

## DEPARTMENT OF ELECTRONICS AND INSTRUMENTATION ENGINEERING

### Distributed Control System Lab

Department Name: Electronics and Instrumentation Engineering

Equipment Name: Interacting and Non-Interacting Conical Tank System

Specifications:

Reservoir Tank – 1 No

Conical Tank – 3 Nos

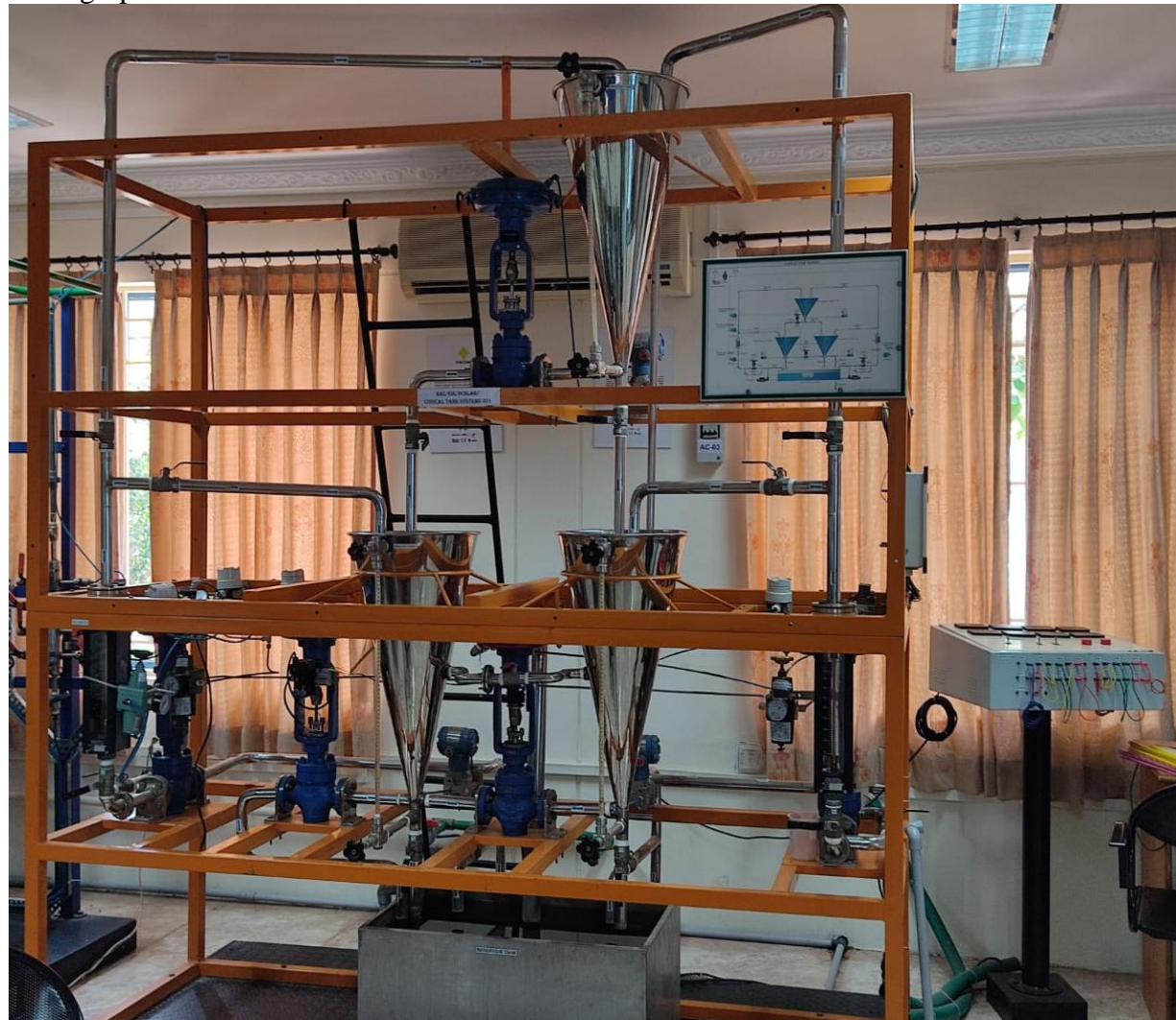
DPT - 3 Nos

I/P Converters - 5 Nos

Control Valves - 5 Nos

Functions: Interacting and Non-Interacting tank Level Controls

Photograph:



Department Name: Electronics and Instrumentation Engineering

Equipment Name: Continuous Stirrer Tank Reactor (CSTR)

Specifications:

Reservoir Tank – 2 Nos, DPT - 2 Nos, I/P Converters - 2 Nos, Control Valves - 2 Nos, Control panel – 1 No

Functions: Temperature Control

Photograph:





## Research Lab

Department Name: Electronics and Instrumentation Engineering

Equipment Name: Two Tank Process in Spherical Type

Specifications: Interacting Non Linear System

Functions: A system is said to be interacting if each input of the system affects over one of its outputs. Another instance when the system is an interacting system is the change in one input has an impact on other outputs.

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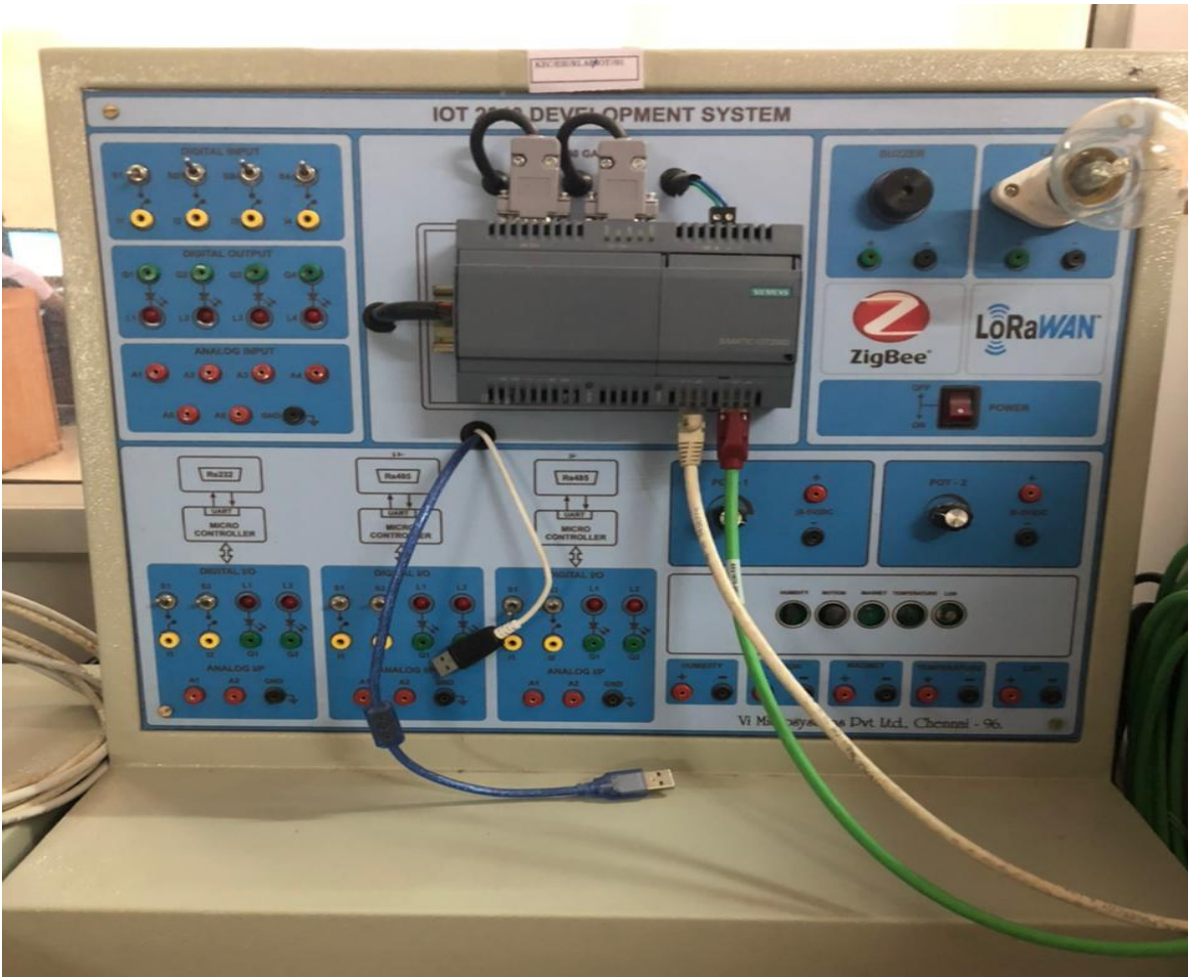


