

IMX3112

I3C Basic 1:2 Bus Multiplexer

**Description**

The IMX3112 is a dual bidirectional 1:2 translating multiplexer for I3C/I<sup>2</sup>C bus. The input HSDA/HSCCL pair can fan out to two output pairs (or channels), either individual output channel can be selected.

Applications with slave devices that share the same address can use this multiplexer to prevent slave address conflicts. By selecting the proper output channel, the I3C/I<sup>2</sup>C master can access a large number of devices across both ports.

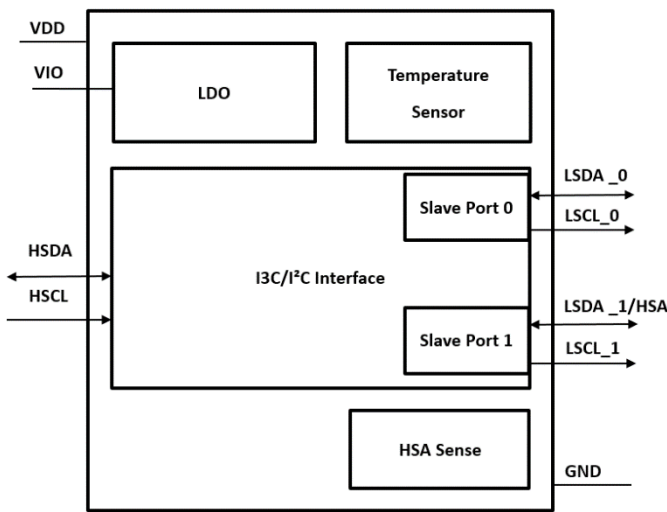


Figure 1. Block Diagram

**Features**

- 1:2 bus multiplexer
- Two-wire programmable I<sup>2</sup>C 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)
- Up to 8 unique addressing
- Programmable I<sup>2</sup>C, I3C bus addressing scheme
- 9-pin thermally enhanced DFN package
- Temperature: Industrial range of -40 °C to 125°C

**Applications**

- Pin reduction in host or ASIC or platform controllers
- Server boards
- PCs/notebooks
- Embedded automation

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