CPU\_PC\_IF\_ID\_Itype

# 作用

完成对*I*类型指令的取指令阶段、指令译码阶段、指令执行阶段、数据存储阶段和指令回写阶段，其中I类型指令如下表所示。

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Mnemonic Symbol** | **Format** | | | | **Sample** |
| **Bit #** | **31..26** | **25..21** | **20..16** | **15..0** |  |
| **I-type** | **op** | **rs** | **rt** | **immediate** |  |
| addi | 001000 | rs | rt | immediate | addi $1,$2,100 |
| addiu | 001001 | rs | rt | immediate | addiu $1,$2,100 |
| andi | 001100 | rs | rt | immediate | andi $1,$2,10 |
| ori | 001101 | rs | rt | immediate | andi $1,$2,10 |
| xori | 001110 | rs | rt | immediate | andi $1,$2,10 |
| lw | 100011 | rs | rt | immediate | lw $1,10($2) |
| sw | 101011 | rs | rt | immediate | sw $1,10($2) |
| beq | 000100 | rs | rt | immediate | beq $1,$2,10 |
| bne | 000101 | rs | rt | immediate | bne $1,$2,10 |
| slti | 001010 | rs | rt | immediate | slti $1,$2,10 |
| sltiu | 001011 | rs | rt | immediate | sltiu $1,$2,10 |
| lui | 001111 | 00000 | rt | immediate | Lui $1, 10 |

# 设计流程