Department Name: Electronics and Instrumentation Engineering

Equipment Name: IOT-2040 Network Hardware Accessories

Specifications: SIMATIC IOT2040

Functions: SIMATIC IOT2040 is an intelligent gateway that standardizes communication between various data sources, then analyzes and forwards communications to the corresponding recipients and is easy to implement



Department Name: Electronics and Instrumentation Engineering

**Equipment Name:** Candura Energy Pro Power Quality Analyzer

**Specifications:** Max Voltage: 600V, Max Current: 200A, Frequency: 45 to 65 Hz

**Functions:** The Candura Energy Pro power quality analyzer can be used to measure, monitor and store various power quality parameters. It offers wide data storage with re-placable memory slots. The device can effectively used for Power quality monitoring and Energy Auditing applications.

**Photograph:**



## Advanced Instrumentation Lab

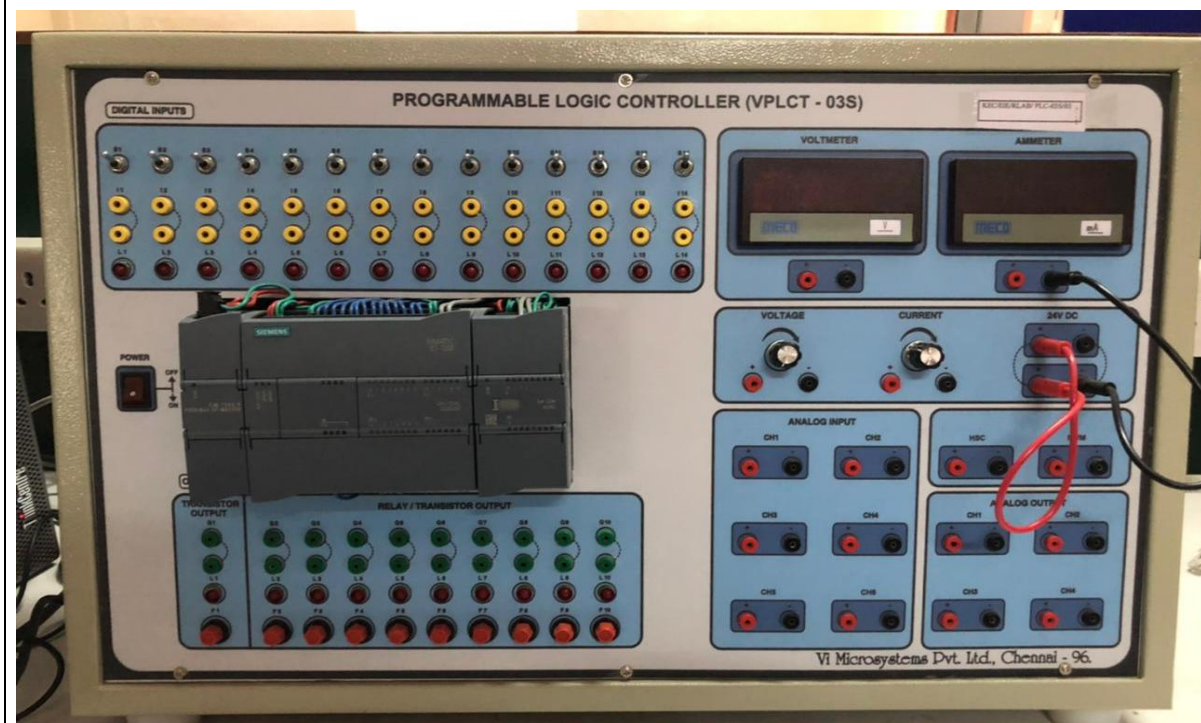
Department Name: Electronics and Instrumentation Engineering

Equipment Name: GE Faunc Versamax PLC

Specifications: CPU1214C DC/DC/DC

Functions: A Programmable Logic Controller is a type of tiny computer that can receive data through its inputs and send operating instructions through its outputs.

Photograph:





Department Name: Electronics and Instrumentation Engineering

Equipment Name:

Variable Frequency Drive

Specifications:

Analog Input-2, Analog Output-1, Digital Input-4

Functions:

A variable frequency drive (VFD) is a type of motor controller that drives an electric motor by varying the frequency and voltage of its power supply.

Photograph:



Department Name: Electronics and Instrumentation Engineering

Equipment Name: PLC-Siemens S7 1200 with V13 Software

Specifications: CPU1214C DC/DC/RLY

Functions: SIMATIC S7-1200 controllers by Siemens are the intelligent choice for compact automation solutions with extended communication options and integrated technology functions.

Photograph:





## Sensor and Transducer Lab

Department Name: Electronics and Instrumentation Engineering

Equipment Name: Ultrasonic Level Measurement

Specifications:

Measuring Tank: Capacity 10 L – 1 No

Reservoir Tank: Capacity 20 L – 1 No

Pump: 1500 RPM – 1 No

Ultrasonic Level Transmitter – 1 No

Manual Control Valve – 1 No

Functions: Level Measurement using Ultrasonic Level Transmitter

Photograph:



Department Name: Electronics and Instrumentation Engineering

Equipment Name: Turbine Flow Meter

Specifications:

Reservoir Tank: capacity 20 L – 1 No

Pump: 1500 RPM – 1 No

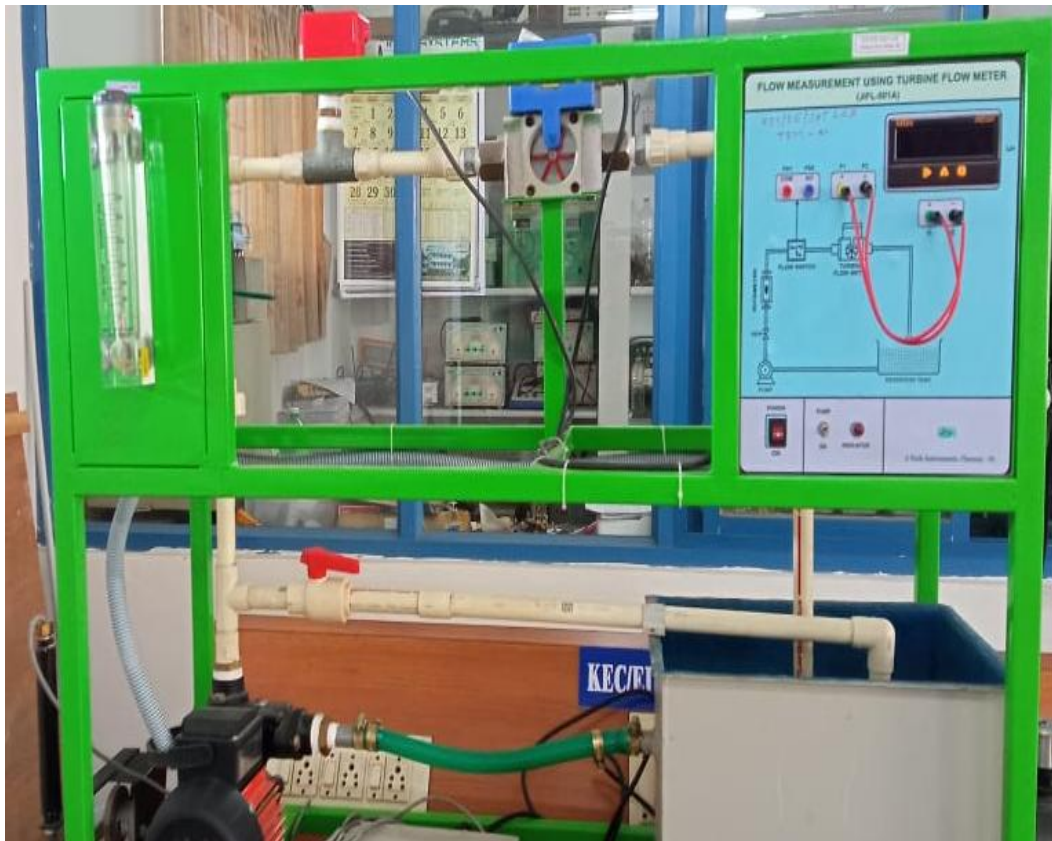
Rotameter: 0 – 1000 LPH – 1 No

Turbine flow meter: 0 – 600 LPH - 1 No

Flow Switch – 1 No

Functions: Flow Measurement using Turbine Flow Meter

Photograph:



## Measurements and Instrumentation Laboratory

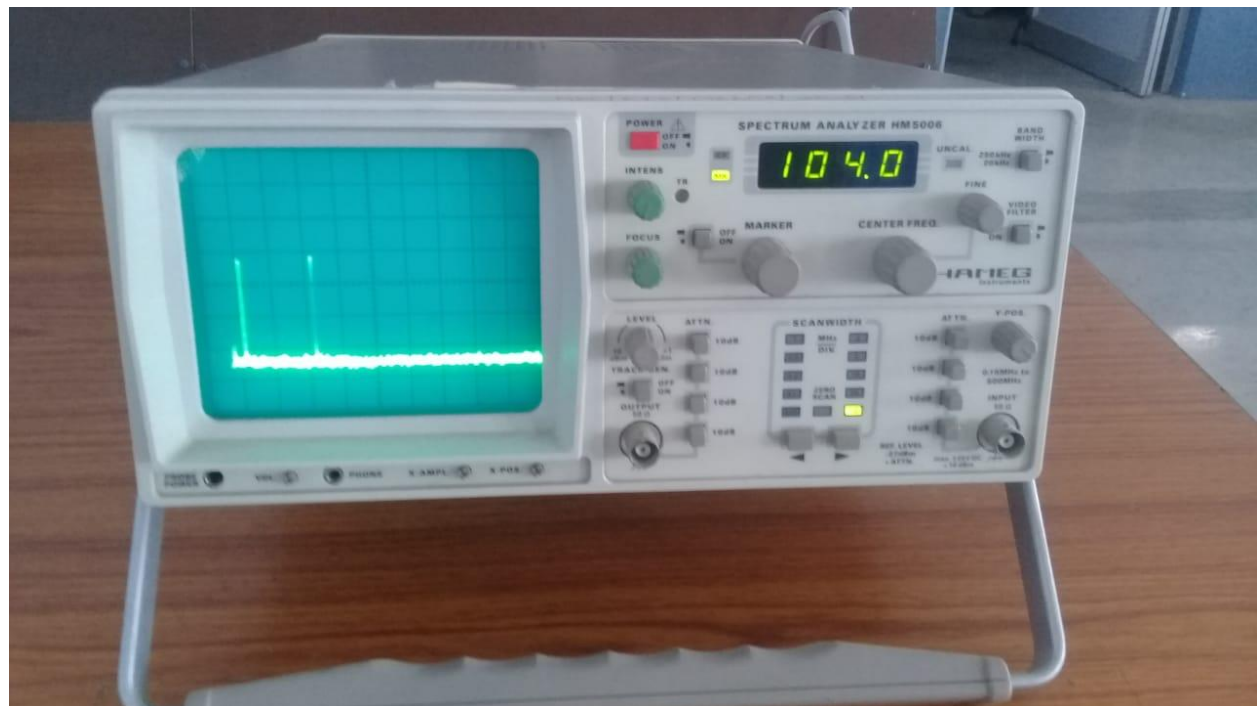
Department Name: Electronics and Instrumentation Engineering

Equipment Name: Spectrum Analyzer

Specifications: Frequency Range: 0.15 MHz - 500 MHz. 4 Digit Display (Center & Marker Frequency, 0.15 MHz resolution) Amplitude Range:  $-100$  to  $+13$ dBm. Filters: 20 kHz, 250 kHz and Video Filter.

