12mm Switch • Momentary Switch • Arduino Button Kit
	EDM-00004-A	Alligator clips	ED - Electronic Device	Pomona Electronics, Mueller Electric, E-Z-Hook, Klein Tools	The Alligator Clips are spring-loaded metal clips used for temporary electrical connections in testing, prototyping, and electronics projects. They provide quick, secure contact with wires, batteries, sensors, and circuit terminals without soldering. Widely used in Arduino, robotics, educational kits, and troubleshooting applications.	Clip Type: Alligator / Crocodile Clip Material: Nickel Plated Steel Opening Width: 5mm – 15mm Electrical Rating: Low Voltage (	alligator clip • crocodile clip • test clip • battery clip • jumper clip • electronics clip • prototyping clip

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	EDM-00005-A	Prototype Board	ED - Electronic Device	MWduino / Generic	Complete prototyping kit with 400-point solderless breadboard and T-type GPIO breakout module. Includes 40-pin flat ribbon cable for clean and organized Raspberry Pi GPIO access. Ideal for Raspberry Pi projects, circuit prototyping, and educational experimentation.	Item Type: Cable Model: GPIO Compatibility: Raspberry Pi 3 Model B/B+ T: Connector Dimensions (mm): 72 × 59 × 12 T: Connector Weight (g): 13 Pitch (mm): 2.54 Cable Length (cm): 20 (Flat Ribbon) No. of Pins: 40 Width of Cable (cm): 5.5 Additional Specs (mm): 84 × 55 × 8.5 (L × W × H) No. of Tie Points: 400 Weight (g): 40 Material: ABS Plastic Shipping Weight: 0.06 kg Shipping Dimensions (L × W × H): 10 × 7 × 7 cm	Breadboard 400 Point • GPIO Breakout Board • Rasperry Pi GPIO • T-Type Adapter • 40 Pin Ribbon Cable
No Image	EDM-00005-B	Breadboard Mini	ED - Electronic Device	BusBoard Prototype, Twin Industries, Elegoo, SunFounder, Generic	The Mini Solderless Breadboard (170 Tie Points) is a compact prototyping board used for building circuits without soldering. It allows easy component placement and quick circuit testing. It is commonly used in Arduino projects, electronics experiments, and educational kits.	Item Type: Breadboard No. of Points: 170 Tie Points: 170 Material: ABS Mounting holes: M2 Length (mm): 48 Width (mm): 35 Height (mm): 9 Weight (g): 14	testing • Prototyping • Electronics • breadboard • mini breadboard • pcb • solderless
	EDM-00005-C	Full-size breadboard	ED - Electronic Device	BusBoard Prototype, Twin Industries, Elegoo, SunFounder, Generic	The MB102 830 Points Solderless Prototype Breadboard is a solderless board used for building and testing electronic circuits. It allows quick circuit assembly and modification without soldering. It is widely used in Arduino projects, educational labs, R&D, and electronics prototyping.	Item Type: Breadboard, Solderless Type No. of Points: 830 Material: ABS	testing • Prototyping • Electronics • breadboard • pcb • solderless • full size breadboard
	EDM-00006-A	Header Pin Strip	ED - Electronic Device	Samtec, Amphenol, Harwin, TE Connectivity, Molex	The Break-Away Header Pin Strip is a customizable PCB connector that can be cut to any length. It is used for through-hole mounting and provides flexible pin configurations for electronic circuits. It is commonly used in Arduino projects, embedded systems, shields, and prototyping applications.	Pitch Size: 2.54mm (0.1 Inch) Connector Type: Male Pin Header Number of Pins: 40 Pins Mounting Type: Through Hole Current Rating: 3A Typical	Male Header • Pin Header • PCB Connector • Arduino Header • Breakaway Header • 2.54mm Header
	EDM-00006-B	Right Angle Header	ED - Electronic Device	Molex, Harwin	The Right Angle Header Pins are 90-degree PCB connectors used for board-to-wire and board-to-board connections. Their angled design allows horizontal cable attachment, making them ideal for compact and space-saving PCB layouts. They are widely used in Arduino shields, embedded systems, robotics, prototyping, and electronic projects.	Connector Type: Right Angle Pin Header (90°) Pin Pitch: 2.54mm (Standard) Pin Count: 1x1 to multi-pin strips	Pin Header • PCB Connector • 90 degree header • right angle header • Arduino header pins
	EDM-00007-A	Female Header Strip	ED - Electronic Device	Samtec, Amphenol, Harwin, TE Connectivity, Molex	The 2×40 Pin Female Double Row Header Strip is a PCB connector with two rows of 40 pins used for board-to-board and module connections. It provides reliable and organized electrical connectivity and is commonly used in Arduino shields, Rasperry Pi interfaces, embedded systems, and prototyping projects.	Pitch Size: 2.54mm (0.1 Inch) Connector Type: Female Header Socket Number of Pins: 40 Pins Mounting Type: Through Hole Current Rating: 3A Typical	PCB Connector • 2.54mm Header • Female Header • Socket Header • Arduino Connector • Female Pin Header
	EDM-00008-A	Female Connector	ED - Electronic Device	Amphenol, TE Connectivity, Molex	The RJ11 4P4C Female Connector is a modular socket used for telephone and communication wiring applications. It provides a secure connection for telephone cables, modems, intercom systems, and low-speed data communication lines. It is widely used in landline networks, IoT projects, electronics prototyping, and communication systems.	Connector Type: RJ-11 4P4C Female Jack Number of Contacts: 4 Pin (4P4C) Material: Thermoplastic Housing with Metal Contacts Rated Voltage: Low Voltage Signal (	RJ11 connector • 4P4C female jack • telephone adapter • modular connector • communication jack
	EDM-00009-A	PCB Prototype Board	ED - Electronic Device	Bud Industries, Twin Industries, BusBoard Prototype Systems, Keyestudio, Generic / OEM	The 4×6 cm Universal PCB Prototype Board is a durable prototyping board used for building and testing electronic circuits. It features a HASL finish and precision drilled holes for easy soldering. It is commonly used in Arduino projects, embedded systems, and DIY electronics development.	Item Type: PCB Prototype Board Dimensions: 4 × 6 cm Length: 60 mm Width: 40 mm Board Thickness: 1.6 mm Copper Thickness: 1–4 oz Minimum Hole Size: 0.3 mm Weight (Unit): 6 g Pack Quantity: 2 Pieces Shipping Weight: 0.01 kg Shipping Dimensions: 7 × 5 × 1 cm	Double-Sided PCB • 4x6 cm • FR4 • Prototype Board • 2.54mm Pitch • DIY Electronics

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EDR-00001-100Z	Resistor - 100 Ohm	ED - Electronic Device	Yageo, Vishay, KOA Speer, TE Connectivity, Generic	The Carbon Film Resistor Pack includes multiple resistor values such as 100 Ω and others for convenience. These resistors offer stable performance with low noise and are commonly used in Arduino projects, RF circuits, and general electronic applications.	Series: – Resistance (Ohm): 100 Tolerance (%): 1 Power Rating: 250mW Composition: Metal Film Temperature Coefficient: $\pm$ 50ppm/ $^{\circ}$ C Operating Temperature ($^{\circ}$ C): -40 ~ 150 Case/Package: Axial Length (mm): 6 Mounting Type: Through Hole Shipping Weight: 0.001 kg Shipping Dimensions: 1 $\times$ 1 $\times$ 1 cm	resistor • 100ohm • carbon film • passive component
	EDR-00001-10K0	Resistor - 10K Ohm	ED - Electronic Device	Yageo, Vishay, KOA Speer, TE Connectivity, Generic	The Carbon Film Resistor Pack is a set of resistors with multiple values like 10 Ω , 100 Ω , and 1K Ω . They offer stable performance, low noise, and are widely used in Arduino projects, embedded systems, and general electronic circuits.	Power: 1/4 W Resistance: 100 Ω Resistance Tolerance: 5% Type: Carbon Film Resistors	Through Hole • carbon film • 10k resistor • 0.25w • passive • axial
	EDR-00001-1K00	Resistor - 1K Ohm	ED - Electronic Device	Yageo, Vishay, KOA Speer, TE Connectivity, Generic	The 1K Ohm Carbon Film Resistor is a passive component used to limit current and control voltage in electronic circuits. It offers reliable performance with good stability and low noise and is commonly used in Arduino projects, signal processing, and embedded systems.	Series: – Resistance (Ohm): 1k Tolerance (%): 1 Power Rating: 250mW Composition: Metal Film Temperature Coefficient: $\pm$ 50ppm/ $^{\circ}$ C Operating Temperature ($^{\circ}$ C): -40 ~ 150 Case/Package: Axial Length (mm): 6 Mounting Type: Through Hole Shipping Weight: 0.001 kg Shipping Dimensions: 1 $\times$ 1 $\times$ 1 cm	carbon film • 0.25w • passive • 1k resistor
	EDR-00001-1M00	Resistor - 1M Ohm	ED - Electronic Device	Yageo, Vishay, KOA Speer, TE Connectivity, Generic	The 1M Ohm 0.25W Metal Film Resistor is a passive component used to provide high resistance and control current in electronic circuits. It offers stable, precise performance with low noise and is commonly used in signal conditioning, sensor circuits, Arduino projects, and embedded systems.	Series: - Resistance (Ohm): 1M Tolerance (%): 1 Power Rating: 250mW Composition: Metal Film Temperature Coefficient: $\pm$ 50ppm/ $^{\circ}$ C Operating Temperature ($^{\circ}$ C): -40 ~ 150 Case/Package: Axial Length (mm): 6 Mounting Type: Through Hole Shipping Weight: 0.001 kg Shipping Dimensions: 1 $\times$ 1 $\times$ 1 cm	0.25w • passive • 1m resistor • metal film
	EDR-00001-220Z	Resistor - 220 Ohm	ED - Electronic Device	Yageo, Vishay, KOA Speer, TE Connectivity, Generic	The 220 Ohm 0.25W Metal Film Resistor is a passive component used to limit current and control voltage in electronic circuits. It provides stable, accurate resistance with low noise and high reliability. It is commonly used in LED circuits, Arduino projects, and embedded systems.	Series: – Resistance (Ohm): 220 Tolerance (%): 1 Power Rating: 250mW Composition: Metal Film Temperature Coefficient: $\pm$ 50ppm/ $^{\circ}$ C Operating Temperature ($^{\circ}$ C): -40 ~ 150 Case/Package: Axial Length (mm): 6 Mounting Type: Through Hole Shipping Weight: 0.001 kg Shipping Dimensions: 1 $\times$ 1 $\times$ 1 cm	
	EDR-00001-330Z	Resistor - 330 Ohm	ED - Electronic Device	Yageo, Vishay, KOA Speer, TE Connectivity, Generic	The 330 Ohm 0.25W Metal Film Resistor is a passive component used to limit current and control voltage in electronic circuits. It offers stable, accurate resistance with low noise and is commonly used in LED circuits, Arduino projects, and embedded systems.	Series: – Resistance (Ohm): 330 Tolerance (%): 1 Power Rating: 250mW Composition: Metal Film Temperature Coefficient: $\pm$ 50ppm/ $^{\circ}$ C Operating Temperature ($^{\circ}$ C): -40 ~ 150 Case/Package: Axial Length (mm): 6 Mounting Type: Through Hole Shipping Weight: 0.001 kg Shipping Dimensions: 1 $\times$ 1 $\times$ 1 cm	
	EDR-00001-470Z	Resistor - 470 Ohm	ED - Electronic Device	Yageo, Vishay, KOA Speer, TE Connectivity, Generic	The 470 Ohm 0.25W Metal Film Resistor is a passive component used to limit current and control voltage in electronic circuits. It provides stable, precise resistance with low noise and is commonly used in LED circuits, Arduino projects, and embedded systems.	Power: 1/4 W Resistance: 47k Ω Resistance Tolerance: 5% Type: Carbon Film Resistors	resistor • carbon film • 0.25w • passive • axial • 470ohm
	EDR-00001-680Z	Resistor - 680 Ohm	ED - Electronic Device	Yageo, Vishay, KOA Speer, TE Connectivity, Generic	The 680 Ohm 0.25W Metal Film Resistor is a passive component used to limit current and control voltage in electronic circuits. It offers stable, precise resistance with low noise and is commonly used in LED circuits, Arduino projects, and embedded systems.	Series: – Resistance (Ohm): 680 Tolerance (%): 1 Power Rating: 250mW Composition: Metal Film Temperature Coefficient: $\pm$ 50ppm/ $^{\circ}$ C Operating Temperature ($^{\circ}$ C): -40 ~ 150 Case/Package: Axial Length (mm): 6 Mounting Type: Through Hole Shipping Weight: 0.001 kg Shipping Dimensions: 1 $\times$ 1 $\times$ 1 cm	resistor • carbon film • 0.25w • passive • axial • 680ohm
	EDR-00002-10K0	Potentiometer	ED - Electronic Device	ED Series / Generic Compatible, Bourns, Alpha, Omega	10K Ω rotary potentiometer used for adjusting voltage, current, and signal levels in electronic circuits. Features smooth single-turn rotation, a durable 15mm shaft, and through-hole mounting for easy installation. Ideal for audio volume control, Arduino analog inputs, sensor calibration, circuit tuning, embedded systems, prototyping, and educational electronics projects.	Manufacturer: Generic Resistance (Ohm): 10K Tolerance (%): 20 Temperature Coefficient: $\pm$ 100ppm/ $^{\circ}$ C Operating Temperature ($^{\circ}$ C): -40 to 80 Mounting Type: Through Hole Shaft Type: 15mm Rotary Shaft Adjustment Type: Single Turn Length (mm): 20 Width (mm): 17 (Body Diameter) Height (mm): 24 Weight (g): 6 Shipping Weight: 0.001 kg Shipping Dimensions (L $\times$ W $\times$ H): 1 $\times$ 1 $\times$ 1 cm	10K Potentiometer • Rotary Pot • Variable Resistor • WH148 Potentiometer • 3-Pin Pot

