Analog Resource Reserve

1.50

Auto

Features

- Prevents an analog router from using a global analog routing resource
- Allows safe firmware access to a global analog routing resource

General Description

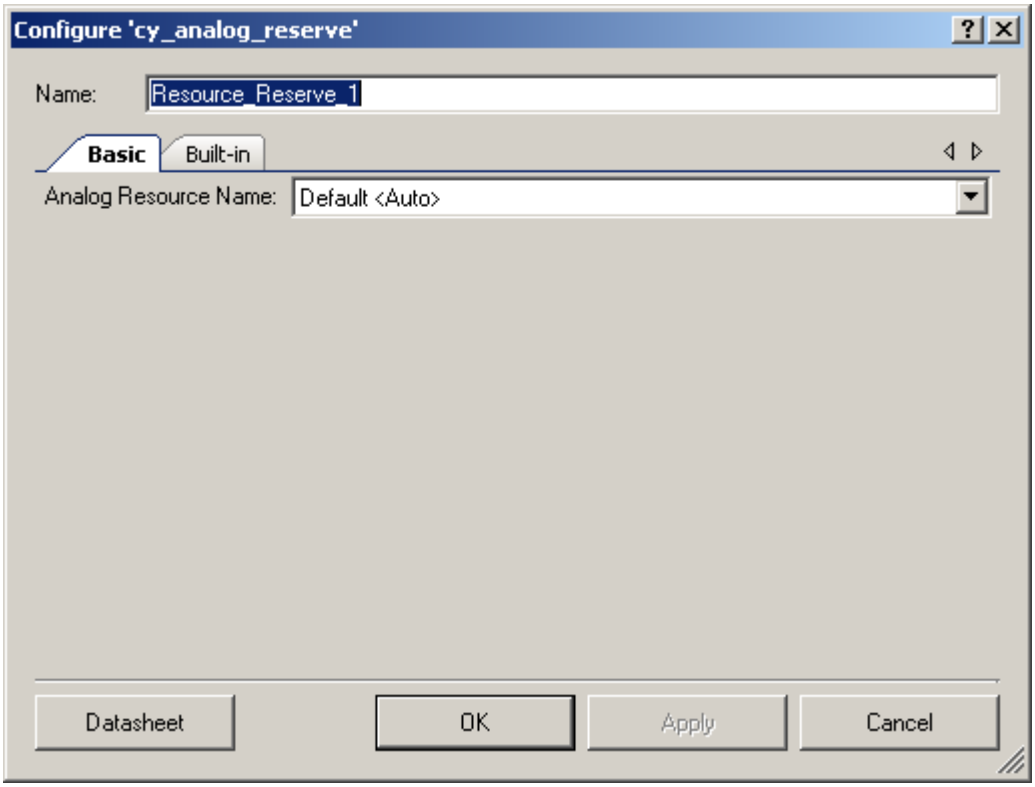
The Analog Resource Reserve component reserves a global analog routing resource so that the resource can be safely used by firmware-based manual analog routing. This is an advanced feature that is not needed for most designs, and should be used with caution.

When to Use an Analog Reserve

You should use the Analog Resource Reserve component when your firmware intends to modify analog routing registers. The Analog Resource Reserve component protects against conflicting use of analog resources by firmware and automatic analog routing.

Component Parameters

Drag an Analog Resource Reserve onto your design and double-click it to open the **Configure** dialog.



The Analog Resource Reserve component provides the following parameter.

Analog Resource Name

The analog resource to reserve. The default value, Auto, has no effect. The routing resource list depends on the selected family. That is, the set of global analog routing resources from which you can choose depends on the underlying family of devices.

Placement

The Analog Resource Reserve component has no independent placement information. The Analog Resource Name controls the resources used.

Resources

The Analog Resource Reserve component consumes the specified routing resource, because it specifies the routing resource that is not used by the analog router. However, this resource is

free for user firmware to route signals, by manually writing the routing registers. Refer to the Registers Technical Reference Manual (TRM) for the applicable device, available on the Cypress website.