Functions: As a frequency analyzer, spectrum analyzers' main use is to document and analyze electrical input signals as well as spectral compositions of other signals.

Photograph:





## Microprocessor & Microcontroller Laboratory

**Department Name:** Electronics and Instrumentation Engineering

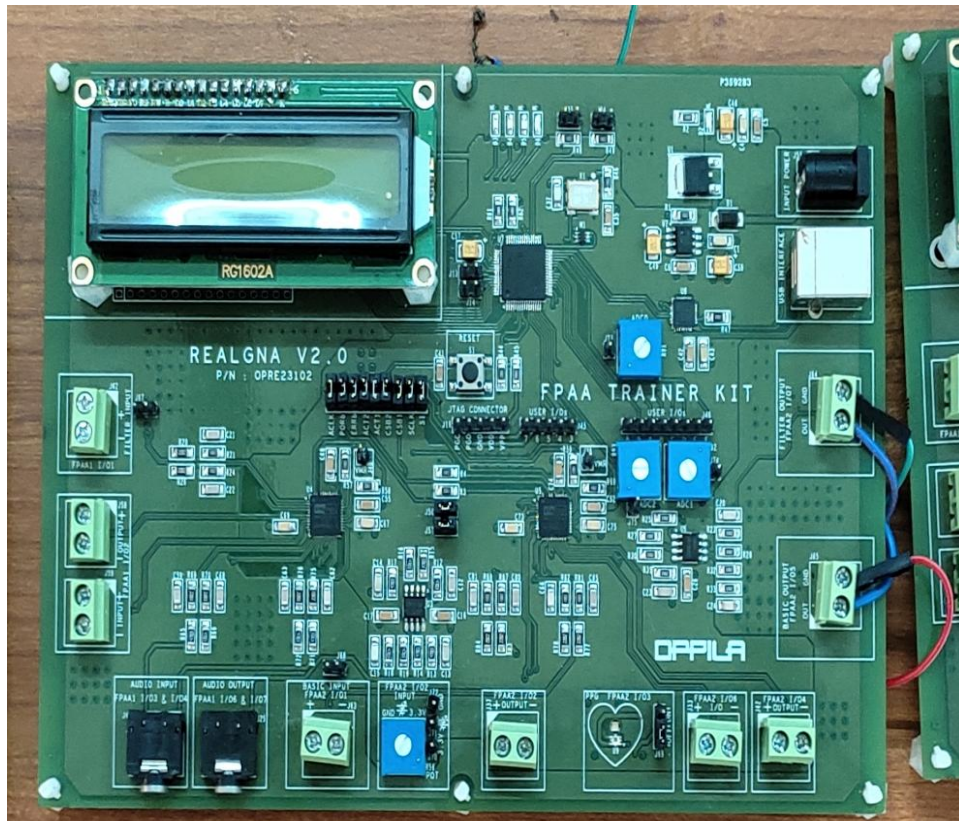
**Equipment Name:** FPAA Development Kit

