

IMX3102

I3C Basic 2:1 Bus Multiplexer

Description

The IMX3102 is a 2:1 I3C basic bus multiplexer switch with integrated Temperature Sensor for I3C and I²C applications. It is designed to be used for various motherboard applications.

There are two master ports (Master port 0 and Master port 1) and one slave port. Any one of those two Master ports can be selected as Active Master which has the control of the slave port as well as the IMX3102 itself.

Applications

- Server boards
- PCs/notebook motherboards
- Embedded automation

Features

- 2:1 bus multiplexer
- Two wire programmable I²C or I3C bus serial interface
- Single device load on the Host bus
- Up to 12.5MHz transfer rate
- Single 1.8V power supply input
- 1.0V VLDO output at VIO pin
- Supports 1.0V, 1.1V, and 1.2V Push-Pull IO levels
- Supports 1.0V, 1.1V, 1.2V, 1.8V, 2.5V, and 3.3V open-drain IO levels
- Integrated Temperature Sensor; 0.5°C accuracy with 0.25°C resolution
- Packet Error Check (PEC) function, Parity Error Check function
- Bus reset function
- In-band interrupt (IBI)
- Programmable I²C, I3C bus addressing scheme
- 9-pin thermally enhanced DFN package
- Temperature: Industrial range of -40°C to 125°C

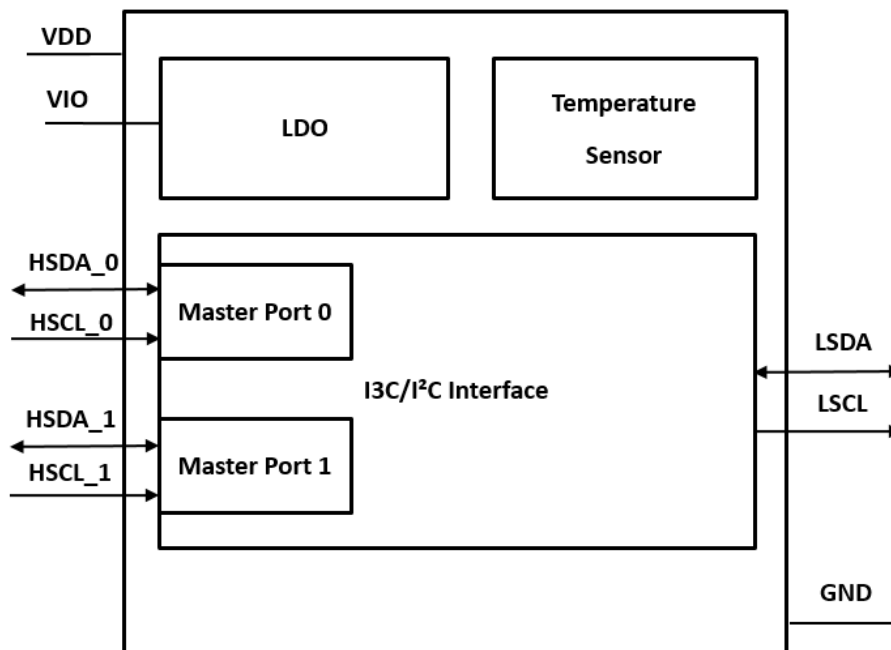


Figure 1. Block Diagram

IMPORTANT NOTICE AND DISCLAIMER

RENESAS ELECTRONICS CORPORATION AND ITS SUBSIDIARIES (“RENESAS”) PROVIDES TECHNICAL SPECIFICATIONS AND RELIABILITY DATA (INCLUDING DATASHEETS), DESIGN RESOURCES (INCLUDING REFERENCE DESIGNS), APPLICATION OR OTHER DESIGN ADVICE, WEB TOOLS, SAFETY INFORMATION, AND OTHER RESOURCES “AS IS” AND WITH ALL FAULTS, AND DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT OF THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

These resources are intended for developers skilled in the art designing with Renesas products. You are solely responsible for (1) selecting the appropriate products for your application, (2) designing, validating, and testing your application, and (3) ensuring your application meets applicable standards, and any other safety, security, or other requirements. These resources are subject to change without notice. Renesas grants you permission to use these resources only for development of an application that uses Renesas products. Other reproduction or use of these resources is strictly prohibited. No license is granted to any other Renesas intellectual property or to any third party intellectual property. Renesas disclaims responsibility for, and you will fully indemnify Renesas and its representatives against, any claims, damages, costs, losses, or liabilities arising out of your use of these resources. Renesas' products are provided only subject to Renesas' Terms and Conditions of Sale or other applicable terms agreed to in writing. No use of any Renesas resources expands or otherwise alters any applicable warranties or warranty disclaimers for these products.

(Rev.1.0 Mar 2020)

Corporate Headquarters

TOYOSU FORESIA, 3-2-24 Toyosu,
Koto-ku, Tokyo 135-0061, Japan
www.renesas.com

Contact Information

For further information on a product, technology, the most up-to-date version of a document, or your nearest sales office, please visit:
www.renesas.com/contact/

Trademarks

Renesas and the Renesas logo are trademarks of Renesas Electronics Corporation. All trademarks and registered trademarks are the property of their respective owners.