Prayas Centre Name: **AGRIBUSINESS INCUBATION SOCIETY-TECHNOLOGY BUSINESS INCUBATOR, TNAU, COIMBATORE.**

City   : **COIMBATORE**

State   : **TAMIL NADU**

Fablab Page Link   : **https://portal.nidhi-prayas.org/ui/#/funding/pc-equipments**

Equipment available at ABIS-TBI, TNAU, COIMBATORE, DST NIDHI PRAYAS SHALA

Section	Electronic/Prototyping Facility	
Sr. No.	Equipment Name	Equipment detail
1	Sensor Kit	**Brand -** PD Hub R2 **Model -** **Specification -** Product Dimensions: 6.5 x 2 x 2.5 cm; 500 g, Processor Speed: 16 MHz, Storage Capacity: 32 KB, Inbuilt Memory: 2 KB, Memory: SRAM, Wireless Standard: Infrared, Number of Ports/Connectors: 1, Connectivity Technology: Infrared, USB, I2C, GPIO, Operating System: industrial, robotics, Components: Sonar, UNO R3 SMD, IR sensor, Breadboard, Resistor. **Operational area –** Industrial Automation, Robotics & AI, IoT & Smart Devices, Embedded Systems. **Link of the user manual -**
2	Digital IC Tester	**Brand -** Generic TSH-06F **Model -** **Specification -** Multi-use Transistor Tester, Meter Maintenance Tester, PNP NPN Detector, 3.3V/5.0VAuto Search Mode, Item Weight: 0.28g. **Operational area –** Electronics Repair, Circuit Design & Development, Educational Use, Industrial Maintenance **Link of the user manual -**
3	IoT Kit	**Brand -** Espressif System ESP8266 **Model -** **Specification -** Bread Board With Power Supply Module, LDR Sensor Module, PIR Sensor Module, IR Sensor, Active Buzzer, Dupont Cables-3 type, USB to Micro-USB Cable, 1K Resistors, 5mm LED **Operational area –** IoT Prototyping , Sensor-Based Systems , Embedded System Learning , Wireless Communication Projects **Link of the user manual -**
4	GPIO Modules	**Brand -** RASPBERRY PI4 **Model -** **Specification -** 4GB Ram, C- type USB (15.3W), GPIO CASE, 2.4/5GHS Dual-band Wi-Fi, Display Serial Interface, Camera Serial Interface, Bluetooth 5 (BLE), POE Capable Ethernet (1GB/s), Micro HDMI to standard HDMI Cable, SD: 32GB Class 10 memory Card **Operational area –** IoT & Embedded Systems, Industrial Automation, Robotics

		& AI – Real-time data processing, Multimedia Projects **Link of the user manual -**
5	PCB Prototyping Machine	**Brand -** Mechanix deskmill **Model -** **Specification -** Machine size: 700*700*800mm; 110 /kg, Speed: 18,000 RPM, 1.8kW Manual Tool Change, Air cooled industrial spindle, High quality & precision ball screws with Stepper motors, Drilling Dia: 0.2 - 3.175, Drilling hits/min: 80, Resolution (µm): 0.625 µm (0.025 mil), min. line to line distance 0.254mm (10 mil), 230v single-phase supply, Millsoft PCB prototyping software with auto level, Copper cam or flatcam for gcode conversion Accessories included with the machine: Prototyping Kit: Drill bit - 1 set Engrave bit - 1 set Scrubber- 2 nos, Single Side Copper Clad - 5nos, Double Side Copper Clad - 5nos, Masking tape - 2nos, Infrastructure Requirements: 1 Stand-alone PC with Windows 7 or above, 4GBRAM, 500 GB, HDD/SSD, DB25 Parallel Port interface, Input file g-code, CAD/CAM software, Power supply & **Operational area –** PCB Manufacturing & Prototyping , Research & Development , Embedded System Development **Link of the user manual -**
6	Soldering & De-soldering Station	**Brand -** SHARANG **Model -** **Specification -** LED Digital Solder Iron De-soldering Station, BGA Rework Solder Station, Air Gun + Electric Iron Set for SMD SMT DIP, Wattage: 700 Watts **Operational area –** PCB Repair & Assembly, Component Replacement , Wire & Connector Soldering, Prototype Development **Link of the user manual -**
7	Computer Workstation	**Brand -** DELL / ANTESPORTS **Model –** DELL-D2020H/4GD5Y **Specification -** Dell 20'' Monitor, Dell Keyboard Mouse, Windows Core I7, Gigabyte motherboard, 16 GB DDR4 Ram, 6GB Graphics Card, 256 NVME, 1TB Hard Disk, SMPS 550 Watts, Cooler with Cabinet **Operational area –** Software Development & Data Analysis, Graphic Design & Video Editing, Gaming & 3D Modeling, Engineering & Scientific Computing **Link of the user manual -**
8	3D Scanner	**Brand -** CR SCAN RAPTOR **Model –** CRS07R **Specification -** CR- Scan Raptor 3D Scanner, Scanning Mode: BlueLight, Accuracy: Up to 0.02mm, 3D Resolution: 0.02-2 mm, Scanning Speed: Up to 60fps, Min. scan volume: 5mm x 5mm x 5mm, Single Capture Range: 270mmx170mm@30mm, Working distance: 150mm-400mm, Camera resolution: 1920x1200, 12 white LEDs, 12 infrared LEDs, Laser Safety: Class I (eye safe), IMU, Output Format: OBJ/STL/PLY, Input Power: 12V 2A, Device Dimensions: 215mmx50mmx74mm; 372g, High-precision glass calibration board, Wireless Scanning, Temperature: -10*C to 40*C **Operational area –** Reverse Engineering, Medical & Dental Modelling, Cultural Heritage Preservation, Industrial Design & Prototyping, Animation & Game Development **Link of the user manual -**
9	3D Printer	**Brand - Flashforge** **Model -** Adventure 5M Pro **Specification -** Printing Precision: *0.2mm, Extruder Speed 600mm/s, Acceleration 20000mm/s2, Thickness 0.1-0.4mm, Nozzle diameter 0.4 mm, Max Extruder Temperature 280*C, Max Platform Temperature 110*C, Printing Bed PEI Sheet, Output file Type GX/G File, Touch LCD Screen, Software Prusa

