```
load s2 into s1
_mov(s1, s2)
_movi(s1, 10)
                 load 10 into s1
                 load s1 + s2 into s1
_add(s1, s2)
                  load s1 + s2 + Carry into s1
_addc(s1, s2)
_addi(s1, 10)
                  load s1 + 10 into s1
_addic(s1, 10)
                 load s1 + 10 + carry into s1
_sub(s1, s2)
                  load s1 - s2 into s1
                  load s1 - 10 into s1
_subi(s1, 10)
_subc(s1, s2)
                  load s1 - s2 - carry into s1
                 load s1 - 10 - carry into s1
_subic(s1, 10)
                  load s1 & s2 into s1
_and(s1, s2)
_andi(s1, 8)
                 load s1 & 00001000 into s1
_or(s1, s2)
                 load s1 OR s2 into s1
_or(s1, 8)
                  load s1 OR 00001000 into s1
_shr(s1, s2)
                 s1 = s2: carry<<1 car=s2(7)
                  s1 = carry: s2 >> 1 car = s2(0)
_shl(s1, s2)
_jump(#start)
        _jump(z, #start)
                                   branch if Zero = 1
        _jump(nz, #start)
                                   branch if Zero = 0
        _jump(c, #start)
                                   branch if Carry = 1
        _jump(nc, #start)
                                   branch if Carry = 0
_call(#start)
        _call(z, #start)
                                   call if Zero = 1
        _call(nz, #start)
                                   call if Zero = 0
        _call(c, #start)
                                   call if Carry = 1
        _call(nc, #start)
                                   call if Carry = 0
_RET
         Return from call
                  compare s1 and s2 (s1 - s2)
_cmp(s1, s2)
_cmpi(s1, 10)
                 compare s1 and 10 (s1 - 10)
_clrc
         Carry = 0
         Zero = 0
_clrz
         Carry = 1
_setc
```

_setz Zero = 1

 $_{\rm imp}(s0, portaddress)$ s0 = protaddress

_exp(s0, portaddress) Portaddress = S0

_expi(c, portaddress) Portaddress = c

vchip A vision chip instruction

&vchip A vision chip instruction with keep