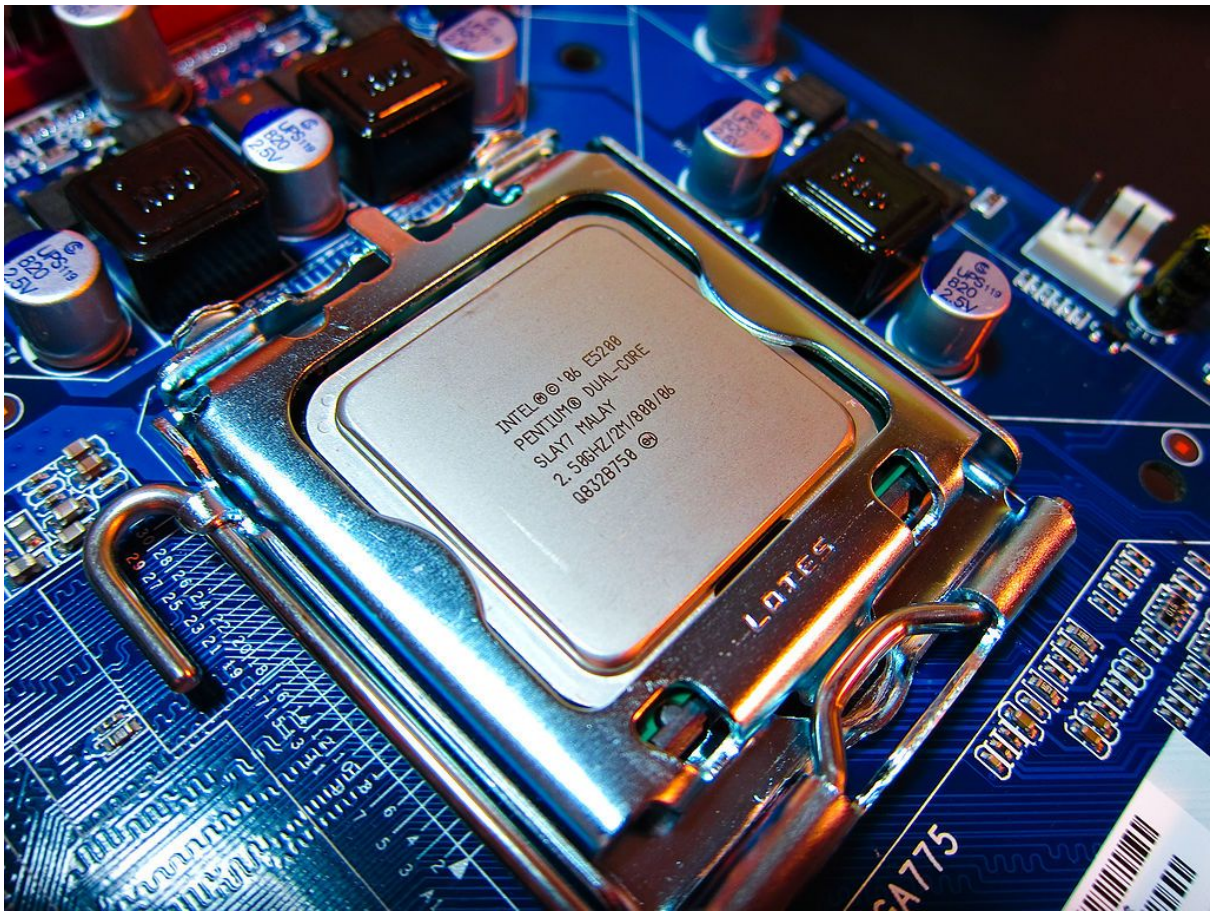
# Motherboard

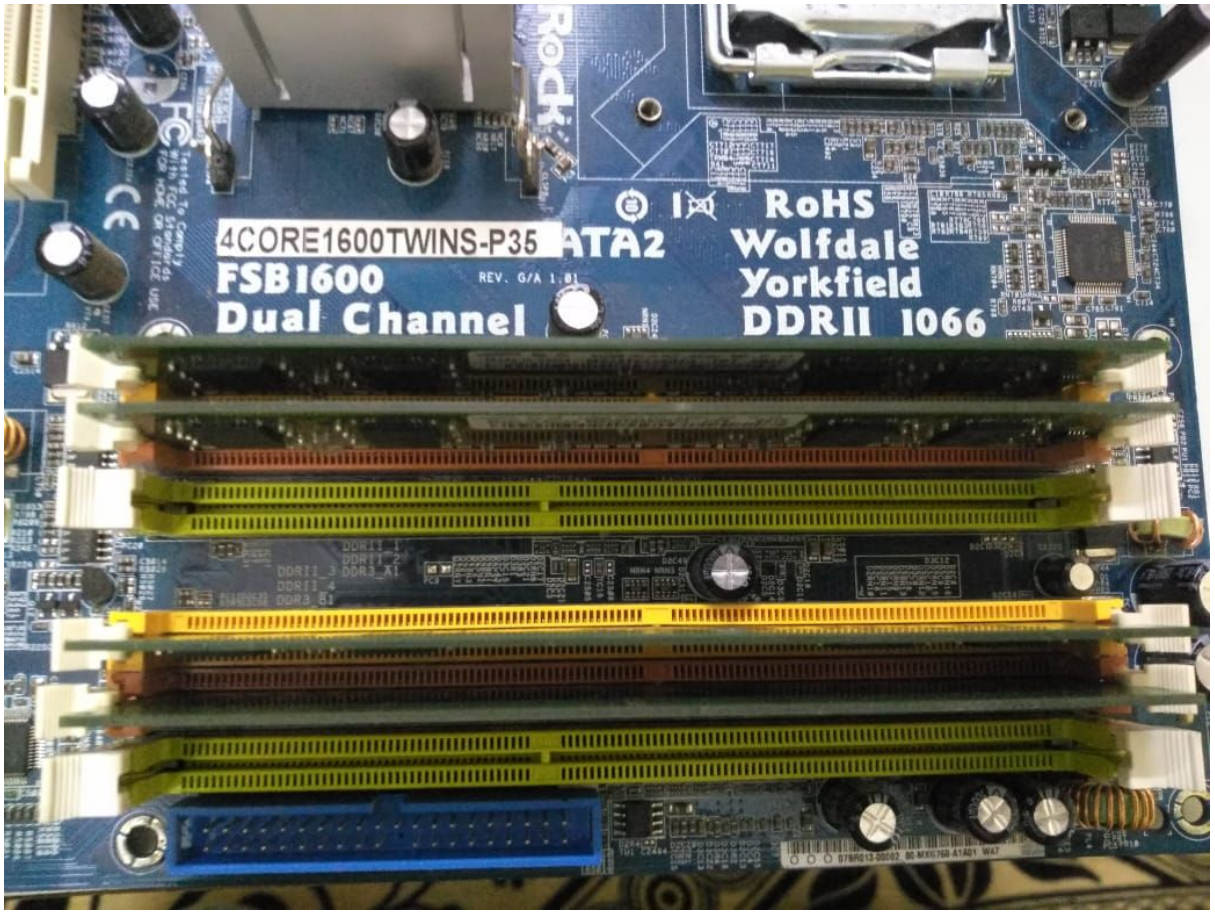
The various parts of the motherboard as studied by me are:

1.LGA-775 :The main core of the CPU which has 775 pins in side and the main middle part is completely exposed to the cooling fan. The pins carry current which are then pressurised by the metal plate to make contact. So never open the metal plate as you will lower the pressure and the contact would be broken and also don't apply too much of manual pressure as it may break the board. LGA-775 is a socket T i.e a Intel Desktop CPU socket with no socket pins. It is responsible for to communicate with RAM and graphic controller.



