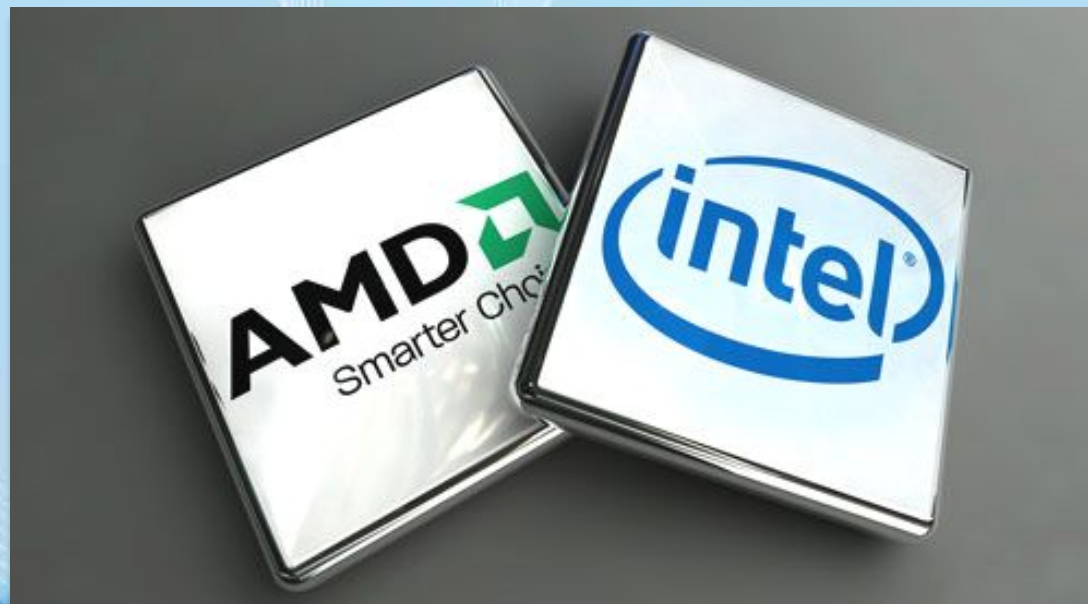


# Inside the system

*Central processing  
unit(CPU)*



# ***CPU includes:***

- **Control unit (interaction between components)**
- **Arithmetical logic unit (logic and mathematical operations)**
- **Registers (data i\o)**
- **System clock (measures smallest time intervals in computer)**

# *System clock*

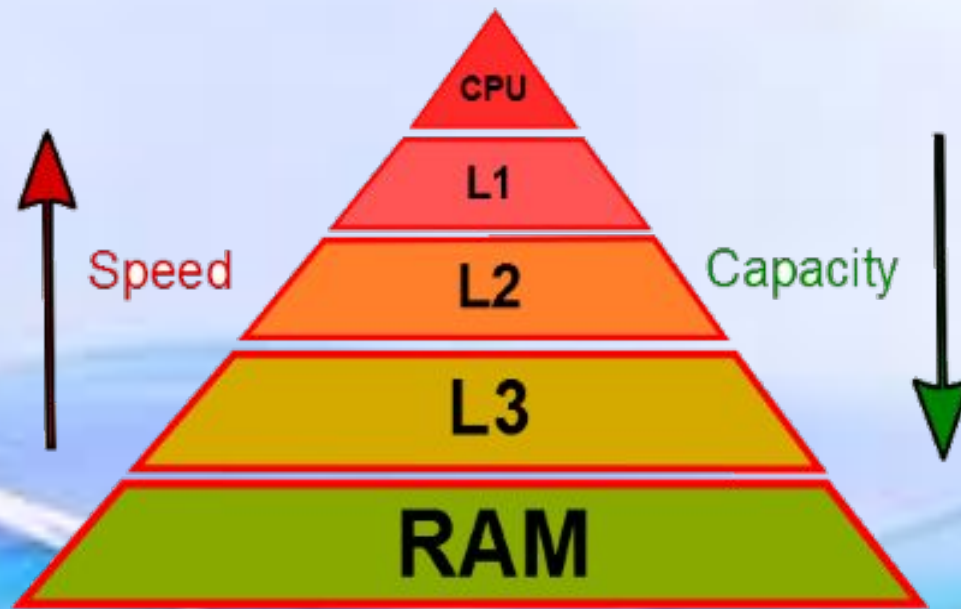
- All the time in computer is firstly measured in system clock ticks.
- Clock frequency shows how much basic operations CPU (more accurately: one flow of CPU) can make per second.



