SNS COLLEGE OF TECHNOLOGY
Coimbatore-35
An Autonomous Institution

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++' Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

19ECT312 – EMBEDDED SYSTEM DESIGN

III YEAR/ VI SEMESTER

UNIT 1 – **INTRODUCTION TO EMBEDDED SYSTEMS**

TOPIC –1.1 -Introduction to Embedded System

GENERAL-PURPOSE COMPUTERS

- Able to run a variety of software.

- Contain relatively high-performance hardware components (fast processors, data & program storage).

- Require an operating system (OS).

GENERAL-PURPOSE COMPUTERS

- Designed for heavy user interaction.

- Uses a variety of peripherals (displays, keyboards, mice, internet connections, wireless communication capability).

- Expensive ($100s - $1000s).

- Use a group of integrated circuits or chips (ICs).

  - One implements the central processing unit (CPU).

- Several implement data memory and program storage.

EMBEDDED COMPUTERS

- Resources can be implemented on a single IC.

- Include a variety of peripherals (timers, analog-to-digital converters, digital-to-analog converters, serial interfaces).

- Small size makes them very versatile.
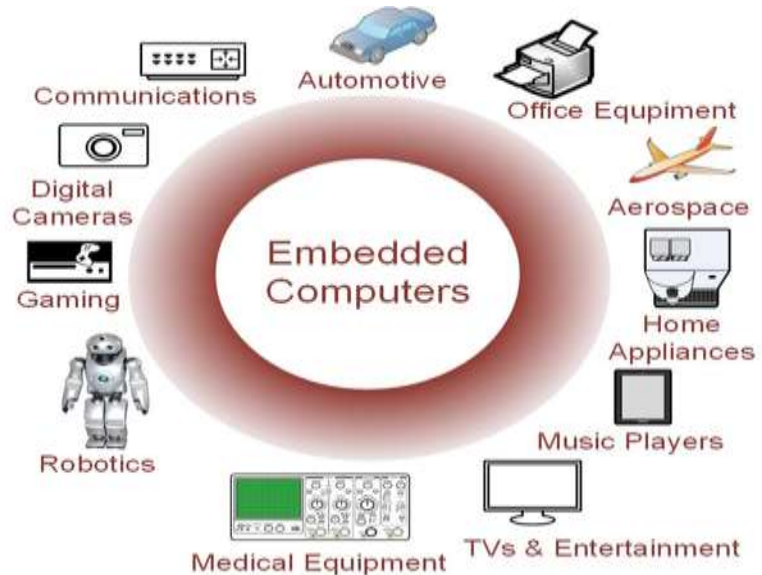
EMBEDDED COMPUTERS

- Contains firmware (only the *needed* software which is not intended to be changed frequently).

- May contain Real Time Operating Systems (RTOS) which are used as a task scheduler.

- Low cost (10s of cents to a few dollars).