
# FACULTY OF ENGINEERING & TECHNOLOGY

Dileep Kumar
Assistant Prof. EE Deptt

## Non-Volatile Memories:

The memory unit consisting of binary cells made with magnetic cores is known as non-volatile as the stored data is not lost when the power is turned off.

- **Electrically Addressed**
  - **ROM**
    - **PROM**
    - **EAROM**
    - **EPROM**
    - **EEPROM**

    Flash memory (NOR and NAND)
  -

- **Mechanically Addressed System**
  - Tape Hard
  - disk
  - Optical disk (CD, DVD) Magnetic
  - Disk (Floppy Disk)

# ROM
## Read-only memory


- Stored-program computer requires some form of non-volatile storage to store the initial program that runs when the computer is powered on or otherwise begins execution (a process known as bootstrapping, often abbreviated to "booting" or "booting up")

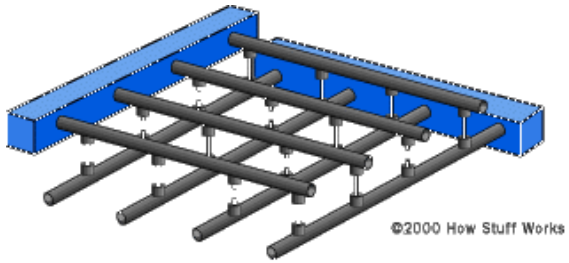
- **Read-only memory** (ROM), also known as **firmware**, is an integrated circuit programmed with specific data when it is manufactured. ROM chips are used not only in computers, but in most other electronic items as well.

## PROM
## Programmable Read Only Memory

- **Programmable read-only memory** (**PROM**) or **field programmable read-only memory** (**FPROM**) is a form of digital memory where the setting of each bit is locked by a fuse or antifuse. Such PROMs are used to store programs permanently. The key difference from a strict ROM is that the programming is applied after the device is constructed.

- Creating ROM chips totally from scratch is time-consuming and very expensive in small quantities. For this reason, mainly, developers created a type of ROM known as **programmable read-only memory** (PROM). Blank PROM chips can be bought inexpensively and coded by anyone with a special tool called a **programmer**.

- **Advantages**
  - Reliability
  - Stores data permanently
  - Moderate price
  - Built using integrated circuits, rather than discrete components.
  - Fast: speed is between 35ns and 60ns.



PROM