|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 指令 | PC | IM | RF | S\_EXT | | | ALU | | DM | |
| Wdata | S\_EXT5 | S\_EXT16 | S\_EXT18 | A | B | Data in | addr |
| ADDU | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| SUBU | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| SLL | PC+4 | PC | ALU | IM[10:6] |  |  | S\_EXT5 | RF，RD2 |  |  |
| ORI | PC+4 | PC | ALU |  | IM[15:0] |  | RF，RD1 | S\_EXT16 |  |  |
| LW | PC+4 | PC | DM |  | IM[15:0] |  | RF，RD1 | S\_EXT16 |  | ALU |
| SW | PC+4 | PC |  |  | IM[15:0] |  | RF，RD1 | S\_EXT16 | RF | ALU |
| BEQ | PC+4/  PC+S\_EXT18 | PC |  |  |  | IM[15:0]  <<00 | RF，RD1 | RF，RD2 |  |  |
| J | PC[31:28]||  IM[25:0]<<2 | PC |  |  |  |  |  |  |  |  |
| ADD | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| SUB | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| AND | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| OR | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| XOR | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| NOR | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| SLT | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| SLTU | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| SRL | PC+4 | PC | ALU | IM[10:6] |  |  | S\_EXT5 | RF，RD2 |  |  |
| SRA | PC+4 | PC | ALU | IM[10:6] |  |  | S\_EXT5 | RF，RD2 |  |  |
| SLLV | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| SRLV | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| SRAV | PC+4 | PC | ALU |  |  |  | RF，RD1 | RF，RD2 |  |  |
| JR | RF，RD1 | PC |  |  |  |  |  |  |  |  |
| ADDI | PC+4 | PC | ALU |  | IM[15:0] |  | RF，RD1 | S\_EXT16 |  |  |
| ADDIU | PC+4 | PC | ALU |  | IM[15:0] |  | RF，RD1 | S\_EXT16 |  |  |
| ANDI | PC+4 | PC | ALU |  | IM[15:0] |  | RF，RD1 | S\_EXT16 |  |  |
| XORI | PC+4 | PC | ALU |  | IM[15:0] |  | RF，RD1 | S\_EXT16 |  |  |
| BNE | PC+4/  PC+S\_EXT18 | PC |  |  |  | IM[15:0]  <<00 | RF，RD1 | RF，RD2 |  |  |
| SLTI | PC+4 | PC | ALU |  | IM[15:0] |  | RF，RD1 | S\_EXT16 |  |  |
| SLTLIU | PC+4 | PC | ALU |  | IM[15:0] |  | RF，RD1 | S\_EXT16 |  |  |
| LUI | PC+4 | PC | ALU |  | IM[15:0] |  |  | S\_EXT16 |  |  |
| JAL | PC[31:28]||  IM[25:0]<<2 | PC | PC+8 |  |  |  |  |  |  |  |