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
No Image	EDS-00003-A	Temperature Sensor	ED - Electronic Device	Maxim Integrated, Dallas Semiconductor, Adafruit, SparkFun	The DS18B20 Temperature Sensor is a digital temperature sensor that provides accurate temperature measurements using the One-Wire communication protocol. It allows multiple sensors to share a single data line and delivers calibrated digital readings. The sensor is widely used in weather stations, automation systems, industrial monitoring, IoT devices, and Arduino projects.	Sensor Type: Digital Temperature Sensor Communication: One-Wire Interface Operating Voltage: 3.0V – 5.5V Temperature Range: -55°C to +125°C	Temperature Sensor • digital sensor • DS18B20 • one wire sensor • Arduino temperature sensor
	EDS-00004-A	LM35 Sensor	ED - Electronic Device	Texas Instruments, National Semiconductor, STMicroelectronics	The LM35 Temperature Sensor Module is an analog temperature sensor that provides a voltage output directly proportional to temperature in degrees Celsius. It offers accurate temperature measurement and easy interfacing with Arduino and other microcontrollers. It is widely used in weather stations, industrial control systems, robotics, IoT devices, and educational projects.	Sensor Type: Analog Temperature Sensor Output: Linear Analog Voltage (10mV/°C) Operating Voltage: 4V – 30V Temperature Range: 0°C to 100°C (typical)	Arduino Sensor • Temperature Sensor • analog sensor • LM35 • thermal sensor • IoT sensor
	EDS-00005-A	IR Receiver Module	ED - Electronic Device	Vishay, Everlight, Sharp, Panasonic	The IR Receiver Module is an infrared sensor used to receive and decode signals from remote controls. It detects modulated IR light, typically at 38kHz, and converts it into digital signals for microcontrollers. It is widely used in Arduino projects, robotics, home automation, TV remote decoding, and embedded systems.	Sensor Type: Infrared Receiver Module Operating Voltage: 3.3V – 5V Carrier Frequency: 38kHz (typical) Detection Range: 5m – 10m (approx.) Wavelength: ~940nm Infrared	IR Receiver • Infrared Sensor • IR Decoder • IR remote sensor • TSOP sensor • Arduino IR module
	EDS-00006-A	IC NE 555	ED - Electronic Device	Texas Instruments, STMicroelectronics, ON Semiconductor, NXP, Generic	The NE555 Timer IC is a precision timing chip used to generate delays, pulses, and oscillations. It works in monostable and astable modes and is widely used in timers, LED flashing circuits, pulse generators, and electronics projects.	Case/Package: PDIP 8 Min Supply Voltage: 4.5 Max. Supply Voltage (V): 16 Product Type: Timers & Support Products Processor Series: NE555 No. of Timers/Counters: 1 Operating Temperature (°C): 0 to 70 Dimensions (L x W x H) mm: 9.81 x 4.57 x 6.35 Mounting Type: Through Hole	Electronics • ne555 • timer ic • oscillator • pulse generator • ic • astable
	EDT-00001-B	Alcohol Gas Sensor	ED - Electronic Device	Hanwei Electronics, Winsen	The Alcohol Gas Sensor is a gas detection device used to detect alcohol vapors and ethanol concentration in the air. It provides an analog output proportional to gas levels and can be easily interfaced with Arduino, Raspberry Pi, and other microcontrollers. It is commonly used in breath analyzers, safety systems, industrial monitoring, and IoT projects.	Sensor Type: Alcohol / Ethanol Gas Sensor Target Gas: Ethanol (C?H? OH), Alcohol Vapors Operating Voltage: 5V DC Warm: up Time: 20–48 hours (initial), few minutes per use	alcohol sensor • Gas Detector • ethanol sensor • MQ-3 sensor • breath alcohol sensor
	EDT-00001-C	Methane Gas Sensor	ED - Electronic Device	Hanwei Electronics, Winsen, Figaro Engineering	The Methane Gas Sensor is a gas detection device used to detect methane (CH?), CNG, and natural gas leaks. It provides an analog output proportional to gas concentration and can be easily interfaced with Arduino and other microcontrollers. It is widely used in gas leak detection, industrial safety, smart homes, and IoT monitoring systems.	Sensor Type: Methane / CNG Gas Sensor Target Gas: CH? (Methane), CNG, Natural Gas Operating Voltage: 5V DC Warm: up Time: 20–60 seconds Detection Range: ~200–10000 ppm (typical)	methane sensor • CNG sensor • MQ-4 sensor • gas leak detector • natural gas sensor
	EDT-00001-E	LPG Gas Sensor	ED - Electronic Device	Hanwei Electronics, Winsen, Figaro Engineering	The LPG Gas Sensor is a gas detection device used to detect LPG, butane, and propane gas leaks. It provides an analog output based on gas concentration and can be easily interfaced with Arduino and other microcontrollers. It is widely used in gas leak alarms, smart home safety systems, industrial monitoring, and IoT projects.	Sensor Type: LPG / Butane Gas Sensor Target Gas: LPG, Butane, Propane Operating Voltage: 5V DC Warm: up Time: 20–60 seconds Detection Range: ~200–10000 ppm (typical)	LPG Sensor • Propane Sensor • Butane Sensor • gas leak detector • MQ-6 sensor

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EDT-00001-G	Air Quality Sensor	ED - Electronic Device	Winsen, Hanwei Electronics	The Air Quality Sensor is an electronic device used to detect harmful gases and monitor pollution levels in the environment. It can sense gases such as CO, CO ?, smoke, LPG, methane, and volatile compounds depending on the sensor type. It is widely used in environmental monitoring, smart homes, industrial safety, IoT systems, and Arduino projects.	Sensor Type: Multi-Gas Air Quality Sensor Device Detected Gases: CO, CO?, Smoke, LPG, Methane, VOCs Operating Voltage: 5V DC Warm: up Time: 20–60 seconds	gas sensor • air quality device • pollution detector • MQ sensor • air monitoring system
	EDT-00002-A	LDR Module	ED - Electronic Device	Advanced Photonix, Token Electronics, Excelitas Technologies, Luna Optoelectronics	The LDR (Light Dependent Resistor) is a light-sensitive component whose resistance varies with light intensity. Its resistance decreases in bright light and increases in darkness. It is widely used in automatic lighting systems, light meters, solar trackers, security devices, and electronics projects for light detection and control.	Operating Voltage: 3.3V – 5V Sensor Type: Light Dependent Resistor Output Type: Analog Resistance Output Resistance Range: 200? – 1M?	Light Sensor • analog sensor • LDR sensor • photoresistor • light dependent resistor
	EDT-00003-A	Piezo Sensor	ED - Electronic Device	Murata Manufacturing, SparkFun Electronics, Measurement Specialties, TE Connectivity	The Piezoelectric Ceramic Vibration Sensor is an analog sensor used to detect vibration, knocks, impacts, touch, and pressure. It generates a voltage through the piezoelectric effect when mechanical force is applied. The sensor is widely used in vibration monitoring, touch sensing, security systems, musical instruments, and Arduino-based projects.	Operating Voltage: 3.3V – 5V Output Type: Analog Voltage Output Sensor Type: Piezoelectric Ceramic Frequency Range: 1Hz – 10KHz	Knock Sensor • piezoelectric sensor • vibration sensor • analog sensor • ceramic sensor
	EDT-00004-A	Speaker	ED - Electronic Device	CUI Devices, PUI Audio, Soberton, Visaton	The Speaker is an electronic audio output device used to convert electrical audio signals into audible sound. It is commonly used in embedded systems, multimedia devices, alarms, robotics, IoT applications, and educational projects. The module can reproduce tones, voice, music, and alert sounds, making it suitable for audio feedback, notifications, and sound generation in electronic systems.	Operating Voltage: 3V – 12V Speaker Type: Dynamic Speaker Impedance: 4? / 8? Power Rating: 0.5W – 3W Frequency Range: 300Hz – 20KHz	Sound Module • speaker • audio output • buzzer speaker • multimedia speaker • embedded audio device
	EDT-00006-A	FSR Round Module	EM - Electronic-Electrical Modules	Interlink Electronics, SparkFun Electronics, DFRobot, Adafruit Industries, Ohmite, Tekscan	The Round Force Sensitive Resistor (FSR) is a pressure sensor with a 0.5-inch sensing area that changes resistance based on applied force. It detects pressure in the 100g to 10kg range and can be easily interfaced with microcontrollers using a voltage divider circuit. It is widely used in touch sensing, load detection, robotics, and Arduino projects.	Diameter: 1.8 cm Max Pressure: 10 Kg Min Pressure: 100 gm Sensing area: 1.4 cm (Dia.) Shape: Circular Length: 6 cm	FSR Sensor • Force Sensor • Pressure Sensor • Round Force Sensor • Force Sensitive Resistor
	EDT-00006-B	Force Sensor	EM - Electronic-Electrical Modules	Interlink Electronics, SparkFun Electronics, DFRobot, Adafruit Industries, Ohmite	The Force Sensitive Resistor (FSR) is a pressure sensor that changes resistance based on applied force. It detects pressure in the range of 100g to 10kg and is commonly used with voltage divider circuits. It is widely used in touch sensing, load detection, robotics, and Arduino-based projects.	Actuation Force: 0.1 N Clock Speed: 16MHz	FSR Sensor • Pressure Sensor • Force Sensitive Resistor • Square Force Sensor • Touch Sensor
	EDT-00008-A	Passive Buzzer	ED - Electronic Device	CUI Devices, Keystudio, Generic Electronics	The Passive Buzzer Module is a sound-producing device that requires an external PWM or frequency signal to generate audio. Unlike active buzzers, it can produce different tones, melodies, and alarms when controlled by microcontrollers such as Arduino, ESP32, Raspberry Pi, and STM32. It is widely used in notification, audio, and educational electronics projects.	Product Type: Passive Buzzer Module Operating Voltage: 3.3V – 5V DC	Piezo Buzzer Module • Passive Buzzer Module • KY-006 Buzzer • Arduino Passive Buzzer

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EDT-00009-A	Active Buzzer Module	ED - Electronic Device	CUI Devices, Keyestudio, Generic Electronics	The Active Buzzer Module with Internal Oscillator is an electronic sound device that produces a fixed beep when power is applied. Unlike passive buzzers, it contains a built-in oscillator circuit and does not require PWM signals or external frequency generation from a microcontroller. It is widely used in alarms, notifications, warning systems, timers, and Arduino-based electronics projects.	Product Type: Active Buzzer Module Oscillator: Internal Operating Voltage: 3.3V – 5V DC Frequency: Approx. 2kHz – 4kHz	Arduino Buzzer • Active Buzzer Module • Self Oscillating Buzzer • 5V Buzzer Module • Piezo Buzzer Module
	EMA-00001-A	I2C LCD Display	EM - Electronic-Electrical Modules	MWduino / Generic, KEYESTUDIO, SunFounder	16x2 character LCD module with an integrated I2C interface for simplified wiring and reduced pin usage. Features a blue backlight with white characters for clear, high-contrast visibility. Ideal for Arduino, Raspberry Pi, microcontroller projects, embedded systems, sensor monitoring, and applications requiring a compact and easy-to-read 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
No Image	EMA-00002-A	OLED Display	EM - Electronic-Electrical Modules	Solomon Systech, SparkFun, DFRobot	The SSD1306 0.96-inch I2C OLED Display is a compact monochrome graphical display module widely used with Arduino, ESP32, Raspberry Pi, and other microcontrollers. It features a 128×64 pixel resolution and uses the SSD1306 OLED driver IC with an I2C communication interface. The display provides high contrast, low power consumption, and is ideal for showing text, graphics, sensor data, and menus.	Product Type: OLED Display Module Display Size: 0.96 inch Driver IC: SSD1306 Resolution: 128 × 64 Pixels Operating Voltage: 3.3V – 5V DC	SSD1306 OLED Display • 0.96 OLED Module • I2C OLED Display • OLED Screen Module
	EMA-00003-A	RGB LED Strip	EM - Electronic-Electrical Modules	Worldsemi, APA Electronics, Pololu	The Programmable RGB 60 LED Strip is an addressable LED strip with 60 individually controllable RGB LEDs per meter. Based on devices such as WS2812B or SK6812, each LED can display independent colors and brightness levels. It is widely used for lighting effects, animations, smart lighting, decorative displays, and Arduino projects.	Product Type: Programmable RGB LED Strip LED Type: WS2812B / WS2811 LEDs Per Meter: 60 LED Colors: RGB Full Color Operating Voltage: 5V DC (WS2812B) / 12V (WS2811)	Programmable RGB LED Strip • WS2812B LED Strip • NeoPixel LED Strip • Addressable RGB Strip
No Image	EMA-00003-B	RGB NeoPixel 8 LED	EM - Electronic-Electrical Modules	Worldsemi Co., Ltd., Generic / OEM	The WS2812B 8-Bit RGB LED Module features 8 individually addressable 5050 RGB LEDs with built-in driver ICs for precise color and brightness control. Operating on 5V and using a single-wire communication protocol, it enables vibrant lighting effects and animations with minimal wiring. Ideal for Arduino projects, IoT devices, decorative lighting, displays, and interactive electronic creations.	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-00003-C	RGB LED	EM - Electronic-Electrical Modules	Worldsemi, CJMCU, SparkFun Electronics	The CJMCU WS2812 RGB LED Breakout Module is a compact addressable RGB LED board featuring a WS2812B smart LED on a black PCB. It allows independent control of color and brightness using a single data pin. It is widely used in lighting effects, displays, wearables, decorative projects, and Arduino/ESP32 applications.	Product Type: Addressable RGB LED Breakout Module LED Type: WS2812B PCB Color: Black LED Colors: Red, Green, Blue (RGB) Operating Voltage: 5V DC	Addressable RGB LED • CJMCU WS2812 Black Module • WS2812 RGB LED Black • NeoPixel Black PCB
	EMA-00003-D	RGB LED Ring	EM - Electronic-Electrical Modules	Worldsemi, CJMCU, SparkFun	The RGB LED Ring 12x is a circular addressable LED module featuring 12 individually controllable WS2812B (NeoPixel-type) RGB LEDs arranged in a ring. Each LED has an integrated driver IC, enabling independent control of color and brightness using a single data line. The module is widely used in lighting effects, animations, wearables, clocks, robotics, and Arduino or ESP32-based projects.	Product Type: RGB LED Ring Module Number of LEDs: 12 LED Type: WS2812B LED Colors: RGB Full Color Operating Voltage: 5V DC	RGB LED Ring 12x • WS2812 LED Ring • NeoPixel Ring 12 LED • Addressable RGB Ring • 12 Pixel LED Ring

