ory I		Computer, display screen, tablet, 3D scanner and 3D printer.	
Items	Quantity	Spects	Remarks
Mac pro or Equivalent	1	• **8-Core Intel Xeon E5 processor** with 25MB L3 cache and Turbo Boost up to 3.9GHz • 16GB (four 4GB) of 1866MHz DDR3 ECC memory • **Dual AMD FirePro D700 graphics processors with 6GB GDDR5 VRAM each** • Six Thunderbolt displays • **1TB PCIe-based SSD[1]** • Wireless : 802.11ac Wi-Fi wireless networking;3 IEEE 802.11a/b/g/n compatible Bluetooth 4.0 wireless technology • MacOS High Sierra	
Display screen for Mac Pro	4	**Display Type:** LED-backlit LCD monitor / TFT active matrix **Energy Class:** Class A **Diagonal Size:** 27" **Viewable Size:** 27" **Adaptive-Sync Technology:** AMD FreeSync **Panel Type:** IPS **Aspect Ratio:** Widescreen - 16:9 **Native Resolution:** Full HD (1080p) 1920 x 1080 at 60 Hz **Pixel Pitch:** 0.3114 mm **Pixel Per Inch:** 82 **Brightness:** 250 cd/m² **Contrast Ratio:** 1000:1 / 8000000:1 (dynamic) **Colour Support:** 16.7 million colours **Response Time:** 6 ms (grey-to-grey) **Vertical Refresh Rate:** 48 - 75 Hz **Horizontal Refresh Rate:** 31 - 140 kHz	

		Horizontal Viewing Angle: 178 **Vertical Viewing Angle:** 178 **Screen Coating:** Anti-glare, 3H Hard Coating **Backlight Technology:** LED backlight **Features:** 99% sRGBcolour gamut, Flicker Free technology, Dell ComfortView**Dimensions (WxDxH):** 61.27 cm x 16.22 cm x 45.36 cm - with stand Audio **Type:** Speakers **Output Power / Channel:** 6 Watt Connectivity **Interfaces** HDMI VGA Audio line-in Audio line-out Mechanical **Display Position Adjustments:** Tilt **Tilt Angle:** -5/+21 **Features:** Security lock slot (cable lock sold separately) **Cables Included:** 1 x HDMI cable **Compliant Standards:** TCO Displays, BFR-free Power: **Voltage Required:** AC 120/230 V (50/60 Hz) **Power Consumption Operational:** 24 Watt **Power Consumption Sleep:** 0.3 Watt **Power Consumption (Off Mode):** 0.3 Watt **Dimensions :** With stand - width: 61.27 cm - depth: 16.22 cm - height: 45.36	
iMac Pro or equivalent	3	**DISPLAY**: 27-inch Retina 5K display, **PROCESSOR**: 8 core processor, **MEMORY**: 32GB of 2666MHz DDR4 ECC memory,	

		STORAGE: 1 TB SSD Drive,	
		GRAPHICS: Radeon Pro Vega 56 graphics processor with 8GB of HBM2 memory,	
		AUDIO: Stereo speakers, Four microphones, 3.5 mm headphone jack.	
		CONNECTIONS: Nbase-T Ethernet 10GB Ethernet RJ- 45 connector, Four Thunderbolt 3 (USB-C) ports, Four USB 3 ports, SDXC card slot with support for UHS- II	
		INPUT: Space Gray Magic Keyboard with Numeric Keypad, Space Gray Magic Mouse 2, Optional Space Gray Magic Trackpad 2	
		WIFI: 802.11ac Wi-Fi wireless networking, IEEE 802.11a/b/g/n compatible	
		BLUETOOTH: Bluetooth 4.2 wireless technology	
		COOLING: 2 fans thermal cooling system.	
		OS: macOS High Sierra	
Tablet for editing and modeling	2	Display Area :19″ IPS LCD Pressure Sensitivity: 2048 levels Accuracy: 0.25mm Resolution: 1440 X 900 Response Time: 5ms Support Color :16.7M(RGB 6-bit data + HiFRC data) Contrast Ratio: 800:01:00	
3D Scanner	1	**Model** : 3D Scanner	