		Slicer /Cura/ Orca Slicer, Connection wi-fi; Ethernet; USB, ADVENTURER 5M PRO **Operational area –** Prototyping & Product Development, Education & Research, Custom Manufacturing, Art & Design **Link of the user manual -**
10	Vinyl Cutter	**Brand -** SKYTECH **Model -** V24/V48 **Specification -** Packing Size :1620*360* 388mm; 39.5kg, Max Media Width : 1350mm, Max Cutting Width : 1190mm, Max Contour Cutting Width : 1080mm, Max Force : 2000g, DB Values : 75, Number of Heads : 2, Corel DRAW Directly, Power supply:50/220 V/Hz, Processor: 128MB, Cutting Precision: +/- 0.01mm, Repeat Precision: 0.082 mm, Max Moving Speed: 700mm/s, Max Cutting Speed: 600mm/s, Connector Interface: USB flash/WIFI(option)/USB Cable **Operational area –** Signage & Banners ,Vehicle Graphics , Sticker & Label Production ,Textile & Apparel **Link of the user manual -**
11	Quadcopter Assembly Kit	**Brand -** WEADFAX / GARUDA **Model –** FS-R6B **Specification -** Brushless motor, Machine with optical flow positioning, wind-resistant and drop-resistant, Remote control battery: AA batteries*3, Operation method: remote control/APP control, Frequency: 2.4GHz, Body size: (unfolded) 30*27*6CM (folded) 14*9*6CM, Charging method: Universal USB interface, Battery capacity: 3.7V 1800mAH modular battery, Standalone weight: 188g, Charging time: 90 minutes, Remote control distance: 150 m, Video resolution: HD dual camera, Speed adjustment: slow/medium/fast. **Operational area –** Aerial Photography & Videography, Surveillance & Monitoring , Recreational Flying , STEM Learning & Robotics **Link of the user manual -**

Section	Metalworking Facility	
Sr. No.	**Equipment Name**	**Equipment detail**
12	Lathe cum Milling Machine	**Brand -** MECHINEX **Model –** HQ300 **Specification -** Semi Automatic - Chuck and spindle powered and manual axis movement, Distance b/w centers : 400-500mm, Max Spindle Speed: 1000-2000 rpm, Power Source: AC 230V, 50Hz, Overall dimension (LxWxH):1100x680x610 mm; Weight of 120-200 KG, Package includes: Allen wrench, Tool post wrench, Hook Wrench, Machine can work with Soft Metals(Aluminium, Brass etc), Polymers, Wood etc. **Operational area –** Metalworking & Fabrication , Prototyping & Repairs ,Wood & Plastic Engraving , Educational & Research Labs **Link of the user manual -**
13	CNC Router	**Brand -** VL TECH CNC 1325 **Model –** GDF53-18Z/3.5 **Specification -** 3.5 kw Air- cooled spindle with 24000 RPM, FOLINN VFD, A11 RICHAUTO CNC control system, Lead shine motor and drive, HG20 Linear Guide Rail and Bearing Block, 1.25M helical harden rack and pinion, 1.25M Timing belt gearbox, 1.5 mm standard t-slot aluminium with hard PVC with Oil Tank Single Head, Working area: 1300×2500×300 mm **Operational area –** Woodworking & Furniture Making , Acrylic & Plastic Cutting, Metal & Aluminum Engraving , Architectural & Interior Design

