

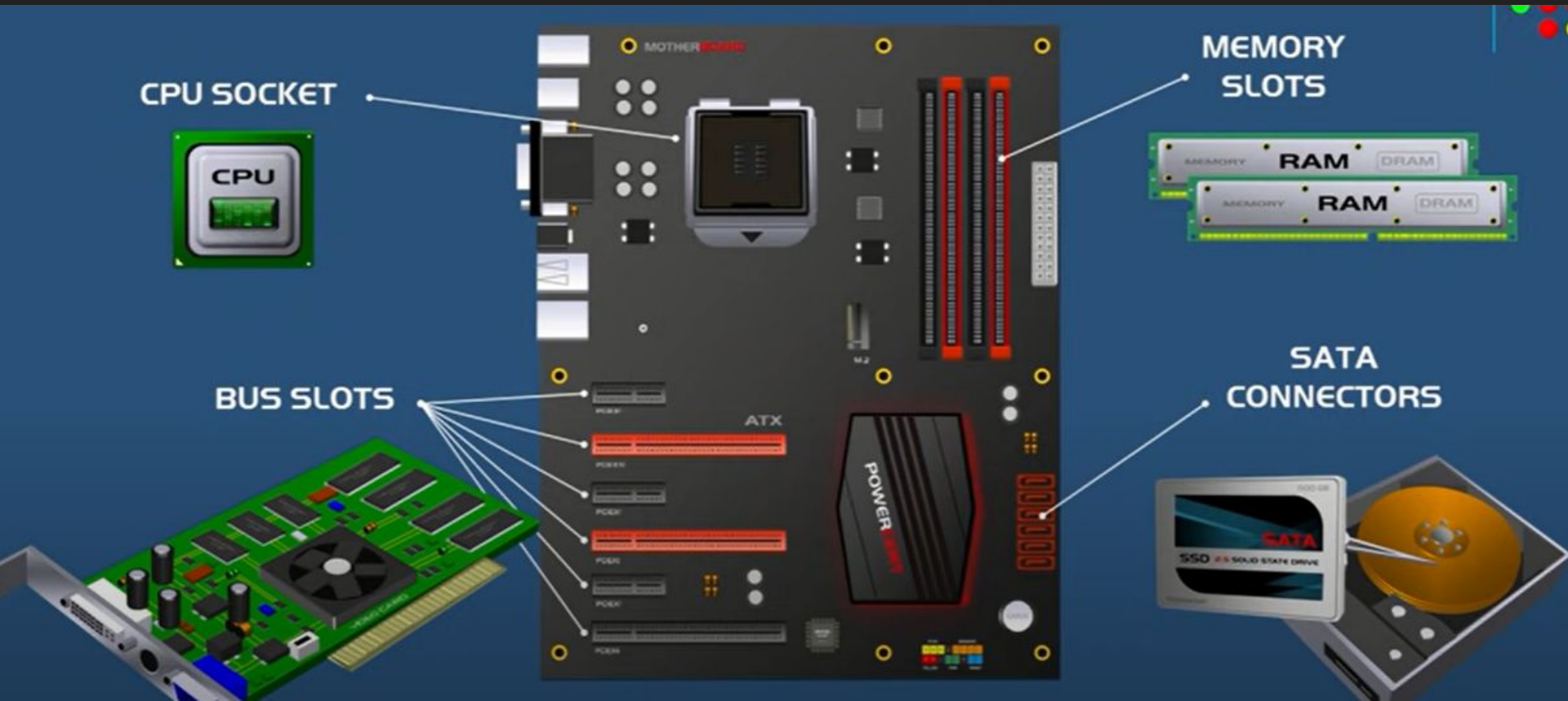
# Motherboards

# What is it?

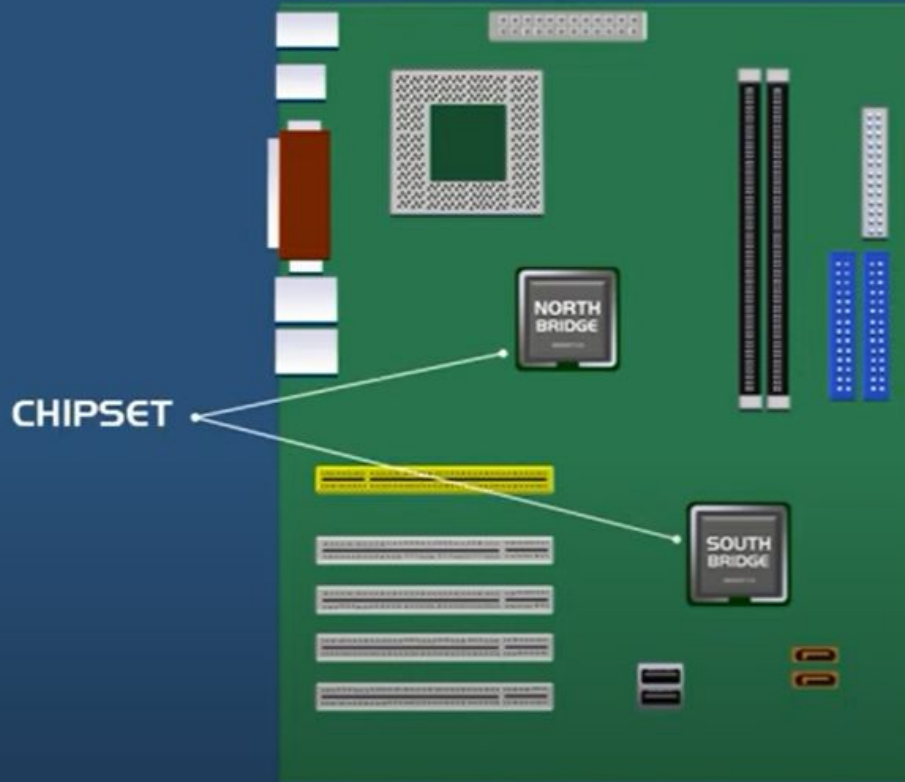
- main board
- everything connects to it
- sometimes called a mobo



