

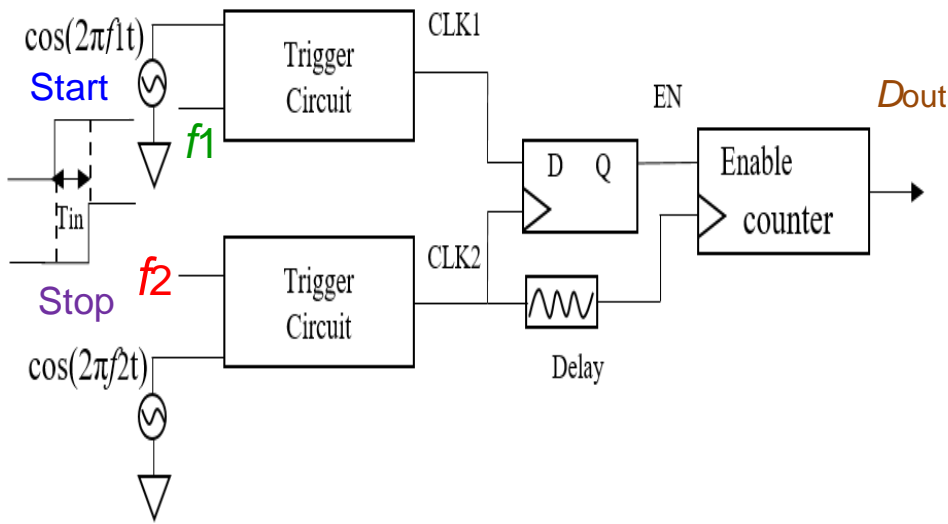
## Integration-type Time-to-Digital Converter Using Vernier Oscillators

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Proposed circuit:

- Measurement of time between **Start** and **Stop** rising edges → digital output **Dout**
- Inspired by integration-type ADC
- Simple circuit



- Two oscillators  $f_1, f_2$

- Fine time resolution  $T_1 - T_2$   
 $T_1 = 1/f_1, T_2 = 1/f_2$

