

Matičná doska

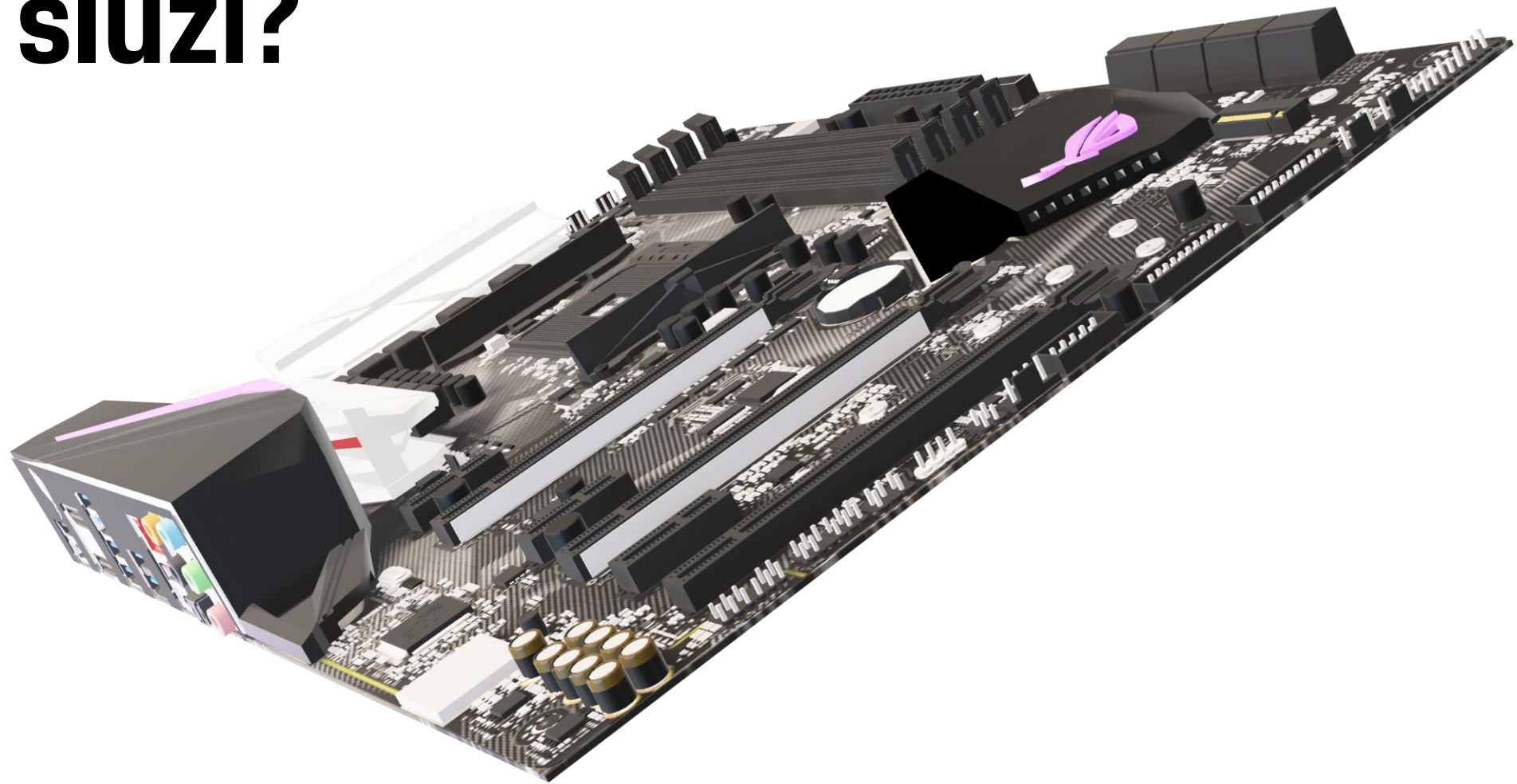
David Kolínek
2025



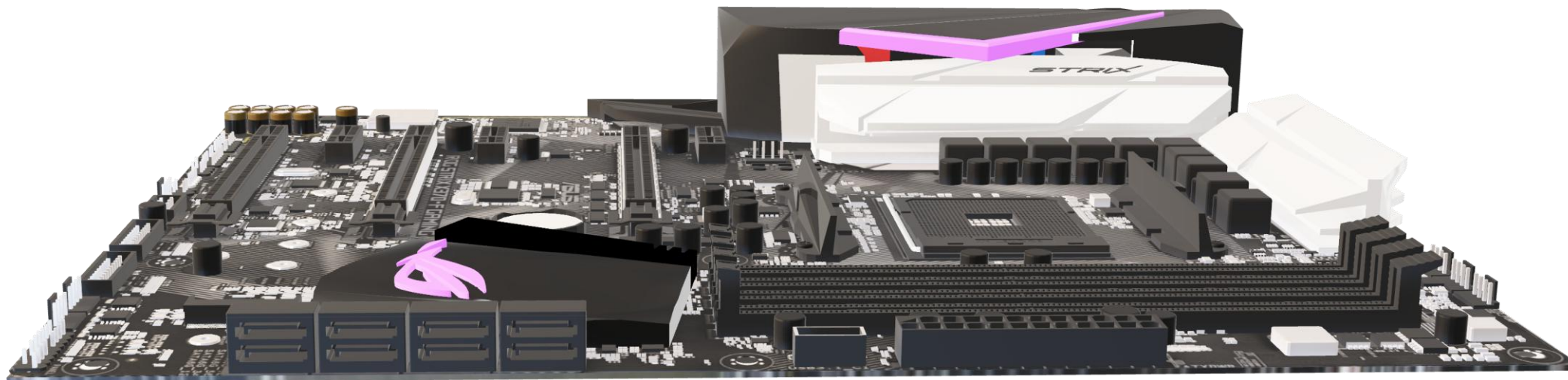
Čo to je?

