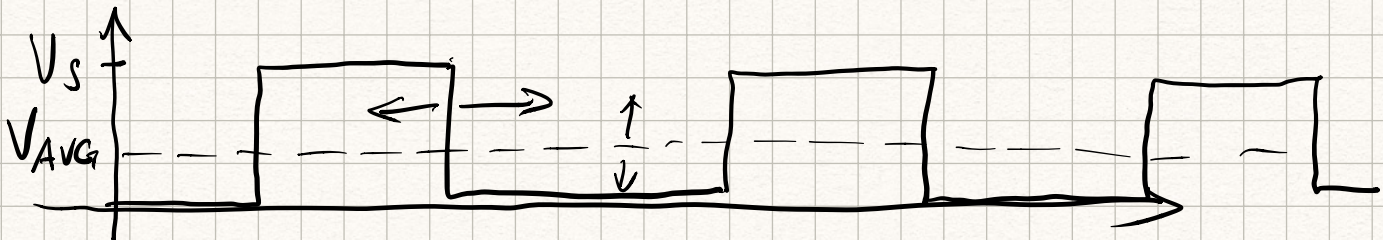


Pulse Width Modulation



How to generate this signal \Rightarrow Timer.

Counting Unit

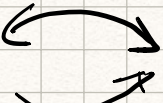
TAR (TA ϕ R)



- Counter
- Up/down w/ each clock cycle

Compare/Capture Unit

Compare TA ϕ CCR ϕ



Capture

TA ϕ CCR1



TA ϕ CCR2



I/O port

Compare

- Generate timing (e.g. PWM)

