

The diagram illustrates a 16-bit parallel adder circuit. At the top, there are two 16-bit input registers, labeled A and B. The outputs of these registers feed into a central 16-bit parallel adder block. The output of the adder is connected to a 16-bit output register. Below the adder, there are two 16-bit comparators, each with inputs from registers A and B. The outputs of the comparators feed into another 16-bit output register. At the bottom, a 16-bit parallel control bus is shown, which provides control signals to the adder and comparators.