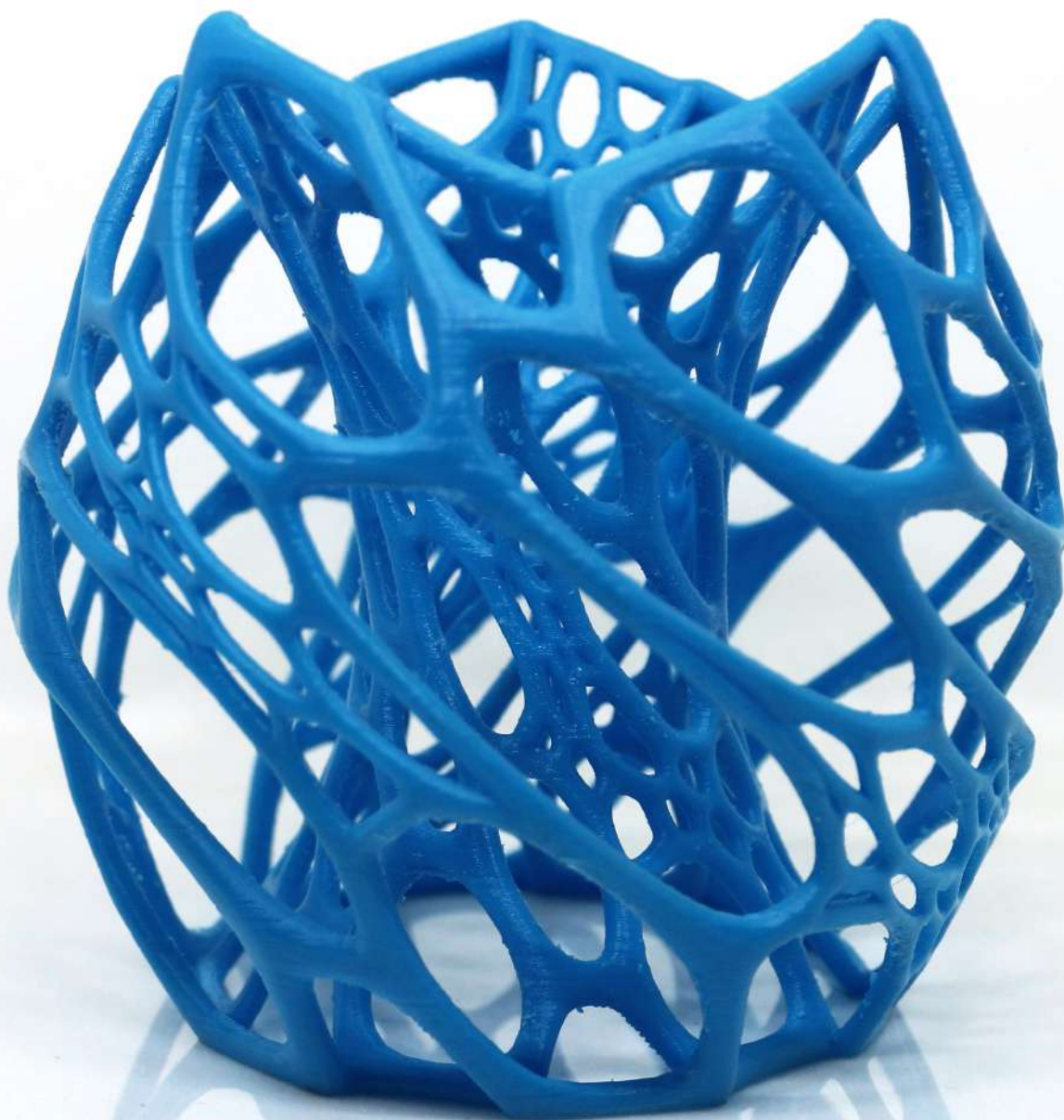


ilab





About iLAB

iLAB is a state of the art prototyping lab under iTIC Incubator at IIT Hyderabad. The lab consists of prototyping machines, design tools, computing systems and XR equipments to build any type of prototypes. iLAB is equipped to work with more than 100 different materials which includes plastics, metals, foam, composites, wood etc.

Access to prototyping lab facilities and tools are on chargeable basis for non incubated startups. This does not include raw material charges for machines and services.

Procedure to use iLAB

To get the devices of iLAB one just has to share the requirements over the email along with the digital files in relevant formats. iLAB team might provide some design and manufacturing consultancy to finalize the manufacturing process and material. iLAB would seek approval over the estimated cost and time before starting the fabrication itself.

