

Shifter Data Flow Details

Figure 2-14 shows a more detailed diagram of the shifter, which appears in Figure 2-1 on page 2-3. The shifter has the following components: the shifter array, the OR/PASS logic, the exponent detector, and the exponent compare logic.

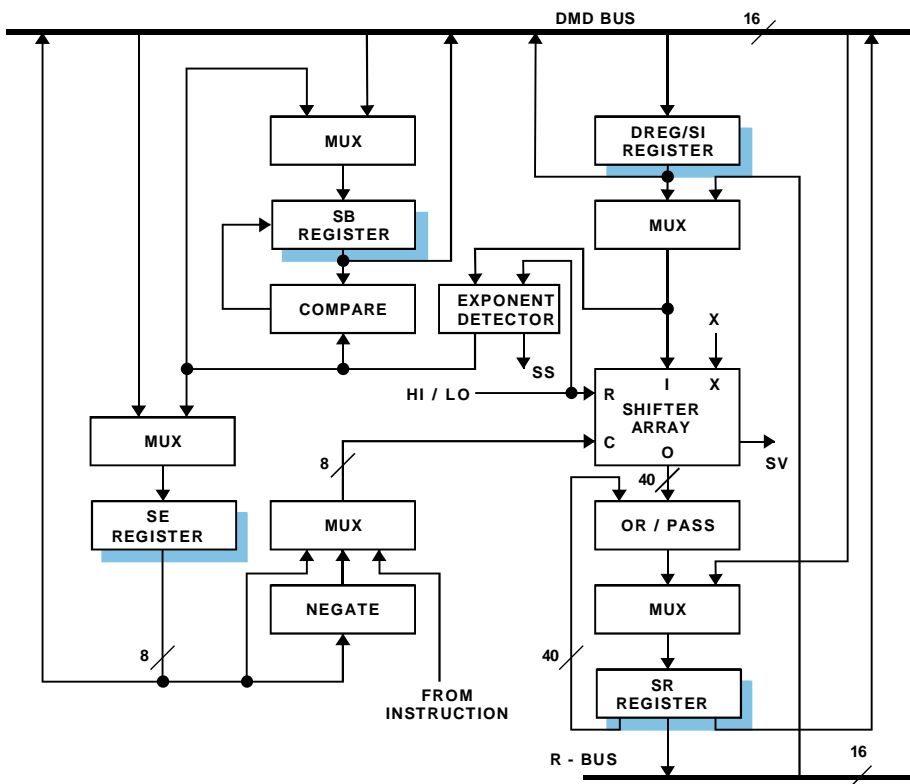


Figure 2-14. Shifter Block Diagram

The shifter array is a 16x40 barrel shifter. It accepts a 16-bit input and can place it anywhere in the 40-bit output field, from off-scale right to off-scale left, in a single cycle. This spread gives 57 possible placements