



Eg. Required PWM frequency is 1.5Khz (Period = 666.667usec) at 50% duty cycle.

Step1: Calculate Timer Period Value for 666.667usec

$$\begin{aligned} \text{Full_Period_Cnt} &= \text{PWM_Period} / \text{CCU_Resolution_Period} \\ &= 666.667\text{usec} / 16.667\text{nsec} \\ &= 40000 \end{aligned}$$

Therefore, Timer Period Value (CC4yPR)

$$\begin{aligned} \text{CC4yPR} &= \text{Full_Period_Cnt} - 1 \\ &= 40000 - 1 \\ &= \mathbf{39999 \text{ or } 0x9C3F} \end{aligned}$$

Step 2: Calculate Duty cycle of 50%

$$\begin{aligned} \text{DutyCycle_Cnt} &= \text{Full_Period_Cnt} \times \text{Duty cycle\%} \\ &= 40000 \times 50\% \\ &= 20000 \end{aligned}$$

Therefore, Timer Compare Value (CC4yCR)

$$\begin{aligned} \text{CC4yCR} &= \text{DutyCycle_Cnt} - 1 \\ &= 20000 - 1 \\ &= \mathbf{19999 \text{ or } 0x4E1F} \end{aligned}$$