

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.

Detailed overview

Component icon and component dialog are shown in Figure 1, and Figure 2, respectively.

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

Target-oriented 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.

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.

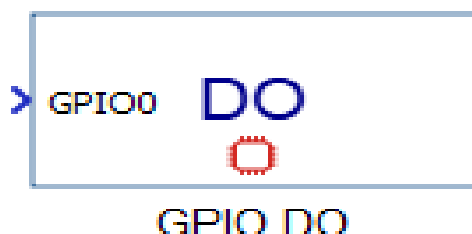


Figure 1 GPIO DO component icon

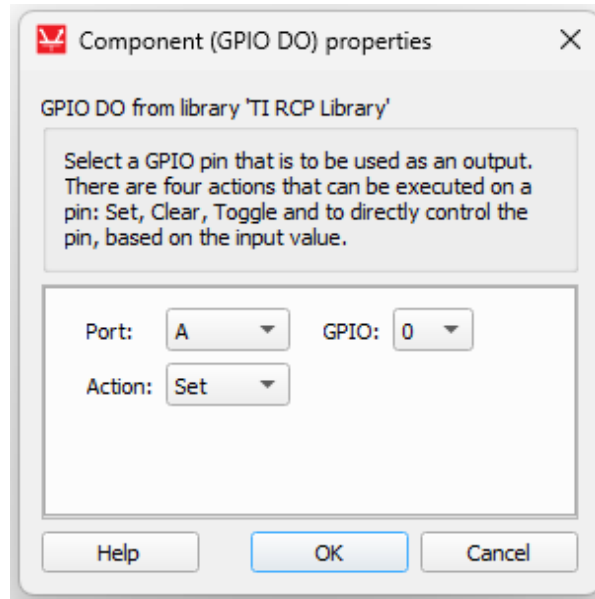


Figure 2 GPIO DO component dialog

Application-oriented component

Component properties:

- Tab **General**:
 - HIL DI number - specify number of HIL device digital input,
 - Pin action - select action that will be applied to target pin:
 - **Set**: Set the pin if **Dlx** > 0.5,
 - **Clear**: Clear the pin if **Dlx** > 0.5,
 - **Toggle**: Toggle the pin if **Dlx** > 0.5,
 - **Pin action**: **Dlx** directly controls the pin value – pin is set if **Dlx** > 0.5, otherwise cleared.
- Tab **HIL Interface**:
 - Interface type - select interface board that is used, currently supported boards are '*HIL TI Launchpad Interface*' and '*HIL TI uGrid Launchpad Interface*', '*HIL DSP 180 Interface*' and '*HIL DSP Interface*'.
 - Controller index - visible only when '*HIL TI uGrid Launchpad Interface*' is selected, specifies used MCU slot on the interface board.

NOTE: It is recommended to select *interface type* and *controller index* before configuring other properties.

Component inputs:

- Dlx – signal which drives the HIL digital input pin.

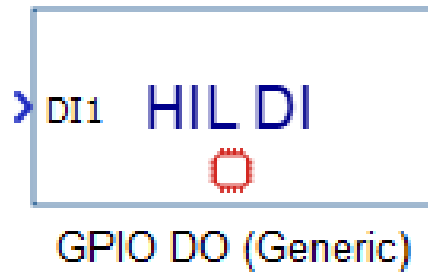


Figure 3. GPIO DO (Generic) component icon.

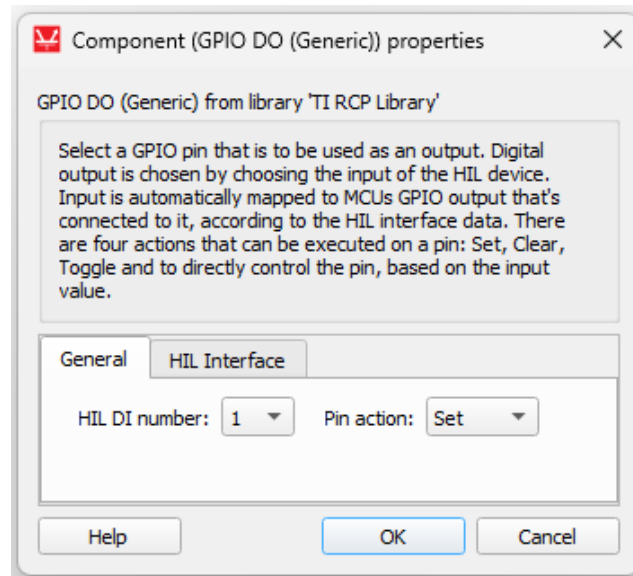


Figure 4. GPIO DO (Generic) component dialog - General tab.

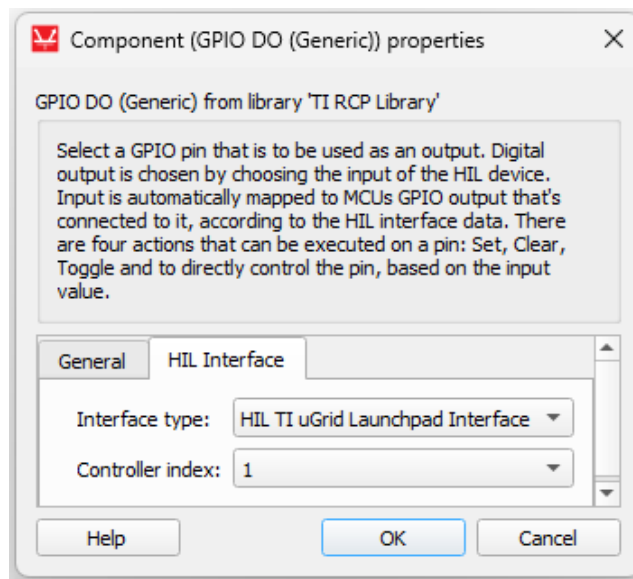


Figure 5. GPIO DO (Generic) component dialog - HIL Interface tab.