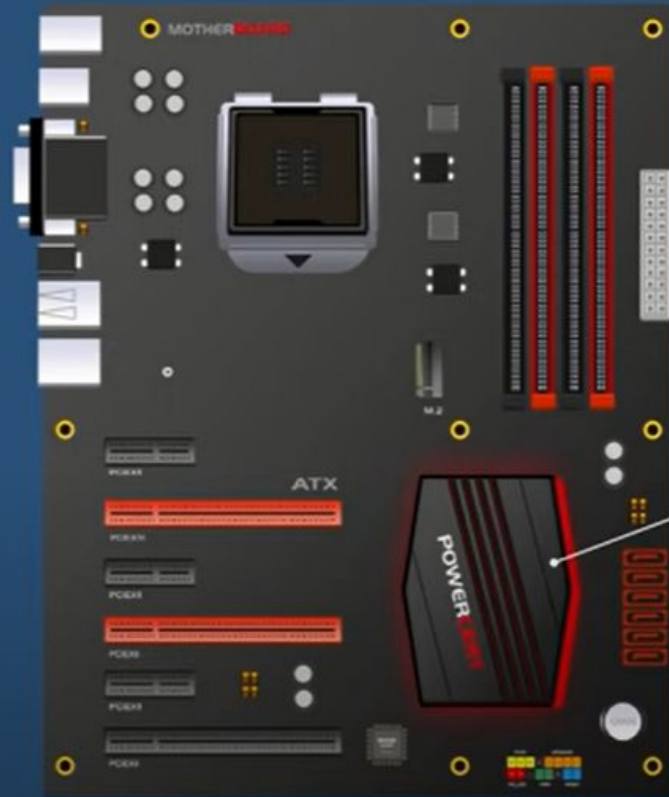
# Common Features



# Chipset Architectures



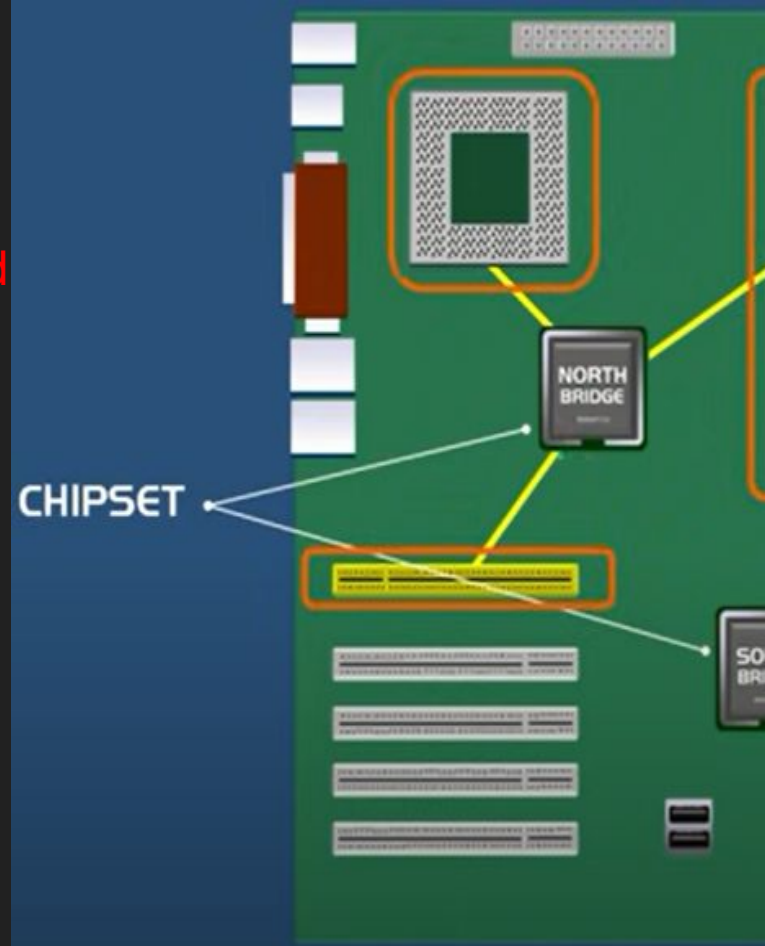
OLDER MOTHERBOARD



MODERN MOTHERBOARD

# Old Chipset

- NorthBridge-located near cpu
- interface between cpu pci express slots and ram
- SouthBridge-interface for older PCI Standard slots, USB, SATA ports etc.
- data was sent from South to North and exchanged between CPU and RAM



# Platform Controller Hub

- replaced old North-South Bridge architecture
