ALU Opcodes

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| Opcode | | Instruction | |
| 10 | Two Operand |  |  |
| 000 | ADD | F = A+B |
| 001 | ADC (add with carry) | F = A+B+C |
| 010 | SUB (subtract) | F = A-B |
| 011 | SBC (subtract with carry) | F = A-B-C |
| 100 | AND | F = A AND B |
| 101 | OR | F = A OR B |
| 110 | XNOR | F = A XNOR B |
| 111 | CMP (compare) | F = A – B (alias for SUB) |
|  | One Operand |  |  |
|  | 0011 | INV (invert) | F = NOT A |
| 0 | 0100 | LSR (logic shift right) | '0' & A(15 : 1) |
| 0101 | ROR (rotate right) | A(0) & A(15 : 1) |
| 0110 | RRC (rotate right with carry) | C & A(15 : 1) |
| 0111 | ASR (arithmetic shift right) | A(15) & A(15: 1) |
| 1000 | LSL (logic shift left) | A(14 : 0) & '0' |
| 1001 | ROL (rotate left) | A(14 : 0) & A(15) |
| 1010 | RLC (rotate right with carry) | A(14 : 0) & C |
| 1011 | PB (pass byte) | “00000000” & A(7 : 0) |
| 1100 | INC (increment) | F = A + 1 |
| 1101 | DEC (decrement) | F = A – 1 |
| 1110 | CLR (clear) | F = “0000000000000000” |