		Metascore: 3.⅗ **Technology** : Laser triangulation **Output formats**: OBJ, PLY, STL, XYZOS **Compatibility:** Mac OS, Microsoft Windows **Max. resolution**: 0.43 mm **Max. accuracy:**0.25 mm **Scanning area** (near): 180 mm **Dimension:** 210 x 345 x 345 mm **Feature** **Texture/Colors** : Yes **Rotating table:** Yes Connectivity : USB	
Printer	1	**Functions:**Print, copy, scan **Copies, maximum:**Up to 50 copies **First page out (ready) black**: as fast as 11 s; **First page out (ready) color:**as fast as 13 s; **Resolution (black):** Up to 1200 x 1200 rendered dpi (when printing from a computer) **Resolution (color):**Up to 4800 x 1200 optimized dpi color (when printing from a computer and 1200 input dpi) **Monthly duty cycle:**Up to 500 pages **Print speed, black (ISO, laser comparable):**On AC: up to 10 ppm; **On Battery:** up to 9 ppm **Recommended monthly page volume:**100 to 300 **Display**: 2.65" CGD DISPLAY, IR Touch **Processor speed**: No less than 700 MHz **Number of print cartridges**: 2: 1 black and 1 color **Automatic paper sensor**: Yes Paper trays, standard: 1 **Connectivity, standard:**1 USB 2.0 device; 1 USB 2.0 host; 1	

		wireless; 1 wifi direct; 1 BLE **Compatible with:** *Apple iOS and MacOS, Windows, Linux* **Memory, maximum:**128 MB **Duplex printing : YES** **Digital send file Formats:**PDF; JPEG; and Editable Text (OCR) formats supported **Copy resolution (black text):**Up to 600 dpi **Copy resolution (colour text and graphics):**Up to 600 dpi **Copy reduce / enlarge settings:** 25 to 400%	
3D printer		**Print size :** *10 x 9 x 8 in* *254 x 228.6 x 203.2 mm* **Layer resolution:** *50–300 microns* **Travel speed:** *Up to 80 mm/s* **Print head:** *Quick Change Nozzle* **XYZ accuracy:** *11, 11, 1.6 microns* **Weight:** *21 lbs.* **Size (w x h x d):** *17.1 x 18.1 x 15.1 in* *433.8 x 459.7 x 383.54 mm* **Print plate leveling tech:** *Automatic Leveling Calibration* **Print technology:** *Fused Filament Fabrication* **Print speed:** *Up to 50 mm/s* **Nozzle diameter:** *0.4 mm Nozzle* **Supported OS:** *Apple iOS and MacOS, Windows, Linux*	

Items	Qty	Spects	
Arduino (STARTER KIT)	2	STARTER KIT with MULTI-LANGUAGE Should include following items in kit. 1 Projects Book (170 pages), 1 Arduino / Genuino Uno, 1 USB cable, 1 Breadboard 400 points, 70Solid core jumper wires, 1 Easy-to-assemble wooden base, 1 9v battery snap, 1 Stranded jumper wires (black), 1 Stranded jumper wires (red), 6 Phototransistor, 3 Potentiometer 10kOhms, 10Pushbuttons, 1 Temperature sensor [TMP36], 1 Tilt sensor, 1 alphanumeric LCD (16x2 characters), 1LED (bright white), 1 LED (RGB), 8 LEDs (red), 8 LEDs (green), 8 LEDs (yellow), 3 LEDs (blue), 1 Small DC motor 6/9V, 1 Small servo motor, 1 Piezo capsule [PKM17EPP-4001-B0], 1 H-bridge motor driver [L293D], 1 Optocouplers [4N35], 2 Mosfet transistors [IRF520], 5 Capacitors 100uF, 5 Diodes [1N4007], 3 Transparent gels (red, green, blue), 1 Male pins strip (40x1), 20 Resistors 220 Ohms, 5Resistors 560 Ohms, 5 Resistors 1 kOhms, 5 Resistors 4.7 kOhms, 20 Resistors 10 kOhms, 5Resistors 1 MOhms, 5 Resistors 10 MOhms	
Arduino (**ARDX Experimentation Kit**	2	**Experimentation Kit** *Arduino Prototyping Bundle (the latest Arduino Uno '328 board, half size breadboard & acrylic holder)* *65 Piece Jumper Wire Bundle* *Full color printed 32 page Experimenter's Guide* *13 color Breadboard Layout Sheets* *USB Cable* *9V battery clip*	

| | | Components such as
5mm diffused tri-color (RGB) LED (x1)
New! Force Sensing Resistor (FSR) for detecting touch and squeezing. (Please note, we are currently shipping with the FSR-400 not FSR-402 since there's a 2 month backorder for the '402. The '400 works exactly the same but has a smaller 'head') *5mm Red LEDs (x10)*

● *5mm Green LEDs (x10)*
● *10mm Blue LED (x1)*
● *Toy DC Motor (x1)*
● *Mini Servo Motor (x1)*
● *8-Bit Shift Register (74HC595) (x1)*
● *Piezo Element (x1)*
● *Pushbuttons (x2)*
● *Potentiometer (10k) (x1)*
● *Photo Resistor (x1)*
● *Temperature Sensor (TMP36) (x1)*
● *Relay (5v DPDT) (x1)*
● *Transistors (P2N2222A) (x2)*
● *Resistors (560 Ohm x25, 2.2k Ohm x3, 10k Ohm x3)*
● *Diodes (1N4001) (x2)* | |
| Raspberry pi | 2 | **Processor Chipset** *: Broadcom BCM2837 64Bit Quad Core Processor powered Single Board Computer running at 1.2GHz*
Processor Speed*: QUAD Core @1.2 GHz*
RAM *: 1GB SDRAM @ 400 MHz*
Storage*: MicroSD* | |

		USB 2.0*: 4x USB Ports* ***Max Power Draw/voltage:*** *2.5A @ 5V* ***GPIO:*** *40 pin* ***Ethernet Port:*** *Yes* ***WiFi:*** *Built in* ***Bluetooth LE:*** *Built in*	

	2	**Starter Pack**
		    ● **Included MCU/MPU Board(s):**Raspberry Pi 3
		    ● **Interconnect System:**Raspberry Pi HAT (40 pin)
		    ● **Kit Type:**Starter Kit
		    ● **Main Purpose:**Inventor Kit
		    ● **Utilized IC / Part:**BCM2837
		The pack must contain
		
		Raspberry Pi 3 - Model B - ARMv8 with 1G RAM AND built- in WiFi - The FRESHEST freshness that's EVEN MORE FRESH than the already fresh Pi 2. This is hot off the presses, selling- like- hotcakes, Wi- Fi enabled, blindingly fast, credit card sized computer with quad USB ports, quad- core ARMv8, 1G RAM, and a little BlueFruit Low Energy that all make this board essential. oAdafruit Raspberry Pi B+ Case - Smoke Base / Clear Top - We think it's the Single Greatest Raspberry Pi 2 Model B Case Ever. This will still work with your Pi 3. oAdafruit Assembled Pi Cobbler Plus - This is the soldered together version of our popular Pi Cobbler Plus Kit. Comes with a breakout board that's perfect for cobbling prototypes as well as a 40- pin GPIO cable for your Pi's pins. Still works with the Pi 3. o Full Size Breadboard - In the past, we've used the half- size breadboard for a lot of Pi projects - but no longer! WIth 40 pins to break out, you're going to need some space - and that's why we're including a full size breadboard in this pack. o Premium Male/Male Jumper Wires - 20 x 6" (150mm) - These jumper wires are great for making wire harness or jumpering between headers on PCBs. We include the	

		longer ones so they work well with the full- size breadboard. o USB to TTL Serial Cable - An old standby, this cable's pretty much the easiest way to connect your Raspberry Pi to a USB port to log into the debugging/login console. Ideal for running the Pi 'headless' o 8 GB SD Card pre- installed with the latest NOOBs distribution - As of October 24th, 2016 this pack now contains the 8GB microSDHC card programmed with the latest Raspberry Pi NOOBs distribution. o 5V 2.4A Switching Power Supply w/ 6' MicroUSB Cable - The 5V 2A power adapter is the perfect choice for powering your Raspberry Pi B+ with 2 Amps of current output, and an extra long cord. Note: As of March 28th, 2016 we've updated our power supply to be 5V 2.4A. o Embroidered Raspberry Pi Badge - Now that you're getting started, show off your Pi Pride with this beautifully embroidered, jewel toned, iron-on badge. o BONUS PARTS! Everyone loves bonuses so we include some parts that will get you through some of the tutorials on the Adafruit Learning System. These include: 1x Photo Cell 5x 10K 5% 1/4W Resistor 5x 560 ohm 5% 1/4W Resistor 1x Diffused 10mm Blue LED 1x Electrolytic Capacitor - 1.0uF 1x Diffused 10mm Red LED 1x Diffused 10mm Green LED 3x 12mm Tactile Switches	
GPS NEO-6M Module sensor	3	Gowoops GPS Module U-blox NEO-6M with TTL Ceramic Passive Antenna for Arduino Raspberry Pi 2 3 B+ MCU Model: GPS-NEO-6M-001 Supply voltage: 3V / 5V power supply common Antenna size: 25 x 25 mm Module size: 25.5 x 31.5 mm Mounting Hole diameter: 2mm Default Baud Rate: 38400 Default output: NMEA0183 protocol accord	
USB GPS Receiver	3	Chipset SIRF Star III, Frequency: L1, 1575.42 MHz,	

| | | C/A Code : 1.023 MHz chip rate,
Channels 20 channel all-in-view tracking,
Sensitivity -159 dBm
Accuracy
 Position Horizontal: 10m 2D RMS (SA off)
Velocity: 0.1m/sec
Time: 1 micro-second synchronized to GPS time
WAAS enabled: 5m 2D RMS
Datum
Datum WGS-84
Acquisition Rate
Hot start 1 sec., average (with ephemeris and almanac valid)
Warm start 38 sec., average (with almanac but not ephemeris)
Cold start 42 sec., average (neither almanac nor ephemeris)
Reacquisition 0.1 sec. average (interruption recovery time)

Protocol GPS
Protocol Default: NMEA 0183
GPS Output Data SiRF binary >> position, velocity, altitude, status and control ; NMEA 0183 protocol.supports command: GGA, GSA, GSV, RMC, VTG, GLL (VTG and GLL are optional)
GPS transfer rate Software command setting (Default : 4800,n,8,1 for NMEA)
Dynamic Condition
Acceleration Limit Less than 4g
Altitude Limit 18,000 meters (60,000 feet) max.
Velocity Limit 515 meters/sec. (1,000 knots) max.
 Jerk Limit 20 m/sec**3
Temperature Operating -40°~ 85°C Storage -40°~ 85°C
 Humidity Up to 95% non-condensing
Power Voltage 4.5V ~ 6.5V
Current 80mA typical | |
| MPU-6050 Gyroscope (Sensor) | 3 | Acceleration Range: **± 2g, ± 4g, ± 8g, ± 16g**
Interface:**I2C** | |

