

Prayas Centre Name PSG - SCIENCE and TECHNOLOGY ENTREPRENERIAL PARK (PSG-STEP)

District COIMBATORE

State TAMILNADU

Fablab Page Link www.psgstep.org

Equipment available at PSG-STEP, DST PRAYAS Shala

Section	Prototyping Facility	
Sr. No.	Equipment Name	Equipment Detail
1	3D Printer(1)	<p>Brand - Ultimaker Model - 3 Extended Specification - Fused Filament Fabrication [FFF] Build Volume: 215mm x 215mm x 300 mm Print Head Travel Speed: 30 mm/s to 300 mm/s Z resolution: 2.5 micron Compatible Filament [2.85mm]: Nylon, PLA, ABS, CPE, CPE+, PVA, PC, TPU 95A, PPP Software :Ultimaker Cura Link of the user manual - Ultimaker 3 Extended</p>
2	3D Printer(2)	<p>Brand - Sharebot Model - 42 Specification - Technology: Fused Deposition Modeling [FDM] Build Volume: 250mmx220mmx200mm Print Head Travel speed: 25 mm/s Z Resolution: 50 micron Compatible Filaments [1.75mm]: PLA-S, Nylon-Carbon, Thermoplastic Polyurethane, ABS-HF Software : Simplify 3D Link of the user manual-Sharebot 42</p>
3	3D Scanner	<p>Brand – Shining3D Model – FreeScan X7 Specification :Measuring Accuracy: 0.03mm Resolution: 0.05mm Scan Speed, Range & Depth: 480,000 scans/s 100mm-8000 mm 250mm Light Source: 14 line laser ray Laser Category: Class II [eye safe] Net Weight: 0.95 Kg Software: Free Scan Link of the user manual-SHINING3D FreeScan X7</p>
4	SMT Pick and Place Machine	<p>Brand –ChipMax Model –Neoden 4 Specification Components per Hour: 2000 Placement Accuracy: ±0.02mm [Repeatable Positioning Precision] Placement Capacity: 5000 CPH [vision off], 3500 CPH [vision on] Number of Heads: 4 heads with 360 degree orientation Applicable PCB Size: 310mmx1200mm / 350mmx400mm</p>

		Automatic Electric Feeder: Maximum 48 sets with Auto Error Correction Link of the user manual: Neoden 4 SMT Pick & Place Machine [Fully Auotmatic]
5	Solder stencil Printer	Brand – ChipMax Model –CM3040 Specification Platform Size & Height: 300mmx400mm 220mm Frame Size: 370mmx470mm PCB Size: 250mmx300mm PCB Board Thickness: 0~80 mm Repeatability: ±0.01mm Link of the user manual: CM3040
6.	Reflow Oven	Brand – Puhui Model – T961 Specification Heating Zone Quantity: 6 Zones Heating Zone Length: 730mm PCB Board Width: 230mm [max] Temperature Control: ±1°C Initial Heat up Time: Around 7mins Link of the user manual : Puhui T961 Reflow Owen –
7,	Vinyl Cutter	Brand - Roland Model – Gs-24 Specification - Loadable Material Width: 50 to 700mm Maximum Cutting Area: 584mmx2500mm Max Cutting Speed: 500 mm/s Max Cutting Media Thickness: 1mm Compatible Materials: Vinyl, Paint Mask, Twill, Sandblast, Twill Link of the user manual - ROLAND CAMM-1 GS 24 Vinyl Cutter
8	Laser Cutter and Engraver	Brand – Epilog Model –Fusion Pro 60 Specification Laser Tube Wattage: 60 watts [air-cooled] Working Area: 812mmx508 mm Maximum Z-Depth: 311mm Resolution: 75-1200 dpi [user controlled] Operating Modes: Raster, Vector & Combined Modes Memory: Multiple files up to 1GB Compatible Materials [Engrave & Cut]: Wood, Acrylic, Plastic, Fabric, Leather, Rubber, Fiber ,Glass, Matte Board, Corian [Engrave Only]: Anodized Aluminum, Glass, Coated Metals, Ceramic, Tile, Marble Software:RR Studio Link of the user manual - EPILOG FUSION PRO 32
9	3D Modeling Software	Brand- Magics RP Model- 2019 Specification : 3D design and Modeling
10	3D Design Software	Brand- Soildworks Model- 2020 Specification: 3D Drawing and Drafting and Simulation , PCB Design, Electrical Drawings & Simulations
12	Software	Brand –Corel Draw Model- 2019 Specification – Image & Letters Designing, Illustration Making, Logo Making, Laser Cutting Design.

Section			Metalworking Facility		
Sr. No.	Equipment Name	Equipment Detail			
13	CNC Milling Machine	Brand – TOOL CRAFT Model –BR5535 Specification -T Slot Work Table: 550mm x 350mm Movement XYZ: 450mm x 300mm x 160 mm Spindle (Power/Speed): 1.1KW@ 24000 RPM, CNC Controller : OSAI 4 Axis Simultaneous Closed Loop Daylight: 200mm- standard. Maximum Job weight: 50 kgs. Positioning Accuracy: 10-15 microns Compatible Materials: Steel, Cast Iron, Aluminum, Brass, Hard Wood, Acrylic and other Ferrous and non-Ferrous materials. Software: Solidworks CAM Link of the user manual: Tool Craft BR5535			

Section			Electronics Facility		
Sr. No.	Equipment Name	Equipment Detail			
14	Manual Tripple DC Power Supply	Brand - Scientech Model – ST4077 Specification -Number of Outputs:-3, Output Voltage: 30 V, Current:1.5 A, Output Power:120 W			
15	Digital Storage Oscilloscope	Brand - TEKTRONIX Model - TBS 2012 B SERIES Specification – Bandwidth:100 MHz, Sample Rate:1 GS/s, Channels:2			
16	Digital Phosphor Oscilloscope	Brand - TEKTRONIX Model - DPO 2012 SERIES Specification – Bandwidth:100 MHz, Sample Rate: 1 GS/s, Channels:2			
17	Soldering Station & Rework Station	Brand – VAR TECH Model - 706 Specification Soldering Station- Power:500V Rework Station- Power:450V			
18	Function Generator	Brand - Scientech Model -HM 5030 Specification - 3 MHz, Channels:1 Power: 230V,50Hz			
19	Digital IC Tester	Brand – MME-DIT 2040 Specification - Tests most of the 6 to 40 pin ICs in DIP package			

Section			Measuring Equipment		
Sr. No.	Equipment Name	Equipment Detail			
20	Digital Multimeter	Brand – FLUKE Model –177 Specification –Voltage Ac:1000V Dc:1000V Current :10(Max) Frequency :100 kHz Resistance :50 Ohm			

Power Tools Facility		
Section		
Sr. No.	Equipment Name	Equipment Detail
21	Hot Air Gun	Brand – BOSCH Model –GHG 500-2 Professional Specification -Power Consumption : 1600W Airflow:240[l/min] Temperature Nozzle:300°C/500°C