**Year of Purchase & Value :** 2018 & Rs.99,120.00

**Specifications:** Analog QUAD 3.3volt

**Functions:** Implement Prototype model of Analog Circuits for Real Time Applications

**Photograph:**



**Department Name:** Electronics and Instrumentation Engineering

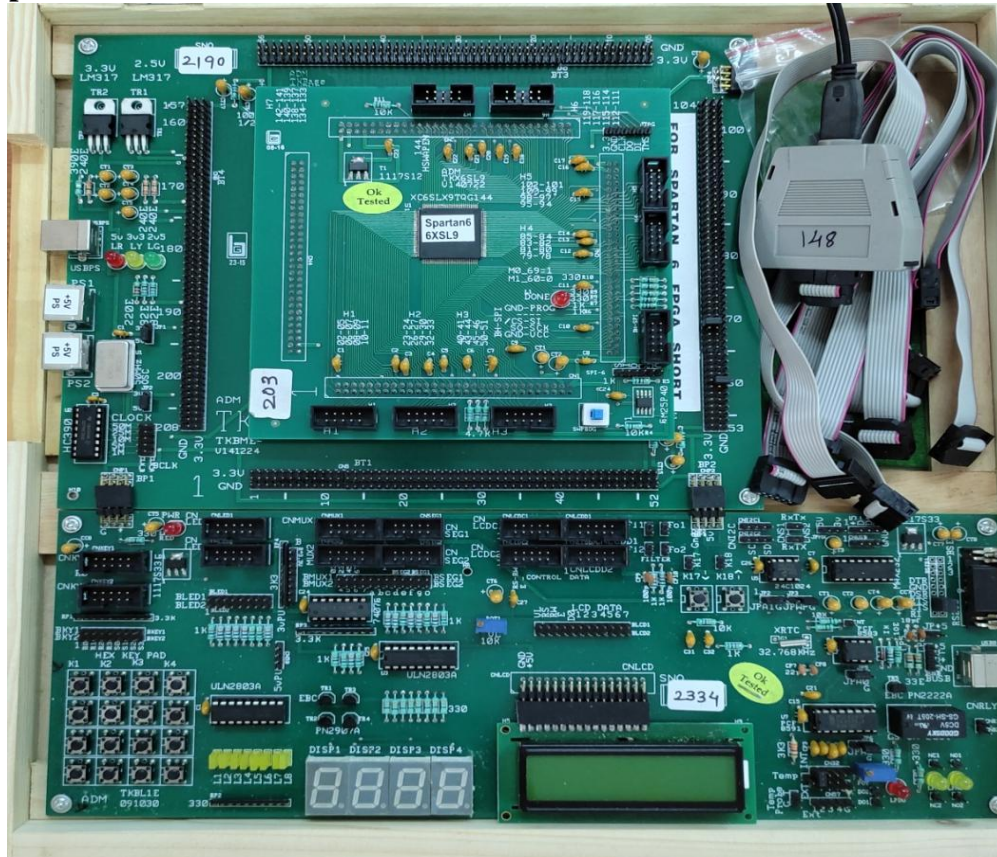
**Equipment Name:** FPGA

**Year of Purchase & Value :** 2016 & Rs.2,25,000.00

**Specifications:** SPARTAN 6

**Functions:** Implement Prototype model of Digital Circuits for Real Time Applications

**Photograph:**



**Department Name:** Electronics and Instrumentation Engineering

**Equipment Name:** Digital Storage Oscilloscope

**Year of Purchase & Value :** 2018 & Rs.28,674.00

**Specifications:** DSO1052B Oscilloscope, 50MHz

**Functions:** Store and analyze the Input Signals

**Photograph:**





**Department Name:** Electronics and Instrumentation Engineering

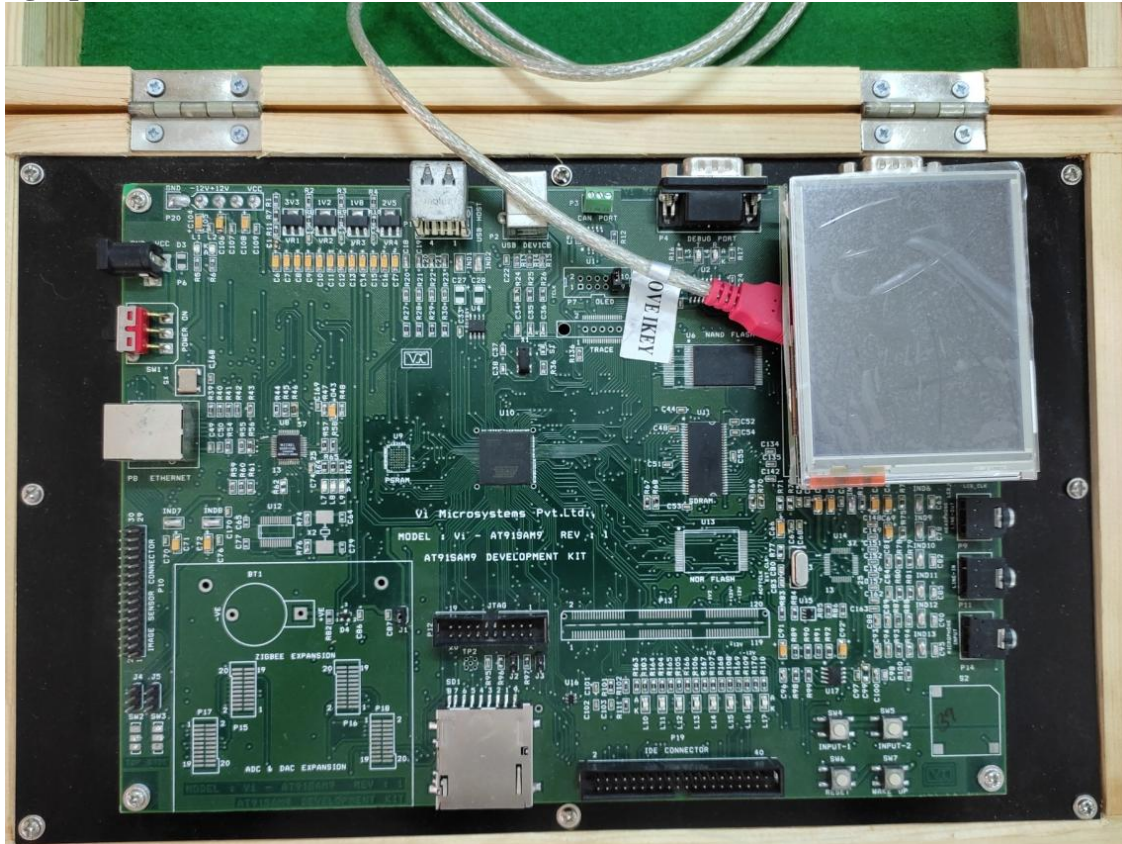
**Equipment Name:** ARM 9 Processor

**Year of Purchase & Value :** 2011 & Rs.51,887.00

**Specifications:** AT9LSAM 9263

**Functions:** Implement Real Time Applications using ARM 9 Processor

**Photograph:**



## **Bio-Medical Instrumentation Laboratory**

**Department Name:** Electronics and Instrumentation Engineering

**Equipment Name:** Ultrasound Image Processing Unit

**Year of Purchase & Value :** 2020 & Rs.1,80,000.00

**Specifications:** 10-inch,800\*575 pixels, 256 levels, Real time: 100% to 1600% , USB 1.1

**Functions:** The 3 Digital Ultrasonic Diagnostic imaging system is intended for diagnostic ultrasound imaging analysis in gynecology rooms, obstetrics rooms, examination rooms, intensive care units and emergency rooms.

**Photograph:**



**Department Name:** Electronics and Instrumentation Engineering

**Equipment Name:** EEG, EOG, EMG with PC Connecting Software

**Year of Purchase & Value :** 2020 & Rs.95,000.00

**Specifications:** CMMR 90Db, Gain 1k to 10k Variable, Uni-polar & Bipolar, Frequency 25Hz to 5KHz

**Functions:** Data Acquisition Systems of Signals

**Photograph:**





**Department Name:** Electronics and Instrumentation Engineering

**Equipment Name:** Heart Lung Bypass Machine

**Year of Purchase & Value :** 2016 & Rs.75,000.00

**Specifications:** Demo Type

**Functions:** Study Purpose through Circulation of Water

**Photograph:**



**Department Name:** Electronics and Instrumentation Engineering

**Equipment Name:** Haemo-dialysis

**Year of Purchase & Value :** 2016 & Rs.75,000.00

**Specifications:** Demo Type

**Functions:** For Study Purpose through Circulation of Water

**Photograph:**

