GPI - General purpose inputs

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Benoît STEINMANN
Software Team Leader
imperix

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The GPI block reads the value of the General Purpose Inputs (GPI). To set the value, use the GPO block.

Simulink block

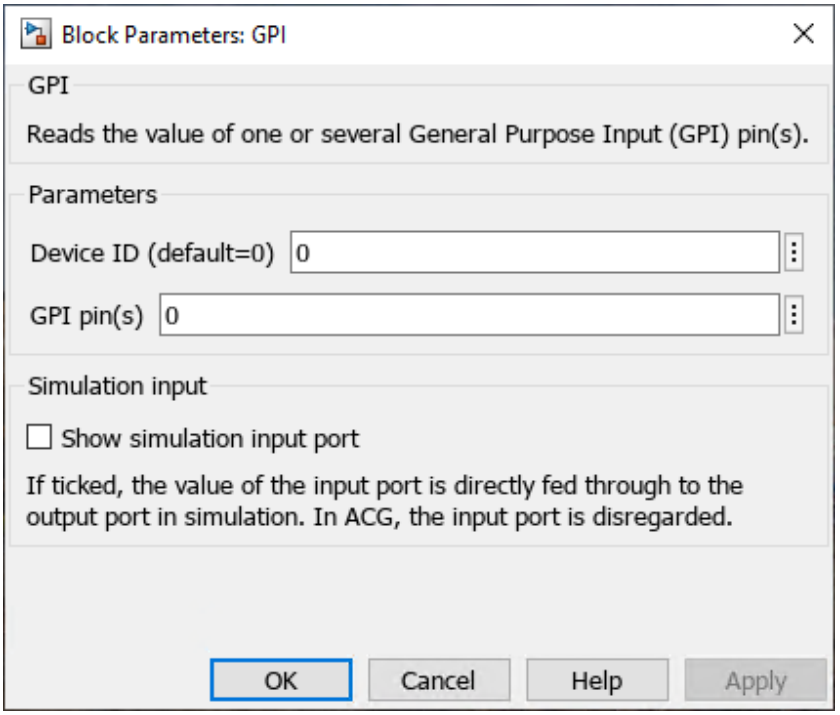
Signal specification

The output signal returns the value of one GPI pin.

The pin locations of the general purpose inputs, numbering, and voltage levels are available in the B-Box RCP datasheet and in the B-Board PRO datasheet.

Parameters

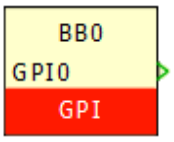
- `Device ID` selects which B-Box/B-Board to address when used in a multi-device configuration.
- `GPI pin(s)` (vectorizable) a selection of GPI pin(s) to read. It can be a single value or a vector.
- `Show simulation input port` defines if the simulation input is displayed or not.



PLECS block

Signal specification

The output signal returns the value of one GPI pin.

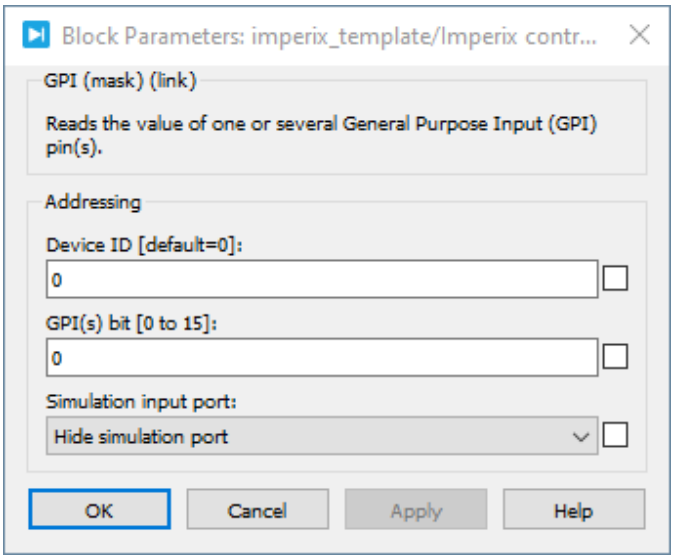


The pin locations of the general purpose inputs, numbering, and voltage levels are available in the B-Box RCP datasheet and in the B-Board PRO datasheet.

Parameters

- `Device ID` selects which B-Box/B-Board to address when used in a multi-device configuration.
- `GPI pin(s)` (vectorizable) a selection of GPI pin(s) to read. It can be a single value or a vector.

- `Simulation input port` defines if the target *inport* is displayed or not. This parameter is only used in simulation.



C++ functions

`Gpi_GetBit` **— Get the GPI pin value**

```
int Gpi_GetBit(unsigned int bit, unsigned int device=0);Code language: C++ (cpp)
```

Returns the GPI pin value (0 or 1).

It has to be called in the control interrupt routine.

Parameters

- `bit`: the GPI pin number
- `device`: the id of the addressed device (optional, used in multi-device configuration only)

Return value

- The GPI pin value (0 or 1)

`Gpi_Get` **— Get the whole 16 GPI values**

```
int Gpi_Get(unsigned int device=0);Code language: C++ (cpp)
```

Return the whole 16 GPI inputs values in the form of a 16-bit value.

It has to be called in the interrupt.

Parameters

- `device`: the id of the addressed device (optional, used in multi-device configuration only)

Return value

- The whole 16 inputs GPI value in the form of a 16-bit value