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EMA-00003-E	Coin Battery	EM - Electronic-Electrical Modules	Panasonic, Maxell, Energizer, Sony	The CR2032 3V Lithium Coin Battery is a compact, long-lasting power source used in small electronic devices like watches, calculators, remotes, toys, and embedded systems. It provides a stable 3V output and is widely used in low-power applications due to its long shelf life and reliability.	Battery Type: Lithium Coin Cell Battery Size: CR2025 Chemistry: Lithium Manganese Dioxide (LiMnO ₂) Nominal Voltage: 3 V Nominal Capacity: 165 mAh Diameter: 20 mm Height: 2.5 mm Termination Style: Pressure Contacts Operating Temperature: -30°C to +60°C Weight (Unit): 2.3 g Shipping Weight: 0.008 kg Shipping Dimensions: 9.2 × 7.5 × 1 cm	CR2025 Battery • 3V Coin Cell • Lithium Battery • Panasonic Battery • Button Cell
	EMA-00003-F	RGB LED Module	EM - Electronic-Electrical Modules	Worldsemi, CJMCU, SparkFun	The CJMCU WS2812 RGB LED Breakout Module is a compact addressable LED board based on the WS2812 intelligent LED driver IC. It combines a full-color RGB LED with an integrated controller, enabling independent control of color and brightness through a single data line. The module is widely used in decorative lighting, LED displays, animations, wearable electronics, and Arduino or ESP32 projects.	Product Type: Addressable RGB LED Module LED Type: WS2812B LED Colors: Red, Green, Blue (RGB) Operating Voltage: 5V DC	CJMCU WS2812 Module • WS2812 RGB LED • NeoPixel LED Module • Addressable RGB LED • WS2812 Breakout Board
	EMA-00004-A	LED Matrix	EM - Electronic-Electrical Modules	Analog Devices, Keyestudio, SparkFun	The 8x8 LED Dot Matrix Display with MAX7219 Driver features a 64-LED matrix and an integrated MAX7219 controller for easy serial communication. It reduces microcontroller pin usage and is used to display text, symbols, patterns, and animations in Arduino, ESP32, Raspberry Pi, and embedded projects.	Product Type: LED Matrix Display Module Matrix Size: 8 × 8 Driver IC: MAX7219 Number of LEDs: 64 LEDs Operating Voltage: 5V DC	MAX7219 LED Matrix Module • 8x8 LED Matrix Display • MAX7219 Dot Matrix • Arduino LED Matrix
	EMA-00004-B	LED Matrix Display	EM - Electronic-Electrical Modules	Kingbright, Everlight Electronics, Luckylight, SparkFun	The 8x8 Single Colour LED Dot Matrix Display is an LED module with 64 LEDs arranged in an 8×8 grid. It is used to display characters, symbols, patterns, scrolling text, and simple animations. Compatible with Arduino, ESP32, and Raspberry Pi, it is ideal for display and educational projects.	Product Type: LED Dot Matrix Display Matrix Size: 8 × 8 Number of LEDs: 64 LEDs Display Color: Red / Green / Yellow (varies) Operating Voltage: 2V – 5V	8x8 LED Matrix • LED Dot Matrix Display • Single Color LED Matrix • 8x8 Dot Matrix Module
	EMA-00005-A	Audio Amplifier	EM - Electronic-Electrical Modules	Diodes Incorporated, SparkFun	The 2x3W Mini Digital Amplifier Board is a compact stereo Class-D audio amplifier module commonly based on the PAM8403 IC. It delivers up to 3W + 3W stereo output from a 5V power supply, providing efficient and low-distortion audio amplification. The module is widely used in portable speakers, Bluetooth speaker systems, DIY audio projects, multimedia devices, and Arduino-based sound applications.	Product Type: Stereo Audio Amplifier Module Amplifier IC: PAM8403 Amplifier Type: Class-D Output Power: 2 × 3W Operating Voltage: 2.5V – 5.5V DC Recommended Voltage: 5V	PAM8403 Amplifier Board • 2x3W Stereo Amplifier • Mini Digital Amplifier • Class-D Audio Amplifier
No image	EMA-00006-A	Buzzer module	EM - Electronic-Electrical Modules	Generic, Keyes, Elegoo, SunFounder, DFRobot	The Small PCB Mountable 5V Buzzer is an audio alert component used to produce sound in electronic circuits. It operates on 5V DC and is commonly used in alarms, timers, Arduino projects, and embedded systems for simple audio feedback and notifications.	Voltage Rating: 5VDC Operating Voltage (VDC): 5 Pin Spacing (mm): 6 Material: Plastic Color: Black Width (mm): 12 (Body Diameter) Height (mm): 8 Weight (g): 1 (approx.) (each) Shipping Weight: 0.001 kg Shipping Dimensions: 1 × 1 × 1 cm	buzzer • buzzer module • sound • alarm • electronic • module • 5v
	EMA-00006-B	Passive Buzzer	EM - Electronic-Electrical Modules	ED Series / Generic Compatible, KEYESTUDIO	Passive buzzer module for generating variable tones using PWM or frequency control. Operates on 1.5V–15V DC and produces sound in the 1.5–2.5 kHz range. Ideal for alarms, alerts, educational projects, Arduino applications, and microcontroller-based sound generation. Compact, reliable, and easy to interface with electronic circuits and development boards.	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-00007-A	7-Segment Display	EM - Electronic-Electrical Modules	Titan Micro Electronics, Keyestudio, DFRobot, SparkFun	The 4-Digit 7-Segment Display Module is an LED display used to show numbers, timers, counters, clocks, and sensor data. Many versions use the TM1637 driver IC, requiring only two signal pins for control. It is widely used in Arduino, automation, and embedded system projects.	Product Type: 4 Digit LED Display Module Display Type: 7 Segment LED Driver IC: TM1637 Digits: 4 Operating Voltage: 3.3V – 5V DC	4 Digit 7 Segment Display • TM1637 Display Module • 7 Segment LED Module • Digital Display Module

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EMA-00008-A	1 Channel Relay	EM - Electronic-Electrical Modules	Single Relay, Generic / OEM	The Single Channel 12V Relay Module is used to control high-voltage AC/DC devices using low-voltage microcontrollers. It supports high/low-level triggering and includes LED indicators. It is commonly used in home automation, IoT, and motor control 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 x W x H cm): 7 x 4 x 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-00008-B	2 Channel Relay	EM - Electronic-Electrical Modules	Songle, Keyes, SunFounder, Elegoo, Generic	The 5V 2 Channel Relay Module is used to control high-power AC and DC devices using low-power microcontrollers like Arduino. It supports up to 10A switching per channel and includes LED indicators for status. It is commonly used in home automation, IoT systems, and industrial control applications.	No. of Channels: 2 Operating Temperature Range: -40 to 85 °C Operating Voltage: 2.5 ~ 5.5 V (DC) Switching Voltage(AC): 240V@10A Switching Voltage(DC): 30V@10A Trigger Current: 20 mA Trigger Voltage: 5V (DC) Length: 4.3 cm Height: 1.7 cm Width: 4.3 cm	arduino • module • 5v • relay module • 2 channel • switching • control
	EMA-00009-A	Audio Playback	EM - Electronic-Electrical Modules	Nuvoton Technology Corporation, Generic / OEM	The ISD1820 Voice Recording & Playback Module supports up to 10 seconds of audio recording stored in non-volatile memory. It features an onboard electret microphone, push-button recording and playback controls, and support for external triggering through a microcontroller. Ideal for Arduino projects, voice prompts, alarms, interactive electronics, educational kits, and sound playback applications.	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 Ω, 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 x W x H cm): 8 x 6 x 3	Arduino Compatible • ISD1820 Module • Voice Recorder • 10s Audio • Playback Module • Onboard Mic • 8Ω Speaker • Sound Board
	EMA-00010-A	2 Channel Driver	EM - Electronic-Electrical Modules	STMicroelectronics, Keyestudio, SparkFun, HiLetgo	The L298N 2 Channel Motor Driver Module is a dual H-Bridge motor control board used to drive two DC motors or one stepper motor independently. Based on the L298N IC, it works with Arduino, ESP32, and Raspberry Pi. It includes a heat sink, protection diodes, and a 5V regulator, making it ideal for robotics and automation projects.	Product Type: Dual Motor Driver Module Driver IC: L298N Motor Channels: 2 DC Motors Motor Voltage: 5V ~ 35V DC Logic Voltage: 5V	DC Motor Driver Board • L298N Motor Driver • L298N 2 Channel Driver • Dual H-Bridge Module
No Image	EMA-00010-B	Motor Driver Module	EM - Electronic-Electrical Modules	Texas Instruments, STMicroelectronics, NXP Semiconductors, ON Semiconductor, Toshiba	The L293D Motor Driver Module is a dual H-bridge IC used to control DC and stepper motors in embedded systems. It enables motor direction control and speed regulation using PWM signals from microcontrollers like Arduino. The module supports up to 12V and 600mA per channel, making it suitable for robotics, automation systems, and DIY electronics projects requiring reliable motor control.	Driver IC: L293D Motor Type: DC & Stepper Motor Operating Voltage: 4.5V ~ 12V Current Rating: 600mA per channel Peak Current: 600mA Control Method: Direction + PWM Speed Control Number of Channels: 2 (H-Bridge) Arduino Compatible: Yes (via wires) Polarity Protection: NO Cooling Fan: NO Dimensions: 48 x 34 x 14 mm Weight: 15g	motor • l293d • motor driver • dc motor • stepper motor • robotics • arduino • h-bridge • pwm
	EMA-00010-C	L293D Motor Driver	EM - Electronic-Electrical Modules	Texas Instruments, STMicroelectronics, SparkFun	The L293D Motor Driver IC is a dual H-Bridge driver used to control the speed and direction of DC and stepper motors. It acts as an interface between microcontrollers and higher-current motors, enabling reliable bidirectional motor control. It is widely used in robotics, automation, and embedded projects.	Product Type: Motor Driver IC Driver Type: Dual H-Bridge Motor Channels: 2 DC Motors / 1 Stepper Motor Logic Voltage: 4.5V ~ 7V Motor Supply Voltage: 4.5V ~ 36V	Arduino Motor Driver • Stepper Motor Driver • Robot Motor Controller • L293D Motor Driver • L293D IC • Dual H-Bridge Driver • DC Motor Driver IC • L293D Driver Module
No Image	EMA-00010-D	Dual Motor Driver	EM - Electronic-Electrical Modules	Texas Instruments, STMicroelectronics, SparkFun	The L293D Motor Driver IC is a dual H-Bridge driver used to control DC and stepper motors with microcontrollers like Arduino, ESP32, and Raspberry Pi. It enables low-power circuits to drive higher-current motors safely and supports bidirectional motor control with built-in protection diodes.	Product Type: Motor Driver IC IC Type: Dual H-Bridge Motor Channels: 2 DC Motors or 1 Stepper Motor Logic Voltage: 4.5V ~ 7V Motor Voltage: 4.5V ~ 36V Output Current: 600mA per channel	Arduino Motor Driver • Stepper Motor Driver • Robot Motor Controller • L293D Motor Driver • L293D IC • Dual H-Bridge Driver • DC Motor Driver IC • L293D Driver Module