Functional Description

The following analog routing resource names are available for PSoC 3 and PSoC 5:

- Analog globals: AGL[0]–AGL[7], AGR[0]–AGR[7]
- Analog local bus: abusl0–abusl3, abusr0–abusr3
- Analog mux bus: AMUXBUSL, AMUXBUSR
- Combined left/right resources: AG[0]–AG[7], abus0–abus3, AMUXBUS

To reserve analog wires connected to pins, comparators, or other components, use the Terminal Reserve component.

Component Changes

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

Version	Description of Changes
1.50.h	Minor datasheet edits.
1.50.g	The component was made visible for PSoC 6.
1.50.f	Minor datasheet edits.
1.50.e	Minor datasheet edits.
1.50.d	Minor datasheet edits.
1.50.c	Cosmetic change; updated symbol.
1.50.b	Minor datasheet edits and updates.
1.50.a	Minor datasheet edits and updates.

© Cypress Semiconductor Corporation, 2010-2017. This document is the property of Cypress Semiconductor Corporation and its subsidiaries, including Spansion LLC (“Cypress”). This document, including any software or firmware included or referenced in this document (“Software”), is owned by Cypress under the intellectual property laws and treaties of the United States and other countries worldwide. Cypress reserves all rights under such laws and treaties and does not, except as specifically stated in this paragraph, grant any license under its patents, copyrights, trademarks, or other intellectual property rights. If the Software is not accompanied by a license agreement and you do not otherwise have a written agreement with Cypress governing the use of the Software, then Cypress hereby grants you a personal, non-exclusive, nontransferable license (without the right to sublicense) (1) under its copyright rights in the Software (a) for Software provided in source code form, to modify and reproduce the Software solely for use with Cypress hardware products, only internally within your organization, and (b) to distribute the Software in binary code form externally to end users (either directly or indirectly through resellers and distributors), solely for use on Cypress hardware product units, and (2) under those claims of Cypress’s patents that are infringed by the Software (as provided by Cypress, unmodified) to make, use, distribute, and import the Software solely for use with Cypress hardware products. Any other use, reproduction, modification, translation, or compilation of the Software is prohibited.

TO THE EXTENT PERMITTED BY APPLICABLE LAW, CYPRESS MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH REGARD TO THIS DOCUMENT OR ANY SOFTWARE OR ACCOMPANYING HARDWARE, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. To the extent permitted by applicable law, Cypress reserves the right to make changes to this document without further notice. Cypress does not assume any liability arising out of the application or use of any product or circuit described in this document. Any information provided in this document, including any sample design information or programming code, is provided only for reference purposes. It is the responsibility of the user of this document to properly design, program, and test the functionality and safety of any application made of this information and any resulting product. Cypress products are not designed, intended, or authorized for use as critical components in systems designed or intended for the operation of weapons, weapons systems, nuclear installations, life-support devices or systems, other medical devices or systems (including resuscitation equipment and surgical implants), pollution control or hazardous substances management, or other uses where the failure of the device or system could cause personal injury, death, or property damage (“Unintended Uses”). A critical component is any component of a device or system whose failure to perform can be reasonably expected to cause the failure of the device or system, or to affect its safety or effectiveness. Cypress is not liable, in whole or in part, and you shall and hereby do release Cypress from any claim, damage, or other liability arising from or related to all Unintended Uses of Cypress products. You shall indemnify and hold Cypress harmless from and against all claims, costs, damages, and other liabilities, including claims for personal injury or death, arising from or related to any Unintended Uses of Cypress products.

Cypress, the Cypress logo, Spansion, the Spansion logo, and combinations thereof, WICED, PSoC, CapSense, EZ-USB, F-RAM, and Traveo are trademarks or registered trademarks of Cypress in the United States and other countries. For a more complete list of Cypress trademarks, visit cypress.com. Other names and brands may be claimed as property of their respective owners.