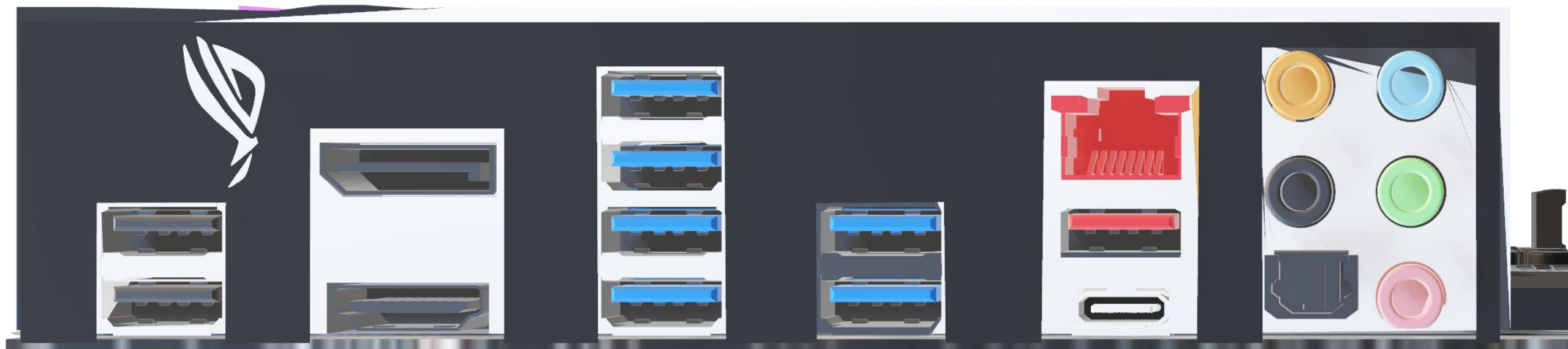


Na čo slúži?