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EMA-00010-E	L298N Driver	EM - Electronic-Electrical Modules	STMicroelectronics, STMicroelectronics, SparkFun, Keyestudio	The L298N Motor Driver Module is a dual H-Bridge motor driver used to control the speed and direction of DC and stepper motors. It allows Arduino, ESP32, and other microcontrollers to drive motors requiring higher power. It is widely used in robotics, automation, and motor control projects.	Product Type: Motor Driver Module IC Used: L298N Dual H-Bridge Motor Channels: 2 DC motors or 1 stepper motor Operating Voltage (Logic): 5V Motor Voltage: 5V – 35V DC	L298 Motor Driver • L298N Module • Dual H-Bridge Motor Driver • DC Motor Driver Board • Arduino Motor Driver • Stepper Motor Driver • Robot Motor Controller • L298N H-Bridge Module
	EMC-00001-A	RF Module Kit	EM - Electronic-Electrical Modules	HopeRF, Wireless Tag	The RF 433/315 MHz Transmitter and Receiver Module Kit is a wireless communication system used to send and receive data using radio frequency signals. It operates at 433 MHz or 315 MHz and is commonly used in remote controls, home automation, wireless sensors, and Arduino projects.	Product Type: RF Wireless Communication Module Frequency: 433 MHz / 315 MHz Operating Voltage: 3V – 5V DC Data Rate: Up to ~10 kbps (typical) Range: 20m – 100m (depends on antenna & environment)	RF 433MHz Module • 315MHz RF Module • Wireless Transmitter Receiver Kit • RF Communication Module • Arduino RF Module • ASK RF Module • Wireless Remote Module • 433MHz RF Pair Kit
	EMC-00002-A	ESP8266 WiFi Module	EM - Electronic-Electrical Modules	Espressif Systems, Ai-Thinker, SparkFun	The ESP8266 WiFi Module is a low-cost IoT module with built-in WiFi used to connect devices to wireless networks. It enables communication with cloud platforms, servers, and apps. It is widely used in smart home systems, automation, and IoT projects.	Product Type: WiFi Microcontroller Module Core Chip: ESP8266EX CPU: 32-bit Tensilica L106 Operating Voltage: 3.3V	ESP8266 WiFi Module • ESP8266 NodeMCU • ESP8266 ESP-01 • WiFi IoT Module • Arduino WiFi Module • ESP8266 Wireless Module • ESP8266 ESP-12E • ESP8266 IoT Board
	EMC-00004-A	Bluetooth Module	EM - Electronic-Electrical Modules	HC Series / Generic Compatible, Waveshare, KEYESTUDIO, SunFounder	The HC-05 Bluetooth Module is a 6-pin wireless communication device used for UART-based data transfer between microcontrollers and Bluetooth-enabled devices. Operating in the 2.4GHz ISM band with GFSK modulation, it supports both Master and Slave modes. Featuring AT command configuration and an onboard push button for AT mode access, it is ideal for wireless control, automation, and IoT projects.	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
No Image	EMC-00005-A	RFID READER MODULE	EM - Electronic-Electrical Modules	NXP Semiconductors, Ai-Thinker, SunFounder, Keyestudio, Waveshare	The RC522 RFID Reader/Writer Kit is a 13.56MHz RFID module based on the MFRC522 IC with cards and tags. It uses SPI communication and supports ISO 14443A/MIFARE contactless data exchange. It is widely used in access control, attendance systems, IoT projects, and embedded RFID applications.	Operating Frequency (MHz): 13.56 Reading Distance (m): 2 cm to 5 cm Supply Voltage (V): 3.3V Operating Current (mA): 13 ~ 26 SPI data rate (Mbit/s): 10 Length (mm): 60 Width (mm): 39.5 Weight (g): 20	RC522 • RFID Reader • NFC Module • MFRC522 • 13.56MHz RFID • Arduino RFID
	EMC-00005-B	RFID Key Fob	EM - Electronic-Electrical Modules	NXP Semiconductors, ACS (Advanced Card Systems)	An RFID Card is a contactless smart card used for wireless identification using radio frequency communication. It typically works at 13.56 MHz with RC522 readers and stores a unique ID for authentication. It is commonly used in access control, attendance systems, security, and Arduino projects.	Product Type: RFID Key Fob Frequency: 13.56 MHz Standard: ISO/IEC 14443A Memory: 1KB / 4KB (varies by chip)	13.56MHz RFID Tag • RFID Key Fob • MIFARE Key Fob • NFC Key Tag • Access Control Key Fob • Arduino RFID Tag • Smart Key Fob • Contactless RFID Token
	EMC-00005-C	RFID Smart Card	EM - Electronic-Electrical Modules	NXP Semiconductors, HID Global	An RFID Card is a contactless smart card used for wireless identification using radio frequency communication. It typically works at 13.56 MHz with RC522 readers and stores a unique ID for authentication. It is commonly used in access control, attendance systems, security, and Arduino projects.	Product Type: RFID Smart Card Frequency: 13.56 MHz Standard: ISO/IEC 14443A Memory: 1KB / 4KB (varies)	RFID Card • 13.56MHz RFID Tag • MFRC522 Card • Smart Card RFID • Access Control Card • Contactless ID Card • Arduino RFID Card • NFC RFID Tag

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
No Image	EMC-00006-A	GSM-GPRS Module	EM - Electronic-Electrical Modules	SIMCom, DFRobot, Waveshare	The SIM800L GSM/GPRS Module is a compact GSM modem used for SMS, voice calls, and GPRS internet connectivity. It supports quad-band GSM networks and TCP/IP communication. It is widely used in IoT projects, tracking systems, remote monitoring, automation, and embedded wireless communication.	IC Chip: SIM800L Input Voltage: 3.4V ~ 4.4V Peak Current: 2 A	SIM800L • GSM Module • GPRS Module • SMS Module • IoT Module • Arduino GSM • ESP8266 GSM
No Image	EMC-00006-B	GSM Module	EM - Electronic-Electrical Modules	SIMCom, DFRobot, Itead Studio	The SIM900A GSM Module is a wireless communication module used for SMS, voice, and data applications over GSM networks. It supports UART communication and SIM card integration for microcontrollers like Arduino. It is widely used in IoT systems, remote monitoring, automation, and embedded communication projects.	Frequency bands: Dual-band GPRS connectivity: GPRS multi-slot class 10 (default) , GPRS multi-slot class 8 (option) Operating Temperature Range: -30 to 80 °C Supply Voltage: 3.4 ~ 4.5 V Dimensions (LxWxH): 8.5x5.7x2cm (approx)	GSM Module • GPRS Module • SMS Module • IoT Module • Arduino GSM • SIM900A
No Image	EMC-00008-A	IR Receiver module	EM - Electronic-Electrical Modules	Vishay Semiconductors, Sharp Corporation, Keyestudio, DFRobot, SparkFun Electronics	The KY-022 IR Receiver Module is a 38kHz infrared sensor used to detect and decode signals from IR remote controls. It provides a digital output with an indicator LED when an IR signal is received. It is commonly used in Arduino projects, robotics, home automation, and remote-control decoding applications.	Current consumption: 1.5mA peak Frequency: 38kHz Operating Voltage: 3.3V to 5V Pulse Duration: 400µs to 800µs Range: 17m Wavelength: 940 nm	IR Receiver • Infrared Sensor • TSOP1838 • Remote Receiver • Arduino IR Sensor • 38kHz IR Module • IR Decoder
	EMC-00008-B	IR Remote Module	EM - Electronic-Electrical Modules	Keyes Electronics, DFRobot	The IR Remote Transmitter Module is an infrared emitter used to send signals to IR-controlled devices like TVs and appliances. It typically uses a 38kHz modulated IR LED and is used in remote control systems, home automation, robotics, and Arduino projects.	Product Type: IR Transmitter Module Operating Voltage: 3.3V ~ 5V DC Carrier Frequency: 38 kHz (typical) Range: ~1~5 meters (depends on setup)	IR Remote Transmitter Module • IR LED Transmitter • KY-005 IR Transmitter • Infrared Remote Control Module
	EMK-00001-A	RFID Starter Kit	EM - Electronic-Electrical Modules	NXP Semiconductors, Keyestudio, SparkFun, HiLetgo	The RFID Kit is a wireless identification system used to read and write data from RFID cards and tags. It usually includes an RC522 module (13.56 MHz) with SPI communication, along with cards and key fobs. It is commonly used in access control, attendance systems, security, and Arduino projects.	Product Type: RFID Reader Kit Operating Frequency: 13.56 MHz Operating Voltage: 3.3V Read Range: ~2~5 cm	RFID Kit • RFID Reader Module • RC522 RFID Kit • RFID Card Reader • Arduino RFID Module • NFC Reader Module • RFID Tag System • Access Control Kit
	EMP-00001-A	Adapter	EM - Electronic-Electrical Modules	Mean Well, Hi-Link, Delta Electronics	The 9V Wall Power Supply Adapter is an AC-to-DC adapter that provides a stable 9V DC output for electronic devices and circuits. It converts AC mains power into regulated DC power and is commonly used for Arduino boards, sensors, routers, audio devices, and DIY electronics projects.	Product Type: AC to DC Power Adapter Output Voltage: 9V DC Input Voltage: 100V ~ 240V AC Output Current: 500mA / 1A / 2A Frequency: 50/60 Hz	Wall Power Supply • Arduino Power Adapter • 9V Power Adapter • 9V DC Adapter • 9V SMPS Adapter
	EMP-00001-B	Power Adapter	EM - Electronic-Electrical Modules	Mean Well, Hi-Link, Delta Electronics	The 5V Wall Power Supply Adapter is an AC-to-DC adapter that provides a stable 5V DC output for electronic devices and circuits. It converts mains AC power into low-voltage DC and is commonly used for Arduino boards, sensors, IoT devices, LED systems, and other electronics projects.	Product Type: AC to DC Power Adapter Output Voltage: 5V DC Input Voltage: 100V ~ 240V AC Output Current: 1A / 2A / 3A Power Supply Type: SMPS	SMPS Adapter • 5V Power Adapter • 5V DC Adapter • Wall Power Supply • Arduino Power Adapter
	EMP-00001-C	Power Supply Adapter	EM - Electronic-Electrical Modules	Generic / OEM, Mean Well, Delta Electronics, LEICKE	The 12V 2A SMPS Power Adapter is a regulated power supply that converts 100~240V AC to 12V DC output. It provides stable power up to 2A and is commonly used for Arduino projects, routers, DC motors, LCDs, and other electronic devices.	Input Voltage: 100~240V AC Output Voltage: 12V DC Maximum Output Current: 2A Output Connector Size: 5.5 x 2.5 mm Polarity: Center Positive Operating Temperature: -25°C to +60°C Shipping Weight: 0.02 kg Shipping Dimensions: 10 x 6 x 6 cm	12V Adapter • 12V 2A Power Supply • SMPS Adapter • AC-DC Adapter • 5.5x2.5mm Power Adapter

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EMS-00001-A	MQ-2 Gas Sensor	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 ₂ sensing element and provides both analog and digital outputs with adjustable sensitivity. Ideal for gas leakage detection, safety systems, fire alarms, environmental monitoring, smart home applications, and Arduino-based electronics projects.	Sensor Model: MQ-2 Detection Range: 300 – 10,000 ppm Detectable Gases: LPG, Butane, Propane, Methane (CH ₄), Hydrogen (H ₂), Alcohol, Smoke, CO Sensing Material: Tin Dioxide (SnO ₂) 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 • SnO ₂ Sensor • Combustible Gas Module • 5V Gas Sensor • Gas Leakage Detector
	EMS-00002-A	Temp Humidity Sensor	EM - Electronic-Electrical Modules	EM Series / Generic Compatible, KEYESTUDIO, SunFounder, DFRobot	Digital temperature and humidity sensor module with calibrated single-wire serial output for easy interfacing. Features an onboard pull-up resistor and LED status indicator for reliable operation. Suitable for weather stations, environmental monitoring, smart home systems, Arduino projects, and IoT applications requiring accurate temperature and humidity measurements.	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-00003-C	Accelerometer module	EM - Electronic-Electrical Modules	Freescale Semiconductor, DFRobot, Elecrow	The MMA7361 Accelerometer Module is a low-power 3-axis analog accelerometer used to measure acceleration, tilt, vibration, orientation, and motion along the X, Y, and Z axes. Based on the Freescale/NXP MMA7361L MEMS sensor, it provides analog voltage outputs proportional to acceleration values. It is widely used in robotics, motion tracking, gaming devices, and Arduino-based projects.	Product Type: 3-Axis Accelerometer Module Model: MMA7361L Sensor Type: MEMS Accelerometer Axes: X, Y, Z Operating Voltage: 3.3V – 5V DC	Tilt Sensor Module • MMA7361 Accelerometer • Triple Axis Accelerometer • 3-Axis Accelerometer Module
No Image	EMS-00004-A	Sound Level Sensor	EM - Electronic-Electrical Modules	Keyes, Keyes, DFRobot, SparkFun Electronics	The Sound Detection Module Sensor for Intelligent Vehicles is a single-channel sensor used to detect surrounding sound intensity. It provides a digital output signal and LED indication when sound is detected. It is widely used in voice-activated systems, smart vehicles, robotics, automation, and sound-triggered electronic projects.	IC Chip: LM393 Induction Distance: 500 cm Operating Voltage: 3.3 – 5 V Length: 4.3 cm Height: 0.8 cm Width: 1.7 cm	Sound Sensor • Microphone Module • Audio Sensor • Noise Sensor
	EMS-00004-C	Microphone Module	EM - Electronic-Electrical Modules	Analog Devices / Maxim Integrated, SparkFun, DFRobot, Keyestudio	The MAX4466 Electret Microphone Module is a low-noise sound sensor with an inbuilt amplifier for detecting and monitoring audio signals. It uses an electret microphone with the MAX4466 op-amp to provide clear analog output. It is commonly used in voice detection, sound level monitoring, robotics, and Arduino/ESP32 projects.	Product Type: Electret Microphone Module Main IC: MAX4466 Output Type: Analog Operating Voltage: 2.4V – 5.5V DC	MAX4466 Microphone Module • Electret Microphone Amplifier • Sound Sensor Module • Audio Detection Sensor
	EMS-00005-A	Ultrasonic Sensor	EM - Electronic-Electrical Modules	MWduino / Generic, ElecFreaks, KEYESTUDIO, SunFounder	Ultrasonic distance sensor module that uses 40kHz sound waves for accurate, non-contact distance measurement. Operates on 3.3–5.5V DC and features a simple 4-pin interface (VCC, Trig, Echo, GND) for easy integration. Ideal for robotics, obstacle avoidance, automation systems, parking sensors, distance measurement, and Arduino-based 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-00006-A	PIR Sensor	EM - Electronic-Electrical Modules	HC, DFRobot, SparkFun, Keyestudio	The PIR Motion Sensor is a passive infrared detection module used to detect human movement and body heat by sensing changes in infrared radiation. The commonly used HC-SR501 PIR sensor combines a pyroelectric infrared sensor with a Fresnel lens to detect motion within its sensing range. It is widely used in security systems, automatic lighting, smart homes, robotics, and Arduino projects.	Product Type: PIR Motion Sensor Model: HC-SR501 Sensor Type: Passive Infrared Operating Voltage: 5V – 20V DC Detection Distance: 3 – 7 meters	Motion Detection Sensor • PIR Motion Sensor • HC-SR501 PIR Sensor • Human Motion Sensor

