

Commonly Used Directives

DIRECTIVE	EXAMPLES
<code>.align</code>	<code>.align 2</code>
<code>.ascii, .asciz</code>	<code>.asciz "My String"</code>
<code>.byte, .word, .hword</code>	<code>.byte 1,2,3,4</code>
<code>.data, .text</code>	<code>.text</code>
<code>.equ</code>	<code>.equ MaxUserInput 9</code>
<code>.global</code>	<code>.global main</code>
<code>.include</code>	<code>.include "nios_macros.s"</code>
<code>.skip, .space</code>	<code>.skip 100, 0</code>

Commonly Used Instructions (1 of 2)

INSTRUCTION	EXAMPLES	USE
ld <i>S</i> (u)(io) <i>S=b,h,w. u only for b and h types</i>	ldw r10,4(r11) ldhuio r10,0(r11)	Get (load) from memory
st <i>S</i> (io) <i>S=b,h,w</i>	stw r10,0(r11)	Store into memory
mov, movhi, mov(u)i, movia <i>[mov, movui and movia are pseudoinstr]</i>	movi r9,0x1B mov r10,r14	Copy something into a register
add(i), sub, mul(i) <i>[other variants too], div(u)</i>	add r8,r9,r10	Arithmetic op with registers
or(i), xor(i), nor, xor, and(i), orhi, andhi, xorhi	xori r12,r13,0x0F0	Logical op with registers
rol(i), sll(i), srl(i), sra(i)	srli r13,r9,4	Bit shifts with registers

Commonly Used Instructions (2 of 2)

INSTRUCTION	EXAMPLES	USE
br, jmp(i), call(r), ret, eret	br Loop	Change program flow
b <i>TT</i> (u) <i>TT</i> = <i>ge,ne,le,lt,eq</i>	bne r6,r0,TryAgain	Conditional change program flow
cmp <i>TT</i> (u)(i) <i>TT</i> = <i>ge,ne,le,lt,eq</i>	cmpeq r8,r13,r10	Compare and set register with result
wrctl, rdctl	wrctl ctl2,r9	Read/write control regs