Karunya INSTITUTE OF TECHNOLOGY AND SCIENCES
(Declared as Deemed to be University under Sec.3 of the UGC Act, 1956)
MoE, UGC & AICTE Approved; NAAC Accredited A++
Karunya Nagar, Coimbatore - 641 114, Tamil Nadu, India.

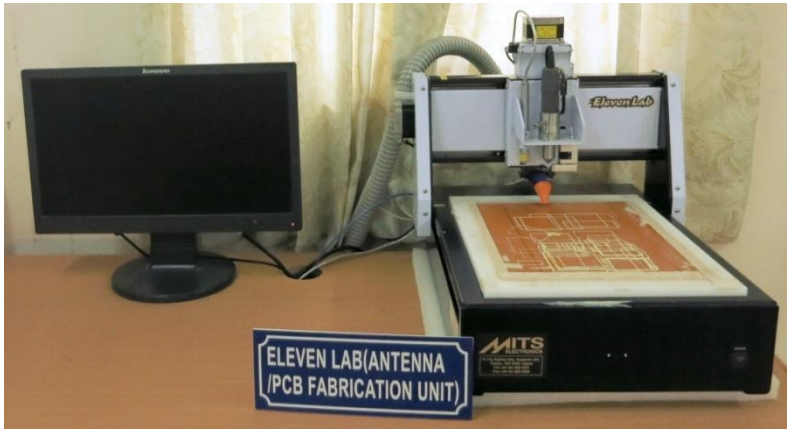
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

RESEARCH & CONSULTANCY FACILITIES

(MICROWAVE & OPTICAL FIBER LAB)

MICROWAVE & OPTICAL FIBER LAB

- **ELEVEN LAB ANTENNA FABRICATION UNIT**



Make	MITS ,Japan
Minimum Pattern & Milling Width (mm)	0.1mm (4 mil)
Working Area (X/Y/Z) mm	229 x320 (9.0"x 12.6")
Control Axis	X, Y, Z
Drilling (mm)	0.2 -3.175 mm (8 -125 mil)
Tools Used	Drilling Bits , Milling Bits, Routing Bits

Application/Research Projects / Consultancy Carried out in:

- ✓ Designing of Antenna for Telecommunication , Wireless, 5 G, IoT , Wearable applications

- **FIELD FOX VECTOR NETWORK ANALYZER (18 GHz)**

Make/Model	Keysight - Field Fox- N9917A –handheld
Maximum Frequency	18 GHz
CAT/VNA Start Frequency	30 kHz
SA Start Frequency	5 kHz
VNA System Dynamic Range	100 dB
Best Speed at 1001 Point, 1 Sweep	432 us/pt
Output Power	-1 dBm
Trace Noise	0.004 dB
Number of Built-In Ports	2 ports
Instrument Type	Combination Analyzer

Application/Research Projects / Consultancy Carried out in:

- ✓ Testing of Antenna for Telecommunication, Wireless, 5 G, IoT, Wearable applications

- **FEKO + WINPROP (2019)**

License : Perpectual

No.of Users : 10

About FEKO:

- FEKO is a comprehensive computational electromagnetics (CEM) software used widely in the telecommunications, automobile, aerospace and defence industries.
- FEKO offers several frequency and time domain EM solvers under a single license.
- Hybridization of these methods enables the efficient analysis of a broad spectrum of EM problems, including antennas, micro strip circuits, RF components and biomedical systems, the placement of antennas on electrically large structures, the calculation of scattering as well as the investigation of electromagnetic compatibility (EMC).

Application/Research Projects / Consultancy Carried out in:

- ✓ Simulation of Antenna for Telecommunication , Wireless, 5 G, IoT , Wearable applications
- ✓ Simulation of RF Antennas

- **COMSOL MULTIPHYSICS: (5.4)**

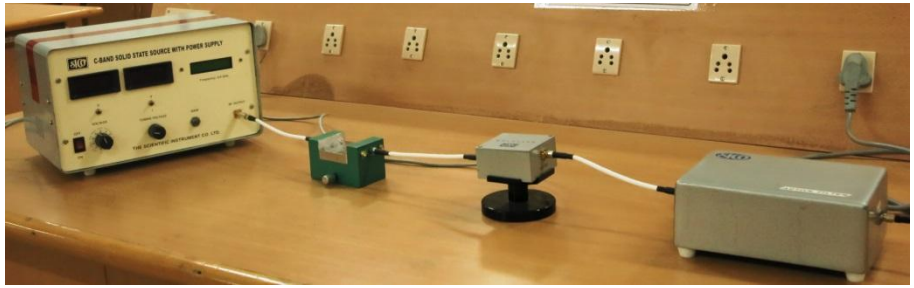
License : Perpectual
No.of Users : 1

About COMSOL:

- COMSOL Multiphysics is general-purpose simulation software for modeling designs, devices, and processes in all fields of engineering, manufacturing, and scientific research.
- In addition to using Multiphysics modeling for your own projects, you can also turn your models into simulation applications and digital twins for use by other design teams, manufacturing departments, test labs, customers, and more.
- The platform product can be used on its own or expanded with functionality from any combination of add-on modules for simulating electromagnetics, structural mechanics, acoustics, fluid flow, heat transfer, and chemical engineering.

Application/Research Projects / Consultancy Carried out in:

- **ADVANCED MICRO STRIP TRAINER**

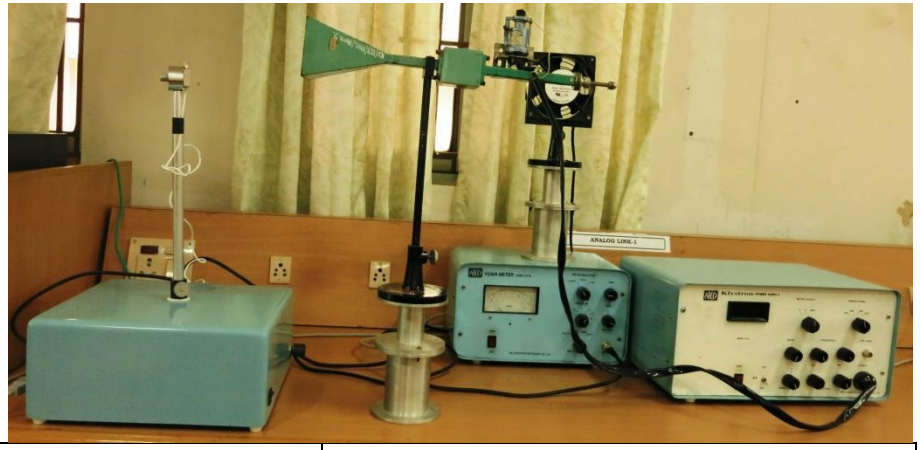


Make	SICO
Model	SSS-980C
Band	C-Band
Frequency Range	4 GHz to 6 GHz
Filter Type	Active
Test Component Type	Micro strip Feed

Application/Research Projects / Consultancy Carried out in:

- ✓ Measurement of Gain in Micro strip Antennas.
- ✓ Measurement of Return Loss in Micro strip Antennas

- **MICRO STRIP TRAINER-(Patten Measurement)**



Make	SICO
Band	X-Band
Frequency Range	8.2 GHz to 12.4 GHz
Output Plot	PC Based

Application/Research Projects / Consultancy Carried out in:

- ✓ Computer based Radiation Pattern Measurement with angle wise Output Power readings.