

CAIE Computer Science IGCSE

3.4 Network hardware

Flashcards

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Describe the role of NICs
(Network Interface
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Describe the role of NICs (Network Interface Controllers/Cards).

Hardware components inside devices that enable them to connect to networks, converting data into signals that can be transferred across a network.



What is a MAC address?



What is a MAC address?

A unique identifier, permanently assigned to a device's Network Interface Controller (NIC) during its manufacture, that identifies a specific device.



What is the format of a MAC address?



What is the format of a MAC address?

Usually written in hexadecimal format and consist of two main parts: the manufacturer code and the serial code (which identifies the specific device).



What is IP addressing?



What is IP addressing?

A system for uniquely identifying devices connected to a network.



What is the format of IPv4 addresses?



What is the format of IPv4 addresses?

IPv4 addresses are 32-bit numbers, typically written as four decimal numbers separated by dots (e.g., 192.168.1.1).



What is the format of IPv6 addresses?



What is the format of IPv6 addresses?

IPv6 addresses are 128-bit numbers, expressed as eight groups of four hexadecimal digits, separated by colons (e.g., 2001:0db8:85a3:0000:0000:8a2e:0370:7334).



What is the role of a router?



What is the role of a router?

A router is used to send data to a specific device located on a network. It is able to assign IP addresses to devices and can connect local networks to the internet.

