#### **NETWORKING & SYSTEM ADMINISTRATION LAB**

## **Experiment No.: 1**

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### <u>Aim</u>

Identify major components of computer system such as Motherboard ,RAM Module, Daughter cards, Bus slot, SMPS, Internal Storage Device, Interfacing ports

### **Procedure**

#### **Motherboard**

The motherboard is also referred to as a circuit board for the computer system. It is also called the logic board or the mainboard. In the computer system, the motherboard is the biggest component that controls all the other components of the computer system and bridges a link between all components. Various components such as ROM, CPU, RAM, PCI slots, USB ports, and other components are connected to the motherboard. The controller's devices such as DVD, hard disk, mouse, and keyboard are also connected to the motherboard. The computer system does not start without the motherboard and it acts as the backbone for starting the system.



#### **RAM Modules**

In <u>computing</u>, a <u>memory module</u> or <u>RAM (random-access memory)</u> stick is a <u>printed circuit board</u> on which <u>memory integrated circuits</u> are mounted. Memory modules permit easy installation and replacement in electronic systems, especially computers such as <u>personal computers</u>, <u>workstations</u>, and <u>servers</u>. The first memory modules were proprietary designs that were specific to a model of computer from a specific manufacturer. Later, memory modules were standardized by organizations such as <u>JEDEC</u> and could be used in any system designed to use them.

## Types of memory module include:

- TransFlash Memory Module
- SIMM, a single in-line memory module
- <u>DIMM</u>, dual in-line memory module
  - <u>Rambus</u> memory modules are a subset of DIMMs, but are normally referred to as RIMMs
  - SO-DIMM, small outline DIMM, a smaller version of the DIMM, used in laptops



# **DaughterCard**

A daughterboard (or *daughter board*, *daughter card*, or *daughtercard*) is a circuit board that plugs into and extends the circuitry of another circuit board. The other circuit board may be the computer's main board (its motherboard) or it may be another board or card that is already in the computer, often a sound card. The term is commonly used by manufacturers of wavetable daughterboards that attach to existing sound cards.

#### **Bus Slot**

Alternatively known as a **bus slot** or **expansion port**, an **expansion slot** is a connection or port inside a <u>computer</u> on the <u>motherboard</u> or <u>riser card</u>. It provides an installation point for a hardware expansion card to be connected. For example, if you wanted to install a new video card in the computer, you'd purchase a video expansion card and install that card into the compatible expansion slot.

#### **SMPS**

The full form of SMPS is **Switched Mode Power Supply** also known as **Switching Mode Power Supply**. SMPS is an electronic power supply system that makes use of a switching regulator to transfer electrical power effectively. It is a PSU (power supply unit) and is usually used in computers to change the voltage to the appropriate range for the computer.

### **Internal Storage Devices**

Some storage devices are classed as 'internal' which means they are inside the computer case. Most computers have some form of internal storage. The most common type of internal storage is the hard disk. At the most basic level, internal storage is needed to hold the operating system so that the computer is able to access the input and output devices. It will also be used to store the applications software that you use and more than likely, the original copies of your data files.

Internal storage allows the data and applications to be loaded very rapidly into memory, ready for use. The data can be accessed much faster than data which is stored on an external storage device. This is because internal storage devices are connected directly to the motherboard and its data bus whereas external devices are connected through a hardware interface such as USB, which means they are considerably slower to access.

# **Interfacing Ports**

A computer is a device that transforms data into meaningful information. It processes the input according to the set of instructions provided to it by the user and gives the desired output. As we know that we can connect multiple external devices with the computer system. Now, these devices are connected with the computer using Ports. The ports are the physical docking points present in the computer through which the external devices are connected using cables. Or in other words, a port is an interface between the motherboard and an external device of the computer. There are different types of ports available:

- Serial port
- Parallel port
- USB port
- PS/2 port

- VGA port
- Modem port
- FireWire Port
- Sockets
- Infrared Port
- Game Port
- Digital Video Interface(DVI) Port
- Ethernet Port