Term Paper

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Routers: How They Work

**Abstract:** This paper will discuss the hardware side of a router and what happens as it processes the huge amount of data. The basis of what a router does is provide you with an internet connection, but the question is what hardware the router uses to achieve this. What is the process the data must go through when it enters a router? A simple consumer router has four building blocks: input port, switching fabric, router processor, and output ports. It is better to use a business class router as an example because it does more than just connect you to the internet, it integrates voice, video, security, and mobility. Generally, a router has controller chip/CPU, RAM, ROM, and Flash Memory, a power supply, Interfaces, Buses, configuration register and isolation transformers. In a business class router these components expand even further.