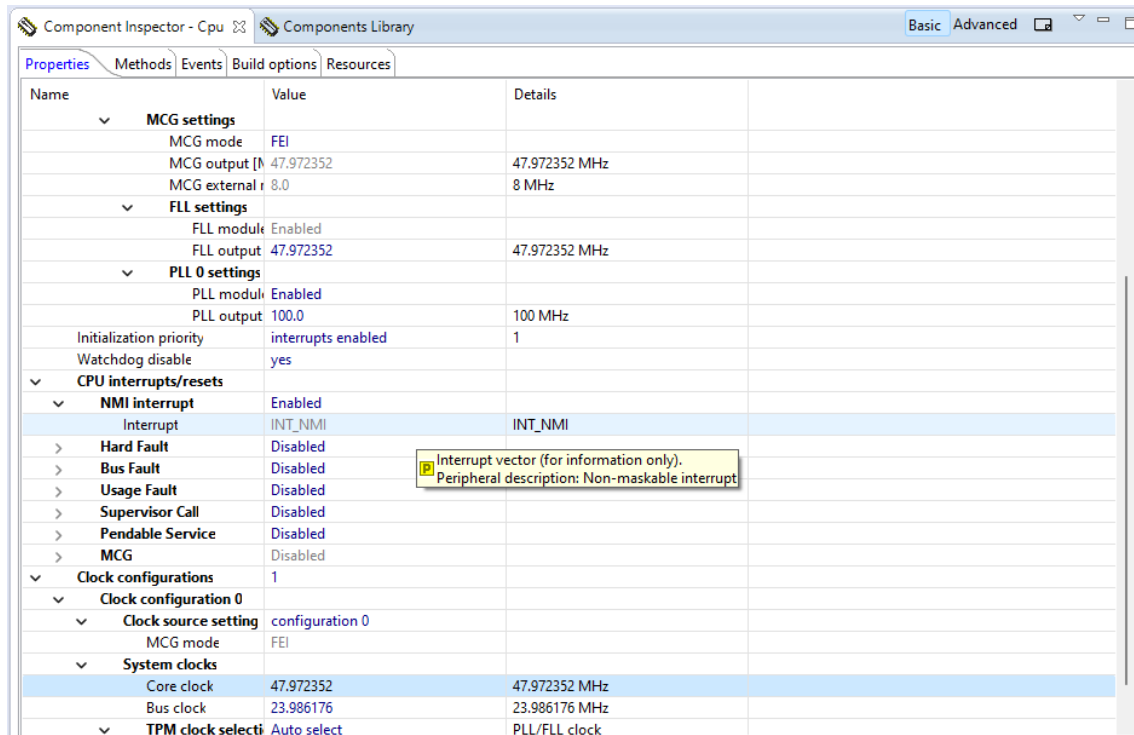


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**Nº USP: 11256816**

1) Configure o clock do core para ~48 MHz e do bus para ~24 MHz no modo FEI.

Configuração do “Component” CPU no CodeWarrior, setado para usar 48MHz no Core e 24 MHz no Bus, em modo MCG FEI + PLL



No modo FEI, que possui referência interna, usamos os multiplicadores FLL possuem referência de 31,25 a 39,0625 kHz, além de possuírem menor consumo de energia, porém menor estabilidade.

2) Configure o clock do core para 48MHz e do bus para 24MHz no modo PEE.  
Habilite o System Oscillator para usar o oscilador externo.

Configuração do “Component” CPU no CodeWarrior, setado para usar 48MHz no Core e 24 MHz no Bus, utilizando o System oscillator e no modo PEE + PLL

*Component Inspector - Cpu			Components Library	Basic	Advanced			
Properties Methods Events Build options Resources								
Name	Value	Details						
CPU type	MKL25Z128VLK4							
Clock settings								
Internal oscillator								
Slow internal reference	32.768	32.768 kHz						
Fast internal reference	4.0	4 MHz						
RTC clock input	Disabled							
Clock frequency [MHz]	0.032768							
System oscillator 0	Enabled							
Clock source	External crystal							
Clock frequency [MHz]	8.0	8 MHz						
Clock source settings	1							
Clock source setting								
MCG settings								
MCG mode	PEE							
MCG output [MHz]	48.0	48 MHz						
MCG external reference	8.0	8 MHz						
FLL settings								
PLL 0 settings								
PLL module	Enabled							
PLL output	48.0	48 MHz						
Initialization priority	interrupts enabled	1						
Watchdog disable	yes							
CPU interrupts/resets								
NMI interrupt	Enabled							
Interrupt	INT_NMI	INT_NMI						
Hard Fault	Disabled							
Interrupt	INT_Hard_Fault	Property is disabled						
Bus Fault	Disabled							
Interrupt	INT_Bus_Fault	Property is disabled						

*Component Inspector - Cpu			Components Library	Basic	Advanced			
Properties Methods Events Build options Resources								
Name	Value	Details						
Initialization priority	interrupts enabled	1						
Watchdog disable	yes							
CPU interrupts/resets								
NMI interrupt	Enabled							
Interrupt	INT_NMI	INT_NMI						
Hard Fault	Disabled							
Interrupt	INT_Hard_Fault	Property is disabled						
Bus Fault	Disabled							
Interrupt	INT_Bus_Fault	Property is disabled						
Usage Fault	Disabled							
Interrupt	INT_Usage_Fault	Property is disabled						
Supervisor Call	Disabled							
Interrupt	INT_SVCall	Property is disabled						
Priority	maximal priority	0						
Pendable Service	Disabled							
Interrupt	INT_PendableSrvReq	Property is disabled						
Priority	maximal priority	0						
MCG	Disabled							
Priority	medium priority	2						
Clock configurations	1							
Clock configuration 0								
Clock source setting	configuration 0							
MCG mode	PEE							
System clocks								
Core clock	48.0	48 MHz						
Bus clock	24.0	24 MHz						
TPM clock select	Auto select	PLL/FLL clock						
Clock frequency	24.0	24 MHz						

No modo PEE, que utiliza referência externa, usamos os multiplicadores PLL de referência de 2 a 4 MHz, que também possuem maior consumo de energia se comparados aos multiplicadores FLL

Obs: em ambos os casos, para gerar um pino para saída digital e alterar o seu valor o mais rápido possível, podemos utilizar o seguinte código, no arquivo main.c:

