

**Prayas Centre Name** Foundation for Sandboxstartup Initiatives (Deshpande Startups)

**City** Hubballi

**State** Karnataka

**Fablab Page Link** [Idea to Prototype - Deshpande Startups](#)

**Equipment available at Deshpande Startups DST PRAYAS Shala**

Section	Mechanical Machinery	
Sr. No.	Equipment Name	Equipment Detail
1	Sheet Metal Laser Cutting Machine	<p><b>Brand:</b> BODOR  <b>Model:</b> A3 Series  <b>Specification:</b>                      Laser Wavelength - 1064nm                      Positioning Accuracy - 0.05mm                      Repositioning Accuracy - 0.03mm                      Laser Source - MAX                      Laser Power - 1000W  <b>Material:</b> MS -10mm /SS-5mm/Aluminum-2mm/Brass-2mm  <b>Bed Dimensions:</b> 4550*2300*1650mm</p>

Section	Mechanical Power Tools	
Sr. No	Equipment Name	Equipment Detail
1	Makita DUC353Z Cordless Chainsaw 14 inch	<p><b>Brand:</b> MAKITA  <b>Model:</b> DUC353Z  <b>Specification:</b>                      Power Source - Battery Powered                      Horsepower - 100 Watts                      Item Weight - 5.3 Kilograms                      Chain Length - 14 Inches                      Item Dimensions (L*W*H) - 76 x 22 x 24 cm</p>
2	GO Solo Professional Cordless Screwdriver Bosch 3.6 V	<p><b>Brand:</b> BOSCH  <b>Model:</b> Go Solo  <b>Specification:</b>                      Chuck Capacity - 6.35 mm</p>

		<p>Country of Origin - Germany/US/India/China  Maximum Screw Diameter - 5 mm  No Load Speed at 1st Gear - 0-360 RPM  No Load Speed at 2nd Gear - 0-360 RPM  Torque (Soft/Hard) - 25/5 Nm  Battery Type - Lithium-ion  Battery voltage - 3.6 V</p>
3	DREMEL 4000-4/65 HIGH-PERFORMANCE ROTARY TOOL KIT	<p><b>Brand:</b> DREMEL  <b>Model:</b> Series 4000  <b>Specifications:</b>  Voltage - 120V AC  Power Source - Corded  Cord Length - 6 ft.  <b>Features:</b> Electronic Feedback Control, High-Performance Motor, Separate On/Off Switch, Speed Control  <b>Operational area:</b> Carving, Cleaning, Cutting, Engraving, Grinding, Polishing, Sanding, Sharpening</p>
4	DREMEL VERSAFLAME 2200-4 STATIONARY BUTANE TORCH	<p><b>Brand:</b> DREMEL  <b>Model:</b> F0132200JA  <b>Specifications:</b> 17 x 6 x 11 cm; 227 Grams</p>
5	BOSCH ELECTRIC KIT GSB SERIES	<p><b>Brand:</b> BOSCH  <b>Model:</b> GSB Series  <b>Specification:</b>  Power Source - Corded Electric  Color - Green, Blue  Speed - 2600 RPM  Item Dim L*W*H – 12*39.5*33 cm  Max Chuck Size - 10mm</p>
6	DREMEL 120 V VARIABLE-SPEED ROTARY KIT	<p><b>Brand:</b> DREMEL  <b>Model:</b> Series 3000  <b>Operational area:</b> Carving, Cutting, Grinding, Polishing, Sanding  <b>Specification:</b>  Voltage - 120V AC  Power Source - Corded  Cord Length - 6 ft.</p>

7	DREMEL VERSATIP 2000-6 BUTANE SOLDERING IRON (GREY, 6- ACCESSORIES)	<b>Brand:</b> DREMEL <b>Model:</b> VERSATIP 2000-6 <b>Specification:</b> Weight - 0,135 kg Length - 19 cm Width - 2.5 cm Depth - 2.5 cm Ignition - Piëzo Burn time - 90 min
8	DREMEL 290-01	<b>Brand:</b> DREMEL <b>Model:</b> 290-01 <b>Specification:</b> 200 strokes per minute engraver includes letter and number template
9	DREMEL VERSA FLAME	<b>Brand:</b> DREMEL <b>Specification:</b> Color - Grey Item Weight - 227 Grams Item Dim L*W*H - 17*6*11 cm Material - Plastic
10	BOSCH ALL-IN-ONE METAL HAND TOOL KIT	<b>Brand:</b> BOSCH <b>Specification:</b> Combo Color - Blue Material - Plastic Dimension - 253mm x 280mm x 45mm
11	CONCRETE GRINDER GBR 15 CAG	<b>Brand:</b> BOSCH <b>Model:</b> GBR 15 CAG <b>Specification:</b> Rated input power – 1500 W No-load speed - 9300 rpm Disc diameter - 125 mm spindle thread - M14 Main handle - Bow (rotating) Grinding head (diameter) - 125 mm Weight - 2.6 kg
12	STRAIGHT GRINDER GGS 28 LCE	<b>Brand:</b> BOSCH <b>Model:</b> GGS 28 LCE <b>Specification:</b> No-load speed - 10,000~30,000 rpm Rated input power - 650 W Power output - 380 W Spindle collar diameter - 43 mm

		<p>Weight - 1.6 kg Max. grinding tool diameter - 50 mm</p>
13	BOSCH DRILL DRIVER GSR12V-15FC	<p><b>Brand:</b> BOSCH <b>Model:</b> GSR12V-15FC <b>Specification:</b> Torque (soft/hard/max.) - 15~30 Nm No-load speed (1st gear / 2nd gear) - 0~400 / 0~1,300 rpm Battery voltage - 12 V Weight excl. battery - 0.6 kg Battery type - Lithium-ion Chuck capacity, min./max.- 1 / 10 mm Torque settings - 20+1</p>
14	BOSCH MULTI-TOOL GOP 30-28	<p><b>Brand:</b> BOSCH <b>Model:</b> GOP 30-28 <b>Specification:</b> Power Input - 300 W Dimensions L*W*H - 207*220*165 mm Weight - 1.5 kg</p>
15	RECIPROCATING SAW GSA	<p><b>Brand:</b> BOSCH <b>Model:</b> GSA <b>Specification:</b> Rated input power - 1200 W Saw, stroke length - 29 mm Stroke rate at no load - 0~3,000 spm Tool dimensions L*W*H - 475*96*165 mm</p>
16	BOSCH DRILLGBM 32-4 WITH ALL CUT MAGNETIC DRILL STAND	<p><b>Brand:</b> BOSCH <b>Model:</b> GBM 32-4 <b>Specification:</b> Rated input power – 1500 W Weight - 7.3 kg No-load speed, 1st gear - 210 rpm No-load speed, 2nd gear - 330 rpm No-load speed, 3rd gear - 470 rpm No-load speed, 4th gear - 740 rpm Power output-1,000 W</p>

17	BELT SANDER	<b>Brand - BOSCH</b> <b>Model- GLM 40</b>
18	70mm VARIABLE SPEED JIGSAW MACHINE WOODCUTTER	<b>Brand: BOSCH</b> <b>Model: 06012A70F0</b> <b>Specification:</b> Stroke Length - 20 mm Power Input - 500 W Cutting Depth in Wood - 70 mm Stroke Rate - 1,450-3,200 spm Scope of Supply Wood blade - T111C 1 hex key Dust Cover
19	RANDOM ORBIT SANDER GEX 150 AC	<b>Brand: BOSCH</b> <b>Model: GEX 150 AC</b> <b>Specification:</b> Sanding pad diameter - 150 mm Rated input power - 340 W Oscillating circuit diameter - 4 mm No-load speed - 4,500~12,000 rpm Orbital stroke rate - 9,000~24,000 opm Eccentricity - 2 mm Sound pressure level - 75 dB(A) Sound power level - 80 dB(A) Uncertainty K-3 dB
20	BOSCH CIRCULAR SAW GKS 190	<b>Brand: BOSCH</b> <b>Model: GKS 190</b> <b>Specification:</b> Rated input power - 1400 W Saw blade diameter - 184 mm Saw blade bore diameter - 20 mm No-load speed - 5200 rpm Tool dimensions L*W*H - 260*385*280 mm Max. cutting capacity in wood (90°) - 67 mm Max. cutting capacity in wood (45°) - 49 mm
21	TEMPERATURE HEAT GUN MODEL GHG 20-63	<b>Brand: BOSCH</b> <b>Model: GHG 20-63</b> <b>Specification:</b> Rated input power - 2000 W Weight - 0.65 kg Tool dimensions L*W*H – 245*86*201 mm

		<p>Working temperature – 50~630 °C          Airflow – 100~500 l/min          Continuously variable temperature control          Cold stage - 50°C          Control airflow - 3          Sound pressure level-66 dB(A)          Sound power level-77 dB(A)</p>
22	STRAIGHT GRINDER GGs 3000L	<p><b>Brand:</b> BOSCH  <b>Model:</b> GGS 3000L  <b>Specification:</b>          No-load speed - 28000 rpm          Input power - 300W          Tool Holder diameter - 8mm          Spindle collar diameter - 41mm          Max collet diameter - 8mm          Max grinder tool diameter - 25mm</p>
23	GWS750-100 PROFESSIONAL ANGLE GRINDER (BLUE)	<p><b>Brand:</b> BOSCH  <b>Model:</b> GWS750-100  <b>Specification:</b>          No-load speed - 11000Rpm          Input power - 750W          Disc diameter - 100mm          Grinding spindle thread - M10</p>
24	BOSCH GO KIT	<p><b>Brand:</b> BOSCH  <b>Model:</b> 0.601.9H2.0F1</p>
25	CORDLESS SCREWDRIVER IXO 3	<p><b>Brand:</b> BOSCH  <b>Model:</b> IXO 3  <b>Specification:</b>          Battery voltage - 3.6 V          Torque (soft/hard/max.) - 3/4/- Nm          No-load speed (1st gear / 2nd gear) - 180 rpm          Battery type - Lithium-ion          Chuck capacity (min./max.) - 5 mm          Max. screw diameter - 5 mm</p>
26	BOSCH BLOWER MODEL GBL 80-27	<p><b>Brand:</b> BOSCH  <b>Model:</b> GBL 80-27  <b>Specification:</b>          Air Volume - 4.5 m<sup>3</sup>/minute          Power Consumption - 800w          Fan Speed - 16000 rpm</p>

		<p>Power - 800W Power Source - Electric Blower</p>
27	GWS 9-100P ANGLE GRINDER BOSCH	<p><b>Brand:</b> BOSCH <b>Model:</b> GWS 9-100P <b>Specification:</b> Rated input power - 900 W No-load speed - 11000 rpm Disc diameter - 100 mm Grinding spindle thread - M10 Weight-1.9 kg Switch-Protection Switch Power output - 450 W Tool dimensions (width) - 73 mm Tool dimensions (length) - 280 mm Tool dimensions (height) - 100 mm</p>
28	FREEDOM KIT GSB SERIES	<p><b>Brand:</b> BOSCH <b>Model:</b> GSB Series <b>Specification:</b> Rated input power - 550 W Weight - 1.8 kg No-load speed, 1st gear - 0~2800 rpm Power output - 270 W Rated torque - 1.5 Nm Chuck capacity, min./max. - 1.5~13 mm Tool dimensions (width) - 65.5 mm Tool dimensions (length) - 262 mm Tool dimensions (height) - 253 mm Impact rate at no-load speed – 0~44800 bpm</p>
29	LASER GLM 40	<p><b>Brand:</b> BOSCH <b>Model:</b> GLM 40 <b>Specification:</b> Laser diode - 635 nm Measurement range - 0.15~40.00 m Weight - 0.1 kg Measurement time, typical - &lt;0.5 s Laser class - 2 Measurement accuracy, typical - <math>\pm 2.0</math> mm Measurement time, max.- 4 s Power supply - 2 x 1.5 V LR03 (AAA)</p>

		Automatic deactivation - 5 min Laser color - Red Measuring range - up to 40 m
30	ORBITAL SANDER GSS 2300	<b>Brand:</b> BOSCH <b>Model:</b> GSS 2300 <b>Specification:</b> Power input - 1400 W Power output - 650 W No-load speed – 11000~28000 rpm Maximum router cage stroke - 55 mm Machine weight - 3.5 kg

Section	Mechanical Power Tools	
Sr. No	Equipment Name	Equipment Detail
1	EC68 Air Compressor Hitachi (Hikoki) 1.5 HP 1300 W	<b>Brand:</b> HIKOKI <b>Model:</b> EC68 <b>Specification:</b> Power Source - Air Powered Item Dimensions L*W*H – 57*58*23 cm Capacity - 24 liters Voltage - 220 Volts Item Weight - 28000 Grams Maximum Air Flow Capacity- 190 LPM
2	Compound Miter Saw	<b>Brand:</b> MAKITA <b>Model:</b> LS1045 <b>Specification:</b> Power Consumption -1650W No-load speed - 4600 RPM

3	<p>GENERIC CNC2418 3 AXIS MINI DIY CNC ROUTER USB WOOD CARVING ENGRAVING MACHINE</p>	<p><b>Brand: RDNA-2418</b>  <b>Model: CNC DIY KIT</b>  <b>Specification:</b>  Material - Aluminum Alloy  Frame Size - Approx. 330*340*240 mm/12.99*13.39*9.45"  Working Area - Approx. 240*180*40 mm/9.45*7.08*1.57"  Spindle - 775 spindle motor(12-36V), 24V: 7000r/min, 36V: 9000r/min  Step Motor - 1.3A 0. 25N.m  Power Supply - 24V 5.6A  <b>Supported System:</b> Windows XP/ Win 7/ Win 8/ Win 10/  Linux  <b>Control Software:</b> GRBL control</p>
4	<p>WORKBENCH TOOL WAY WORKBENCH SERIES 53-PIECE TUNGSTEN TAP &amp; DIE SETS</p>	<p><b>Brand: WORKBENCH</b>  <b>Model: #703023</b>  <b>Specification:</b>  Piece Count 53  Tap Die Sets Color Finish- Metal  Color/finish- Metal  Materials- Heat Treated Metal, Plastic Case</p>
5	<p>DREMEL 3-IN-1 WORKSTATION, DRILL PRESS, ROTARY TOOL HOLDER, AND FLEX-SHAFT TOOL STAND</p>	<p><b>Brand: DREMEL</b>  <b>Specification:</b>  Power Source- Corded Electric  Voltage 220  Item Dimensions L*W*H - 30.5*15.2*15.2 cm  Item Weight - 5.25 Pounds</p>
6	<p>DIGITAL CRAFT WOOD PLANER 600W MACHINE OF CARPENTRY HIGH-POWER MULTI-FUNCTION ELECTRIC PLANER</p>	<p><b>Brand: Digital Craft</b>  <b>Model: MXP-PL82x2-600</b>  <b>Specification:</b>  Item Dimensions LxWxH-28x20x16Cm  Power Source - Corded Electric</p>