		Interface Type: **I2C, SPI** No. Of Axes: **9** No. Of Pins: **24** Operating Temperature Range: **-40°C To +85°C** Rohs Compliant: **Yes** Sensor Case Style: **QFN** Supply Voltage Range: **2.5V To 3.6V**	
PIR Motion Sensor	3	Sensor Type: Dual Element Housing TO 5 Element Size 2 1 mm Spacing 1 mm Responsivity Min 3.2 xv/w 7...14mm, 1Hz,100 Typ 4.0 (One element cover) Match Max <10 % 7...14mm, 1Hz,100 (Both element expose) Noise Typ 20 p-p 25 , 0.4...10Hz Max 50 V Effect Voltage Min 0.2 Re=47XO Max 1.5 Window Material Silicon, coated Spectral Range Transmission T>30 average % 7...14mm Blocking T<0.1 <5mm Operating Voltage 12 V Operating Temperature -10~40 Storage Temperature -40~80	
HC-SR04 ultrasonic sensor	3	Working Voltage : 5V(DC) Static Current: Less than 2mA. Output Signal: Electric frequency signal, high level 5V, low level 0V. Sensor Angle: Not more than 15 degrees. Detection Distance: 2cm-450cm. High Precision: Up to 0.3cm Input Trigger Signal: 10us TTL impulse Echo Signal : output TTL PWL signal Mode of connection: VCC	

		trig(T) echo(R) GND	
Magnetic Switch / Reed Relay	1 set (100 pieces)	Reed Relay in Single-In-Line (SIL) Package **Coil Voltage:** 5, 12, 24 **Coil Resistance:** 500, 2000, 125 **Switching Voltage (V DC):** 200, 175, 300	
GP2Y0A02YK	3	■ **Features** 1. Less influence on the colors of reflected objects and their reflectivity, due to optical triangle measuring method 2. Distance output type (Detection range:20 to 150cm) 3. An external control circuit is not necessary Output can be connected directly to a microcomputer ■ **Applications** 1. For detection of human body and various types of objects in home appliances, OA equipment, etc ■ **Absolute Maximum Ratings** $(T_a=25°C)$ 	Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	−0.3 to +7	V
[*1] Output terminal voltage	V_O	−0.3 to V_{CC} +0.3	V
Operating temperature	T_{opr}	−10 to +60	°C
Storage temperature	T_{stg}	−40 to +70	°C | *1 Open collector output ■ **Recommended Operating Conditions** | Parameter	Symbol	Rating	Unit
Operating Supply voltage	V_{CC}	4.5 to 5.5	V		
RFID-RC522 - Inductive RFID card reader	3	Electrical parameters : Operating current :13-26mA/DC 3.3V Idle current :10-13mA/DC 3.3V Sleep current: <80uA	

		Peak current: <30mA Operating Frequency: 13.56MHz Supported card types: mifare1 S50, mifare1 S70 MIFARE Ultralight, mifare Pro, MIFARE DESFire Product physical characteristics: size: 40mm×60mm Environmental Operating temperature: -20-80 degrees Celsius Environmental Storage Temperature: -40-85 degrees Celsius Relative humidity: relative humidity 5% -95% Module interfaces SPI Parameter Data transfer rate: maximum 10Mbit/s Package Contents: 1x RFID-RC522 module 1x The standard S50 blank card 1x S50 special-shaped card (as shown by the key ring shape) 1x Straight, curved rows of pin of the article	
Servo Motors	3	**Size** 38 x 11.5 x 24mm (Include tabs) 28 x 12.7 x 27mm (Not include tabs) **Weight** 17g (Not include a cable and a connector) 18g (Include a cable and a connector) **Speed** 0.14sec/60degrees (4.8V) 0.12sec/60degrees (6.0V) **Torque** 2.5kgf-cm (4.8V) 3.0kgf-cm (6.0V)	

		Voltage 4.8V-6.0V **Connector type** JR type (Yellow: Signal, Red: VCC, Brown:GND)	
28BYJ-48 Stepper Motor	3	● Rated voltage :5VDC ● Number of Pole: 4 ● Speed Variation Ratio: 1/64 ● Idle In-traction Frequency: ≥500Hz ● Idle Out-traction Frequency: ≥800Hz ● In-traction Torque:>34.8mN.m(100Hz) ● Self-positioning Tor>30mN.m ● Insulated resistance :>10MΩ(500V) ● Insulated electricity power :600VAC/1mA/1s ● Insulation grade A ● Rise in Temperature <55K(120Hz) ● Noise <40dB(120Hz,No load,10cm)	
PCA9685 Servo Board	3	Arduino compatible servo control board Control over I2C Has built in timer, does not tie the microcontroller 16 12-bit PWM output channels 1.6kHz frequency modulation for PWM signals Up to 62 modules can be controlled from a single I2C bus	
MCP3008 Analog-to-digital Convertor	3	10-bit resolution ± 1 LSB max DNL ± 1 LSB max INL 4 (MCP3004) or 8 (MCP3008) input channels Analog inputs programmable as single-ended or pseudo-differential pairs	