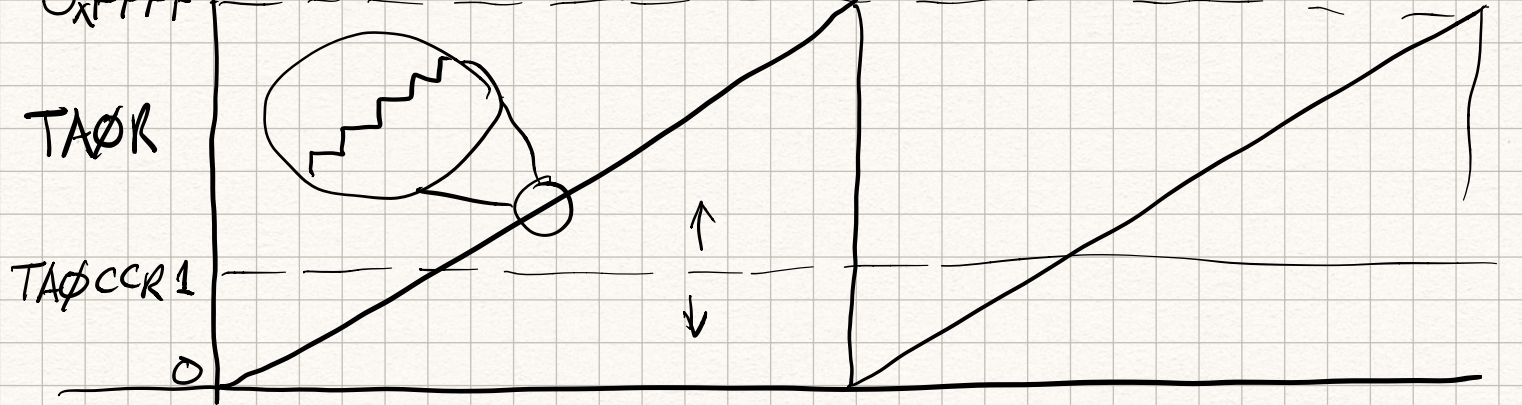
Capture

- Measure timing

Resolution: 8 MHz \rightarrow 125 ns

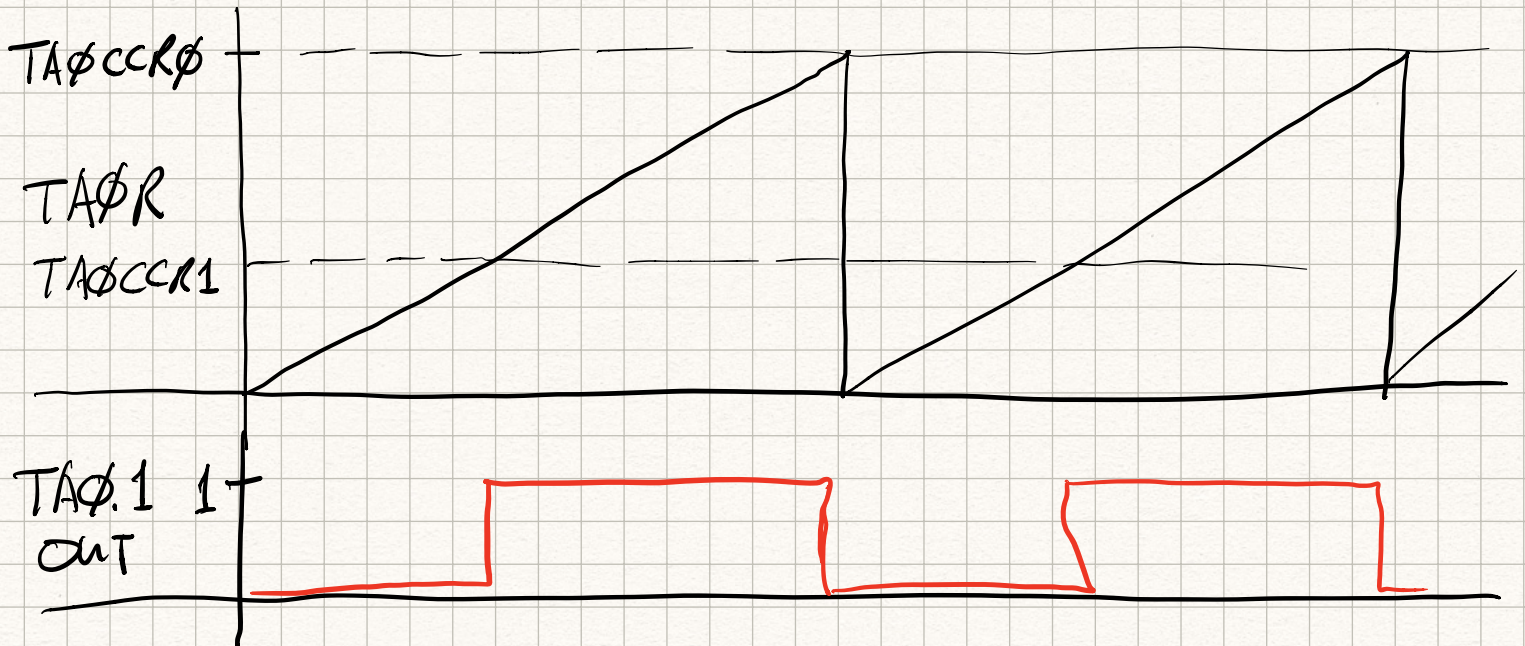
24 MHz \rightarrow 41.667 ns

Continuous Mode



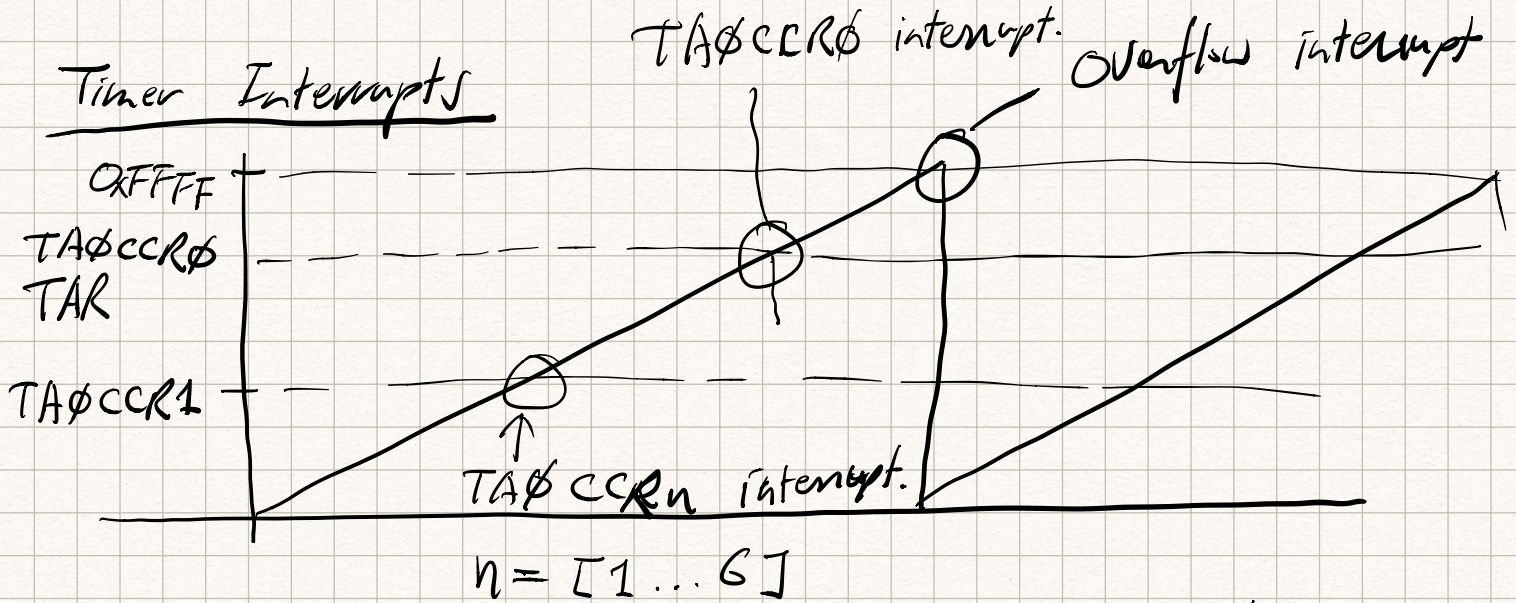
Period is set by the timer clock
 $(\text{clock cycle time}) \times 2^{16}$

Up Mode



How to generate arbitrary freq. (Square Wave)
 - Use Continuous mode





Only two interrupt vectors are available