<p style="text-align: center;"><b>7</b></p>	<p style="text-align: center;">ARC WELDING MACHINE 400 APMS,400 AT3, MAKE PANASONIC</p>	<p><b>Brand: PANASONIC</b> <b>Model: YD-400AT3DJV</b> <b>Specification:</b> Current - 20-400 amp Technology - Inverter Based Voltage - 415 V Output Current - 20-400 amp Weight - 50 kg Welding Type - Arc Welding Frequency - 50-60 Hz Dimension – 327*560*602 mm Phase - Three Phase Operating Temperature - 10 to 50 dc</p>
<p style="text-align: center;"><b>8</b></p>	<p style="text-align: center;">METAL CUT-OFF GRINDER GCO14-24J</p>	<p><b>Brand: BOSCH</b> <b>Model: GCO14-24J</b> <b>Specification:</b> Cutting disc diameter - 355 mm Cutting disc bore - 25.4 mm No-load speed - 3800 rpm Tool dimensions - 256 x 520 x 400 mm Weight - 18.1 kg Rated input power - 2400 W</p>
<p style="text-align: center;"><b>9</b></p>	<p style="text-align: center;">TOOL TROLLEY TTB7,7 DRAWER</p>	<p><b>Brand: TAPARIA</b> <b>Model: TTB 7</b> <b>Specification:</b> Material-Alloy Steel Mounting Type-Wall Mount Number of Drawers-7 Product Dimensions-74.9 x 55 x 93.5 cm; 1 kg</p>
<p style="text-align: center;"><b>10</b></p>	<p style="text-align: center;">LASER GLL 3-15</p>	<p><b>Brand: BOSCH</b> <b>Model: GLL 3-15</b> <b>Specification:</b> Accuracy - <math>\pm 0.2</math> mm/m Projection - 3lines +1point Working range -15m Operating temp - 10~45 °C Storage temp – 20~70 °C Laser diode - 635~650nm Laser class - 2 Power supply - 4X1.5v Weight - 0.72Kg</p>

<p><b>11</b></p>	<p>PALLET TRUCK 2.5TON WITH PU CI NYLON WHEEL</p>	<p><b>Brand: SRE</b> <b>Model: SRE-103</b> <b>Specification:</b> Usage/Application Material Handling Power Source - Hand Operated Lifting Capacity-2.5 TON Loading Capacity-2 TON Product Type- Paper reel pallet truck Max Lifting Height- 200 mm Wheel Material- Nylon Material- MS Steering Wheel-180x50mm 2nos Weight- 70-80 Number Of Wheels- 4 Warranty- 6 Months Color- orange Lift Height- 200mm Wheel Type - nylon.</p>
<p><b>12</b></p>	<p>BENCH GRINDER 8" MAKE BOSCH</p>	<p><b>Brand: BOSCH</b> <b>Specification:</b> Grinding wheel diameter-200 mm Rated input power-600 W Grinding wheel widths-25 mm No-load speed-2,900 rpm Grinding wheel bore-32 mm Grit-24, 60 Weight-16.5 kg Tool dimensions (width)-230 mm Tool dimensions (length)-370 mm Tool dimensions (height)-260 mm</p>
<p><b>13</b></p>	<p>MITRE SAW GCM 10 MX</p>	<p><b>Brand: Bosch</b> <b>Model: GCM 10 MX</b> <b>Specification:</b> Blade Length- 255 mm Item Dimensions- 54 x 45 x 37 cm Color-Blue Power Source- Corded Electric Speed-4800 RPM Number of Teeth-80 Cutting Angle-45 Degrees Item Weight-16700 Grams Voltage-240 Volts</p>

<b>14</b>	ROUTER BOSCH MODEL POF 1400	<p><b>Brand: BOSCH</b>  <b>Model: POF 1400</b>  <b>Specification:</b>  Power input-1400W  Power output-650W  No load speed 11000-28000Rpm  Max router cage stroke-55mm  Weight-3.5kg</p>
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Section	3D Printers	
Sr. No	Equipment Name	Equipment detail
<b>1</b>	FDM 3D Printer	<p><b>Brand: DIVIDE BY ZERO</b>  <b>Model: Accucraft i250+</b>  <b>Specification:</b>  Maximum Printable Area - 300mm * 250mm * 200mm  Filament Diameter - 1.75mm  Extruder Diameter - 0.4mm  Extruder Temperature - up to 270° C  Number Of Extruders - 1  Model Of Extruders - Direct Drive All metal extruder  Material Support - PLA, ABS, HIPS, PET-G, CARBON FIBRE, Flexible Filaments, Wood fill, Meta fill, Polycarbonate etc.  Print Accuracy - 80 - 150 microns  Maximum Print Speed - 200mm/sec  Maximum Travel Speed - 300mm/sec  Layer Precision - 0.1-0.30 mm  Heated Bed - Yes  Bed Temperature - 90° C max  LCD Support - Yes  Connectivity - USB, SD card, Wi-Fi, Ethernet  Print Monitoring System - In build camera with Wi-Fi connectivity  Enclosure Type - Complete enclosed chassis, even spool is covered  <b>Software Supported - Accucrafti250+ (Neptune)</b></p>