		On-chip sample and hold SPI serial interface (modes 0,0 and 1,1) Single supply operation: 2.7V - 5.5V 200 ksps max. sampling rate at VDD = 5V 75 ksps max. sampling rate at VDD = 2.7V Low power CMOS technology 5 nA typical standby current, 2 µA max. 500 µA max. active current at 5V industrial temp range: -40°C to +85°C Available in PDIP, SOIC and TSSOP packages	
Heartbeat / Pulse Sensor	3	Heat beat indication by LED Instant output digital signal for directly connecting to microcontroller Compact Size Working Voltage +5V DC Operating Voltage +5V DC regulated Operating Current 100 mA Output Data Level 5V TTL level Heart Beat detection Indicated by LED and Output High Pulse Light source 660nm Super Red LED	
PiBreak Raspberry Pi Prototyping Board	3	Gold-plated (ENIG) PCB for durability Large prototyping area to place your own parts GND and 3.3V power rails Raspberry Pi I/O Pinout markings on both the top and bottom Includes 2 nuts, bolts, spacers, and washers for firm mounting	
Proto Shield Rev3 (UNO SIZE)	3	Must contain 1.0 Arduino Pinout 1 ICSP Connector footprint	

		2 LEDs and resistor footprint IOREF and GND power lines SPI signals pads 24 pin SMD footprint (50 mils pitch)	
RASPBERRY PI ZERO W V1.3 DEVELOPME NT BOARD **WITH CASE**	3	1. Processor: BCM 2835 SOC 2. Clock speed: 1GHz 3. RAM: 512MB 4. Built-in Wireless: WiFi + Bluetooth 4.1 + BLE (Bluetooth Low Energy). 5. Display and Audio: mini-HDMI 6. USB Port: micro-B USB for data 7. Power input: micro-B USB for power	
L12 100mm 100:1 Linear Actuator	2	Peak Power Point: 23N at 6mm/s Gear Ratio: 100:1 Max Speed (no load): 12mm/s Input Voltage: 6V Stall Current: 450ma at 5V and 6V Interface: Analog voltage	
Gemalto Cinterion Concept Board	2	8 GPIO lines with level-shifters, Compatible with a range of Arduino shields, 5V power supply GPIO Control User Buttons EHS8 2G/3G Module with Java and GPS Battery Support Connector for Extension Boards SIM-Card Holder Start / Off Buttons LEDs Antenna (GSM / UMTS)	

		USB ASC0 / FTDI (+5V) GPS Antenna Connector	
Adafruit FONA	3	Quad-band 850/900/1800/1900MHz - connect onto any global GSM network with any 2G SIM (in the USA, T-Mobile is suggested) Make and receive voice calls using a headset OR an external 8Ω speaker + electret microphone Send and receive SMS messages Send and receive GPRS data (TCP/IP, HTTP, etc.) Scan and receive FM radio broadcasts (yeah, we don't exactly know why this was included but it works really well) PWM/Buzzer vibrational motor control AT command interface with "auto baud" detection	
Arduino GSM	2	Quad-band GSM/GPRS modem that works at frequencies GSM850MHz, GSM900MHz, DCS1800MHz and PCS1900MHz. Should supports TCP/UDP and HTTP protocols through a GPRS connection. GPRS data downlink and uplink transfer speed should be maximum is 85.6 kbps.	
Photon: Programmable wifi development kit for prototyping and scaling IoT	3	Photon ● Cypress BCM43362 Wi-Fi chip ● Single band 2.4GHz IEEE 802.11b/g/n ● Supports wireless data rates of up to 65Mbit/s ● Ultra low power sleep, stand-by and stop modes ● Supports Open, WEP, WAPI, WPA and WPA2-PSK WiFi security modes	