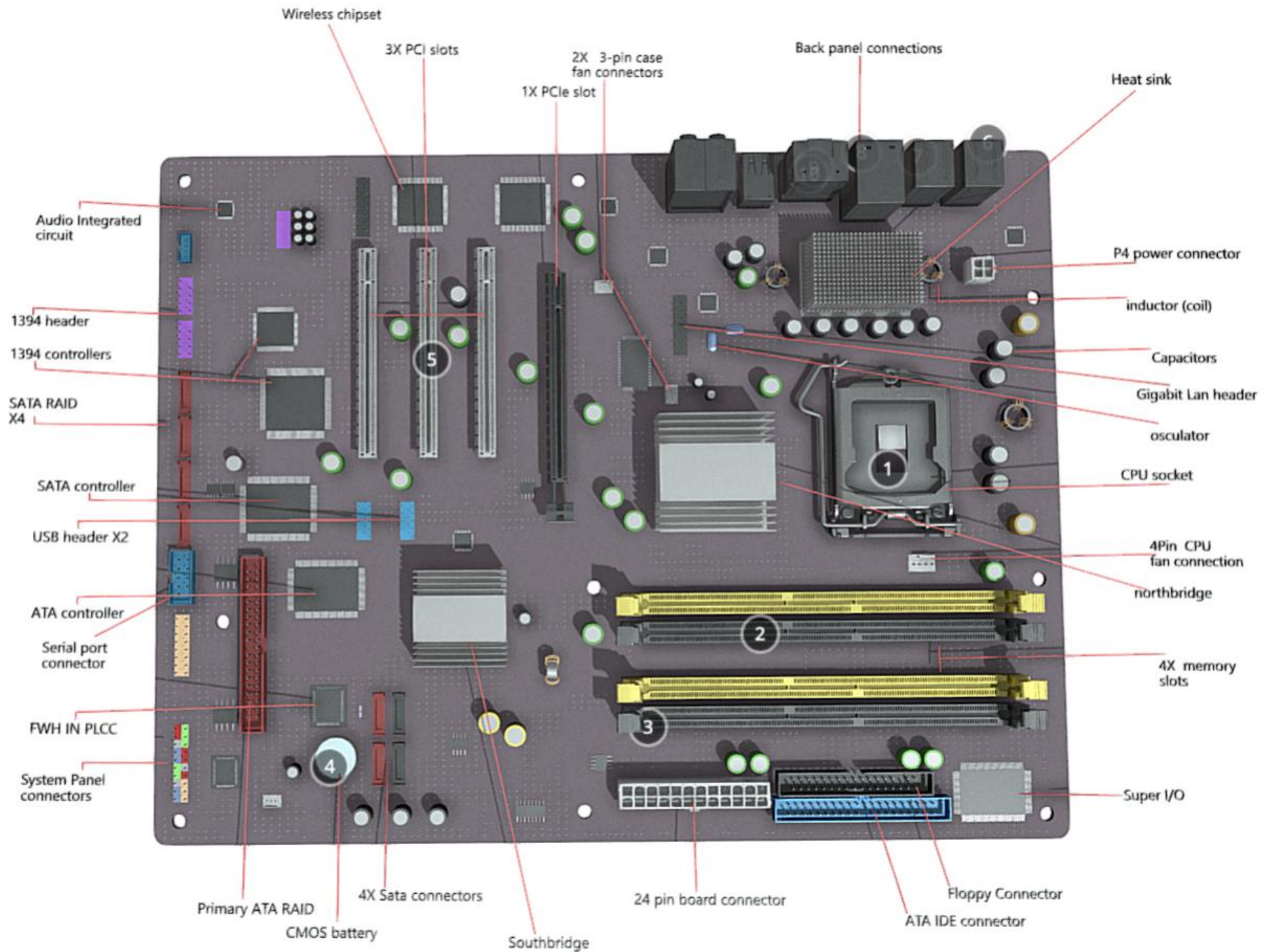


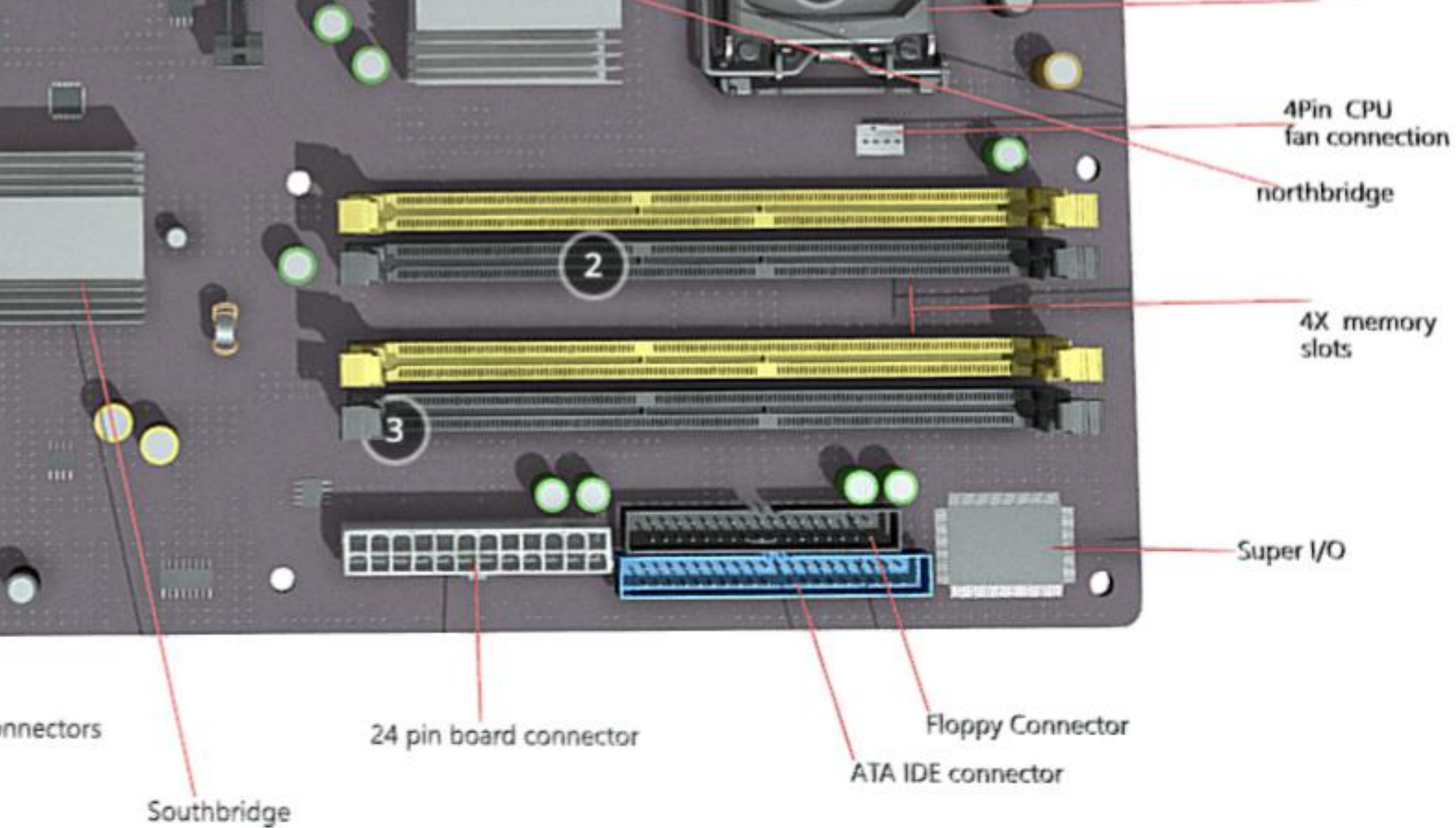
Čo vidíme na modernej Matičnej doske

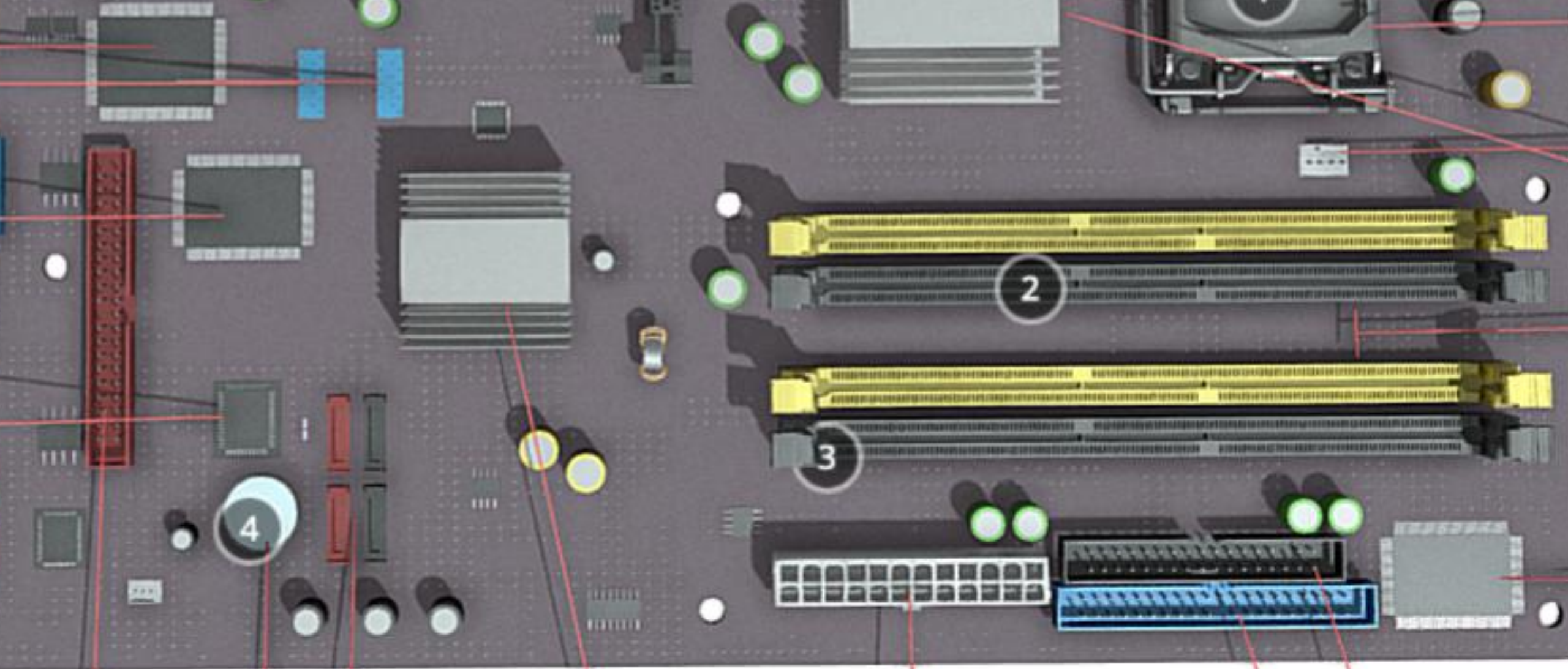












Primary ATA RAID

CMOS battery

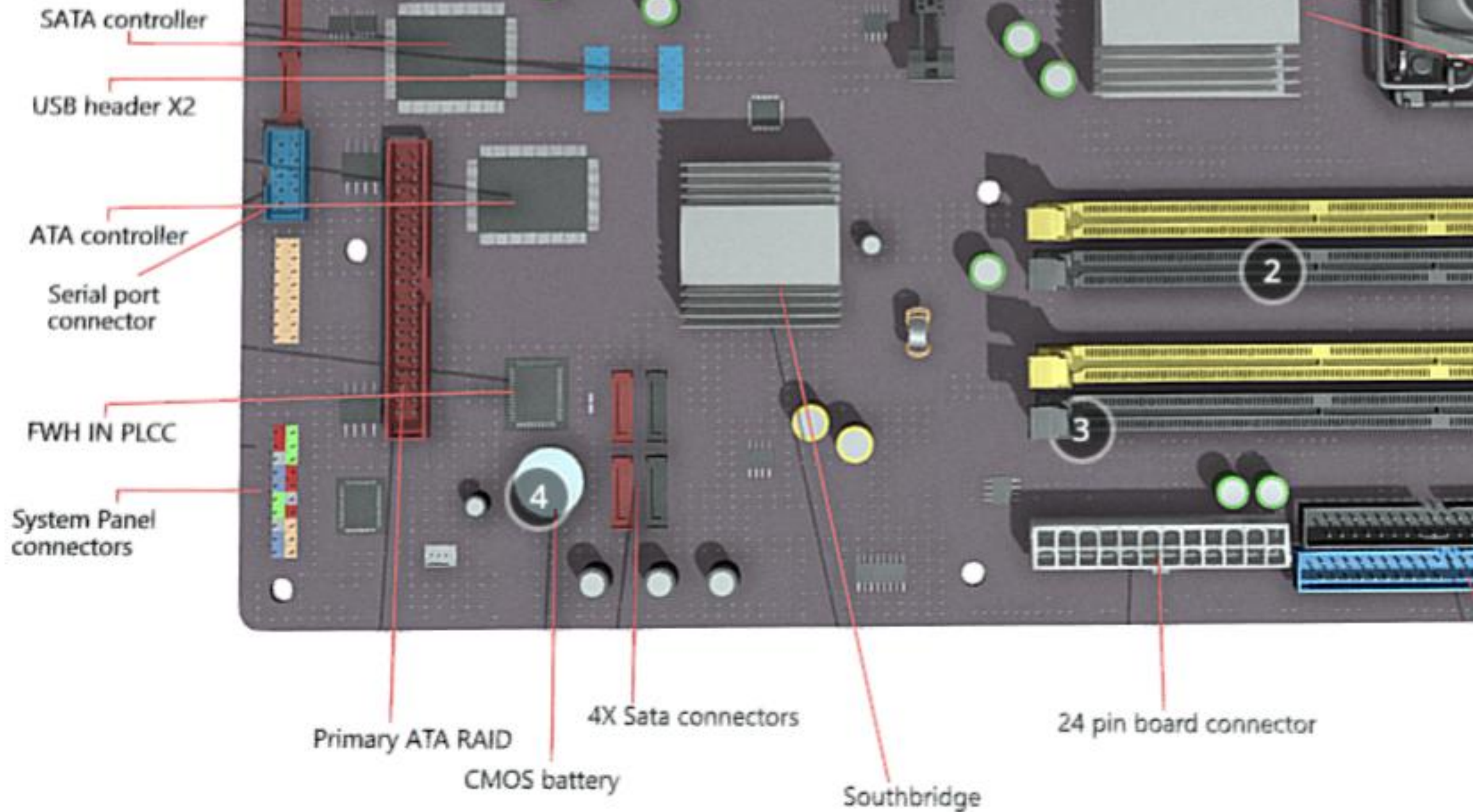
4X Sata connectors

Southbridge

24 pin board connector

ATA IDE connector

Floppy Connector



Audio Integrated circuit

1394 header

1394 controllers

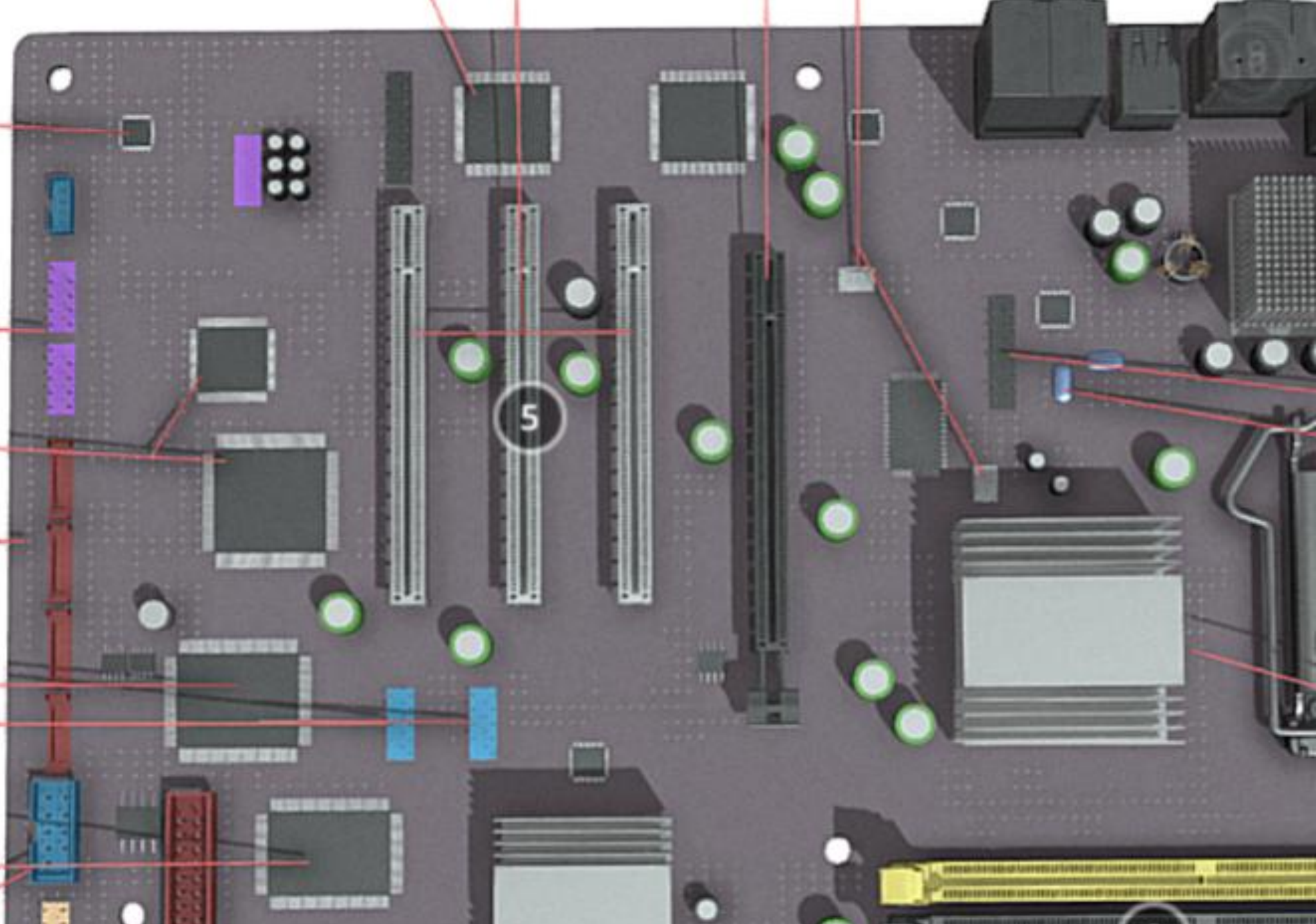
SATA RAID
X4

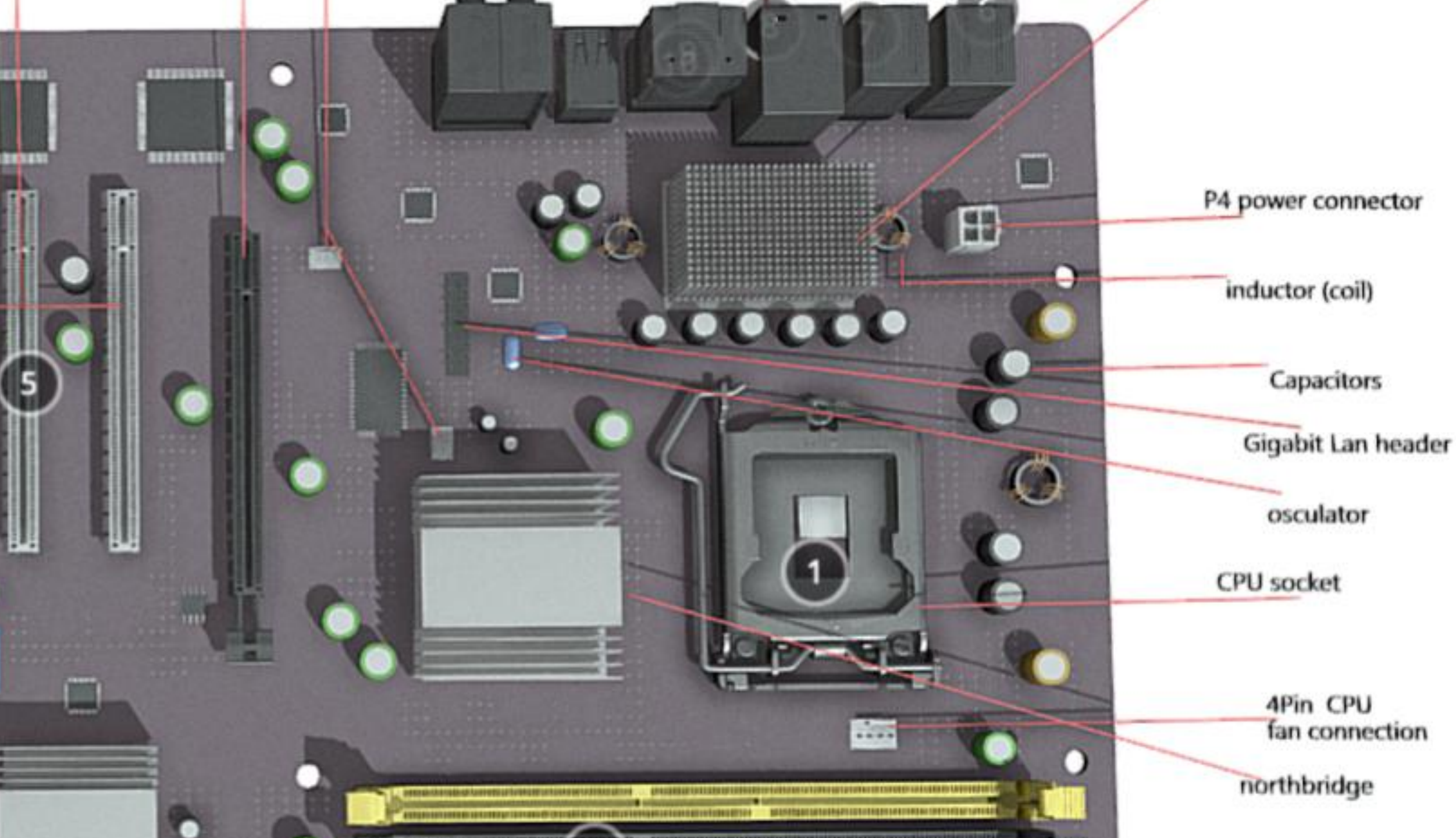