2	FDM 3D Printer	<p><b>Brand: FLASH FORGE</b>  <b>Model: CREATOR PRO</b>  <b>Specification:</b>  Printable materials - ABS plastic, LayBrick, LayWood, Nylon, PET plastic, PLA plastic, PVA plastic  layer resolution / thickness (z-axis) - 100, 500um  Max Object Size width(mm) - 225  Max Object size height(mm) - 145  Max object size depth(mm) - 150  <b>Software Supported: FLASHPRINT</b></p>
3	SLS 3D Printer	<p><b>Brand: Sinterit Lisa- SLS 3D printer</b>  <b>Model: Sinterit Lisa</b>  <b>Specification:</b>  LISA Printer with flight case  Powder Sieve  Sand Blaster Laser System: IR Laser Diode  Dimensions 620x400x660(mm)  Max size of Print 242 mm  Flexa/TPE- High accuracy max print volume 110x160x145  PA-High accuracy max print volume 110x160x130mm  Size of Print Bed – 150x200x150mm  XY accuracy: from 0.05(mm)  The Layer Height: 0.075-0.175(mm)  USB Stick with Sinterit Lisa Software  <b>Martials: PA12 Smooth Starter Powder PA12 Smooth Fresh Powder</b>  <b>Software Supported: SinteritStudio</b></p>

Section	ELECTRONICS Lab	
Sr. No.	EQUIPMENT NAME	EQUIPMENT DETAILS
1	Jetson Nano 2GB Developer Kit	<p><b>Brand - NVIDIA</b>  <b>Model - P3541</b>  <b>Specification -</b> Input 5V-3A, 128-core GPU, Quad-core ARM Cortex -A57MPCore Processor, microSD Card slot, USB-C power supply (5V=3A), USB 3.0 Type A*1, USB 2.0 Type A*2,</p>

		<p>USB 2.0 Micro B, HDMI, 40-pin Expansion Header (UART, SPI, I2S, I2C, GPIO)</p> <p><b>Operational area</b> - It is a small, powerful computer that lets you run multiple neural networks in parallel for applications like image classification, object detection, segmentation, and speech processing.</p> <p><b>Software Support</b> - <a href="#">Jetson Nano Image File (Downloadable)</a></p>
2	Arduino NANO V3.0 Development Board	<p><b>Brand</b> - ARDUINO <b>Model</b> - NANO V3.0 <b>Specification</b> - Microcontroller - Atmel ATmega328 SMD Package, Operating Voltage - 5 V, Input Voltage (limits) - 6-20 V, Digital I/O pins - 22 (of which 6 provide PWM output), Analog Input Pins - 8, Flash Memory 32 KB, Clock Speed - 16 MHz</p> <p><b>Operational area</b> - It is a surface mount breadboard-friendly board integrated with a mini-USB Port.</p> <p><b>Software Support</b> - <a href="#">ARDUINO SOFTWARE (IDE)</a></p>
3	Arduino Mega	<p><b>Brand</b> - ARDUINO <b>Model</b> - Mega 2560 <b>Specification</b> - Microcontroller - Atmel ATmega2560 SMD Package, Operating Voltage - 5V, Input Voltage (limits) - 7-12 V, Digital I/O pins - 54, Analog Input Pins - 16, PWM pins - 15, Flash Memory - 256 KB, Clock Speed - 16 MHz</p> <p><b>Operational area</b> - It is a microcontroller board having 4 UARTs (hardware serial ports), a 16 MHz crystal oscillator, a USB connection, a power jack, an ICSP header, and a reset button</p> <p><b>Software Support</b> - <a href="#">ARDUINO SOFTWARE (IDE)</a></p>
4	Arduino UNO	<p><b>Brand</b> - ARDUINO <b>Model</b> - UNO <b>Specification</b> - Microcontroller - Atmel ATmega328 SMD Package, Operating Voltage - 5 V, Input Voltage (limits) - 6-20 V, Digital I/O pins - 14 (of which 6 provide PWM output), Analog Input Pins - 6, Flash Memory - 32 KB, Clock Speed - 16 MHz</p> <p><b>Operational area</b> - The Uno board is the first in a series of USB Arduino boards and the reference model for the Arduino platform.</p> <p><b>Software Support</b> - <a href="#">ARDUINO SOFTWARE (IDE)</a></p>
5	Raspberry Pi Display	<p><b>Brand</b> - RASPBERRY Pi <b>Model</b> - 19.4 cm (7 Inch) Touchscreen</p>