# *Cache memory*

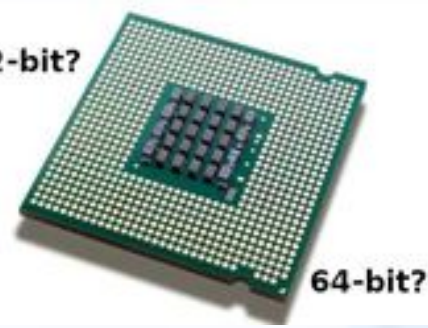
- Cache is the fastest data store in computer.
- Cache consists of three levels (the first is the nearest to registers and the fastest, but it doesn't have much capacity)

# *Cache memory*



# *Bit capacity*

32-bit?

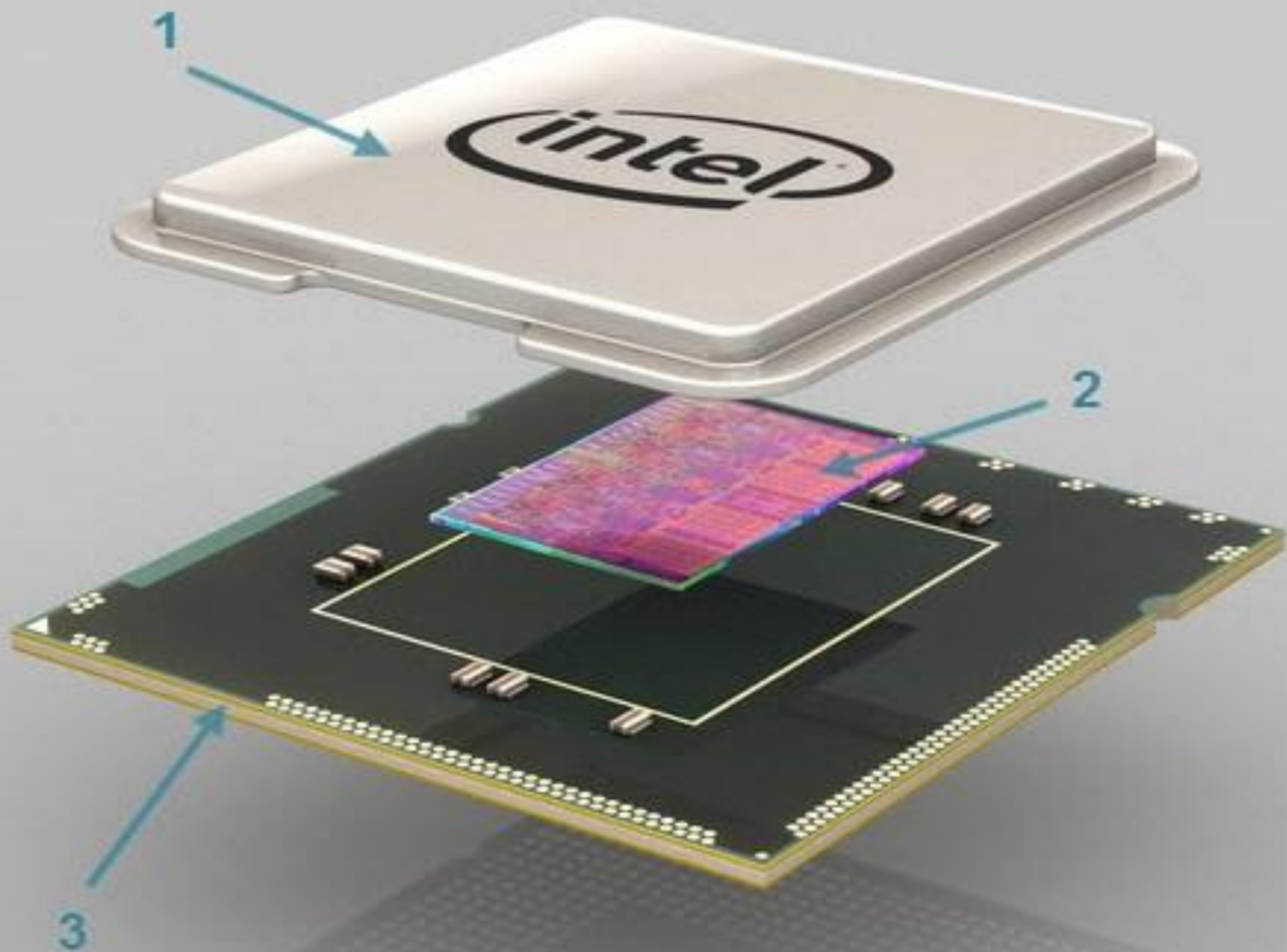


64-bit?

