

# AQA Computer Science A Level

## 4.7.1 Internal hardware components of a computer

### Flashcards

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# What is the role of the processor?



# What is the role of the processor?

To execute program instructions in order to run applications



Name two types of main memory



Name two types of main memory

1. Random access memory (RAM)
2. Read only memory (ROM)



Which is usually faster: main memory or secondary storage?



Which is usually faster: main memory or secondary storage?

Main memory



Name two types of information that may be held in main memory





Name two types of information that may be held in main memory

1. Program instructions
2. Frequently used data



# What is meant by a bus?



# What is meant by a bus?

A series of parallel wires that connects internal components of a computer



Which bus is used to transport memory addresses?



Which bus is used to transport memory addresses?

Address bus



Which bus is used to send information to and from different components?



Which bus is used to send information to and from different components?

Data bus



An address bus is formed from 8 parallel wires. How many addressable memory locations does the address bus allow?





An address bus is formed from 8 parallel wires. How many addressable memory locations does the address bus allow?

256

$$2^8 = 256$$



What effect does increasing the width of the data bus have?



What effect does increasing the width of the data bus have?

Increases the volume of data that can be transferred at any one time.



# What is the role of the control bus?



# What is the role of the control bus?

Carries control signals, including the system clock, that regulate the operation of the computer system



What name is given to hardware that controls the communication of data between the processor and external hardware devices



What name is given to hardware that controls the communication of data between the processor and external hardware devices

I/O Controllers



# Which type of architecture is shown in the diagram: Harvard or von Neumann?





Which type of architecture is shown in the diagram?



Harvard architecture



Which type of architecture is extensively used in embedded systems: Harvard or von Neumann?



Which type of architecture is extensively used in embedded systems: Harvard or von Neumann?

Harvard architecture



In which type of architecture are instructions and data stored in the same memory: Harvard or von Neumann?



In which type of architecture are instructions and data stored in the same memory: Harvard or von Neumann?

von Neumann



Which type of architecture is used in general-purpose computer systems:  
Harvard or von Neumann?



Which type of architecture is used in general-purpose computer systems: Harvard or von Neumann?

von Neumann