		<p><b>Specification</b> - 10 finger capacitive touch, connects to the Raspberry Pi board using a ribbon cable connected to the DSI port, Display - 19.4 cm (7 inch) Touchscreen, Screen Dimensions (cm) - 19.4 x 11 x 2, Screen Resolution (pixels) - 800 x 480</p> <p><b>Operational area</b> - Make your own Internet of Things devices including a visual display. Simply connect your Raspberry Pi, develop a Python script to interact with the display, and you are ready to create your own home automation devices with touchscreen capability.</p>
6	Raspberry Pi	<p><b>Brand - RASPBERRY Pi</b> <b>Model - 3B+</b></p> <p><b>Specification</b> - A 64-bit quad-core processor running at 1.4GHz, dual-band 2.4GHz and 5GHz wireless LAN, Bluetooth 4.2/BLE, faster Ethernet, and PoE capability via a separate PoE HAT, Extended 40-pin GPIO header, 5V/2.5A DC via the micro-USB connector, Micro SD format for loading operating system and data storage.</p> <p><b>Operational area</b> - Raspberry Pi is a small, quite affordable, and very much capable hardware device called a credit card size computer.</p> <p><b>Software Support</b> - <a href="#">Raspberry Pi Image</a></p>
7	Raspberry Pi Camera Module	<p><b>Brand - RASPBERRY Pi</b> <b>Model - V2</b></p> <p><b>Specification</b> - 8-megapixel camera capable of taking photographs of 3280x2464 pixels, Capture video at 1080p30, 720p60 and 640x480p90 resolutions, all software is supported within the latest version of Raspbian Operating System, Supports Raspberry Pi 1,2 and 3,</p> <p><b>Operational area</b> - CCTV security camera, motion detection, time-lapse photography. It can be accessed through the MMAL and V4L APIs, and there are numerous third-party libraries built for it, including the Pi camera Python library.</p> <p><b>Software Support</b> - <a href="#">Raspberry Pi Image</a></p>
8	Node MCU	<p><b>Brand - ESP8266 Opensource Community</b> <b>Model - ESP8266</b></p> <p><b>Specification</b> - Microcontroller - ESP-8266 32-bit, Clock - 80MHz, USB Connector - micro-USB, Operating voltage - 3.3v, Flash memory - 4MB, SoC - ESP8266</p> <p><b>Operational area</b> - The NodeMCU is an open-source software and hardware development environment built around an inexpensive System-on-a-Chip (SoC) called the ESP8266,</p>

		<p>designed and manufactured by Espressif Systems, contains the crucial elements of a computer: CPU, RAM, networking (WiFi), and even a modern operating system and SDK. That makes it an excellent choice for Internet of Things (IoT) projects of all kinds.</p> <p><b>Software Support - <a href="#">ARDUINO SOFTWARE (IDE)</a></b></p>
9	Raspberry Pi Zero Wireless	<p><b>Brand - RASPBERRY Pi</b>  <b>Model - Zero W</b>  <b>Specification</b> - CPU - 1 GHz Broadcom BCM2835, RAM - 512MB, Wireless - 802.11n / Bluetooth 4.1 / LE, Ports - Micro USB, mini-HDMI, I/O - 40 GPIO Pins, CSI camera connector  <b>Operational area</b> - The Raspberry Pi Zero is a computer the size of a stick of gum, which is designed to be as cheap as possible, with a starting price of \$5. With dimensions of just 2.6 x 1.2 x 0.2 inches (66.0mm x 30.5mm x 5.0mm), about the size of a USB Flash drive, the Pi Zero is small enough to be embedded in a project and cheap enough to be left there.  <b>Software Support - <a href="#">Raspberry Pi Image</a></b></p>
10	Programmable Tripple DC Power Supply	<p><b>Brand - KEITHLEY</b>  <b>Model - 2230-30-1</b>  <b>Specification</b> - Power Supply Output Type - Programmable, Number of outputs- 3, Output voltage- 0-30 V, Current- 0-5 A, Output power- 120 W, Supply Voltage - 120-240VAC  <b>Link to Technical Datasheet - <a href="#">Bench power supply, programmable</a></b></p>
11	WEemos D1mini V2.2.0	<p><b>Brand - Generic</b>  <b>Model - FFC-BG-1143874</b>  <b>Specification</b> - 11 digital input/output pins, all pins have interrupt/PWM/I2C/one-wire supported (except D0), 1 analog input (3.2V max input), Micro USB connection, Use BRT (Bias Resistor Transistor, WiFil internet Board based ESP8266 4MB Flash ESP-12S chip, Clock Speed - 80/160MHz  <b>Operational area</b> - This is Wemos D1 Mini WIFI Internet Of Things Development Board Based ESP8266, it is a mini WIFI board based on ESP-8266EX.</p>
12	Atmel ICE KIT	<p><b>Brand - Microchip Technologies</b>  <b>Model - ATATMEL-ICE-BASIC-DEBUGGER</b>  <b>Specification</b> - Supports JTAG, SWD, PDI, TPI, aWire, SPI and debugWIRE interfaces. Full source-level debugging in Microchip Studio. Supports all built-in hardware breakpoints in the target microcontroller. Up to 128 software breakpoints.</p>

