

## ALU Data Flow Details

Figure 2-8 shows a more detailed diagram of the ALU, which appears in Figure 2-1 on page 2-3.

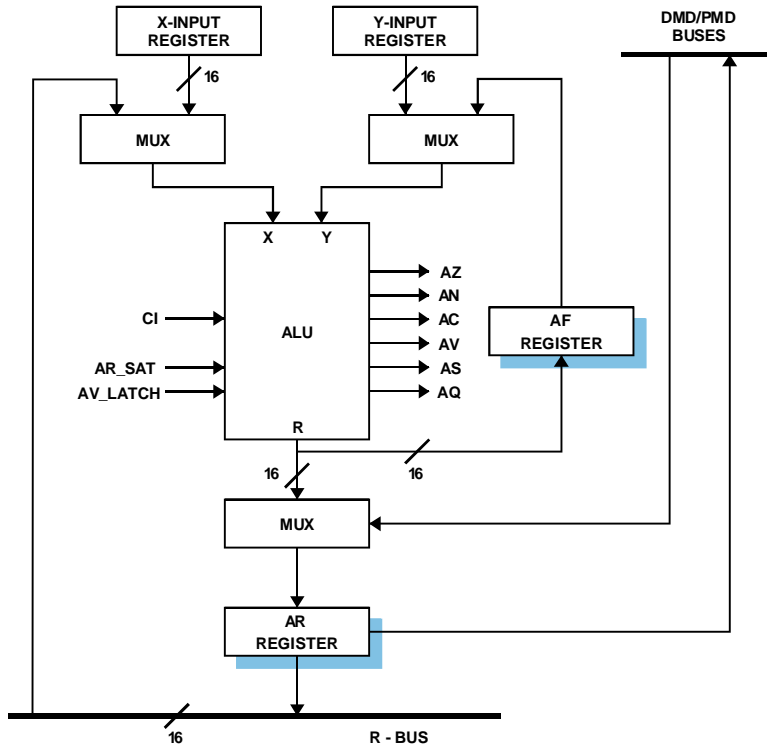


Figure 2-8. ALU Block Diagram

The ALU is 16 bits wide with two 16-bit input ports, X and Y, and one output port, R. The ALU accepts a carry-in signal (CI) which is the carry bit (AC) from the processor arithmetic status register (ASTAT). The ALU generates six status signals: the zero (AZ) status, the negative (AN) status, the carry (AC) status, the overflow (AV) status, the X-input sign (AS) status, and the quotient (AQ) status. All arithmetic status signals are latched into