

St. Francis Institute of Technology

Class: SE-ITA/ITB Semester: IV; A.Y. 2023-2024

Subject: Microprocessor Programming Lab

Experiment – 1: Study of PC Motherboard Technology

1. Aim: To study different components on the PC motherboard.

2. Requirements: 915GLM-V motherboard.

3. Pre-Experiment Exercise:

Brief Theory:

A motherboard is the main printed circuit board (PCB) in a computer. The motherboard is a computer's central communications backbone connectivity point, through which all components and external peripherals connect.



Components of the motherboard:

- a. Chipset Type: Intel 915GL Express / Intel ICH6
- b. Compatible Processors: Pentium 4, Pentium 4 Extreme Edition, Celeron D
- c. Processor Socket: LGA775 Socket
- d. Max Bus Speed: 800 MHz, Max Processors Qty
- e. Interfaces Provided:
 - i. Storage Interfaces: Intel ICH6: ATA-100 -connectors: 1 x 40pin IDC - 2 devicesIntel ICH6: SATA-150 -connectors: 4 x 7pin Serial ATA - 4 devices
 - ii. Connector Type: Mini jack
 - iii. Type: LAN, PS/2 keyboard, PS/2 mouse, USB 2.0, VGA, audio line-in, audioline-out, microphone, parallel, serial
- f. Video and Graphics: Intel GMA 900
- g. Memory: Dynamic Video Memory Technology 3.0
- h. Network Interfaces: Ethernet, Realtek RTL8100C

4. Laboratory Exercise

Perform a case study of motherboard based on the following points: Motherboard technology (South Bridge & North Bridge), Internal Components and Connections, Types/Versions and Features of any one type of motherboard.

5. Post-Experiment Exercise:

A. Conclusion/Comments:

Write the comments based on the experiment performed.

B. Post Lab Questions:

1. List out the common general precautions given in reference to a PC.
2. What are the steps involved for the removal of the motherboard from the computer?

6. References:

- a. <https://icecat.biz/en-in/p/msi/915glm-v/motherboards-915glm-v-344128.html>
- b. <https://www.cnet.com/products/msi-915glm-v-motherboard-micro-atx-lga775-socket-i915gl/>
- c. <https://www.youtube.com/watch?v=ctAVC2JwEwI>
- d. https://www.youtube.com/watch?v=cNN_tTXABUA