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
No Image	EMS-00007-A	Temperature Sensor	EM - Electronic-Electrical Modules	Maxim Integrated, DFRobot, SparkFun	The DS18B20 Temperature Sensor Module is a digital temperature sensor that uses the 1-Wire communication protocol for accurate readings. Developed by Dallas Semiconductor, it provides calibrated digital output with high precision and supports multiple sensors on a single data line. It is widely used in weather stations, automation systems, industrial monitoring, and Arduino projects.	Product Type: Digital Temperature Sensor Model: DS18B20 Communication Protocol: 1-Wire Operating Voltage: 3V – 5.5V DC Temperature Range: -55°C to +125°C Accuracy: ±0.5°C	DS18B20 Temperature Sensor • Waterproof Temperature Sensor • Digital Temperature Sensor • One Wire Temperature Sensor
	EMS-00008-A	Metal Touch Sensor	EM - Electronic-Electrical Modules	Keyes Electronics, Generic Electronics, Keyestudio	The KY-036 Metal Touch Sensor Module is used to detect touch from a human finger or conductive object by sensing changes in conductivity. It uses an LM393 comparator and a transistor-based circuit to provide analog and digital outputs. It is commonly used in touch switches, security systems, automation, and Arduino projects.	Product Type: Metal Touch Sensor Module Model: KY-036 Main IC: LM393 Comparator Operating Voltage: 3.3V – 5V DC	KY-036 Metal Touch Sensor • Human Body Touch Sensor • Metal Touch Module • Touch Detection Sensor
	EMS-00009-A	Heart Pulse Sensor	EM - Electronic-Electrical Modules	Maxim Integrated, Generic Electronics, SparkFun, DFRobot	The Heart Pulse Rate Sensor is a biometric sensor used to detect heartbeats and measure pulse rate in BPM. It works using Photoplethysmography (PPG), where light is emitted into the skin and changes in reflected light due to blood flow are detected. It is used in health monitoring, fitness devices, and Arduino projects.	Product Type: Heart Pulse Rate Sensor Sensor Type: Photoplethysmography (PPG) Operating Voltage: 3.3V – 5V DC Output Type: Analog / I2C Measured Parameter: Pulse Rate (BPM)	Heart Pulse Sensor • Pulse Rate Sensor • Heartbeat Sensor Module • Pulse Detection Sensor • Arduino Pulse Sensor • BPM Sensor • Heart Rate Monitor Sensor • Pulse Sensor Amped
	EMS-00010-A	Smoke Gas Sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Winsen Electronics, SparkFun Electronics, DFRobot	The MQ-2 Gas Sensor Module is used to detect combustible gases like LPG, methane, propane, hydrogen, alcohol, and smoke. It works using an SnO ₂ sensing layer that changes resistance when gas is present. It provides analog and digital outputs and is commonly used in gas leak detection, safety systems, air quality monitoring, and Arduino projects.	Product Type: Gas & Smoke Sensor Model: MQ-2 Detectable Gases: LPG, Methane, Butane, Smoke Detection Range: 200 – 10000 ppm Operating Voltage: 5V DC	LPG Gas Sensor • methane sensor • Arduino Gas Sensor • MQ-2 Gas Sensor • Smoke Sensor Module • Butane Gas Detector • MQ2 Smoke Detector • Flammable Gas Sensor
No Image	EMS-00010-B	MQ-3 Sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Winsen Electronics, Waveshare	The MQ-3 Alcohol Gas Sensor Module is used to detect alcohol concentration in the air. It provides analog and digital outputs based on gas levels. It is widely used in breath analyzers, safety systems, and IoT monitoring applications.	Operating Voltage (V): 2.5 to 5 Additional Specs: Output Pin: Analog and digital, Gold pin connectors, 2.54 mm pitch, Boost Converter Chip: PT1301 Board Size (mm): 40 x 21 mm Mounting Hole Diameter (mm): 2 mm Interface: Digital Output, Analog output, VCC Positive power supply (2.5V-5.0V), Power ground	arduino • alcohol sensor • MQ-3 • gas sensor • ethanol detector
	EMS-00010-C	MQ-4 Gas Sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Winsen Electronics, Waveshare	The MQ-4 Gas Sensor Module is used to detect methane (CH ₄), CNG, and natural gas leaks. It provides analog and adjustable digital outputs for gas detection. It is widely used in gas leakage alarms, safety systems, and IoT monitoring applications.	Model: MQ-4 Detecting range: 200 to 10000 ppm. Operating Voltage: 3 – 5 V Length: 3.1 cm Height: 2.1 cm Width: 1.9 cm	Arduino Compatible • gas sensor • MQ-4 • methane sensor • CNG detector
No Image	EMS-00010-D	MQ-5 Gas Sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Winsen Electronics, Waveshare	The MQ-5 Gas Sensor Module is used to detect combustible gases like LPG, methane, and natural gas. It changes conductivity based on gas presence and provides an analog output signal. It is widely used in gas leakage detection, safety systems, and IoT projects.	Model: MQ-5 Operating Temperature Range: -20 to 40 °C Operating Voltage: 5 V Length: 3.2 cm Height: 2.2 cm Width: 2 cm	Arduino Compatible • gas sensor • methane sensor • CNG detector • CH4 sensor
	EMS-00010-E	MQ-6 LPG Gas Sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Zhengzhou Winsen Electronics, DFRobot	The MQ-6 Gas Sensor Module is used to detect LPG, propane, and butane gas leaks in the air. It changes conductivity based on gas concentration and provides an analog output signal. It is widely used in gas leakage detection, safety systems, and IoT projects.	Model: MQ-6 Operating Temperature Range: -20 to 40 °C Operating Voltage: 5 V Length: 3.2 cm Height: 2.2 cm Width: 2 cm	arduino • gas sensor • methane sensor • MQ6 • LPG Sensor • Propane Sensor • Butane Sensor

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EMS-00010-F	MQ-7 Sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Zhengzhou Winsen Electronics, DFRobot	The MQ-7 Carbon Monoxide Sensor Module is a gas sensor used to detect carbon monoxide (CO) in the air. It measures changes in conductivity to provide analog and digital outputs. It is widely used in safety systems, air quality monitoring, and IoT projects.	Model: MQ-7 Ambient temperature: -20 ~ + 50 °C Characteristic gas: 100 ppm CO Heating current: ? 180 mA Heating power: approx. 350 mW Heating resistance: ± 31 ? Heating voltage: 5.0V ± 2V / 1.5 ± 1V Humidity: ? 95% RH Operating Voltage: 5 V Oxygen content: 21%. Range: 10 ~ 1000 ppm Return time: ? 30 s Sensitivity: ? 3%. Length: 3.5 cm Height: 1.1 cm Width: 2 cm	arduino • MQ7 • Carbon Monoxide Sensor • CO Sensor • Gas Detector • Air Quality Sensor
No Image	EMS-00010-G	MQ-135 Sensor	EM - Electronic-Electrical Modules	Hanwei Electronics, Zhengzhou Winsen Electronics, Futurlec	The MQ-135 Air Quality Sensor Module is used to detect harmful gases and monitor air pollution levels. It changes its conductivity based on gas concentration and provides an analog output. It is sensitive to gases like ammonia, benzene, smoke, and other pollutants. It is widely used in air quality monitoring, IoT systems, and environmental safety projects.	Model: MQ-135 Detecting range: 100ppm to 1000ppm Operating current: 150 mA Operating Voltage: 5 V Length: 3.2 cm Height: 2.7 cm Width: 2 cm	Air Quality Sensor • MQ135 • Ammonia Sensor • NOx Sensor • CO2 Sensor • Smoke Sensor
	EMS-00010-H	Hydrogen Sensor	EM - Electronic-Electrical Modules	SparkFun Electronics, Hanwei Electronics, Winsen Electronics, SparkFun	The MQ-8 Hydrogen Gas Sensor is a semiconductor sensor used to detect hydrogen (H?) gas in the range of 100 ppm to 10,000 ppm. It works using a SnO? sensing layer that changes resistance when exposed to hydrogen. It provides analog and digital outputs and is used in safety systems, gas monitoring, and Arduino/ESP32 projects.	Product Type: Hydrogen Gas Sensor Model: MQ-8 SparkFun SKU: SEN-10916 Detectable Gas: Hydrogen (H?) Detection Range: 100 – 10,000 ppm Operating Voltage: 5V DC	MQ-8 Gas Sensor • Hydrogen Gas Sensor • H2 Gas Detector • MQ8 Sensor Module • Hydrogen Detection Sensor • Arduino Gas Sensor • ESP32 Hydrogen Sensor • Gas Leakage Sensor
	EMS-00011-A	GPS module	EM - Electronic-Electrical Modules	u-blox, Quectel, DFRobot, SparkFun	The GPS Module is a satellite-based positioning and navigation device used to determine real-time location, speed, altitude, and time information. Most embedded and Arduino projects use the Neo-6M GPS module, which communicates through a UART serial interface and receives signals from GPS satellites. It is widely used in vehicle tracking, navigation systems, drones, mapping, and IoT applications.	Product Type: GPS Navigation Module Model: Neo-6M Operating Voltage: 3V – 5V DC Baud Rate: 9600 bps	GPS Module • Neo-6M GPS • GNSS Receiver • Arduino GPS Module • ESP32 GPS Module • Satellite Navigation Module • UART GPS Sensor • Location Tracking Module
	EMS-00012-A	Color Sensor	EM - Electronic-Electrical Modules	ams-OSRAM, ams-OSRAM, ams-OSRAM, Generic Electronics	The TCS3200 Color Sensor Module is an RGB color detection sensor used to identify and measure colors based on reflected light intensity. It uses a light-to-frequency converter IC and photodiodes with onboard LEDs for accurate sensing. It is commonly used in robotics, color sorting, automation, and Arduino projects.	Product Type: RGB Color Sensor Model: TCS3200 / TCS230 Sensor Type: Light-to-Frequency Converter Operating Voltage: 2.7V – 5.5V DC	Arduino Color Sensor • Color Detection Module • TCS3200 Color Sensor • RGB Color Sensor • TCS230 Sensor • RGB Recognition Module • ESP32 Color Sensor • Light Frequency Sensor
	EMS-00012-B	Color Sensor Module	EM - Electronic-Electrical Modules	ams-OSRAM, ams-OSRAM, ams-OSRAM, Generic Electronics	The TCS3200 Color Sensor Module is an RGB color detection sensor used to identify and measure colors based on reflected light intensity. It uses a light-to-frequency converter IC and photodiodes with onboard LEDs for accurate sensing. It is commonly used in robotics, color sorting, automation, and Arduino projects.	Product Type: RGB Color Sensor Model: TCS3200 / TCS34725 Sensor Type: Light-to-Frequency Converter Operating Voltage: 2.7V – 5.5V DC	TCS3200 Sensor • RGB Sensor • Color Sensor • TCS230 Module • Arduino Color Sensor • ESP32 RGB Sensor • Color Detection Module
	EMS-00013-A	IR Obstacle Sensor	EM - Electronic-Electrical Modules	Generic OEM Manufacturer, Keyestudio, HiLetgo, Elegoo, SunFounder	The Infrared Obstacle Avoidance Sensor Module is used to detect nearby objects using infrared light reflection. It provides a digital output when an obstacle is detected. It is commonly used in robotics, Arduino smart cars, and obstacle detection systems.	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