- most modern computer are designed so that the CPU performs most of the old northbridge chip duties
- southbridge chipset responsibilities taken over entirely by the PCH

# IO Interfaces



-most common interface-USB (universal serial bus)

-USB-\_\_data\_\_ and \_\_power\_\_

# Integrated Video

-video built into motherboard

-most common older port-\_\_vga\_\_ or \_\_dvi\_\_

-modern video ports-\_\_hdmi\_\_, \_\_display port\_\_

-on board video -\_\_weak\_\_

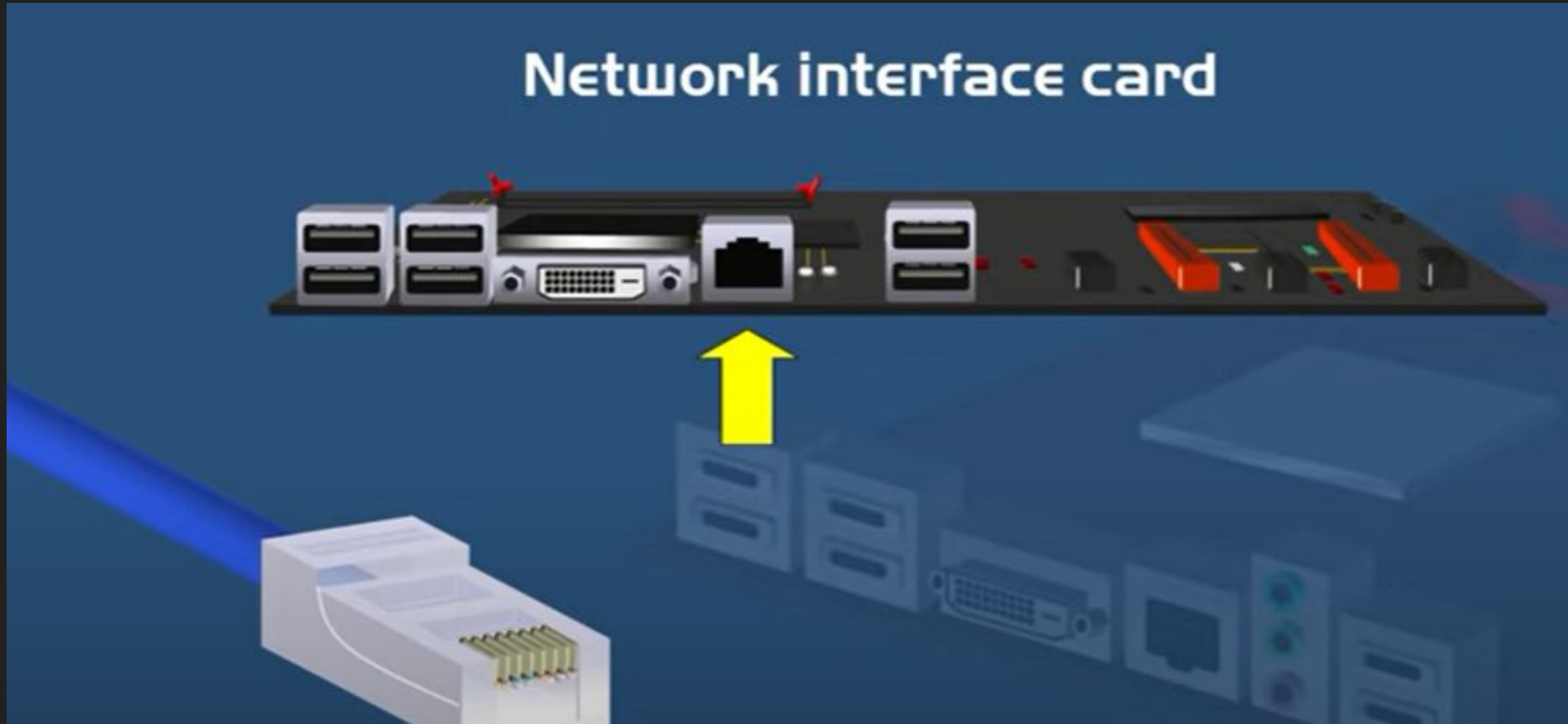
-add add graphics or video card for more power