SATA controller

USB header X2

ATA controller

5





Wireless chipset

3X PCI slots

2X 3-pin case
fan connectors

1X PCIe slot

Back panel connections

Heat sink

P4 power con

inductor (co

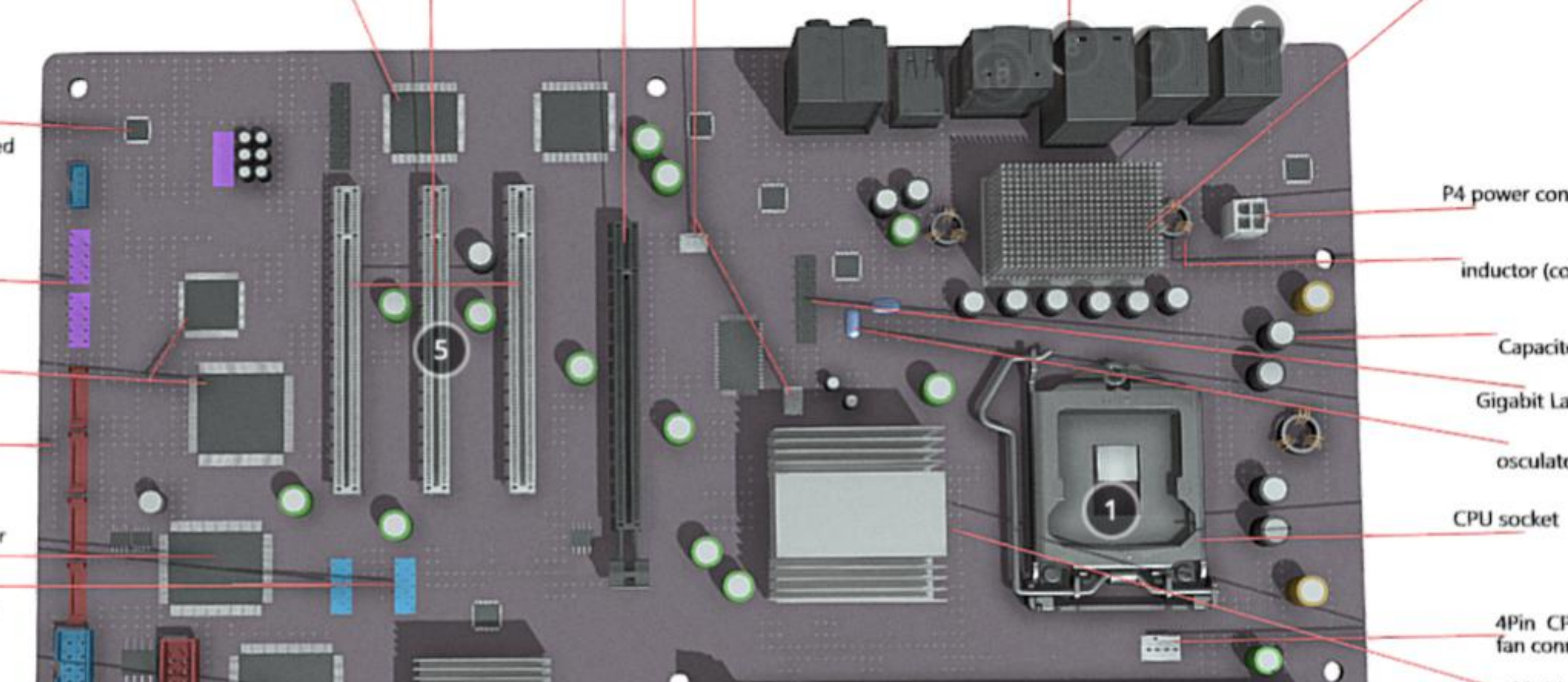
Capacit

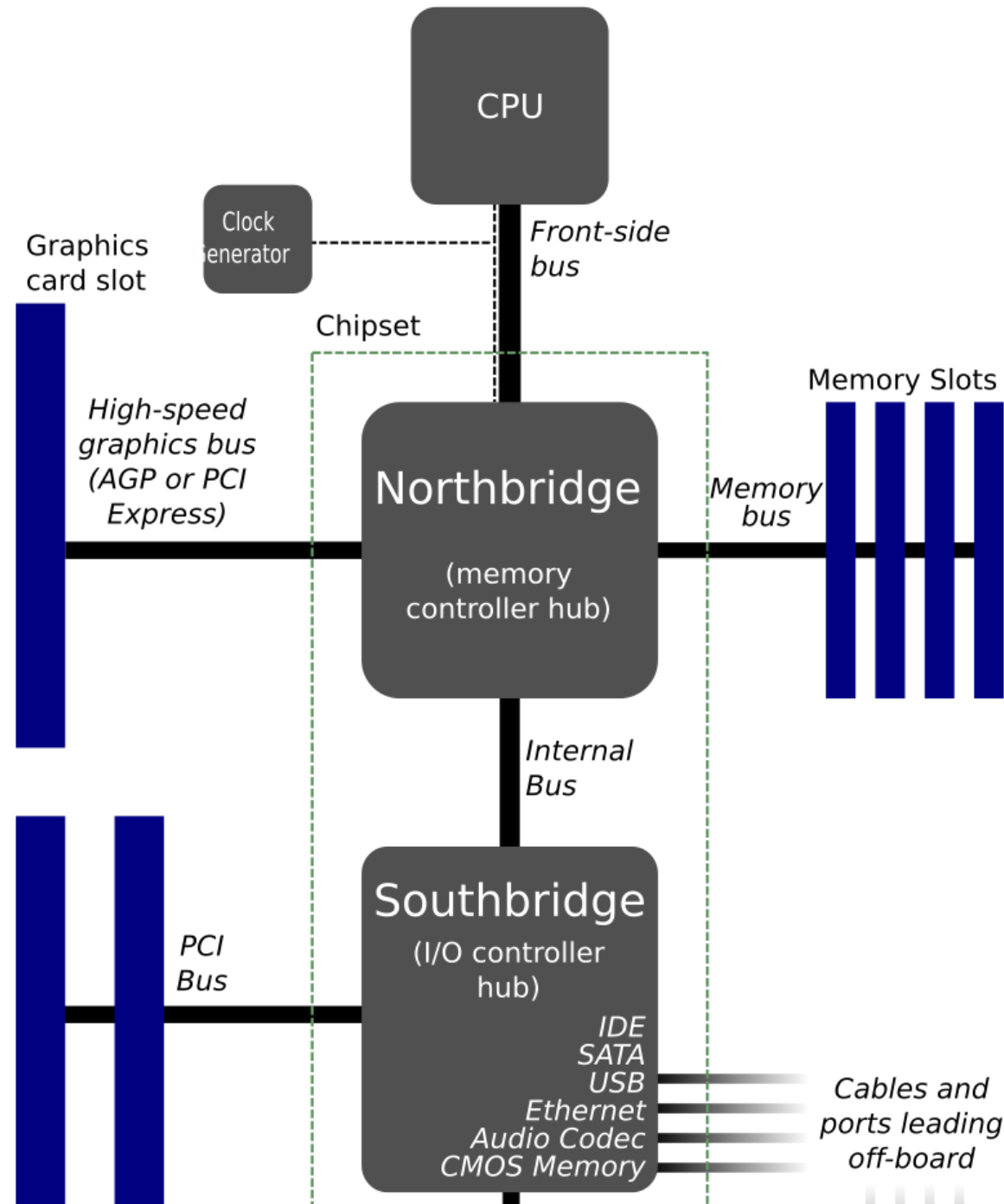
Gigabit La

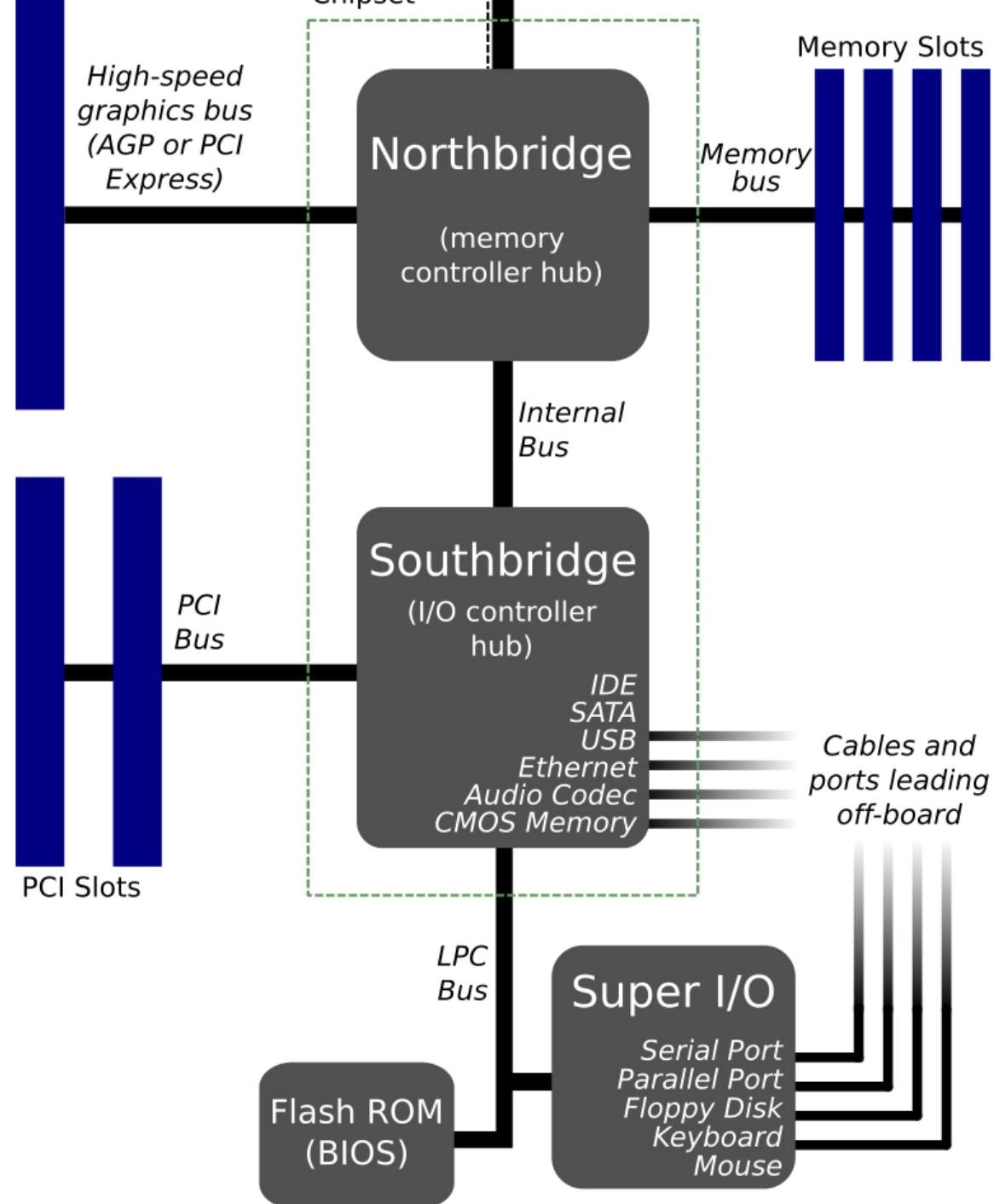
oscillator

CPU socket

4Pin CP
fan con

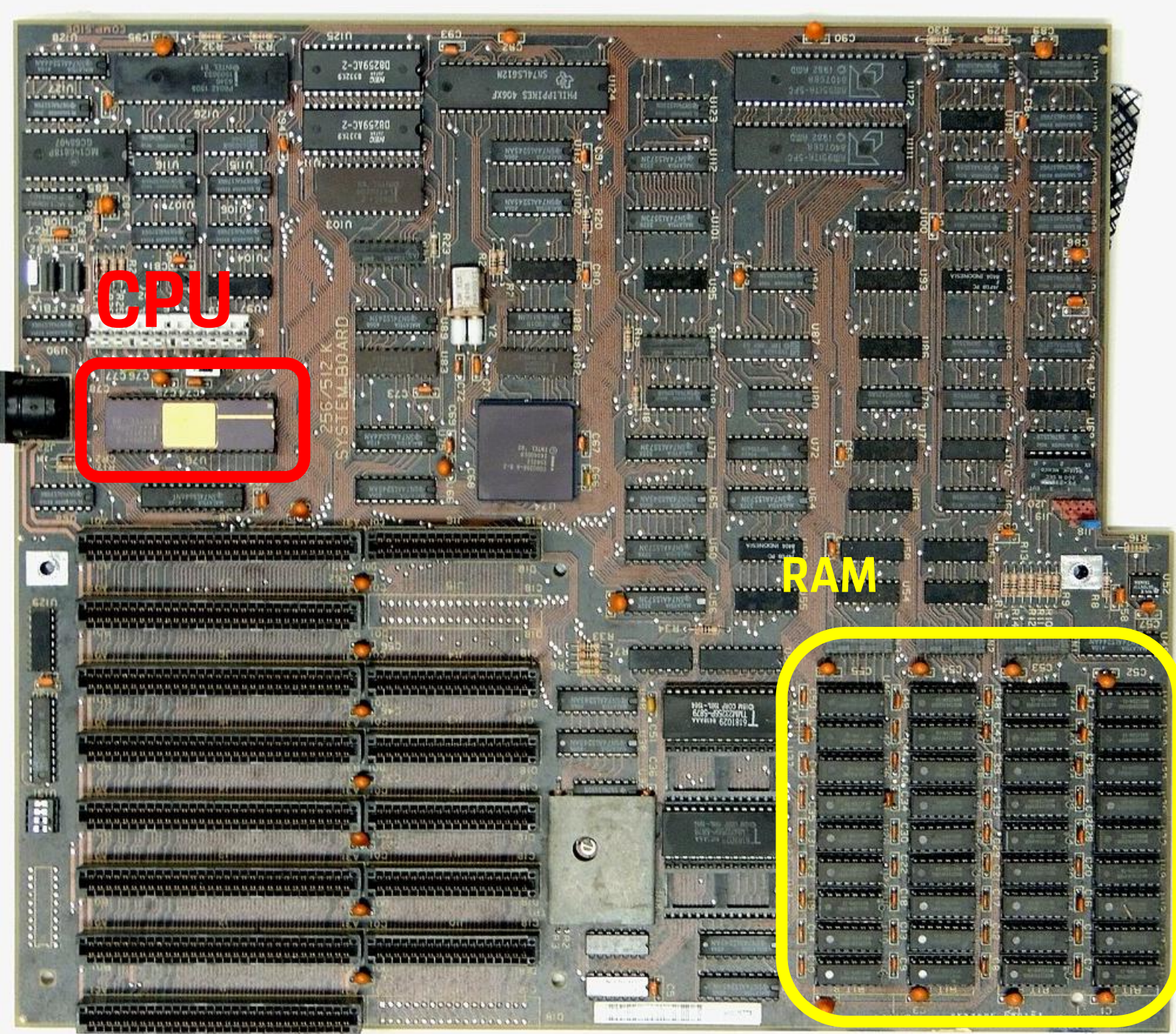






Block diagram of an early 2000s motherboard

HISTÓRIA