- Defines how much data CPU can process during one tick of system clock.
- Defines how much data front side bus can carry during one tick of system clock.
- Defines how much RAM processor can cooperate with.

# *Inside the CPU*

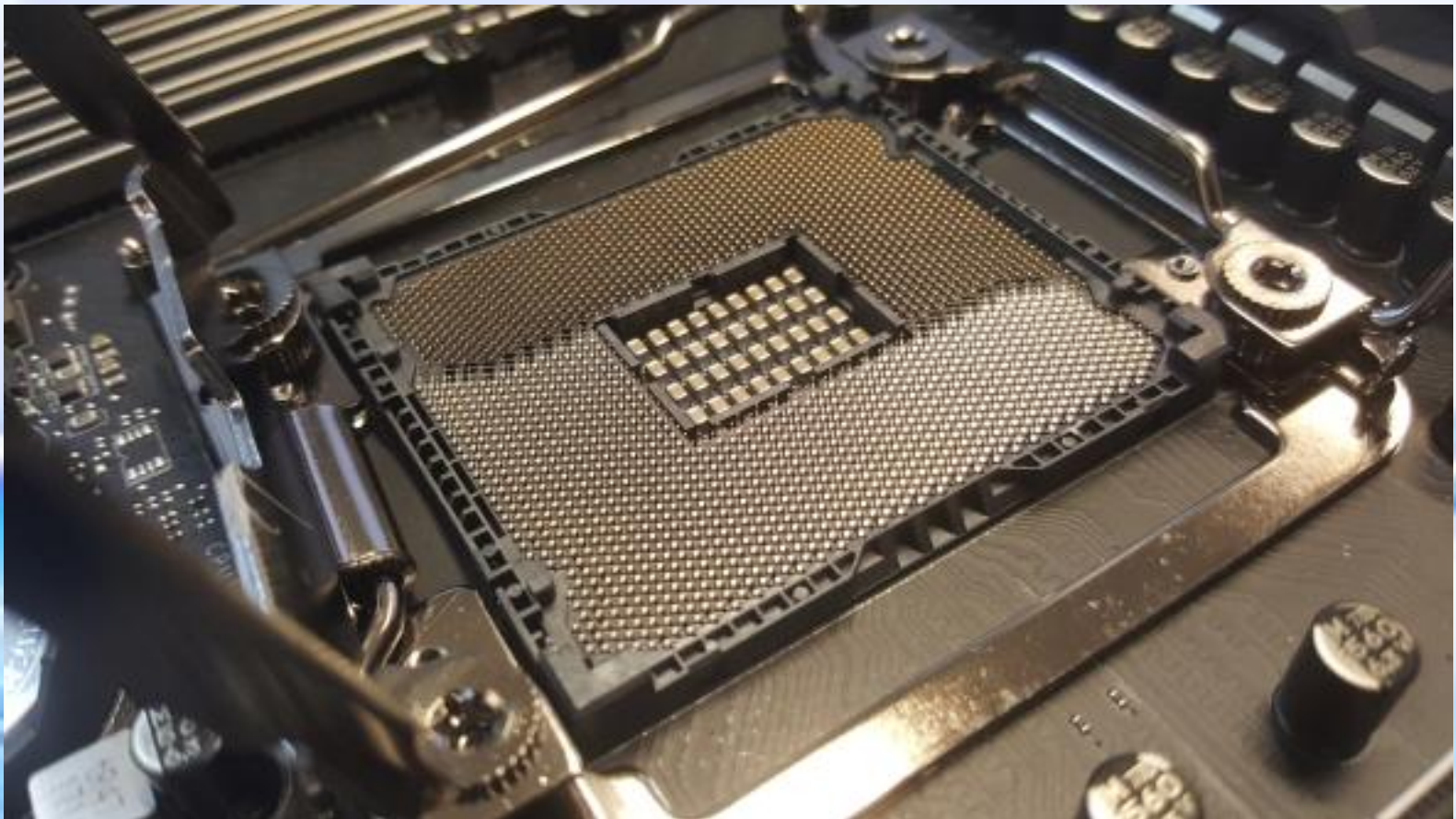
- Mostly consists of micro-transistors(physical interpretation of bits).
- Digital automatic machine implemented using set of logical element circuits, that control transistors.





# **Intel Core i9 7900X LGA 2066**

*(10 cores, 3 Levels of cache, 3.3GHz clock frequency, 64 bit capacity)*



**Thank you for  
attention!**

