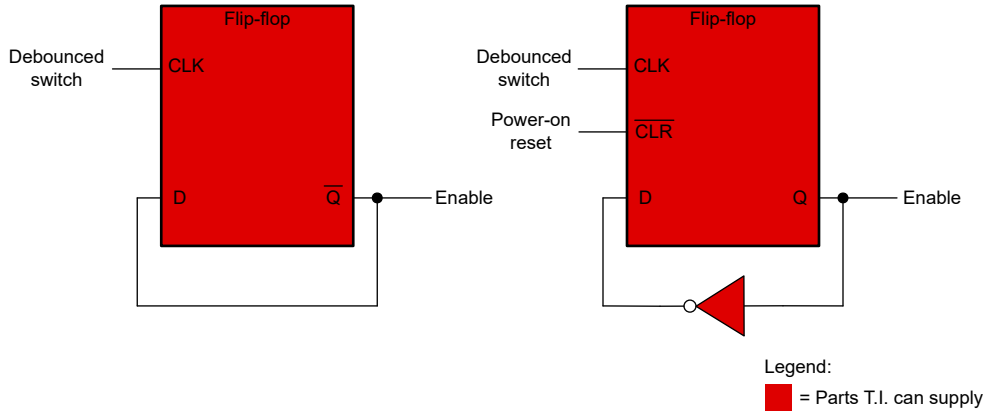
Product Overview

Generate an Enable Signal that can be Toggled

A push-button or other input trigger signal can be used to toggle an enable signal on or off, alternating between the two modes with each press. A flip-flop with a clear pin can be used if it is necessary that the flip-flop be in a specific state after power-on.



Design Considerations

- The flip-flop can trigger on with either a button press or a button depress depending on the debounce configuration
- When the device is first powered on, the flip-flop outputs an unknown state unless the device is reset with a power-on reset pulse
  - Systems which do not require starting in a specific state when powered on do not require asynchronous clear
- Flip-flops with inverted outputs do not require the inverter on the output
- *[FAQ] How does a slow or floating input affect a CMOS device?*
- *[FAQ] Where do I find maximum power dissipation for a device?*
- Ask a question on the TI E2E™ forum

Recommended Parts

Part Number	AEC-Q100	V_{CC} Range	Function	Features
SN74LVC1G08		1.65 V – 5.5 V	D-type flip-flop	1 channel, Inverted output
SN74LVC1G08-Q1	✓			
SN74LVC1G175		1.65 V – 5.5 V	D-type flip-flop	1 channel, Asynchronous clear
SN74LVC2G74		1.65 V – 5.5 V	D-type flip-flop	1 Channel, Asynchronous clear, Inverted output, Preset
SN74LVC2G74-Q1	✓			
SN74LVC1G14		1.65 V – 5.5 V	Inverting buffer	Schmitt-trigger inputs
SN74LVC1G14-Q1	✓			

For more devices, browse through the *online parametric tool* where you can sort by desired voltage, channel numbers, and other features.

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