Basic Clock Module+ (BCM+) Help Sheet

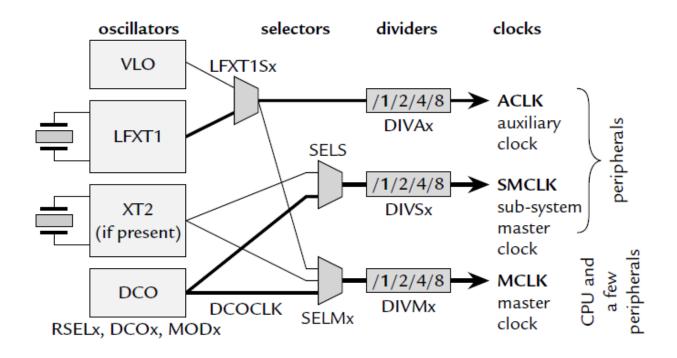The configuration registers are DCOCTL (DCO Control), BCSCTL1/2/3 (Basic Clock System Control 1/2/3)

DCOCTL								
	DCO			MOD				
	7	6	5	4	3	2	1	0

BCSCTL1								
	XT2OFF	XTS	DIVA		RSEL			
	7	6	5	4	3	2	1	0

BCSCTL2								
	SELM		DIVM		SELS	DIVS		DCOR
	7	6	5	4	3	2	1	0

BCSCTL3								
	XT2S		LFXT1S		XCAP		XT2OF	LFXT1OF
	7	6	5	4	3	2	1	0

These are the values of the configurations.

DCOCTL	
DCO	Selects the DCO tap. There are 8 taps per range [0 to 7].
MOD	Modulation on 32 cycles [0 to 31]. Eg: MOD=4, 4 cycles at DCO+1, 28 cycles at DCO.
BCSCTL1	
XT2OFF	Turn XT2 off.
XTS	LFXT1 mode. [0: Low-frequency] [1: High-frequency] HF >= 400 KHz
DIVA	Divide ACLK [0: div by 1] [1: div by 2] [2: div by 4] [3: div by 8]
RSEL	Selects the DCO range. There are 16 ranges [0 to 15].
BCSCTL2	
SELM	Select MCLK. [0: DCOCLK] [1: DCOCLK] [2: XT2CLK/LFXT1/VLOCLK/] [3: LFXT1/VLOCLK]
DIVM	Divide MCLK [0: div by 1] [1: div by 2] [2: div by 4] [3: div by 8]
SELS	Select SMCLK. [0: DCOCLK] [1: XT2CLK/LFXT1CLK/VLOCLK]

DIVS	Divide SMCLK [0: div by 1] [1: div by 2] [2: div by 4] [3: div by 8]
DCOR	DCO resistor select [0: internal resistor] [1: external resistor]
BCSCTL3	
XT2S	XT2 range select. [0: 0.4 to 1 MHz] [1: 1 to 3 MHz] [2: 3 to 16 MHz] [3: external clock]
LFXT1S	When XTS=0 [0: 32768 Hz crystal] [1: Reserved] [2: VLOCLK] [3: external clock] When XTS=1 [0: 0.4 to 1 MHz] [1: 1 to 3 MHz] [2: 3 to 16 MHz] [3: external clock]
XCAP	Selects among small built-in capacitors for LFXT1 crystal in Low-Frequency Mode (XTS=0) [0: 1 pF] [1: 6 pF] [2: 10 pF] [3: 12.5 pF]
XT2OF	XT2 Oscillator Fault signal
LFXT1OF	LFXT1 Oscillator Fault signal

Book Figure 5.8   BCM+ Module