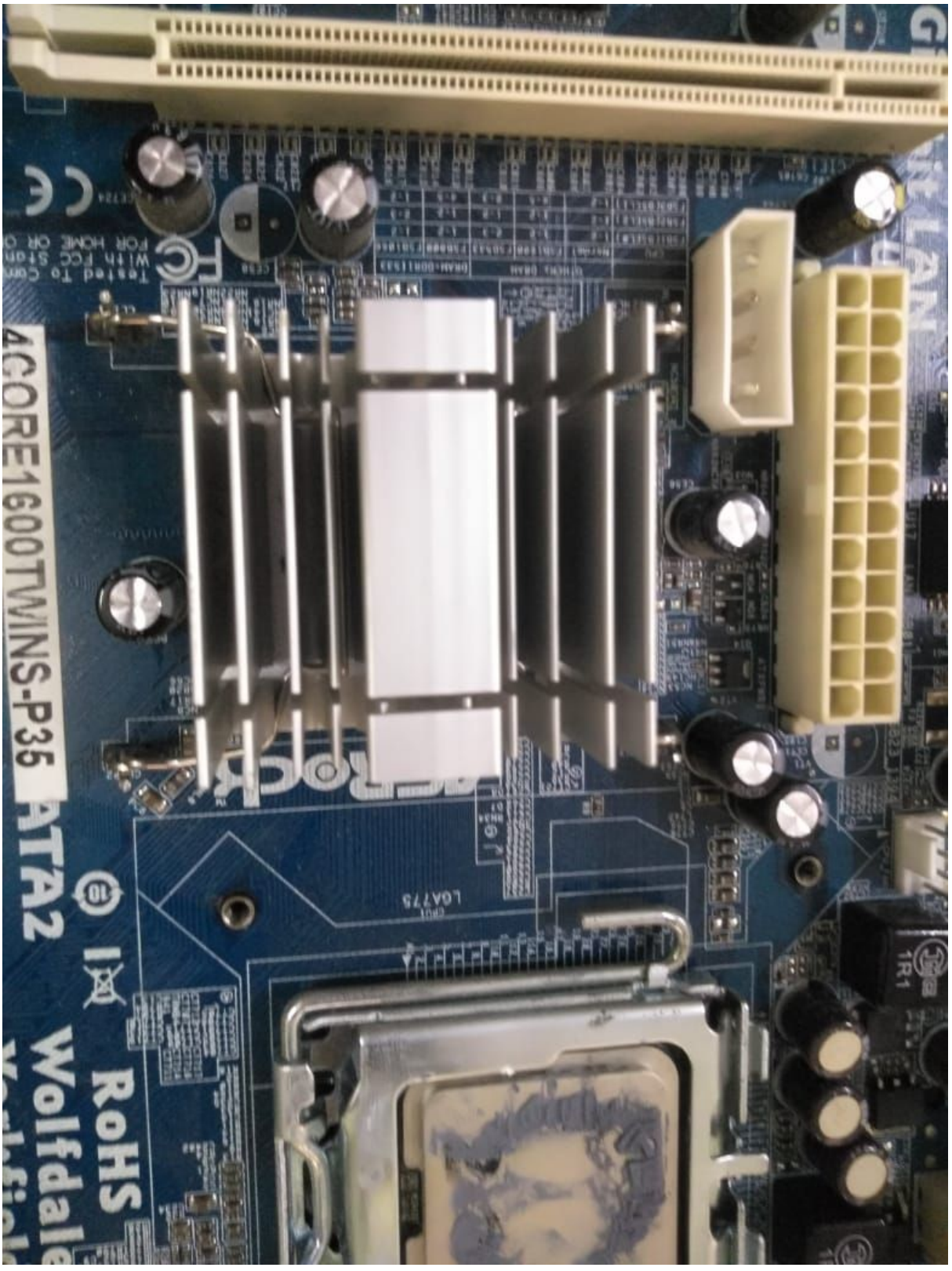

2.RAM Slots: These are the slots used to insert the RAM into the motherboard. Just open the plug and then insert the ram. There are total 6 ram slots with 1.5 V (written

on the top of the slot if seen properly ) as their operating point. This tells us that the ram to be used should be DDR2.




