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# POWER

The four diagrams illustrate the implementation of a 4-bit ripple-carry adder using 74181 ALU and 74180 MUX chips. Each diagram shows a different carry-in configuration:

- (a) carry-in = 0
- (b) carry-in = 1
- (c) carry-in = 0
- (d) carry-in = 1

The diagrams include power supply connections (VCC, GND) and output signals (SUM, COUT). The 74181 ALU is configured to perform addition, and the 74180 MUX is used to select the appropriate carry-in value. The output SUM is the 4-bit result, and COUT is the carry-out signal.

The diagram illustrates the FPGA architecture, showing the interconnection of six boards (Board 1 to Board 6) and a central 40-bit data bus. Each board contains a 7000 series FPGA and various peripheral components like RAM, ROM, and I/O devices. The boards are connected to a central 40-bit data bus, which is also connected to a 40-bit data bus controller. The diagram illustrates the physical layout and data flow of the system.

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TITLE: HEADSTAGE-64	
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Date: 2/18/22 5:34 PM	Sheet: 1/1