Input A is 00000001010101001101000101010000 (22335824) and input B is 00000000000010101010111001100000 (700000)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Cases | S2 | S1 | S0 | C\_IN | Operation | G |
| A | 0 | 0 | 0 | 0 | G=A | 00000001010101001101000101010000 (22335824) |
| B | 0 | 0 | 0 | 1 | G=A+1 | 00000001010101001101000101010001 (22335825) |
| C | 0 | 0 | 1 | 0 | G=A+B | 00000001010111110111111110110000 (23035824) |
| D | 0 | 0 | 1 | 1 | G=A+B+1 | 00000001010111110111111110110001 (23035825) |
| E | 0 | 1 | 0 | 0 | G=A + 1c of B | 00000001010010100010001011101111 (21635823) |
| F | 0 | 1 | 0 | 1 | G=A-B | 00000001010010100010001011110000 (21635824) |
| G | 0 | 1 | 1 | 0 | G=A-1 | 00000001010101001101000101001111 (22335823) |
| H | 0 | 1 | 1 | 1 | G=A | 00000001010101001101000101010000 (22335824 |
| I | 1 | 0 | 0 | X | G=A and B | 00000000000000001000000001000000 (32832) |
| J | 1 | 0 | 1 | X | G=A or B | 00000001010111101111111101110000 (23002992) |
| K | 1 | 1 | 0 | X | G=A xor B | 00000001010111100111111100110000 (22970160) |
| L | 1 | 1 | 1 | X | G = not A | 11111110101010110010111010101111 (-22335825) |

By changing the values in C\_IN, S0, S1 and S2, different operations can be performed on the inputs A and B as shown in the truth table.