RAM slot in the motherboard I analyzed. You can see the 1.5 V written on the top is you zoom in. Here already 4 RAM chips are inserted in their respective slots.

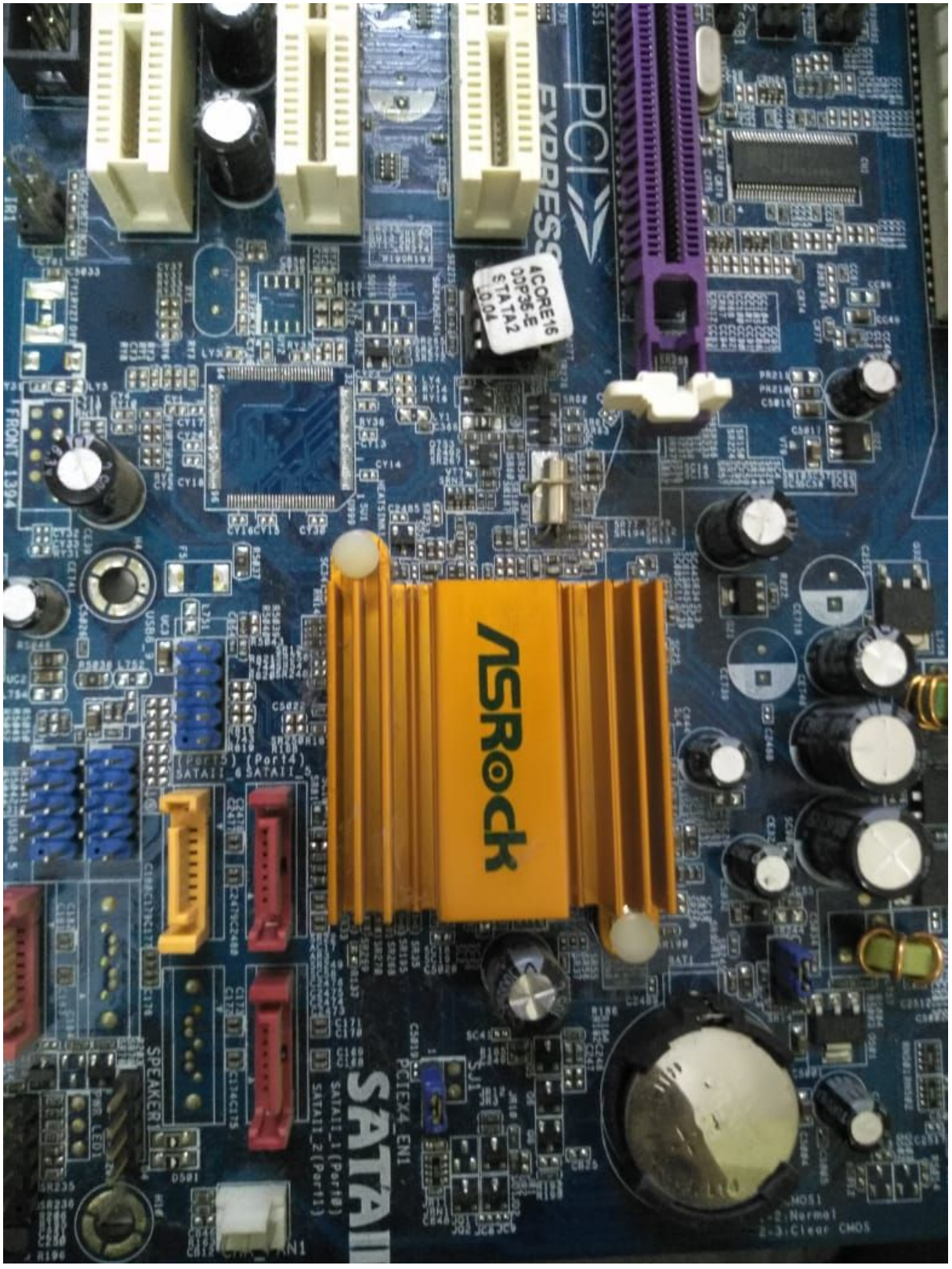
3.Northbridge :This the another important part of the motherboard. This acts as bridge between southbridge and socket T i.e LGA-775 in our case . It is always covered with something grey aluminium thing called “HeatSink” . HeatSink is used to dissipate heat as it absorbs heat from the chip and since it has higher surface area it quickly dissipates it. When CPU needs data from RAM it sends request to Northbridge and Northbride then forwards it to Southbridge.