# Integrated Ethernet

-ethernet port connects to RJ-45 connector on ethernet cable



# Integrated Audio



# Form Factors

- different shapes and sizes of MBs
- most common atx
- Advanced Technology eXtended
- created in 1995
- 12"x9.6"
- mounting holes in specific locations



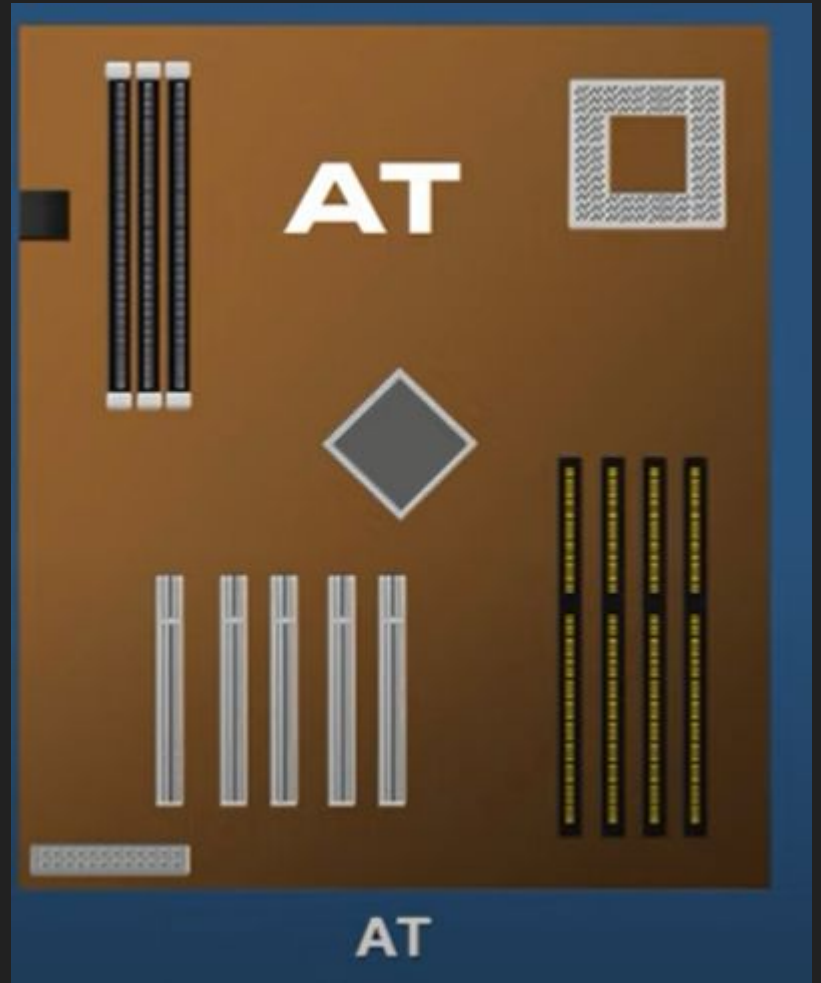
ATX

# AT

-created in the 1980s

-12x13.8"

-no longer used



# MicroATX

- smaller than ATX
- 9.6"x9.6"
- cheaper than ATX
- used for compact PC
- use less power
- have less features



## Questions and Exercises

2. Explain the BTX form factor motherboard.

3. Explain the NTX form factor MB.

[illegible]

5. Include a list of links to HDMI, Display Port, DVI and VGA cables.

[illegible]

<https://www.ncbi.nlm.nih.gov/genbank/F087694>

[illegible]

6. There are different types of DVI connectors. Do some research and describe the differences.

## Questions and Exercises cont.

On the next slide is an image of a motherboard with parts missing labels. Fill in as many of these as possible.