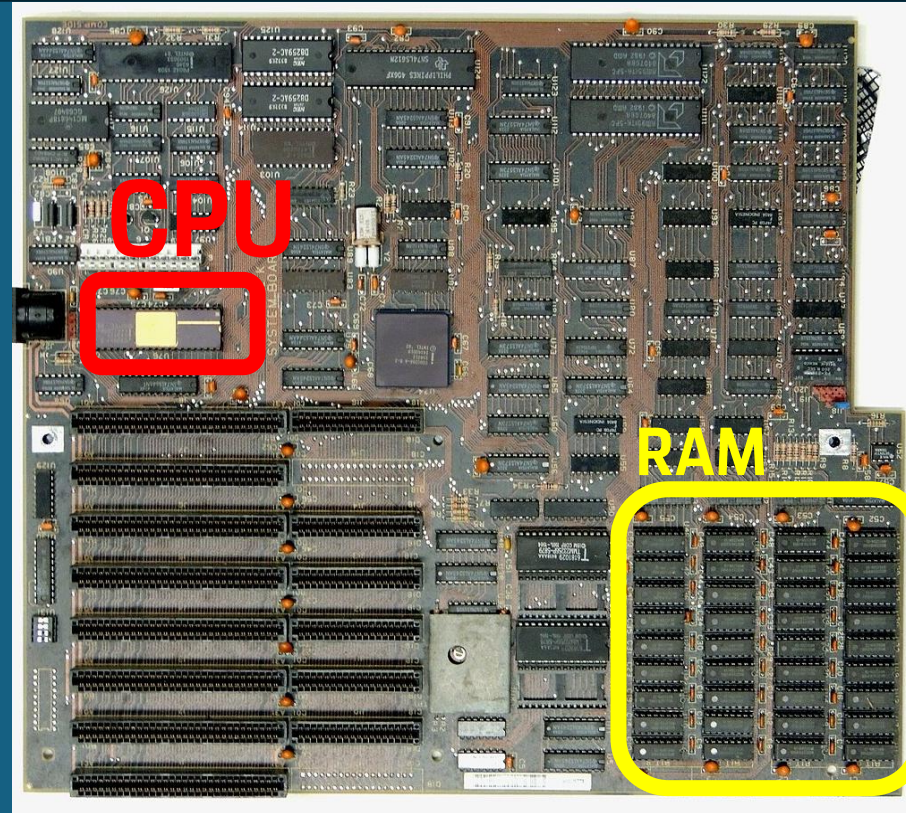




Rádio r. 1930



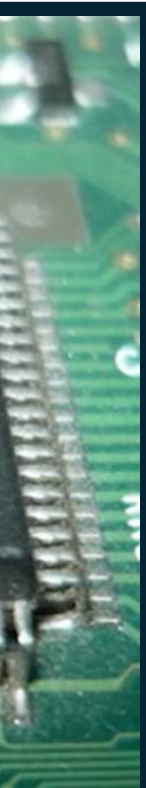
Altair 8800



Original IBM PC

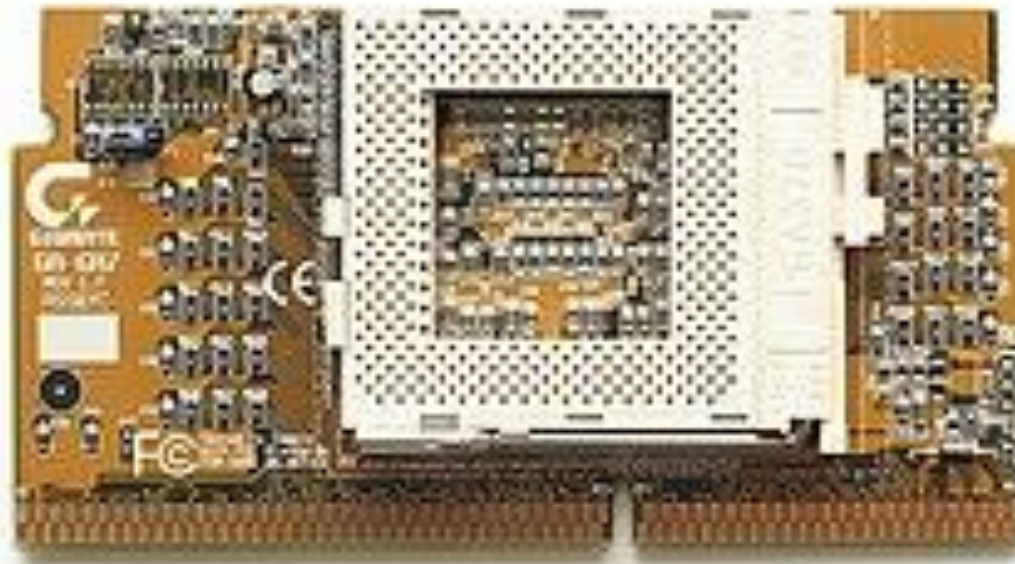


1985 SUPER I/O



**1987 Integrated VGA
graphic chip**





**1992 Intel Socket 1
Pre processor 486**

BIOS (Basic Input/Output System)

- Inicializuje hardware a načíta OS pri štarte.
- Textové rozhranie, ovládanie klávesnicou.
- Obmedzený na disky do 2,2 TB, pomalší výkon.
- Kompatibilný so staršími systémami a softvérom.

