# Hardware

A-Level Computer Science · Vocabulary in context

| Word | Example |
|---|---|
| **input devices** /ˈɪnpʊt dɪˈvaɪsɪz/ | A keyboard and a mouse are **input devices**. |
| **microphone** /ˈmaɪkrəfəʊn/ | A **microphone** records your voice. |
| **sensor** /ˈsensə/ | A light **sensor** turns on the street lamp at night. |
| **output devices** /ˈaʊtpʊt dɪˈvaɪsɪz/ | A screen and a printer are **output devices**. |
| **actuator** /ˈæktʃuːeɪtə/ | A motor is an **actuator**: it moves the robot's arm. |
| **primary memory** /ˈpraɪməri ˈmeməri/ | RAM and ROM are **primary memory**.<br>RAM ROM |
| **processor** /ˈprəʊsesə/ | The **processor** runs the program's instructions. |
| **RAM** /ræm/ | Open programs are stored in **RAM**. |
| **ROM** /rɒm/ | The start-up program is kept in **ROM**. |
| **secondary storage** /ˈsekəndəri ˈstɔːrɪdʒ/ | A hard disk is **secondary storage**. |
| **hard disk** /hɑːd dɪsk/ | Your files are saved on the **hard disk**. |
| **optical disc** /ˈɒptɪkl dɪsk/ | A DVD is an **optical disc**.<br>DVD |
| **volatile** /ˈvɒlətaɪl/ | RAM is **volatile**: when you switch off the computer, its data is lost.<br>RAM |



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| **embedded system** /em'bedɪd 'sɪstəm/ | A washing machine has an **embedded system** inside it. |
| **firmware** /'fɜ:mweə/ | The **firmware** in a printer tells its parts what to do. |
| **laser printer** /'leɪzə 'prɪntə/ | A **laser printer** prints pages fast. |
| **drum** /drʌm/ | The laser draws the page on a turning **drum**. |
| **toner** /'təʊnə/ | The black powder in a laser printer is **toner**. |
| **fuser** /'fju:sə/ | The **fuser** heats the toner so it sticks to the paper. |
| **buffer** /'bʌfə/ | The printer keeps the pages in a **buffer** until it is ready to print them. |
| **3D printer** /ˌθri: 'di: 'prɪntə/ | A **3D printer** builds a model layer by layer. |
| **filament** /'fɪləmənt/ | The printer melts plastic **filament** to make the model. |
| **diaphragm** /'daɪəfræm/ | Sound makes the **diaphragm** in the microphone move. |
| **capacitor** /kə'pæsɪtə/ | A **capacitor** stores a small electric charge. |
| **analogue-to-digital converter** /'ænəlɒg tə 'dɪdʒɪtl kən'vɜ:tə/ | An **analogue-to-digital converter** turns sound into numbers. |
| **digital-to-analogue converter** /'dɪdʒɪtl tʊ 'ænəlɒg kən'vɜ:tə/ | A **digital-to-analogue converter** turns numbers back into sound. |
| **tracks** /træks/ | A hard disk stores data in circles called **tracks**. |



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| **sectors** /ˈsektəz/ | Each track is split into **sectors**. |
| **read/write head** /riːd raɪt hed/ | The **read/write head** moves over the spinning disk. |
| **actuator arms** /ˈæktʃuːeɪtə ɑːmz/ | The **actuator arms** move the heads across the disk. |
| **solid-state drive** /ˈsɒlɪd steɪt draɪv/ | A **solid-state drive** has no moving parts. |
| **transistors** /trænˈzɪstəz/ | A chip holds billions of **transistors**. |
| **floating-gate transistor** /ˈfləʊtɪŋ geɪt trænˈzɪstə/ | A **floating-gate transistor** keeps its data with the power off. |
| **pits** /pɪts/ | A laser reads the **pits** on the surface of a CD. |
| **lands** /lændz/ | The flat parts between the pits are **lands**. |
| **touchscreen** /ˈtʌtʃskriːn/ | You use a phone's **touchscreen** with your finger. |
| **resistive** /rɪˈzɪstɪv/ | A **resistive** screen works when you press it. |
| **capacitive** /kəˈpæsɪtɪv/ | A **capacitive** screen feels the charge in your finger. |
| **virtual reality** /ˈvɜːtʃuːəl rɪˈælɪti/ | A **virtual reality** headset shows a 3D world. |
| **accelerometer** /əkˌseləˈrɒmɪtə/ | The phone's **accelerometer** knows when you shake it. |
| **gyroscope** /ˈdʒaɪrəskəʊp/ | The **gyroscope** knows when you turn the phone. |
| **interrupt** /ˈɪntərʌpt/ | Pressing a key sends an **interrupt** to the processor. |



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| Word | Example |
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| **non-volatile** /nɒn 'vɒlətaɪl/ | ROM is **non-volatile**: it keeps its data with the power off.<br>ROM |
| **SRAM** /'esræm/ | **SRAM** is fast and is used for cache. |
| **DRAM** /'di:ræm/ | **DRAM** is used for the main memory. |
| **flip-flop** /flɪp flɒp/ | A **flip-flop** stores one bit. |
| **cache** /kæʃ/ | The **cache** keeps data the processor needs often. |
| **refreshed** /rɪ'freʃt/ | DRAM must be **refreshed** many times every second.<br>DRAM |
| **monitoring** /'mɒnɪtərɪŋ/ | A **monitoring** system checks a patient's heart rate. |
| **control system** /kən'trəʊl 'sɪstəm/ | A **control system** keeps the room at 20 °C.<br>20 °C |
| **feedback** /'fi:dbæk/ | **Feedback** lets the system check the result and adjust. |
| **preset value** /'pri:set 'vælju:/ | The heater turns off at the **preset value** of 22 °C.<br>22 °C |
| **thermistor** /'θɜ:mɪstə/ | A **thermistor** measures the temperature. |
| **logic gate** /'lɒdʒɪk geɪt/ | An AND gate is a **logic gate**.<br>AND |
| **Boolean** /'bu:lɪən/ | A **Boolean** value is either TRUE or FALSE.<br>TRUE FALSE |
| **truth table** /tru:θ 'teɪbl/ | A **truth table** shows the output for every input. |
| **logic circuit** /'lɒdʒɪk 'sɜ:kɪt/ | A **logic circuit** is made of logic gates. |



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