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
No Image	EMS-00014-A	Touch Sensor	EM - Electronic-Electrical Modules	Tontek Design Technology, Shenzhen Tontek (Tontek IC), Generic Module Manufacturer, Waveshare (Module Vendor), Keyestudio (Arduino Vendor)	The TTP223B Capacitive Touch Key Sensor Module is a touch switch that replaces mechanical buttons. It outputs a HIGH signal when touched and works in low-power mode. It is commonly used in Arduino projects, smart switches, hidden controls, and automation systems.	Item Type: Electronic Switch Model: Touch Switch IC Chip: TTP223B Operating Voltage: 2V – 5.5V Output High (VOH): 0.8 × VCC Output Low (VOL): 0.3 × VCC Response Time (Low Power Mode): 220 ms Response Time (Touch Mode): 60 ms Length: 24 mm Width: 24 mm Height: 2 mm Weight: 0.6 g Shipping Weight: 0.085 kg Shipping Dimensions: 3 × 3 × 1 cm	arduino • touch • TTP223B • capacitive sensor
	EMS-00015-A	Capacitive Keypad	EM - Electronic-Electrical Modules	Tontek Design Technology, Robocraze, Keyestudio	The TTP229 16-Key Capacitive Touch Keyboard is a touch-based input module using capacitive sensing technology. It detects finger touches without mechanical switches, offering silent and reliable operation. It is commonly used with Arduino, ESP32, and embedded systems for touch panels, access control, and smart interactive projects.	Product Type: Capacitive Touch Keypad IC Used: TTP229 Number of Keys: 16 Key Layout: 4x4 Operating Voltage: 2.4V – 5.5V DC	TTP229 Touch Keypad • 16-Key Capacitive Keyboard • 4x4 Touch Sensor Module • Arduino/ESP32 Touch Input Module
	EMS-00015-B	3x4 Membrane Keypad	EM - Electronic-Electrical Modules	Adafruit, DFRobot, SparkFun, Keyestudio	The 3x4 12-Key Membrane Keypad is a compact matrix input device used with Arduino, ESP32, Raspberry Pi, and other microcontrollers. It has 12 buttons in a 4x3 telephone-style layout, reducing GPIO usage while allowing easy user input. It is commonly used in password systems, calculators, access control, and embedded projects.	Product Type: Membrane Matrix Keypad Key Layout: 3x4 Matrix Number of Keys: 12 Operating Voltage: 3V – 35V DC Connector Type: 7-pin Header	12 Key Matrix Keypad • Membrane Switch Keypad • Arduino Keypad • 3x4 Membrane Keypad • Numeric Keypad Module • 4x3 Matrix Keyboard • Telephone Style Keypad • Matrix Input Module
	EMS-00015-C	4x4 Keypad	EM - Electronic-Electrical Modules	Adafruit, Keyestudio, DFRobot, SparkFun	The 4x4 / 4x3 Membrane Keypad is a thin, flexible input device used with Arduino, ESP32, Raspberry Pi, and other microcontrollers. It uses a row-column matrix to reduce GPIO usage while providing multiple button inputs. It is commonly used in password systems, calculators, access control, and embedded projects.	Product Type: Membrane Matrix Keypad Key Layout: 4x4 / 4x3 Number of Keys: 12 or 16 Operating Voltage: 3V – 35V DC Connector Type: 7-pin / 8-pin Header	4x4 Membrane Keypad • 12 Key Matrix Keypad • Membrane Switch Keypad • Matrix Keyboard Module • Arduino Keypad • Numeric Input Module • 4x3 Matrix Keypad • Keypad Module
	EMS-00016-A	Water Flow Sensor	EM - Electronic-Electrical Modules	YF Electronics, DFRobot, FlyRobo, Robocraze	YF-G1 Water Flow Sensor is a hall-effect based flow meter used to measure the flow rate of water and other non-corrosive liquids in pipelines. It uses a magnetic rotor that spins with water flow, and a hall sensor generates pulse signals proportional to flow rate. It is widely used in automation, water monitoring, and Arduino projects.	Product Type: Water Flow Sensor Model: YF-G1 Sensor Type: Hall Effect Flow Meter Operating Voltage: 5V – 18V DC Working Current: ? 15 mA Flow Range: 1 – 30 L/min	Water Flow Sensor • Hall Effect Flow Sensor • Liquid Flow Meter • Flow Rate Sensor • YF-G1 Sensor • Industrial Water Flow Sensor • Arduino Flow Sensor • Pipe Flow Detection Module
	EMS-00016-B	Water Flow Sensor	EM - Electronic-Electrical Modules	YF Electronics, DFRobot, FlyRobo, Robocraze	YF-S401 Water Flow Sensor is a compact hall-effect based flow meter used to measure water flow rate in pipes and tubing systems. It uses a rotor with embedded magnets that spins as water flows, generating pulse signals via a hall sensor proportional to flow rate. It is widely used in smart irrigation, water dispensers, liquid monitoring, automation systems, and Arduino/ESP32 projects.	Product Type: Water Flow Sensor Model: YF-S401 Sensor Type: Hall Effect Flow Meter Operating Voltage: 5V – 18V DC Working Current: ? 15 mA Flow Range: 0.3 – 6 L/min	YF-S401 Sensor • Water Flow Sensor • Hall Effect Flow Sensor • Liquid Flow Meter • Flow Rate Sensor • Arduino Water Flow Sensor • Flow Detection Module
	EMS-00017-A	LDR Module	EM - Electronic-Electrical Modules	EM Series / Generic Compatible, KEYESTUDIO	The LDR Module detects ambient light intensity and provides a digital output based on the surrounding brightness level. It features an onboard potentiometer for adjusting sensitivity and threshold settings. Ideal for automatic lighting systems, day/night detection, Arduino projects, smart automation, security systems, and other light-controlled electronic 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

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EMS-00018-A	Water Level Sensor	EM - Electronic-Electrical Modules	Generic Electronics, Generic Electronics, DFRobot, SparkFun	Water Level Sensor Module is used to detect water levels in tanks, containers, and irrigation systems. It works using conductive tracks that change resistance when in contact with water. It provides analog output for level measurement and digital output for threshold-based detection. It is commonly used in smart irrigation, tank monitoring, and leak detection systems.	Product Type: Water Level Sensor Module Sensor Type: Conductive Water Sensor Operating Voltage: 3.3V – 5V DC Comparator IC: LM393	Water Detection Sensor • Water Level Sensor • Liquid Level Sensor • Analog Water Sensor • Arduino Water Sensor • Level Detection Module • Tank Level 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) measures water content in soil using resistive sensing technology. It provides both analog (AO) and digital (DO) outputs, with adjustable sensitivity through an onboard LM393 comparator. Ideal for smart irrigation systems, plant monitoring, Arduino projects, greenhouse automation, and IoT-based environmental monitoring applications.	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
	EMS-00020-A	Joystick Module	EM - Electronic-Electrical Modules	EM Series / Generic Compatible, KEYESTUDIO, SunFounder, DFRobot	Dual-axis analog joystick module for detecting X and Y movement positions. Each axis uses a 10K? potentiometer to provide a 0–5V analog output proportional to joystick position. Includes a built-in push-button switch for additional input functionality. Ideal for robotics, gaming controllers, Arduino projects, remote control systems, and motion control applications.	Model: PS2 Joystick Module Operating Voltage (VDC): 5V 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
	EMS-00021-A	Tilt Sensor	EM - Electronic-Electrical Modules	Generic Electronics, DFRobot, SparkFun, Keyestudio	SW-520D Tilt Sensor Module is a simple digital sensor that detects tilt, orientation change, vibration, or motion using a rolling metal ball inside a cylindrical switch. When tilted beyond a threshold (~10–15°), contacts connect/disconnect and produce a digital HIGH/LOW output. Used in alarms, robotics, and Arduino projects.	Product Type: Tilt / Angle Sensor Module Sensor Type: Ball Switch (SW-520D) Output Type: Digital (0 / 1) Operating Voltage: 3.3V – 5V DC Comparator IC: LM393	SW-520D Sensor • Tilt Sensor Module • Angle Sensor • Ball Switch Sensor • Orientation Sensor • Digital Tilt Switch • Arduino Tilt Sensor
	EMS-00022-A	Analog Piezo Module	EM - Electronic-Electrical Modules	Generic Electronics, DFRobot, SparkFun, Adafruit	The Analog Piezoelectric Vibration Module uses a ceramic disc to detect vibrations, knocks, and mechanical stress. It generates an analog voltage based on the strength of the vibration using the piezoelectric effect. Unlike digital sensors, it measures vibration intensity, making it useful for Arduino projects, touch sensing, impact detection, and monitoring applications.	Product Type: Analog Vibration Sensor Module Sensing Element: Piezoelectric Ceramic Disc Output Type: Analog Voltage Output Operating Voltage: 3.3V – 5V DC Operating Current: < 1 mA	Shock Sensor • Piezo Vibration Sensor • Analog Piezo Module • Ceramic Vibration Sensor • Knock Sensor • Arduino Piezo Sensor • Vibration Detection Module
	EMS-00023-A	Vibration Sensor	EM - Electronic-Electrical Modules	Generic Electronics, DFRobot, SparkFun, FlyRobo	SW-420 Vibration Sensor Module is used to detect vibration, shock, and movement in security systems, robotics, and Arduino projects. It uses an SW-420 sensor with an LM393 comparator to give a digital output when vibration is detected. The sensitivity can be adjusted using an onboard potentiometer.	Product Type: Vibration Sensor Module Sensor Model: SW-420 Comparator IC: LM393 Operating Voltage: 3.3V – 5V DC Output Type: Digital Output	LM393 Sensor • SW-420 Sensor • Vibration Sensor Module • Shock Sensor • Alarm Sensor • Motion Detection Sensor • Arduino Vibration Sensor
	EMS-00024-A	Rain Sensor Module	EM - Electronic-Electrical Modules	Generic Electronics, DFRobot, SparkFun	Rain Sensor Modules detect rain, water droplets, and moisture for applications like weather monitoring, smart irrigation, robotics, and Arduino projects. They include a sensor plate and LM393 module, providing analog and digital outputs for accurate and adjustable detection.	Product Type: Rain Detection Sensor Module Operating Voltage: 3.3V – 5V DC Comparator IC: LM393 Sensitivity Adjustment: Potentiometer Compatible Boards: Arduino, ESP32, Raspberry Pi	Rain Sensor Module • Rain Drop Sensor • FC-37 Sensor • YL-83 Rain Module • Water Detection Sensor • Arduino Rain Sensor • Weather Sensor

