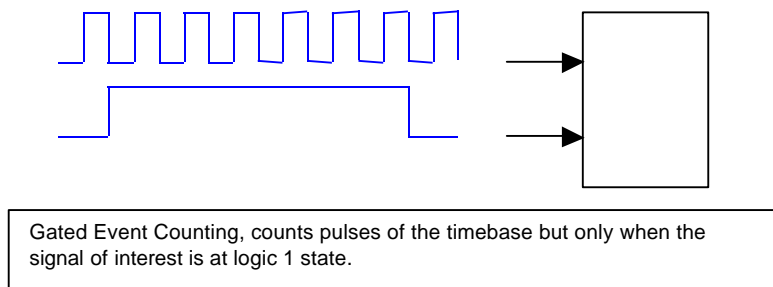


Measurement of Pulse Width

Programming a counter for gated event counting performs pulse width measurement. The signal of interest is connected to the gate of the counter. The number of accumulated counts, of a known timebase, is indicative of the pulse width at the gate.

Often the internal timebase of a multifunction board is too fast to allow just a single 16bit counter to be used for the gated event counting. For example, the multifunction boards of the KPCI3100 driver (KPCI-3101, KPCI-3102, etc.) have an internal timebase of 20MHz. A single 16bit counter will reach full scale in 3.27 msec.



If the pulse of interest is longer than 3 msec in duration, then additional counters must be used to perform the task. One approach is to use a counter in square wave generation mode to provide a slower timebase signal to the gated event-counting channel. If the two counter channels are immediately adjacent, the square wave output can be routed to the input of the next channel by an internal cascade (no jumper wire required).

