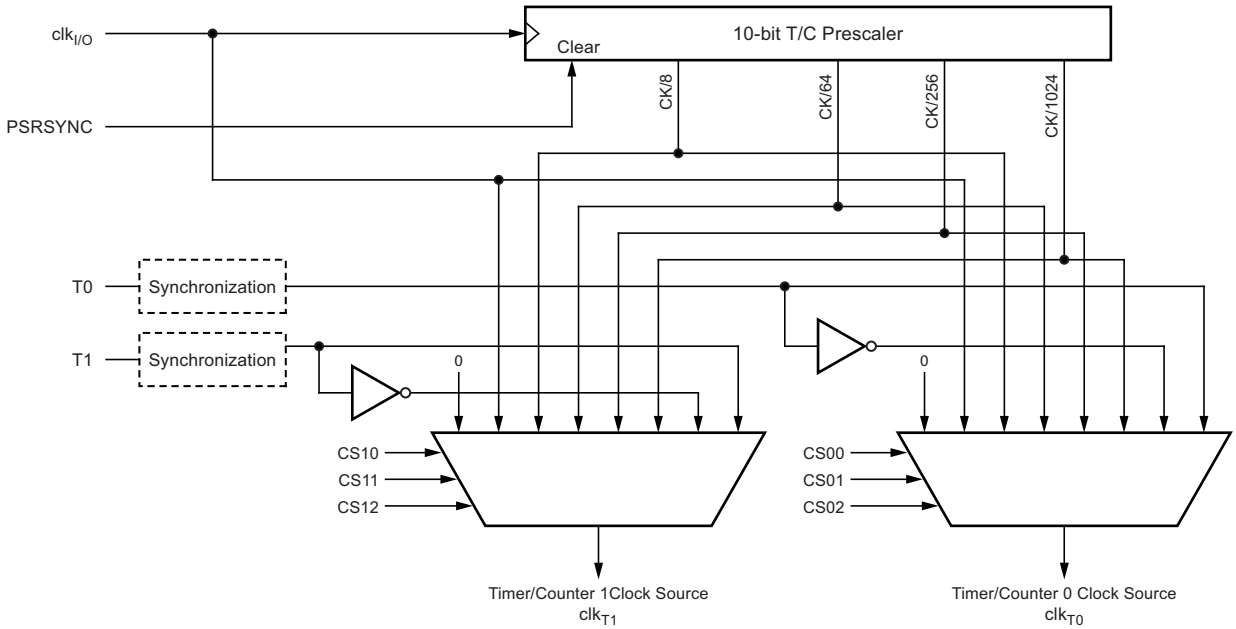
Figure 16-2. Prescaler for Timer/Counter0 and Timer/Counter1(1)



Note: 1. The synchronization logic on the input pins (T1/T0) is shown in Figure 16-1.

16.4 Register Description

16.4.1 GTCCR – General Timer/Counter Control Register

Bit	7	6	5	4	3	2	1	0	
0x23 (0x43)	TSM	–	–	–	–	–	PSRASY	PSRSYNC	GTCCR
Read/Write	R/W	R	R	R	R	R	R/W	R/W	
Initial Value	0	0	0	0	0	0	0	0	

- **Bit 7 – TSM: Timer/Counter Synchronization Mode**

Writing the TSM bit to one activates the Timer/Counter synchronization mode. In this mode, the value that is written to the PSRASY and PSRSYNC bits is kept, hence keeping the corresponding prescaler reset signals asserted. This ensures that the corresponding Timer/Counters are halted and can be configured to the same value without the risk of one of them advancing during configuration. When the TSM bit is written to zero, the PSRASY and PSRSYNC bits are cleared by hardware, and the Timer/Counters start counting simultaneously.

- **Bit 0 – PSRSYNC: Prescaler Reset**

When this bit is one, Timer/Counter1 and Timer/Counter0 prescaler will be reset. This bit is normally cleared immediately by hardware, except if the TSM bit is set. Note that Timer/Counter1 and Timer/Counter0 share the same prescaler and a reset of this prescaler will affect both timers.