

## NLSX4401

# 1-Bit 20 Mb/s Dual-Supply Level Translator

## Product Overview

For complete documentation, see the data sheet.

The NLSX4401 is a 1-bit configurable dual-supply bidirectional auto sensing translator that does not require a directional control pin. The I/O VCC and I/O VL ports are designed to track two different power supply rails, VCC and VL respectively. Both the VCC and VL supply rails are configurable from 1.5 V to 5.5 V. This allows voltage logic signals on the VL side to be translated into lower, higher or equal value voltage logic signals on the VCC side, and vice-versa. The NLSX4401 translator has integrated 10 k pull-up resistors on the I/O lines. The integrated pull-up resistors are used to pull up the I/O lines to either VL or VCC. The NLSX4401 is an excellent match for open-drain applications such as the I2C communication bus.

## Features

- VL can be Less than, Greater than or Equal to VCC
- Wide VCC Operating Range: 1.5 V to 5.5 V
- Wide VL Operating Range: 1.5 V to 5.5 V
- High Speed with 24 Mb/s Guaranteed Data Rate
- Low Bit-to-Bit Skew
- Enable Input and I/O Pins are Overvoltage Tolerant (OVT) to Enable Input and I/O Pins are Overvoltage Tolerant (OVT) to 5.5 V
- Non-preferential Powerup Sequencing
- Power-Off Protection

## Applications

- I2C, SMBus, PMBus
- Low Voltage ASIC Level Translation

## End Products

- Mobile Phones, Cameras, Consumer Products

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Channels	Input Level	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	t <sub>pd</sub> Max (ns)	I <sub>O</sub> Max (mA)	Package Type
NLSX4401MU1T CG	0.2667		Active	1	CMOS	1.5	5.5	12	0.02	UDFN-6