

## Pulse Width Modulation (PWM) Timing formulas

### Raspberry Pi Pico

$$\text{PWM Period} = (\text{CPU Period}) \cdot (\text{Wrap} + 1) \cdot \left( \text{Clock Divider Int} + \frac{\text{Clock Divider Fraction}}{16} \right)$$

$$\text{Duty Cycle} = \left( \frac{\text{Level}}{\text{Wrap} + 1} \right)$$

$$\text{Pulse Width} = (\text{CPU Period}) \cdot (\text{Level}) \cdot \left( \text{Clock Divider Int} + \frac{\text{Clock Divider Fraction}}{16} \right)$$