Exercises

1. If an interrupt is generated at 19,199 Hz and the bus clock frequency is 24MHz, what is the max value of the counter?

TIMER\_CNT\_PERIOD = (24 MHz/19199 Hz) - 1 = 1249.

1. If the max value of the counter is 0x00394391 and the bus clock frequency is 24MHz, what is the interrupt period?

Period = (0x03194391+1)/24 MHz = 2.16614 seconds

1. Specify how the interrupt timer control registers must be configured so that an interrupt is generated with a frequency of 315Hz, a clock speed of 24MHz. What is the actual frequency generated?

Enable the module clock with CLK\_SELECT08.

Load TCPWM\_CNT0\_PERIOD with divisor minus one. (24 MHz/315 Hz) – 1 = 76189.48, round to 76189.

In TCPWM\_CNT0\_INTR\_MASK, set bit 0 to enable the CC interrupt.

Enable the timer by setting bit 0 of TCPWM\_CTRL.

Send a software start trigger by setting TCPWM\_CMD bit 24 to 1.