

## EMBEDDED LAB

Embedded laboratory provides opportunities to learn about the basics of microcontrollers and associated embedded systems standards. The Embedded laboratory is equipped with most sophisticated development boards which cater to the requirements of undergraduate programs in Electronics and Communication Engineering. The Embedded laboratory is aimed to design products for the present electronics market. The goal of this laboratory is to introduce students to the issues in hardware/software interfacing, practical microprocessor-based system design issues. The Embedded laboratory is set up for experiments and projects dealing with topics such as system hardware and software interfaces, serial and parallel interfaces, A/D and D/A, and I/O interfaces.

This lab is equipped with industrial microprocessor and project board kits, which enhance student's knowledge related to industrial needs. This lab is also equipped with single board computer and computing devices to facilitate in the field of latest technologies like Internet of Things (IoT), Artificial Intelligence (AI) and Machine Learning (ML).

S.No	Name of the Equipment	Available Number
1	Computer	30
2	Embedded Wireless (Sensor N/W Using ARM 7)	2
3	Embedded Trainer Kit (ARM 7 TYRO - V4)	10
4	200MHz Mixed Domain Oscilloscope	2
5	Zed board SOC Development Board SD SOC Key License	2
6	ARM, Cortex M4 Board	7
7	Raspberry Pi Modal3B+	3
8	NEXYS A7: FPGA Board & ZYBO ZYNO: 7000ARM(Xilinx ARM - 7 FPGA)	5
9	Basys 3 (Artix - 7) FPGA Trainer Board (Xilinx ARM- 7 FPGA)	12
10	Color Television	1
11	ARM7 : Specifications (ARM 7 TDM )	8
12	MCU : LPC 2148, 16/32 Bit	2
13	RP2040 Processor Based Development Board	4
14	Garbage segregator and bin level indicator using IoT	1
15	Colour based product sorting using IoT	1
16	Image processing based fire detection using IoT	1
17	Vehicle number plate detection using IoT	1
18	Smart lock system using IoT	1