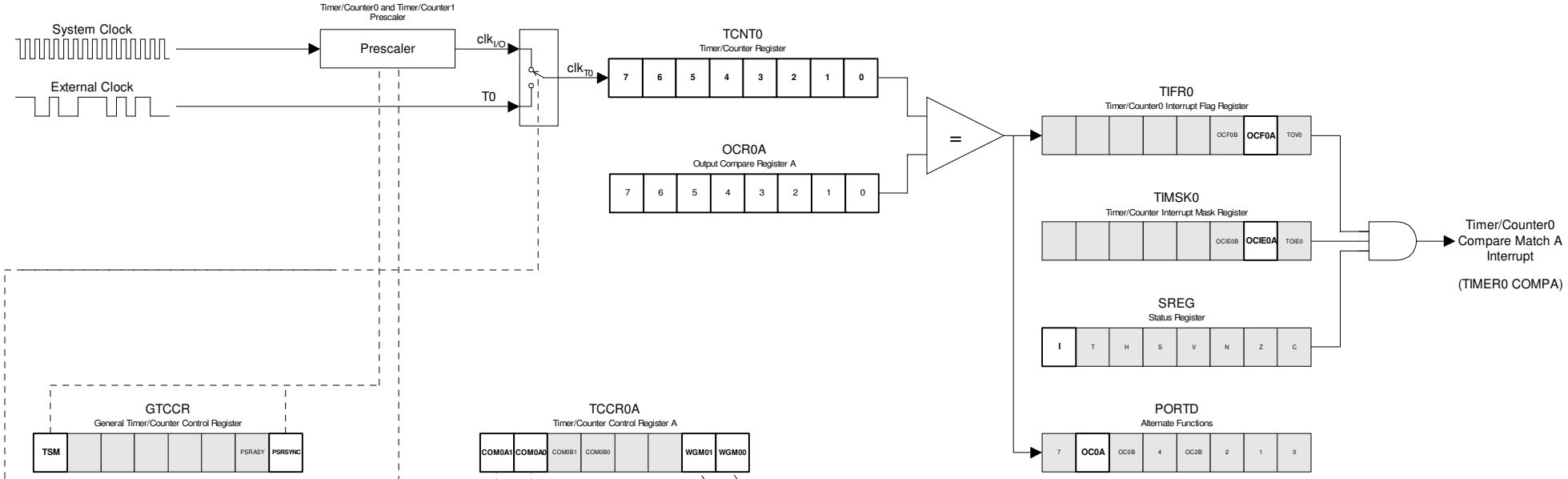
Timer/Counter0 Compare Match A

ATmega48/88/168/328 etc.



CS02	CS01	CS00	Clock Select
0	0	0	Timer/Counter stopped
0	0	1	$clk_{I/O}$
0	1	0	$clk_{I/O}$/ 8
0	1	1	$clk_{I/O}$/ 64
1	0	0	$clk_{I/O}$ / 256
1	0	1	$clk_{I/O}$ / 1024
1	1	0	External clock source on T0 pin. Clock on falling edge
1	1	1	External clock source on T0 pin. Clock on rising edge

Compare Output Mode

COM0A1	COM0A0	non-PWM Mode (WGM modes 0 and 2)
0	0	Normal Port Operation, OC0A disconnected
0	1	Toggle OC0A on Compare Match
1	0	Clear OC0A on Compare Match
1	1	Set OC0A on Compare Match

COM0A1	COM0A0	Fast PWM Mode (WGM modes 3 and 7)
0	0	Normal Port Operation, OC0A disconnected
0	1	Mode 3: Normal Port Operation, OC0A disconnected Mode 7: Toggle OC0A on Compare Match
1	0	Clear OC0A on Compare Match, set OC0A at BOTTOM (non-inverting mode)
1	1	Set OC0A on Compare Match, clear OC0A at BOTTOM (inverting mode)

COM0A1	COM0A0	Phase Correct PWM Mode (WGM modes 1 and 5)
0	0	Normal Port Operation, OC0A disconnected
0	1	Mode 1: Normal Port Operation, OC0A disconnected Mode 5: Toggle OC0A on Compare Match
1	0	Clear OC0A on Compare Match when up-counting. Set OC0A on Compare Match when down-counting.
1	1	Set OC0A on Compare Match when up-counting. Clear OC0A on Compare Match when down-counting.

Waveform Generation Mode

Mode	WGM02	WGM01	WGM00	Timer / Counter Mode of Operation	TOP	Update of OCR0A at	TOV Flag Set on
0	0	0	0	Normal	0xFF	Immediate	0xFF
1	0	0	1	PWM, Phase Correct	0xFF	TOP	0x00
2	0	1	0	CTC	OCR0A	Immediate	0xFF
3	0	1	1	Fast PWM	0xFF	BOTTOM	0xFF
4	1	0	0	Reserved			
5	1	0	1	PWM, Phase Correct	OCR0A	TOP	0x00
6	1	1	0	Reserved			
7	1	1	1	Fast PWM	OCR0A	BOTTOM	TOP

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ATmega328 Timer-Counter0 Compare Match A
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