Terminal Reserve

1.50

Features

- Prevents an analog router from using an analog block terminal routing resource
- Allows safe firmware access to an analog block terminal routing resource

General Description

The Terminal Reserve component reserves the analog routing resource connected to a component, such as the analog wire connected to a comparator or pin. This is an advanced feature that is not needed for most designs, and should be used with caution.

When to Use a Terminal Reserve

The Terminal Reserve component is used when user firmware modifies the analog routing registers that connect to the specified terminal. The Terminal Reserve component protects against conflicting use of analog resources by user firmware and automatic analog routing.

Input/Output Connections

This section describes the various input and output connections for the Terminal Reserve component.

connect – Input/Output

Connects to a terminal to reserve it from automatic routing. The Terminal Reserve can only be connected to a single terminal. Note that some components may connect a terminal to several components internally. In this case, you cannot use the Terminal Reserve. The component that the Terminal Reserve is attached to must have a fixed placement (in the Design-Wide Resources Directives Editor).

Component Parameters

The Terminal Reserve has no configurable parameters, other than the Built-in parameters that exist for all components.

Placement

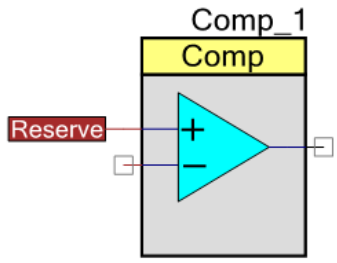
The component to which the Terminal Reserve is connected must have a fixed placement directive. This is to ensure that the terminal being reserved is well defined. The Terminal Reserve component itself has no placement controls.

Resources

The connected terminal is consumed by the Terminal Reserve component, because it specifies the routing resource that may not be used by the analog router.

Functional Description

Normally, the analog router may use the terminals of unused hardware blocks to route signals. For example, the analog router could use a comparator input terminal to connect AGL[0] to AGL[1]. If the firmware uses a terminal for manual routing, the design should include a Terminal Reserve component connected to that terminal. This will prevent conflicts with automatic analog routing. You should also use the Analog Constraint or Analog Reserve component to identify or protect the resource to which the terminal is being connected. The following example reserves the '+' input of the comparator:



Component Changes

This section lists the major changes in the component from the previous version.

Version	Description of Changes
1.50.c	Cosmetic change; updated symbol and diagram
1.50.b	Cosmetic change removing wire guide from terminal
1.50.a	Minor datasheet edits and updates