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	EMS-00025-A	Encoder Module	EM - Electronic-Electrical Modules	Broadcom, Generic Electronics, Omron, AMS	Encoder sensor modules are used to detect rotation, speed, direction, and position in robotics, automation, motor control, CNC machines, and Arduino projects. They provide digital pulse outputs for accurate motion tracking and feedback. Available in rotary, optical, and magnetic types, they are ideal for precise control and positioning systems.	Product Type: Encoder Sensor Module Encoder Type: Rotary / Optical / Magnetic Operating Voltage: 3.3V – 5V DC Output Type: Digital Pulse	Encoder Sensor Module • Rotary Encoder Module • Optical Encoder Sensor • Speed Sensor • Position Sensor • KY-040 Encoder • Arduino Encoder
	EMS-00026-A	Magnetometer Module	EM - Electronic-Electrical Modules	Honeywell, ITEAD Studio, DFRobot, Adafruit, SparkFun	The HMC5883L Triple Axis Compass Magnetometer Module is a 3-axis digital compass sensor used in navigation, robotics, drones, GPS systems, and Arduino projects. It communicates via I2C and measures magnetic field strength along the X, Y, and Z axes. It provides accurate heading and orientation data for motion tracking and autonomous applications.	Product Type: Triple Axis Magnetometer Sensor Model: HMC5883L Number of Axes: 3 Axis Communication Interface: I2C Operating Voltage: 3.3V – 5V ADC Resolution: 12-bit	HMC5883L Sensor • Magnetometer Module • Compass Sensor • Triple Axis Compass • GY-271 Sensor • GY-273 Module • Arduino Compass Sensor
	EQM-00001-A	3D Printer	EQ - Equipment/Instrument	Tiertime Official Website, Cetus 3D Official Website, UP3D / Tiertime, Tiertime Europe	The Cetus MK3 is a compact FDM/FFF 3D printer used for education, prototyping, STEM labs, and hobby projects. It features Wi-Fi connectivity, touchscreen control, and support for multiple nozzle sizes with modular upgrades. It delivers reliable print quality and supports PLA, PETG, TPU, and other filaments, making it ideal for learning and rapid prototyping.	Product Type: FDM / FFF 3D Printer Model: Cetus MK3 Printing Technology: MEM / FDM Build Volume: 180 × 180 × 180 mm Layer Resolution: 50 – 350 Micron Nozzle Sizes: 0.2 / 0.4 / 0.6 mm Filament Diameter: 1.75 mm	FDM Printer • Educational 3D Printer • Cetus MK3 • Cetus 3D Printer • DIY 3D Printer • Compact 3D Printer • Tiertime Printer
	EQM-00001-B	3D Printer	EQ - Equipment/Instrument	FlashForge USA, Inventor Technologies, Robotbanao	The FlashForge Adventurer 3C is a compact FDM 3D printer used for education, prototyping, STEM labs, and hobby projects. It features a removable heated build plate, enclosed chamber, Wi-Fi connectivity, touchscreen control, and easy nozzle replacement. It supports PLA, ABS, and PETG filaments and offers reliable, user-friendly 3D printing.	Product Type: FDM 3D Printer Model: Adventurer 3C Printing Technology: FDM (Fused Deposition Modeling) Build Volume: 150 × 150 × 150 mm Nozzle Diameter: 0.4 mm Max Nozzle Temperature: 240°C Filament Diameter: 1.75 mm	3D Printer • FlashForge Printer • Adventurer 3C • FDM Printer • DIY Printer • STEM Printer • Educational 3D Printer
	MMB-00002-A	Compartment Box	MM - Mechanical Module	Stanley, Pro'sKit, Tactix, Deli	The 8-compartment storage box is a durable organizer for storing electronic components, motors, sensors, screws, wires, connectors, Arduino accessories, tools, and DIY hardware. It features a sturdy plastic body with a transparent lid and removable dividers for flexible storage. Ideal for workshops, labs, and DIY projects, it keeps items neatly organized and easily accessible.	Product Type: Compartment Storage Box Number of Compartments: 8 Material: Plastic / Polypropylene Box Type: Large Organizer Box Storage Items: Sensors, Screws, Components	Storage Box • Component Storage Box • Parts Organizer • DIY Storage • 8 Compartment Box • Large Organizer Box • Hardware Organizer
	MMC-00001-A	M-F Jumper Wire	MM - Mechanical Module	MWduino / Generic	20cm male-to-female jumper wires designed for flexible and reliable circuit connections. Includes 20 multi-color wires with 2.54mm male pins and female header connectors for easy interfacing. Ideal for Arduino, Raspberry Pi, sensors, modules, breadboards, prototyping, testing, and educational electronics projects.	Item Type: Jumper Wire Cable Type: Male to Female Cable Length (cm): 20 Quantity (pcs): 20 Connector Type: Male Pin ? Female Header Color Coding: Multi-color (10–20 assorted colors) Compatibility: Breadboards, Arduino, Raspberry Pi, Sensors Weight (g): 16 Shipping Weight: 0.016 kg Shipping Dimensions (L × W × H): 10 × 7.5 × 2 cm	Breadboard Wire • Arduino Wire • Prototyping Cable • Jumper Wire • Male to Female
	MMC-00001-B	M-M Jumper Wire	MM - Mechanical Module	Male-to-Male Jumper Wire (20 cm, Pack of 20)	20cm male-to-male jumper wires designed for quick and reliable circuit connections. Includes 20 multi-color flexible wires with standard 2.54mm male header pins for easy interfacing. Ideal for breadboards, Arduino, Raspberry Pi, sensors, modules, prototyping, circuit testing, and educational electronics projects.	Item Type: Jumper Wire Cable Type: Male to Male Cable Length (cm): 20 Quantity (pcs): 20 Connector Type: Male Header Pins Color Coding: Multi-color (10–20 assorted colors) Compatibility: Breadboards, Arduino, Raspberry Pi, Sensors Weight (g): 16 Shipping Weight: 0.016 kg Shipping Dimensions (L × W × H): 10.5 × 7.5 × 2 cm	Breadboard Wire • Arduino Wire • Prototyping Cable • Jumper Wire • Male to Male

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	MMC-00001-C	F-F Jumper Wire	MM - Mechanical Module	TWIN INDUSTRIES	20 cm Female-to-Female jumper wires for reliable connections between pins or headers. Pack of 20 flexible, color-coded wires compatible with breadboards and Arduino projects. Ideal for prototyping, testing, educational use, and sensor connections.	Cable Type: Female to Female Cable Length (cm): 20 Quantity (pcs): 20 Connector Type: Female Header ? Female Header Color Coding: Multi-color (10–20 assorted colors) Compatibility: Breadboards, Arduino, Raspberry Pi, Sensors Weight (g): 17 Shipping Weight: 0.017 kg Shipping Dimensions (L × W × H): 10 × 7.5 × 2 cm	Female-to-Female Jumper • Breadboard Wire • Arduino Wire • Prototyping Cable • 20cm • Multi-color
No Image	MMC-00006-A	DC Jack Connector	MM - Mechanical Module	CUI Devices, Kycon, SparkFun, Adafruit	The 9V DC Jack Connector is a power connector used to supply DC power to electronic circuits and devices. It provides a secure connection between power adapters and systems. It is commonly used in Arduino projects, robotics, embedded systems, and DIY electronics for stable power delivery.	Connector Type: DC Barrel Jack Input Voltage: 9V DC Connector Size: 5.5mm x 2.1mm	DC jack • 9V connector • barrel jack • power connector • DC socket • Arduino power jack
No Image	MMD-00001-A	Mini DC Motor	MM - Mechanical Module	Roboman, Rytronics, Singh Varieties, Ercoms Robotics, Robiz (OEM)	The Compact 3–6V DC Mini Motor is a small low-voltage motor used in robotics and DIY electronics projects. It provides smooth rotation for lightweight applications. It is commonly used in mini robots, Arduino cars, and educational kits for driving wheels and simple mechanisms.	Motor Size: 38 × 20 × 15 mm Shaft Diameter: 2 mm Shaft Length (Axial): 9 mm Operating Voltage: 3V – 6V Motor Type: DC Motor	dc motor • Mini Motor • 3V Motor • Arduino Motor • DIY Robotics • Smart Car Motor
	MMD-00001-B	BO Motor Dual Shaft	MM - Mechanical Module	Generic Robotics, Robu.in, FlyRobo, DFRobot, Keyestudio	The BO2 Side Shaft Plastic Gear Motor is a lightweight DC geared motor used in robotics, smart cars, line follower robots, obstacle avoidance robots, STEM kits, and Arduino projects. It features a plastic gearbox with dual side shafts for easy wheel mounting and smooth power transmission. It provides low-speed, high-torque performance, making it ideal for educational and DIY applications.	Product Type: Plastic Geared DC Motor Motor Type: BO2 Side Shaft Motor Operating Voltage: 3V – 12V DC Rated Voltage: 6V DC Speed Range: 60RPM – 300RPM	Arduino Motor • BO Motor • DC Gear Motor • BO2 Gear Motor • Plastic Gear Motor • Side Shaft Motor • Robot Motor
	MMD-00002-A	Metal Gear Servo	MM - Mechanical Module	TowerPro, DFRobot, Adafruit, SparkFun, Robocraze	The MG995 360° High Torque Servo Motor is a continuous rotation servo used in robotics, RC vehicles, robotic arms, automation systems, smart wheel drives, and Arduino projects. It features metal gears, PWM control, and high torque for strong and reliable performance. Its continuous rotation makes it ideal for motion control and automation applications.	Product Type: Digital Servo Motor Model: MG995 Rotation Type: 360° Continuous Rotation Operating Voltage: 4.8V – 7.2V DC Stall Torque: 9kg·cm – 13kg·cm	Arduino Servo • Digital Servo Motor • Metal Gear Servo • High Torque Servo • Robotics Servo • MG995 Servo • 360° Servo Motor
	MMD-00002-B	Servo Motor	MM - Mechanical Module	TowerPro, MWduino Compatible, Generic	Compact 9g micro servo motor with 180° rotation for precise position control. Provides 1.2–1.6 kg·cm torque and fast response, making it ideal for robotics, RC models, automation, and educational projects. Compatible with Arduino and other microcontrollers using standard PWM signals. Lightweight, reliable, and easy to integrate into DIY and prototyping applications.	Item Type: TowerPro Servo Motor Model Series: SG Series Model No.: SG90 Rotation (Degree): 180° Torque Rating (kg·cm): 1.2 to 1.6 Operating Voltage (VDC): 3.0 – 7.2 Operating Speed @ 4.8V: 0.10 sec/60° Stall Torque @ 4.8V (kg·cm): 1.2 Stall Torque @ 6.6V (kg·cm): 1.6 Operating Temperature (°C): -30 to 60 Gear Type: Glass Fiber Servo Plug Type: JR Cable Length (cm): 25 Length (mm): 22.8 Width (mm): 12.6 Height (mm): 34.5 Weight (g): 9 Shipping Weight: 0.014 kg Shipping Dimensions (L × W × H): 8 × 6 × 4 cm	SG90 Servo • 9g Servo Motor • Micro Servo • RC Servo • Arduino Servo
	MMD-00002-C	Micro Metal Servo	MM - Mechanical Module	TowerPro, DFRobot, Adafruit, SparkFun, Waveshare	The MG90S Metal Gear Micro Servo Motor is a compact, high-torque servo used in robotics, RC vehicles, robotic arms, drones, pan-tilt systems, and Arduino projects. It features durable metal gears for improved strength and long life. Operating at 4.8V–6V with around 180° rotation, it provides precise and reliable motion control in a lightweight design.	Product Type: Metal Gear Micro Servo Model: MG90S Operating Voltage: 4.8V – 6V DC Rotation Angle: 180° Stall Torque: 1.8kg·cm – 2.2kg·cm	Arduino Servo • Metal Gear Servo • High Torque Servo • Robotics Servo • MG90S Servo • Micro Servo Motor • PWM Servo

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	MMD-00002-D	Digital Servo Motor	MM - Mechanical Module	TowerPro, Probots, DFRobot, Adafruit, SparkFun	The MG996R 360° Digital Servo Motor is a high-torque continuous rotation servo used in robotics, robotic arms, RC vehicles, automation systems, pan-tilt platforms, and Arduino projects. It features strong metal gears and PWM control for smooth and reliable operation. Its full 360° continuous rotation makes it ideal for applications requiring controlled motion and high torque.	Product Type: Digital Servo Motor Model: MG996R Rotation Type: 360° Continuous Rotation Operating Voltage: 4.8V – 7.2V DC Rated Voltage: 6V DC Stall Torque: 10kg-cm – 13kg-cm	Arduino Servo • MG996R Servo • 360 Degree Servo • Digital Servo Motor • Metal Gear Servo • High Torque Servo • Robotics Servo
	MMD-00003-A	Micro gear motor	MM - Mechanical Module	Pololu, DFRobot, Adafruit, SparkFun	N20 micro gear motors are compact DC motors with integrated metal gearboxes that provide low-speed, high-torque performance in a small size. They are widely used in robotics, smart cars, line follower robots, automation systems, and DIY electronics projects. Their compact design makes them ideal for space-constrained and educational applications requiring precise and reliable motion control.	Product Type: Micro Gear Motor Operating Voltage: 3V – 12V DC Rated Voltage: 6V DC Speed Range: 15RPM – 1000RPM Shaft Diameter: 3 mm	Mini Motor • Arduino Motor • Robotics Motor • Metal Gear Motor • N20 Motor • Micro Gear Motor • DC Gear Motor
	MMD-00003-B	150 RPM Geared Motor	MM - Mechanical Module	Johnson Motor, DFRobot, Robu.in, FlyRobo	The 150 RPM 12V geared DC motor is a high-torque motor with an integrated gearbox for efficient and controlled motion. It reduces speed while increasing torque, making it suitable for robotics, smart vehicles, automation systems, conveyor mechanisms, and DIY projects. It is ideal for Arduino-based applications requiring precise and reliable movement.	Product Type: DC Geared Motor Rated Voltage: 12V DC Speed: 150 RPM Gearbox Type: Metal Gearbox Shaft Diameter: 6 mm Current Consumption: 100mA – 500mA	150RPM Motor • Geared DC Motor • 12V Gear Motor • High Torque Motor • Robotics Motor • DIY Motor • Metal Gear Motor
	MMD-00004-A	Vibrating Motor	MM - Mechanical Module	Precision Microdrives, Adafruit, Jinlong Machinery, Generic Motors, DFRobot	DC vibrating motors are compact motors with an off-center weight that creates vibration when the motor rotates. They are widely used in mobile phones, wearables, robotics, alert systems, haptic feedback devices, and Arduino projects. Lightweight and easy to use, they are ideal for DIY electronics and interactive applications.	Product Type: Vibrating DC Motor Operating Voltage: 1.5V – 5V DC Speed: 8000 – 12000 RPM Current Consumption: 60mA – 100mA	Mini Motor • Arduino Motor • Vibration Motor • Vibrating Motor • Coin Motor • DC Vibration Motor • Haptic Motor
	MMD-00005-A	Mini Water Pump	MM - Mechanical Module	Adafruit, SunFounder, DFRobot, Generic Pump Manufacturer	Mini submersible water pumps are compact DC-powered pumps used for water circulation in fountains, aquariums, hydroponics, cooling systems, and automatic watering projects. They operate fully submerged and provide smooth, low-noise, continuous water flow. Lightweight and easy to install, they are ideal for Arduino, DIY, and educational applications.	Product Type: Mini Submersible Water Pump Operating Voltage: 3V – 6V DC Rated Voltage: 5V DC Current Consumption: 100mA – 220mA Flow Rate: 80 – 120 L/H Outlet Diameter: 7mm – 8mm	Mini Water Pump • Submersible Pump • DC Water Pump • Aquarium Pump • DIY Pump • Arduino Water Pump • Micro Pump
	MMD-00006-A	Gear Stepper Motor	MM - Mechanical Module	Adafruit, Songle Motor, Generic Stepper Motors, SunFounder	The compact 5V unipolar stepper motor with a built-in gearbox for high torque and precise low-speed control. It offers 32 steps per revolution with a 1/16 gear reduction. Widely used in Arduino projects, robotics, automation systems, camera sliders, and smart devices, it is ideal for accurate and controlled motion applications.	Product Type: Geared Stepper Motor Model: 28BYJ-48 Operating Voltage: 5V DC Gear Reduction Ratio: 1/64 Steps Per Revolution: 2048 Steps	Arduino Motor • 5V Stepper Motor • Reduction Stepper Motor • 28BYJ-48 • Geared Stepper Motor • Mini Stepper Motor • DIY Robotics Motor
	MMK-00001-A	Jumper Wire Kit	MM - Mechanical Module	SparkFun, Adafruit, Pololu, Generic	The Jumper Wire Kit is a set of male-to-male, male-to-female, and female-to-female wires used for breadboard prototyping and circuit connections. It enables easy, solder-free connections between components, sensors, and microcontrollers. It is widely used in Arduino projects, robotics, IoT systems, educational kits, and DIY electronics.	Cable Types: Male-Female, Male-Male, Female-Female Quantity: 80 MF, 80 MM, 80 FF Wire Length: 10cm – 30cm Conductor Material: Copper	Breadboard Wire • jumper wires • Dupont cable • MF cable • MM cable • FF cable

