

# BTG

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BTG	Bit Toggle f								
Syntax:	[ <i>label</i> ] BTG f,b[,a]								
Operands:	$0 \leq f \leq 255$ $0 \leq b \leq 7$ $a \in [0,1]$								
Operation:	$(\overline{f\langle b \rangle}) \rightarrow f\langle b \rangle$								
Status Affected:	None								
Encoding:	<table><tr><td>0111</td><td>bbba</td><td>ffff</td><td>ffff</td></tr></table>	0111	bbba	ffff	ffff				
0111	bbba	ffff	ffff						
Description:	Bit 'b' in data memory location 'f' is inverted. If 'a' is 0, the Access Bank will be selected, overriding the BSR value. If 'a' = 1, then the bank will be selected as per the BSR value (default).								
Words:	1								
Cycles:	1								
Q Cycle Activity:	<table><tr><th>Q1</th><th>Q2</th><th>Q3</th><th>Q4</th></tr><tr><td>Decode</td><td>Read register 'f'</td><td>Process Data</td><td>Write register 'f'</td></tr></table>	Q1	Q2	Q3	Q4	Decode	Read register 'f'	Process Data	Write register 'f'
Q1	Q2	Q3	Q4						
Decode	Read register 'f'	Process Data	Write register 'f'						

Example:            BTG        PORTC,   4, 0

Before Instruction:

PORTC = 0111 0101 [0x75]

After Instruction:

PORTC = 0110 0101 [0x65]

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