

# DATORARKITEKTUR

## Introduktion



Dr. Andreas de Blanche  
[andreas.de-blanche@hv.se](mailto:andreas.de-blanche@hv.se)

Datorarkitektur, 2022-08-18



# Delar i datorsystem

Vad finns i ett datorsystem?

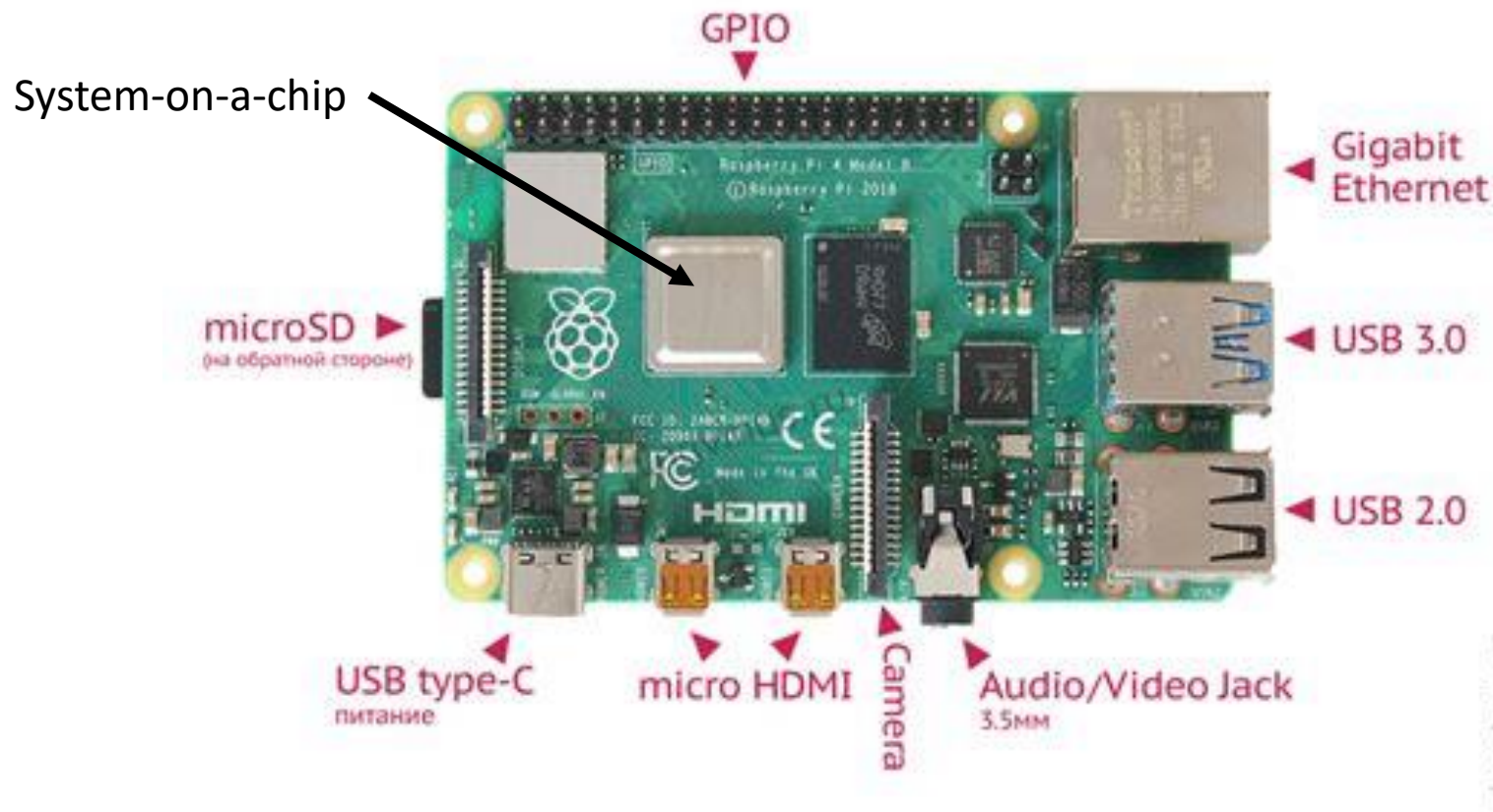






# Raspberry Pi 4

Vad finns i ett datorsystem?





# Historik

## Vilka årtal?



### History of computing hardware

Main article: [History of computing hardware](#)

Källa: <https://en.wikipedia.org/wiki/Computer>

First generation (mechanical/electromechanical)	Calculators	Pascal's calculator, Arithmometer, Difference engine, Quevedo's analytical machines
	Programmable devices	Jacquard loom, Analytical engine, IBM ASCC/Harvard Mark I, Harvard Mark II, IBM SSEC, Z1, Z2, Z3
Second generation (vacuum tubes)	Calculators	Atanasoff–Berry Computer, IBM 604, UNIVAC 60, UNIVAC 120
	Programmable devices	Colossus, ENIAC, Manchester Baby, EDSAC, Manchester Mark 1, Ferranti Pegasus, Ferranti Mercury, CSIRAC, EDVAC, UNIVAC I, IBM 701, IBM 702, IBM 650, Z22
Third generation (discrete <a href="#">transistors</a> and SSI, MSI, LSI <a href="#">integrated circuits</a> )	Mainframes	IBM 7090, IBM 7080, IBM System/360, BUNCH
	Minicomputer	HP 2116A, IBM System/32, IBM System/36, LINC, PDP-8, PDP-11
	Desktop Computer	HP 9100
Fourth generation ( <a href="#">VLSI</a> <a href="#">integrated circuits</a> )	Minicomputer	VAX, IBM AS/400
	4-bit microcomputer	Intel 4004, Intel 4040
	8-bit microcomputer	Intel 8008, Intel 8080, Motorola 6800, Motorola 6809, MOS Technology 6502, Zilog Z80
	16-bit microcomputer	Intel 8088, Zilog Z8000, WDC 65816/65802
	32-bit microcomputer	Intel 80386, Pentium, Motorola 68000, ARM
	64-bit microcomputer <sup>[91]</sup>	Alpha, MIPS, PA-RISC, PowerPC, SPARC, x86-64, ARMv8-A
	Embedded computer	Intel 8048, Intel 8051
	Personal computer	Desktop computer, Home computer, Laptop computer, Personal digital assistant (PDA), Portable computer, Tablet PC, Wearable computer
Theoretical/experimental	Quantum computer, Chemical computer, DNA computing, Optical computer, Spintronics-based computer, Wetware/Organic computer	



# Andreas tidiga datorer



# Olika typer av datorsystem



Superdator

Bladserver

Skrivbordsdator

Smartphone, smartwatch, plattor

Inbyggda system, styrsystem, IoT

Nästan allt...