products		• Soft AP setup • STM32F205 120Mhz ARM Cortex M3 • 1MB Flash • 128KB RAM • 18 mixed-signal GPIO and advanced peripherals	
Electron 3G kits: development kit for creating 2G cellular connected products	3	• U-Blox SARA U260/U270 (3G) or G350 (2G) • Telefonica global SIM card • Particle IoT data plan • STM32F205 ARM Cortex M3 microcontroller • 1MB Flash • 128K RAM • 30 mixed-input GPIOs with advanced peripherals • 36 pins total: 28 GPIOs (D0-D13, A0-A13), plus TX/RX, 2 GNDs, VIN, VBAT, WKP, 3V3, RST • Power management circuit included on-board • Board dimensions: 2.0" x 0.8" x 0.3" (0.5" including headers) • Open source hardware	
RedBear Duo: Wifi + Bluetooth BLE development kit with the particle cloud	3	STMicroelectronics STM32F205 ARM Cortex-M3 @120MHz, 128 KB SRAM and 1MB Flash Broadcom BCM43438 Wi-Fi 802.11n (2.4GHz only) + Bluetooth 4.1 (Dual Mode) combo chip On-board 16 Mbit (2 MB) SPI Flash Integrated chip antenna with the option to connect external antenna 18 I/O pins RGB status LED Small single-sided PCB for easy mounting on other PCB boards Duo comes with headers soldered 20.5mm x 39mm	

Items	Qty	Specs	
Desktop	1	7th Generation Intel Core i5-7400 processor (6 MB Cache, upto 3.5 Ghz) Windows 10 Pro 64 bits (Genuine windows). 8GB, 2400MHz, DDR4; up to 16GB (additional memory sold separately) Intel® HD Graphics 630 with shared graphics memory Dell MS116 Wired Mouse Black	
Arduino Mega 2560	1	Microcontroller = Atmega2560 Operation voltage = 5 V Digital I/O = 54 Analog I/P = 16 Flash Memory = 256 kb SRAM = 8kb EEPROM = 4 kb Clock Speed = 16 Mhz	
Voltmeter	1	Professional DT832 Mini A Digital Multimeter LCD DC AC Voltmeter Ammeter Ohm Tester Digital Multimeter. **Measuring range : 3.3 V to 100 V or more.**	
Arduino Uno	2	Arduino r3 board	
AVR Microcontroller Board	2	1. AVR family microcontroller(AT Mega*8) 2. AVR family microcontroller(AT MEGA*16/32)	

1. Wifi modem 2. Wifi module	1 2	TP link models ESP8366 Wi-Fi module(3.3 operating voltage)	
LED	15	5mm LED,Red or green,	
LCD display	2 2	1. 16x2 LCD display 2. 16x4 LCD display	
Transformer	3 3	1. Step Down transformer 230V ac to 12V ac 2. Stepdown transformer 230V ac to 5V dc	
sensors	10	HC-SR 04 Ultrasonic sensor module	
Resistors	10 10 10	1. 1K 2. 100 ohm 3. 3.3K	
Capacitors ceramic	15 15 15	1. 470µF ceramic 2. 0.1µF ceramic 3. 10µF electrolyte type	
Diodes	20	1. D1N4001,5V	
Voltage Regulator	5 5 5	1. LM 7805c 2. LM 7812 3. LM 1117	
Potentiometer	5	Linear 10k	
Jumper wires	100 100 100 100	1. Male to male 2. male to female 3. female to male 4. female to female	
buzzer	10	5V buzzer	

Bread board	5	Full size	
Breadboard wires	5m 5m	Red Black	
Soldering Kit and accessories	1	Soldering Kit and accessories (iron stand, flux, desoldering wick)	
Multimeter	2 2	1. Digital 2. analogue	
PCB board	10 10 10	12x18 cm 30x15cm 6x8cm	
Insulation Tape	5	Insulation Tape	