### 条件赋值

MOV和MVN两条指令的编码含义有所不同。在UniCore32中，MOV和MVN指令被扩展为条件执行指令。由于MOV和MVN两条指令均只需要使用一个源操作数和一个目的操作数，源操作数Rn的位域用来标识条件域。在opcode对应于MOV或MVN时，设置第23位为0表示无条件MOV或MVN指令，此时第19到第22位无意义，缺省为0；设置第23位为1表示条件执行的MOV或MVN指令，此时第19到第22位用来标识条件。条件执行的MOV和MVN指令分别记为MOV*cond*和MVN*cond*，指令编码如下：

* 1. D\_Imm\_Shift

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| * 1. 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| 0 | 0 | 0 | 1 | 1 | N | 1 | S | 1 | Cond | | | | Rd | | | | | Imm | | | | | 0 | Shift | | 0 | Rm | | | | |

* 1. D\_RegShift

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| * 1. 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| 0 | 0 | 0 | 1 | 1 | N | 1 | S | 1 | Cond | | | | Rd | | | | | Rs | | | | | 0 | Shift | | 1 | Rm | | | | |

C．D\_Immediate

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| 0 | 0 | 1 | 1 | 1 | N | 1 | S | 1 | Cond | | | | Rd | | | | | Rotate | | | | | Imm | | | | | | | | |

其中，条件位的编码（Cond）和转移条件的含义如表 3‑3所示，其中，“条件位赋值”一栏中的条件位是指指令执行时CMSR中的条件位。

|  |  |  |  |
| --- | --- | --- | --- |
| 条件位编码 | 指令后缀 | 条件位赋值 | 条件含义 |
| 0000 | EQ | Z=1 | 等于 |
| 0001 | NE | Z=0 | 不等于 |
| 0010 | UGE | C=1 | 无符号的大于等于 |
| 0011 | ULT | C=0 | 无符号的小于 |
| 0100 | N | N=1 | 小于0 |
| 0101 | NN | N=0 | 大于等于0 |
| 0110 | OV | V=1 | 溢出 |
| 0111 | NV | V=0 | 没有溢出 |
| 1000 | UGT | C=1 AND Z=0 | 无符号的大于 |
| 1001 | ULE | C=0 OR Z=1 | 无符号的小于等于 |
| 1010 | SGE | N=V | 有符号大于等于 |
| 1011 | SLT | NOT N=V | 有符号小于 |
| 1100 | SGT | Z=0 AND(N=V) | 有符号大于 |
| 1101 | SLE | Z=1 OR (NOT N=V) | 有符号小于等于 |
| 1110 | (忽略) | | |

条件位的编码和转移条件的含义