		Link of the user manual -
14	CO_2 Laser Non-Metal Cutting and Engraving Machine	**Brand-**VL TECH **Model-** **Specification -** 4*4 Feet Processing Area, Iron Fabrication Structure, Z axis work size 30mm, RD Controller, EZ Cad Software, Stepper Motor, 25mm Dia Metal Gold coated Mirror, 19mm Dia German make Lens, Exhauster with Hose, Laser Power 100W **Operational area –** Acrylic & Wood Cutting , Leather & Fabric , Glass & Ceramics Etching , Paper & Foam Processing, Rubber Stamp Making. **Link of the user manual -**
15	PCB Milling Machine	**Brand -** Mechanix PCB BOT 22 **Model -** **Specification -** Machine size: 300*400*500mm (X,Y,Z); weight approx. 40KG, Speed: 12,000 RPM, 0.8kW Manual Tool Change, Air-cooled industrial spindle, Precision ball screws with Stepper motors, Drilling Dia: 0.2 - 3.175, Drilling hits/min: 70-80, Resolution (μm): 2 μm (0.025 mil, line to line distance above 0.254mm (10 mil), 230v single-phase supply, Copper cam or flatcam for gcode conversion, USB communication for connection Accessories included with the machine: Drill bit - 1 set, Engrave bit - 1 set, Scrubber- 2 nos , Single Side Copper Clad - 5nos *Double Side Copper Clad - 5nos, Masking tape - 2nos, Masking Ink and UV Lamp / Infrastructure Requirements: 1 Stand- alone PC with Windows 7 or above, 4GB RAM, 500 GB HDD/SSD, USB interface, Input file g-code, CAD/CAM software, Power supply &amp **Operational area –** Custom PCB Production ,Educational Labs & Research , IoT & Electronics Development. **Link of the user manual -**

Section	Power Tool	
Sr. No.	**Equipment Name**	**Equipment detail**
16	Portable Welding Machine	**Brand -** VORMIR VR M180-12 **Model -** 740 Station RP **Specification -** Product Dimensions: 28 x 11 x 20.5 cm; 2.8 kg, Up to 250A amps, Ideal performance: 6010, 6011, 6013 and 7018 rods, LED Display, Mode: function mode and welding mode, Automatic Hot Start & Auto Adaptive Arc Force, Safety: Automatic compensation for voltage fluctuation, over current protection, over load protection, temperature control.
17	Angle Grinder	**Brand -** BOSCH GWS 750-100 **Model –** GWS 750-100 **Specification -** GWS 900-125 S Heavy Duty, Electric Angle Grinder, 900W, Speed: 11,000 rpm, Lockable Switch, Restart Protection, Dimension: 28L x 10W x 7.3H, Power Source: Corded Electric
18	Screwdriver cum Drilling Machine	**Brand -** BOSCH Professional GBM 350 **Model -** GBM 350 **Specification -** Power Source: Battery, Max Rotational Speed: 1350 RPM, Voltage: 12 Volts, Amperage: 1.5 Amps, Max Power: 300 Watts, Item Torque: 28 (N-m), Number of Speeds: 2, Components: 1 x Flexible shaft drill bit, Bmc Box, 4 x Drill bits, 9 x Socket wrench, 1 x Screwdriver holder, 10 x Screw bits, 1 x Charger, 1 x1.5Ah Battery, Special Feature: Variable Speed, Adjustable Torque, Cordless, Adjustable Mode, Rechargeable.
19	Jigsaw Machine	**Brand -** BOSCH Professional GST 680 **Model –** GST 680

		Specification - Stroke length: 65mm, Bevel capacity: ±45°, Tool weight: 3.97lbs (1.8 kg), Battery capacity: 37V, Product Dimensions: 20 x 15 x 5 cm; 450 g, Cutting capacity: Wood: 3-1/8" (80 mm), Steel: 5/16" (8 mm), PVC pipe: 25/32" (20 mm), load speed: 0-3000R/min.

Section	Supply & measuring equipment	
Sr. No.	**Equipment Name**	**Equipment detail**
20	Regulated Power Supply	**Brand -** METRAVI **Model –** PRPS-3005 **Specification -** Output voltage: 0V-30V, Output current: 0A and 5A, LED display, Built-in memory, Remote control mode, Current Rating: 5Amps, Cooling Method: Water, System Bus Connector Type: 2 Pin, Output: 60 Watts, Connector Type: Usb Cable, Max Input: 220 Volts, Form Factor: ATX

Section	Hand tools		
Sr. No.	**Equipment Name**	**Sr. No.**	**Equipment Name**
		21	
		22	
20		23	

Section	Measuring Instruments
Sr. No.	**Equipment Name**
21	Digital Multimeter **Specification -** AC/DC Voltage, Ohm Tester, LCD Display, Battery Powered, Palm-sized, Voltmeter 6000 **Brand -** OWON XDM1041
22	Mixed Signal Oscilloscope **Specification -** Frequency:100MHZ, Bandwidth :1GSa/s, 16 CH Logic Analyzer, 2 Channel, 1 GSPS Sampling **Brand -**HANTEK

Section	BioLab Facility	
Sr. No.	**Equipment Name**	**Equipment detail**
23	Bio Printer	**Brand -** MEDSBY **Model –** Bioprinter v1 **Specification -** Syringe Extrusion, Hydrogel Based Materials, Volume: 220x220x250 Mm, Resolution: 100 – 300 Microns, Data Transfer: Sd Card and Usb, Standalone : Yes
24	Retort Pouch Packaging Machine	**Brand -** Dairy Man Engineering Water Sprayer Retort **Model –** Water Sprayer Retort **Specification -**200 to 250 gms – 300 Pouch/Batch