Under the grey Aluminium HeatSink lies the Northbridge.

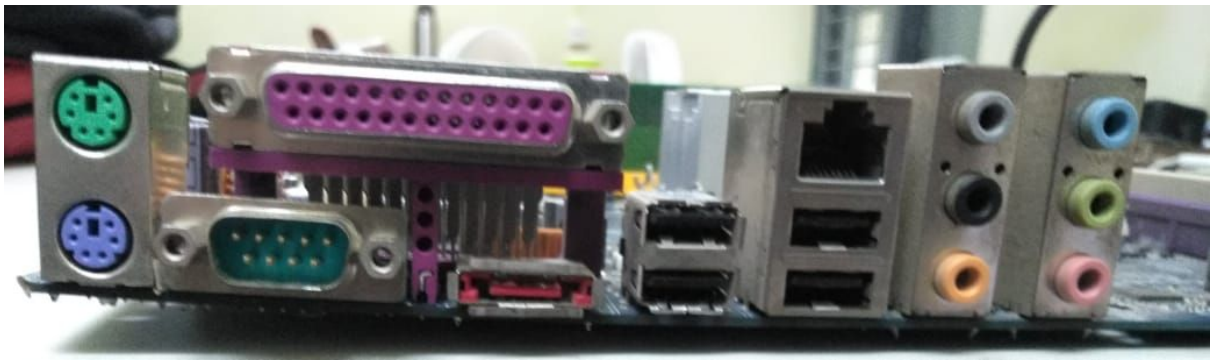
4.SouthBridge : Its an IC on the motherboard responsible for hardware controller, I/O controller and integrated

Hardware. It also has heat sink just like the Northbridge and the Socket T.




The golden metal is the heat sink for Southbridge and under it lies the Southbridge.

5.Connectors and Port : These are the slots given to interact with motherboard externally. It includes USB slots, LAN Connector, Audio Collector, SD card slot and other slots.  It also allows connection of external Keyboard and Mouse.



External Connections slots in the motherboard.

6.PCI Express : This motherboard has 3 PCI Express slots (those white color one’s). It is based on P2P topology i.e they have seperate serial link to the host.They act as high speed serial expansion bus i.e other accessory cards can be inserted into these slots. This can also be used to increasing the storage abilities of motherboard.

7. GV-NX73L128D-RN :This is a NVIDIA graphics card for VGI output. What ever you see on desktop is made of millions of pixel and hence computer has to decide what to do with

those. So Graphic card acts as translator which converts binary data from CPU to pixels. Graphics card is consist of processor, memory card and display i.e here VGI port for desktop output.


This is the above graphics card which is connected into AGI_EXPRESS 1 slot given in the motherboard (the purple color slot)

8.FLOPPY 1 : This slot is used to connect to floppy inserted into the CPU. The connection is done with help of wires which are present at the point of insertion of the FLOPPY and those wires are then inserted into the FLOPPY 1 slot. FLOPPY 1 slot is just below the PCI Express slots i.e just below 3 white slots.

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