Multiplexer

Multiplexer is a combinational circuit that has maximum of 2n data inputs, ‘n’ selection lines and single output line. One of these data inputs will be connected to the output based on the values of selection lines. Since there are ‘n’ selection lines, there will be 2n possible combinations of zeros and ones. So, each combination will select only one data input. Multiplexer is also called as mux. The multiplexer is used to perform high-speed switching and is constructed by electronic components. Multiplexers, or MUX’s, can be either digital circuits made from high-speed logic gates used to switch digital or binary data or they can be analogue types using transistors, or relays to switch one of the voltage or current inputs through to a single output. Multiplexers are not limited to just switching a number of different input lines or channels to one common single output. There are also types that can switch their inputs to multiple outputs and have arrangements or 4-to-2, 8-to-3 or even 16-to-4 etc. configurations. The multiplexer is a very useful electronic circuit that has uses in many different applications such as signal routing, data communications and data bus control applications. Multiplexers are sometimes referred to as “data selectors”, as they select the data to the line.

**Chart, diagram

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