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	MMM-00001-A	BO Motor	MM - Mechanical Module	FlyRobo, RoboticsDNA, RoboElements	The 100 RPM Dual Shaft BO Motor is a low-voltage DC geared motor used for robotics and motion control. It provides good torque at 3–6V and features a dual shaft for easy wheel mounting. It is widely used in robot cars, DIY projects, and educational kits.	Gearbox Shape: Straight Operating Voltage: 3 ~ 6 V Rated Speed After Reduction: 100 RPM Shaft Diameter: 0.55 cm (Double) Shaft Length: 0.85 cm Dimensions (LxWxH): 7 x 2.3 x 1.9 cm	robotics • arduino • BO Motor • Gear Motor • Smart Car
	MMM-00003-A	Plywood Car Chassis	MM - Mechanical Module	Robu.in, FlyRobo, DFRobot, Keystudio	The RJ12 plywood car chassis is a lightweight base for robotics and Arduino projects like line follower and obstacle avoidance robots. Made from laser-cut plywood or MDF, it includes mounting holes for motors, sensors, wheels, and controllers. It is durable, easy to assemble, and ideal for STEM learning and prototyping.	Product Type: Robot Car Chassis Chassis Material: Plywood / MDF Thickness: 3mm – 5mm Compatible Motors: BO Motor / TT Motor / N20	RJ12 Chassis • Robot Car Chassis • Plywood Chassis • DIY Robot Base • Smart Car Platform • Robotics Chassis • Wooden Chassis
No Image	MMM-00005-B	Rubber wheels	MM - Mechanical Module	DFRobot, Pololu, SparkFun, Waveshare	Rubber wheels for DC motors are used in robotics, Arduino car kits, line follower robots, obstacle avoidance robots, and DIY projects. They fit BO and TT geared motors and provide good grip, stability, and smooth movement on different surfaces. Made from durable rubber, they are ideal for educational and prototyping applications.	Product Type: Rubber Wheel for DC Motor Wheel Diameter: 65mm / 70mm Compatible Motors: BO Motor / TT Motor Wheel Width: 25mm – 30mm	Robot Wheel • Rubber Wheel • DC Motor Wheel • Smart Car Wheel • Tyre Wheel • DIY Robot Wheel • Motor Wheel
	MMP-00001-A	Spacers	MM - Mechanical Module	Keystone Electronics, Adafruit, DFRobot, Pro'sKit	Spacers are mechanical components used to maintain precise distance between PCBs, panels, enclosures, and mounted parts in electronics, robotics, Arduino, and DIY projects. They provide support, alignment, and insulation, preventing unwanted contact between components. Available in nylon, brass, aluminum, and stainless steel variants for different applications.	Product Type: Spacer / Standoff Thread Size: M3 Length Options: 5mm – 50mm	PCB Spacer • Mounting Spacer • DIY Hardware • Spacer • Nylon Spacer • Brass Spacer • Standoff Spacer
	MMP-00003-B	M3 Screw 12mm	MM - Mechanical Module	Unbrako, TVS Fasteners, Bossard, RS PRO	M3 × 12mm machine screws are metric fasteners used in PCB mounting, robotics, Arduino projects, 3D printing, electronics enclosures, and mechanical assemblies. They offer strong, precise, and reliable fastening and are available in stainless steel and alloy steel with Phillips, Allen, and hex head options. Ideal for prototyping, repairs, manufacturing, and DIY electronics applications.	Product Type: Machine Screw Screw Size: M3 × 12mm Thread Type: Metric Thread Application: PCB Mounting, DIY, Robotics	DIY Hardware • M3 Screw • Machine Screw • Hex Screw • Mounting Screw • PCB Screw • M3x12mm Screw
	MMP-00003-C	M3 Screw 30mm	MM - Mechanical Module	Unbrako, TVS Fasteners, Bossard, RS PRO	M3 × 30mm machine screws are metric fasteners used in PCB mounting, robotics, Arduino projects, 3D printers, electronic enclosures, and mechanical assemblies. They offer strong and reliable fastening and are available in stainless steel and alloy steel with Phillips, Allen, and hex head options. Ideal for prototyping, repairs, manufacturing, and DIY electronics projects requiring secure assembly.	Product Type: Machine Screw Screw Size: M3 × 30mm Thread Type: Metric Thread Application: PCB Mounting, Robotics, DIY	DIY Hardware • M3 Screw • Machine Screw • Hex Screw • Mounting Screw • PCB Screw • M3x30mm Screw
	MMP-00003-D	M3 Screw 8mm	MM - Mechanical Module	Unbrako, TVS Fasteners, Bossard, RS PRO	M3 × 8mm machine screws are standard metric fasteners used in electronics, PCB mounting, Arduino projects, robotics, 3D printing, and mechanical assemblies. They provide strong, precise, and reliable fastening and are available in different materials like stainless steel, carbon steel, and alloy steel. Ideal for DIY, prototyping, repairs, and engineering applications.	Product Type: Machine Screw Screw Size: M3 × 8mm Application: PCB Mounting, DIY, Robotics	DIY Hardware • M3 Screw • Machine Screw • Hex Screw • Phillips Screw • Mounting Screw • PCB Screw

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	MMP-00004-A	Standoffs set	MM - Mechanical Module	Adafruit, Keystone Electronics, DFRobot, Pro'sKit	Standoff sets are threaded spacers used for mounting and separating PCBs, Arduino boards, Raspberry Pi boards, electronic enclosures, and DIY projects. They provide mechanical support, insulation spacing, and secure assembly for electronics hardware.	Product Type: Brass Standoff Set Thread Type: M2 / M2.5 / M3 Length Options: 5mm – 50mm Shape: Hexagonal	Brass Standoff • PCB Spacer • Hex Standoff • Mounting Spacer • PCB Mount Kit • Threaded Spacer • DIY Hardware
	TLC-00007-A	Desolder Pump	TL - Tools	Generic / OEM, Noel, Pro'sKit, Velleman, Engineer	A desoldering pump is a handy tool used to remove molten solder from PCBs during repairs and component replacement. It uses a spring-loaded plunger and heat-resistant nozzle to create strong suction, quickly clearing solder from joints. Lightweight, portable, and easy to use, it helps ensure clean desoldering while reducing the risk of damage to delicate electronic components.	Item Type: Desoldering Pump Body Material: Aluminum or Plastic Tip Material: Heat-resistant Teflon Color: Blue / Silver Length: 190 mm Width: 30 mm Height: 30 mm Weight: 29 g Shipping Weight: 0.03 kg Shipping Dimensions: 17 × 12 × 3 cm	PCB Rework • Desoldering Pump • Solder Sucker • Manual Vacuum • Teflon Tip
	TLK-00002-A	Screwdriver Set	TL - Tools	Pro'sKit, Jakemy, Stanley, Bosch	The precision screwdriver set used for electronics repair, PCB work, mobile servicing, laptops, watches, and other fine mechanical tasks. It includes cross and slotted screwdrivers with hardened steel tips for durability and accuracy. Ergonomic anti-slip handles provide better grip and control, making it ideal for precise DIY and professional repair work.	Product Type: Precision Screwdriver Set Number of Pieces: 6 pcs Screwdriver Type: Cross & Slotted Usage: Mobile, Laptop, DIY Repair	DIY Tool • Electronics Repair Tool • Precision Screwdriver Set • Cross Screwdriver • Phillips Screwdriver • Mini Screwdriver Set
	TLM-00002-A	Wire Cutter	TL - Tools	Generic / OEM, Pro'sKit, Knipex	A diagonal wire cutter is a precision hand tool designed for clean and accurate cutting of electrical wires, component leads, and soft metals. It features ergonomic non-slip grip handles for comfort and a spring-loaded mechanism that reduces hand fatigue during extended use. Compact, durable, and easy to handle, it is ideal for electronics assembly, repairs, prototyping, and DIY projects.	Item Type: Diagonal Wire Cutter Material: High-Carbon Steel Blade with ABS Handle Color: Blue Length (mm): 185 Width (mm): 95 Height (mm): 15 Weight: 60 g Shipping Weight: 0.062 kg Shipping Dimensions: 19 × 10 × 2 cm	Diagonal Cutter • Wire Cutter • Cutting Pliers • Side Cutter • Electrical Tool
	TLM-00004-C	Mini hacksaw	TL - Tools	Stanley, Taparia, Lenox	A mini hacksaw is a compact hand tool used for cutting metal rods, PVC pipes, plastic sheets, bolts, and small materials with precision. Its lightweight and ergonomic design makes it easy to use in tight spaces. Commonly used in electronics labs, robotics projects, plumbing, maintenance work, and DIY applications, it provides reliable and controlled cutting performance for everyday tasks.	Blade Length: 150 mm / 6 inch / 10 inch Handle Type: Ergonomic Grip / ABS Handle Weight: Approx. 70g – 250g Usage: DIY, Electronics, Plumbing, Workshop Cutting Material: Metal, PVC, Plastic, Aluminum	DIY Tool • Mini Hacksaw • Junior Hacksaw • Hand Saw • Metal Cutter • Compact Saw • Precision Cutting Tool
	TLP-00001-A	Hot Melt Glue Gun	TL - Tools	Generic / OEM, Stanley, Bosch, Pro'sKit	A 40W hot melt glue gun is a versatile tool designed for bonding, crafting, repairs, and DIY projects. It features a standard operating temperature, ergonomic trigger mechanism for precise glue flow control, and an integrated ON/OFF switch for added safety and convenience. Compatible with standard glue sticks, it delivers strong adhesion and reliable performance for various materials.	Item Type: Hot Melt Glue Gun Color: Black Operating Voltage: 110–220 V AC Power Consumption: 40 W Melting Point: 190°C (±10°C) Compatible Glue Stick Diameter: 7 mm Weight: 180 g Shipping Weight: 0.2 kg Shipping Dimensions: 27 × 16 × 5 cm	Compatible with 11mm diameter glue sticks and suitable for DIY projects • electronics work • furniture repair • decoration • packaging • and household fixes.
	TLP-00002-A	Soldering Iron Kit	TL - Tools	TLP Series / Generic Compatible, Noel, Pro'sKit, Velleman	A soldering iron kit is a complete toolset used for electronics assembly and repair. It includes essential tools for general-purpose soldering and is ideal for beginners, hobbyists, and professionals working on DIY electronics, college projects, and repair work.	Item Type: Kit Soldering Iron Power: 25 Watt Suitable For: Beginner to Professional Shipping Weight: 0.4 kg Shipping Dimensions: 20 × 7 × 6 cm	Soldering Kit • 25W Soldering Iron • 3-in-1 Kit • DIY Soldering Set • Electronics Repair Kit

Image	Part Number	Name	Category	Manufacturer	Description	Specification	Tags
	TLP-00003-A	Soldering Iron Stand	TL - Tools	Generic / OEM, Pro'sKit, Velleman, Goot, Noel	The 25W Soldering Iron Stand is used to safely hold soldering irons during work. It has a stable metal base and a spring holder for secure placement. It is commonly used in electronics labs, DIY projects, and repair workstations.	Suitable Wattage: 25 Watt (Max) Material: Metal Base with Steel Spring Holder Shipping Weight: 0.3 kg Shipping Dimensions: 20 × 6 × 3 cm	Soldering Stand • 25W • Iron Holder • Metal Base • Spring Holder
	TLP-00004-A	Cordless Power Drill	TL - Tools	Bosch, Robert Bosch GmbH	The Professional is a compact 12V cordless impact drill designed for drilling and screwdriving in wood, metal, and masonry. It features variable speed control, reverse rotation, and impact drilling for versatile use. Lightweight and durable, it is easy to handle and ideal for professional work, home repairs, and DIY projects requiring reliable and portable power tool performance.	Voltage: 12V Battery Type: Lithium-Ion No Load Speed: 0–400 / 0–1500 RPM Chuck Capacity: 10 mm Max Torque: 30 Nm Impact Rate: Up to 22,500 BPM	DIY Tool • Cordless Drill • Impact Drill • 12V Drill • Power Tool • Electric Drill • Professional Drill • Bosch Tool