

## CPU\_SignExtend\_21363904



The timing diagram for the Sign Extend is shown above. All numbers are in Binary notation.

The **red lines** denote when the input data changes, and the **blue lines** show when the corresponding output is shown after a 5ns propagation delay. The first input is a negative 2s complement number, while the second input is a positive 2s complement number. The leading 1 on the first input is extended to preserve the value across 32 bits, and the leading 0 on the second input is extended to preserve its value. This way the sign and number remain the same going from 10 to 32 bits.