|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test | F[2:0] | A | B | Y | Zero |
| ADD 0+0 | 2 | 00000000 | 00000000 | 00000000 | 1 |
| ADD 0+(-1) | 2 | 00000000 | FFFFFFFF | FFFFFFFF | 0 |
| ADD 1+(-1) | 2 | 00000001 | FFFFFFFF | 00000000 | 1 |
| ADD FF+1 | 2 | 000000FF | 00000001 |  |  |
| SUB 0-0 | 6 | 00000000 | 00000000 | 00000000 | 1 |
| SUB 0-(-1) |  | 00000000 | FFFFFFFF | 00000001 | 0 |
| SUB 1-1 |  | 00000001 |  |  |  |
| SUB 100-1 |  | 00000100 |  |  |  |
| SLT 0,0 | 7 | 00000000 | 00000000 | 00000000 | 1 |
| SLT 0,1 |  | 00000000 |  | 00000001 | 0 |
| SLT 0,-1 |  | 00000000 |  |  |  |
| SLT 1,0 |  | 00000001 |  |  |  |
| SLT -1,0 |  | FFFFFFFF |  |  |  |
| AND FFFFFFFF, FFFFFFFF |  | FFFFFFFF |  |  |  |
| AND FFFFFFFF, 12345678 |  | FFFFFFFF | 12345678 | 12345678 | 0 |
| AND 12345678, 87654321 |  | 12345678 |  |  |  |
| AND 00000000, FFFFFFFF |  | 00000000 |  |  |  |
| OR FFFFFFFF, FFFFFFFF |  | FFFFFFFF |  |  |  |
| OR 12345678, 87654321 |  | 12345678 |  |  |  |
| OR 00000000, FFFFFFFF |  | 00000000 |  |  |  |
| OR 00000000, 00000000 |  | 00000000 |  |  |  |

**Table 1. ALU operations**