

# TI C2000 Toolbox GPIO DO

This document describes *GPIO DO* component from TI C2000 Toolbox library.

## Short description

GPIO DO component allows the user to manipulate the digital outputs of the target controller, as part of GPIO peripheral. User can *set*, *clear*, and *toggle* the digital outputs, depending on how the component is configured, and on the value of the component's runtime input.

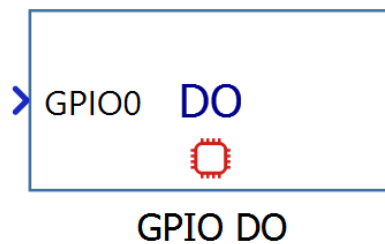


Figure 1. GPIO DO - component icon.

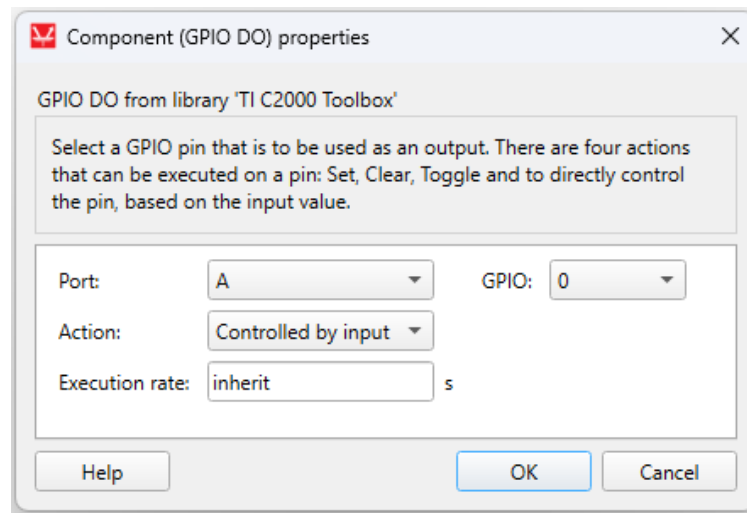
## Detailed overview

Component icon and component dialog are shown in **Error! Reference source not found.**, and **Error! Reference source not found.**, respectively.

**NOTE:** It is recommended to select *target platform* on [TI C2000 Setup](#) component before configuring the component.

Component properties:

- **Port** – select target GPIO port,
- **GPIO** – select target GPIO pin number,
- **Action** – select action to perform on the pin:
  - **Set** : Set the pin if **GPIOx** > 0.5,
  - **Clear** : Clear the pin if **GPIOx** > 0.5,
  - **Toggle** : Toggle the pin if **GPIOx** > 0.5,
  - **Pin Ctrl** : In directly controls the pin value – pin is set if **GPIOx** > 0.5, otherwise cleared.
- **Execution rate** - Desired rate at which component input will be applied. This value must be compatible with other components of the same subsystem: the value must be a multiple of the fastest execution rate in the circuit. To specify the execution rate, you can use either decimal (e.g. 0.001) or exponential values (e.g. 1e-3) in seconds. Alternatively, you can type in 'inherit' in which case the component will be assigned execution rate based on the execution rate of the components it is receiving input from.



**Figure 2. GPIO DO component dialog.**

Component inputs:

- GPIOx – signal which drives the GPIO pin and will be written to corresponding bitfield of GPySET, GPyCLEAR or GPyTOGGLE registers, y being a port label and x GPIO number.
  - Supported types: uint
  - Vector support: no