

The following opcodes are used for **addition**:

- ADDI — Add Signed Integer
- ADDU — Add Unsigned Integer
- ADDF — Add Floating Point

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### ADDI — *Add Signed Integer* {#ADDI}

Use ADDI to add an integer value to whatever value is stored within the L2 register. If the register L2 is not set, then initial value of L2 is assumed to be 0, and not a garbage value.

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Property   Value
----- -----
`Opcode`   #13
`Type`   *Arithmetic*
`Operand Type`   Signed 64-bit integer
`Destination`   L2 (implicit)
----- -----

=== "ADDI Algorithm"

```
...  
    L2 = L2 + <signed_imm>  
    L2 = L2 + <reg_val>  
    L2 = L2 + <const>  
...
```

=== "ADDI Example"

```
```linenums="1" hl_lines="1 3 5 7"  
; imm +ve  
    ADDI    1  
; imm -ve  
    ADDI   -123  
; reg val  
    ADDI   val(QT)  
; const  
    ADDI   SOME_CONST_VAL  
...
```

## ADDU — *Add Unsigned Integer* {#ADDU}

Property	Value
`Opcode`	#18
`Type`	*Arithmetic*
`Operand Type`	Unsigned 64-bit value
`Destination`	L3 (implicit)

=== "ADDU Algorithm"

```
...  
    L3 = L3 + <unsigned_imm>  
    L3 = L3 + <reg_val>  
    L3 = L3 + <const>  
...
```

=== "ADDU Example"

```
```linenums="1" hl_lines="1 3 5"  
; imm +ve  
    ADDU    1  
; reg val  
    ADDU    val(QT)  
; const  
    ADDU    SOME_CONST_VAL  
...
```

## ADDF — *Add Float value* {#ADDF}

Property	Value
`Opcode`	#23
`Type`	*Arithmetic*
`Operand Type`	64-bit float value
`Destination`	L1 (implicit)

=== "ADDF Algorithm"

```
...  
    L1 = L1 + <float>  
    L1 = L1 + <reg_val>  
    L1 = L1 + <const>  
...
```

=== "ADDF Example"

```
``linenums="1" hl_lines="1 3 5"  
; imm float  
    ADDF    3.14  
; reg val  
    ADDF    val(QT)  
; const  
    ADDF    SOME_CONST_VAL  
...
```

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