UEFI (Unified Extensible Firmware Interface)

- Moderná náhrada BIOS-u s rýchlejším štartom a viac funkciami.
- Grafické rozhranie s podporou myši.
- Podporuje väčšie disky (až 9,4 ZB) a rýchlejší štart.
- Obsahuje bezpečnostné funkcie ako Secure Boot na ochranu pred malvérom.



Extended ATX

305 mm x 330 mm



ATX

305 mm x 244 mm



Micro-ATX

244 mm x 244 mm



Mini-ITX

170 mm x 170mm

Čipsety:

1. Intel Z590: Pre procesory Intel 10. a 11. generácie. Podporuje PCIe 4.0 a Wi-Fi 6.

2. AMD B550: Pre procesory AMD Ryzen 3000 a 5000, podporuje PCIe 4.0 na vybraných slotoch.

Radiče:

1.SATA Radič: Riadi prenos dát medzi pevnými diskami (HDD/SSD) a základnou doskou.

2.RAID Radič: Riadi prenos dát medzi viacerými diskami v RAID konfiguráciách.

Zdroje

Wikipedia contributors. (2025, March 30). AT (form factor). Wikipedia, The Free Encyclopedia. Retrieved from https://en.wikipedia.org/wiki/AT_%28form_factor%29

YouTube. (2025, March 30). "Mw6ha5wxJUI". Retrieved from <https://www.youtube.com/watch?v=Mw6ha5wxJUI>

Wiki contributors. (2025, March 30). Socket 1-3 Motherboards. VogonsWiki. Retrieved from https://www.vogonswiki.com/index.php/Socket_1-3_Motherboards

LevnaPC. (2025, March 30). Znáté rozdíly mezi BIOS a UEFI. Retrieved from <https://www.levnapc.cz/znate-rozdily-mezi-bios-a-uefi.html>

Wikipedia contributors. (2025, March 30). Motherboard. Wikipedia, The Free Encyclopedia. Retrieved from <https://en.wikipedia.org/wiki/Motherboard>



Ďakujem za
pozornosť



Otázky?