

A51 Bit manipulation

The 8051 has a Boolean processor that allows direct manipulation of bits. Alternatively, you can do the same operation with less efficiency using logic operations.

Set bit P0.2 to 1 but don't change any other bits

Logic	Boolean processing
orl P0, #04H	setb P0.2

Clear bit P0.2 to 0 but don't change any other bits

Logic	Boolean processing
anl P0, #0FBH	clr P0.2

Complement bit P0.2 but don't change any other bits

Logic	Boolean processing
xrl P0, #04H	cpl P0.2

Jump to TARGET if P0.2 is set

Logic	Boolean processing
mov a, #04H anl a, P0 jnz TARGET	jb P0.2, TARGET

Exchange nibbles in the accumulator

Logic	Boolean processing
rl a rl a rl a rl a	swap a