		<p>Target operating voltage range of 1.62V to 5.5V          USB powered          Provides both ARM Cortex debug connector (10 pins) pinout and AVR JTAG connector pinout          ITM serial trace capture at up to 3MB/s          USB 2.0 high-speed host interface  <b>Operational area</b> - Atmel-ICE is a powerful development tool for debugging and programming ARM® Cortex®-M based SAM and AVR microcontrollers with on-chip debug capability.  <b>Software Support</b> - <a href="#">DGILIB (Downloadable)</a>  <b>Link to User manual</b> - <a href="#">User Manual</a></p>
13	NRF24L01	<p><b>Brand - Nordic Semiconductor</b>  <b>Model - 24L01 2.4GHz</b>  <b>Specification</b> - Low-power 1.9 ~ 3.6V, only 1uA on Power down mod. Built-in hardware CRC error detection, Multipoint communication address control. Maximum operating speeds up to 2Mbps, GFSK modulation efficiency, and Anti-interference ability. Built-in voltage regulator.  <b>Operational area</b> - The nRF24L01 is a highly integrated, ultra-low-power (ULP) 2Mbps RF transceiver IC for the 2.4GHz ISM (Industrial, Scientific, and Medical) band. Particularly suitable for industrial control applications.  <b>Link to Technical Datasheet</b> - <a href="#">nRF24L01 Datasheet</a></p>
14	Micro SD Card Module	<p><b>Brand - Generic</b>  <b>Model - Micro SD Card Module - Breakout Board</b>  <b>Specification</b> -          Support Micro SD Card (&lt;=2G), Micro SDHC card (&lt;=32G) (high-speed card)          The level conversion circuit board that can interface level is 5V or 3.3V          Power supply is 4.5V ~ 5.5V, 3.3V voltage regulator circuit board          Communication interface is a standard SPI interface          4 M2 screw positioning holes for easy installation  <b>Operational area</b> - Micro SD Card Reader Module also called Micro SD Adaptor is designed for dual I/O voltages. This Module is a simple solution for transferring data to and from a standard SD card. The pinout is directly compatible with Arduino but can also be used with other microcontrollers. SD module has various applications such as data logger, audio, video, and graphics.  <b>Link to Technical Datasheet</b> - <a href="#">Micro SD card Datasheet</a></p>

<p style="text-align: center;"><b>15</b></p>	<p style="text-align: center;">AC Digital Clamp Meter</p>	<p><b>Brand - MASTECH</b>  <b>Model - M266 Series</b>  <b>Specification</b> - DC Voltage - 1000V (Accuracy <math>\pm(0.8\%+3)</math>), AC Voltage - 750V(Accuracy <math>\pm(1.2\%+5)</math>), AC Current - 200A (Accuracy <math>\pm(2.5\%+5)</math>) / 1000A (Accuracy <math>\pm(3.0\%+10)</math>), Resistance - 200<math>\Omega</math>(Accuracy <math>\pm(1.0\%+5)</math>) / 20k<math>\Omega</math>(Accuracy <math>\pm(1.0\%+8)</math>), Insulation Test - 20M<math>\Omega</math> / 2000M<math>\Omega</math> (Note&lt;500M&gt;) / 2000M<math>\Omega</math> (Note&gt;500M<math>\Omega</math>), Power Supply : 1<math>\times</math>9V 6F22 Battery  <b>Operational area</b> - AC Current measurement, electrical repair, appliance repair, hobby projects, testing electrical systems on cars and boats, tests frequency &amp; temperature  <b>Link to User Manual</b> - <a href="#">Clamp Meter User Guide</a></p>
<p style="text-align: center;"><b>16</b></p>	<p style="text-align: center;">Analog Discovery</p>	<p><b>Brand - Digilent</b>  <b>Model - Discovery 2</b>  <b>Specification</b> -  Two-channel USB digital oscilloscope (1M<math>\Omega</math>, <math>\pm</math>25V, differential, 14-bit, 100MS/s, 30MHz+*)  Two-channel arbitrary waveform generator (<math>\pm</math>5V, 14-bit, 100MS/s, 12MHz+ bandwidth*)  16-channel digital logic analyzer (3.3V CMOS and 1.8V or 5V tolerant, 100MS/s)  16-channel pattern generator (3.3V CMOS, 100MS/s)  16-channel virtual digital I/O including buttons, switches, displays, and LEDs, which is perfect for logic training applications  Two channel voltmeter  Network Analyzer (1Hz to 10MHz) with Bode, Nyquist, Nichols transfer diagrams of a circuit.  Spectrum Analyzer capable of the power spectrum and spectral measurements  Data Logger with exportable data and plot functionality  Impedance Analyzer for analyzing capacitive and inductive elements  Protocol Analyzer with SPI, I2C, CAN, AVR, and UART  Two programmable power supplies (0.5V to 5V, -0.5V to -5V). The maximum available output current and power depend on the Analog Discovery 2 powering choice.  Stereo audio amplifier to drive external headphones or speakers with replicated Arbitrary Waveform Generator signals  An available Software Development Kit for programming with Python and C++ and a toolkit for programming with LabVIEW. MATLAB support for the Data Acquisition Toolbox</p>

		<p><b>Link to User Manual - <a href="#">Reference manual</a></b>  <b>Software Support - <a href="#">WaveForms Software</a></b></p>
17	DC Power Supply Variable Adjustable Lab Bench Power Supply Buck	<p><b>Brand - KORAD</b>  <b>Model - KD3005D</b>  <b>Specification -</b> Wattage - 150W, Max Voltage - 30V, Max Current - 5A, Over-Current Protection, Control Panel Lock, Bright 4-Digit LED Display  <b>Link to User Manual - <a href="#">Korad KD300</a></b></p>
18	Electronic Work stations	<p><b>Brand - AOYUE</b>  <b>Model - AO888A</b>  <b>Specification -</b> Voltage - 110V, 500 Watts of heating power, 60-Watt soldering iron, Atmega8A microcontroller, 10 x Soldering tips, Hot Air tool  <b>Link to User Manual - <a href="#">AO888A Manual</a></b></p>
19	Digital Multimeter with Temperature & Frequency	<p><b>Brand - Fluke</b>  <b>Model - 17B+</b>  <b>Specification -</b> AC Volts (40 Hz – 500 Hz) - 4.000 V 40.00 V 400.0 V 1000 V, AC Millivolts - 400.0 mV, DC Millivolts - 400.0 mV, DC Volts - 4.000 V 40.00 V 400.0 V 1000 V, Resistance (Ohms) - 400.0 Ω 4.000 kΩ 40.00 kΩ 400.0 kΩ 4.000 MΩ 40.00 MΩ, Temperature - 50.0 °C – 400.0 °C 0 °C – 50.0 °C -55.0 °C – 0 °C, Frequency - 50.00 Hz 500.0 Hz 5.000 kHz 50.00 kHz 100.0 kHz  <b>Link to User Manual - <a href="#">17B+ User Guide</a></b></p>
20	Tenma Function Generator	<p><b>Brand - TENMA</b>  <b>Model - 72-3555</b>  <b>Specification -</b> 6-digit high precision frequency meter compatible with TTL level signal, Channels - 2, Sample Rate - 125MS/s, Output Frequency - 25MHz Frequency Resolution - 1μHz, Vertical Resolution - 14bits, Waveforms - Sine, Square, Ramp, Triangle, Pulse, Noise, DC  Arb Output Amplitude Range - 1mVpp ~ 10Vpp (50Ω); 2mVpp ~ 20Vpp (High Z), Modulation Types - AM, FM, PM, ASK, FSK, PWM, Sweep, Burst  <b>Link to User Manual - <a href="#">TENMA 72-3555</a></b></p>
21	Digital Multimeter	<p><b>Brand - KEITHLEY</b>  <b>Model - 2110 Series: 5½-Digit Dual-Display USB Multimeter</b>  <b>Specification -</b>  DC voltage: 0.1V, 1V, 10V, 100V, and 1000V  AC voltage: 0.1V, 1V, 10V, 100V, and 750V</p>

		<p>DC current: 10mA, 100mA, 1A, 3A, and 10A  AC current: 1A, 3A, and 10A  Two- and four-wire resistance: 100W, 1kW, 10kW, 100kW, 1MW, 10MW, and 100MW  Frequency: From 10Hz to 300kHz  Temperature (RTD and NTC Thermistor) measurements  Continuity test  <b>Link to Technical Datasheet - <a href="#">2110 5 1/2 datasheet</a></b></p>
22	Digital Oscilloscope	<p><b>Brand - TEKTRONIX</b>  <b>Model - TBS 1000C</b>  <b>Specification -</b>  200 MHz, 100 MHz, 70 MHz, and 50 MHz bandwidth models  2-channel models  1 GS/s sample rate on all channels  20k point record length on all channels  Advanced triggers include pulse, runt, and line triggers  <b>Link to User Manual - <a href="#">TBS 1000C datasheet (Downloadable)</a></b></p>
23	Digital Microscope	<p><b>Brand - Generic</b>  <b>Model - DM9 7-Inch HD Display</b>  <b>Specification -</b> Supports for 12 languages, Focus range - 10-40mm, Image sensor - CMOS, Image Resolution - upto 12M (4032*3024)</p>
24	Bench Power Supply - Programmable	<p><b>Brand - GW INSTRON</b>  <b>Model - PSP-603</b>  <b>Specification -</b> Voltage - 0~60V, Current - 0~3.5A, Standard Interface : RS-232C, 200W Programmable switching D.C.  Power supply  <b>Link to User Manual - <a href="#">PSP-Series User Manual</a></b></p>