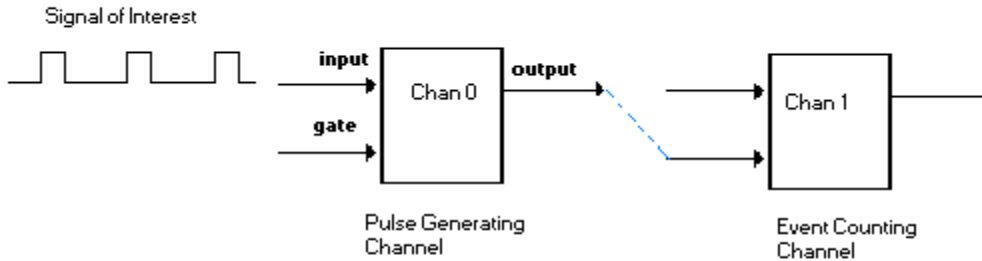# How do I connect my signal when measuring frequency with a CTM board and DriverLINX?

Assuming the DriverLINX task is making use of channel 0, connect the signal of interest to the input of logical channel 0 (counter 1). Use a small jumper wire to connect the output of logical channel 0 to the gate of logical channel 1 (counter 2).

Here is a detailed explanation:

The CTM-05/A or CTM-10 will use two adjacent channels when performing a frequency measurement task.

Frequency measurement can be thought of as two tasks: generate a gating pulse of known duration and do gated event counting. The number of accumulated pulses divided by the known gating period will be the frequency.

In the DriverLINX Service Request, the rateChannel property refers to the first of the two channels that will be used by the task.

The first channel of the two will be used to generate a one-shot pulse of requested duration (duration controlled by the onCount property or member). The output of this first channel must be connected to the gate of the second channel with a jumper wire.

The second channel will perform the gated event counting. It might seem intuitive to connect the signal of interest to the input of this second counter, but DriverLINX has an alternate implementation. The AM9513A chip that is used on the CTM boards has complex signal routing capabilities. The signal applied to the input of one counter can be routed (internally) to other counters. In the DriverLINX task for CTM boards, requesting SOURCE1 as the rateClock for the task instructs the signal applied at the input of counter 1 to be routed internally to the input of counter 2, the gated event counting channel.