Payment and delivery

Post the approval over the estimate of cost and timeline, iLAB would start fabrication jobs. Although the timeline for fabrication is highly dependent on the availability of the machine and existing order queue, iLAB has a great record of delivering on time. Post completion of the job, physical prototypes can be collected from iLAB or iLAB can send it through mail upon request while the digital files can be shared over email or cloud storage.

Email your requirements on ilab@itic.iith.ac.in



MACHINES & EQUIPMENTS



HP Jet Fusion 580 Color 3D printer

Produce functional parts in full color using MJF (Multi Jet Fusion) 3D printing

Technical Specifications

Build volume	332x190x248 mm
Layer Thickness	80 Microns
Materials Supported	PA 12 (nylon)
Supported File Formats	3MF, STL, OBJ, VRML v.2



Formlabs 3B Biocompatible 3D Printer

Produce high resolution and smooth parts with wide range of materials using LFS (Low Force Stereolithography) 3D printing

Technical Specifications

Build volume	145x145x185 mm
Laser spot size	85 Microns
Materials Supported	Clear, Draft, Tough, Flexible, Rigid, Elastic, Dental, High temp, Castable, BioMed
Supported File Formats	STL, OBJ
Layer thickness & XY resolution	25-300 microns & 25 microns



Ultimaker S5 Pro Bundle 3D printer

Print functional and affordable parts with a wide range of materials using FFF (Fused Filament Fabrication) 3D printing

Technical Specifications

Build volume	330x240x300 mm
Print Heads	Dual print heads with composite/abrasive material printing print core
Materials Supported	PLA, ABS, PETG, CPE, PP, PC, HIPS, PVA, TPU and all open source materials below 280 degree celsius melting temperature
Supported File Formats	STL, OBJ
Nozzle diameter & Layer resolution	0.4 mm, 0.6 mm & 20-300 microns



Pramaan 200 Pro 3D printer

Produce affordable prototypes by using open source materials in FFF (Fused Filament Fabrication) 3D printers

Technical Specifications

Build volume	250x200x200 mm
Print Heads	Dual print heads
Materials Supported	PLA, ABS, PETG, PVA, HIPS, TPU and all open source materials below 240 degree celsius melting temperature
Supported File Formats	STL, OBJ
Nozzle diameter & Layer thickness	0.3 mm, 0.4 mm & 80-300 microns

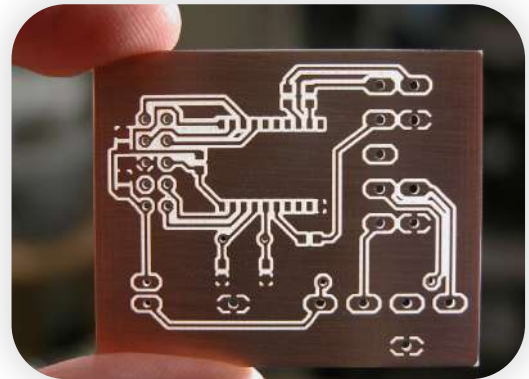
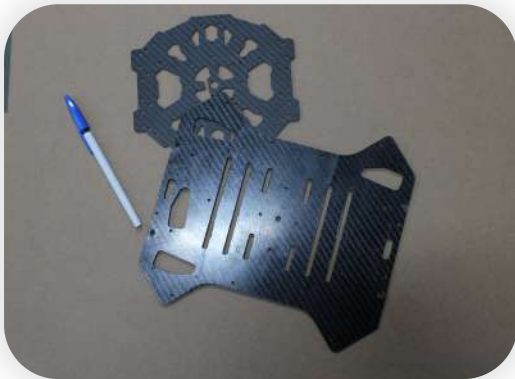
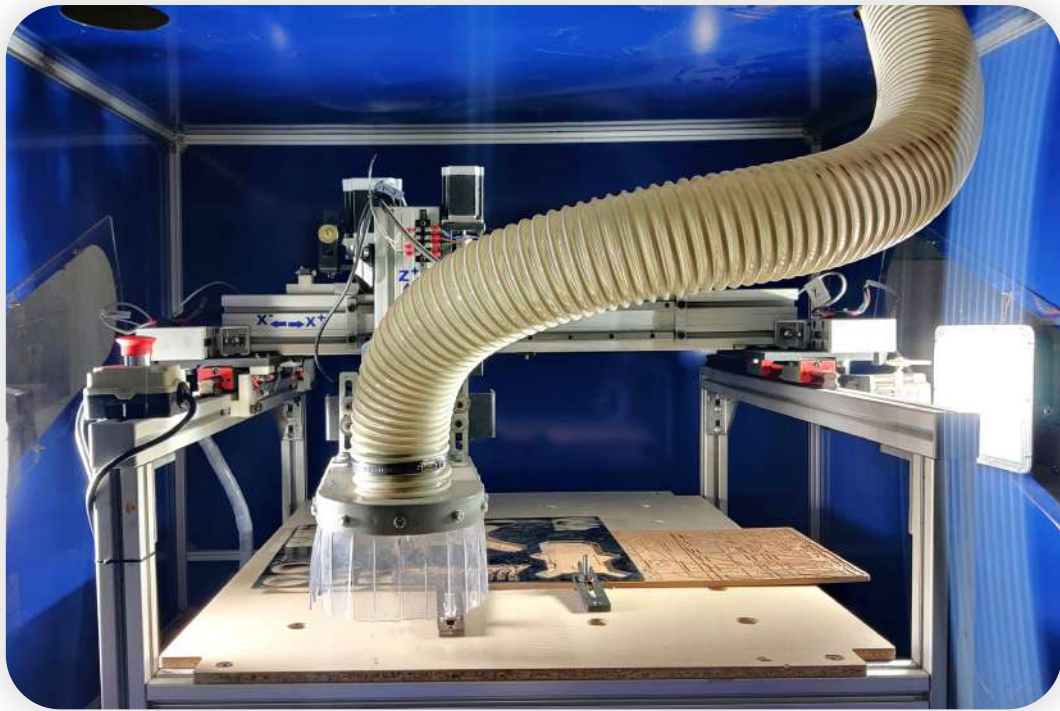


Laser Cutter

Cut parts out of acrylic, MDF, and other soft materials at high speed. Laser cutter can also be used for etching details on various materials

Technical Specifications

Bed size	900x600 mm
Mode of Operations	Cutting, Engraving
Materials Supported	Acrylic sheet upto 12 mm, MDF sheet upto 12 mm, paper, wood, leather.
Supported File Formats	DXF



CNC Router

CNC Router is used for cutting and milling operations. This multi-purpose machine can be used to cut, mill, and engrave materials like carbon fiber sheets, soft metals, plastics, wood, and PCB boards

Technical Specifications

Build volume	300x300x50 mm
Print Heads	10 microns
Materials Supported	PCB boards, plywood, hylam, acrylic, carbon fiber, copper, aluminium, wood.
Supported File Formats	DXF, gerber



CNC foam cutter with hot wire and knife

Create affordable and quick medium to large-scale early prototypes in foam. This machine can also be used to create molds

Technical Specifications

Build volume	2x2x2 feet
Attachements	Turn table for multisided parts, Milling tool for 2D and 3D milling
Materials Supported	EPS, EPP, XPS and other types of foam of varied densities
Supported File Formats	STL, DXF
No of axis & Resolution	5 axis & 100 microns

SERVICES

AR-VR-MR devices

iLAB offers access to the latest XR devices for development on hourly basis



MICROSOFT HOLOLENS 2



OCULUS QUEST 2



HTC VIVE PRO



APPLE iPad PRO





3D scanning

Einscan Pro HD is a 3-in-1 3D Scanner with a handheld, tripod and rotary table based operations. It can be used for reverse engineering of physical components

Technical Specifications

Single scan range	209*160 mm to 310*240 mm
Working distance	510 mm
Light source	LED
Supported File Formats	Watertight models in OBJ, STL, 3MF, ASC, PLY, P3
Attachments	Color module, Turntable, Tripod
Scan accuracy	Upto 0.04 mm



Computing System 1

Perfect for rendering and parallel processing be it on GPU or CPU. Capable of training advanced machine learning models

Technical Specifications

Processor	AMD Threadripper 3960X 24 core upto 4.5 GHz
RAM	XPG D20 64 GB
GPU	RTX 3080 Ti 12 GB (CUDA cores - 10240)
Storage	1TB SSD and 2 TB HDD



Computing System 2

This system is ideally suited for Computer Aided Design (CAD) softwares and simulation purposes. Softwares like Solidworks, Fusion360, Matlab, Ansys, etc. works best in this computing system

Technical Specifications

Processor	AMD Ryzen 9 5950X 16 Core upto 4.90 Ghz
RAM	XPG D20 64 GB
GPU	RTX 3060 AMP Edition 12 GB (CUDA cores - 3584)
Storage	1 TB SSD and 2 TB HDD

TOOLS & FACILITIES



Mechanical Table



Power Tools



Basic Tools, Screws and Nuts



ESD Table & Equipments



Boards & Sensors



Portable Dark Room Setup

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