

## Product Overview

### NLSX5011: Level Translator, 1-Bit, 100 Mbps, Configurable Dual-Supply

For complete documentation, see the data sheet.

The NLSX5011 is a 1-bit configurable dual-supply autosensing bidirectional level translator that does not require a direction control pin. The IO VCC- and IO VL- ports are designed to track two different power supply rails, VCC and VL respectively. Both the VCC and the VL supply rails are configurable from 0.9 V to 4.5 V. This allows a logic signal on the VL side to be translated to either a higher or a lower logic signal voltage on the VCC side, and vice-versa. The NLSX5011 offers the feature that the values of the VCC and VL supplies are independent. Design flexibility is maximized because VL can be set to a value either greater than or less than the VCC supply. In contrast, the majority of competitive auto sense translators have a restriction that the value of the VL supply must be equal to less than (VCC - 0.4) V. The NLSX5011 has high output current capability, which allows the translator to drive high capacitive loads such as most high frequency EMI filters. Another feature of the NLSX5011 is that each IO\_VLn and IO\_VCCn channel can function as either an input or an output. An Output Enable (EN) input is available to reduce the power consumption. The EN pin can be used to disable both IO ports by putting them in 3-state which significantly reduces the supply current from both VCC and VL. The EN signal is referenced to the VL supply.

### Features

- Wide VCC, VL Operating Range: 0.9 V to 4.5 V
- VL and VCC are independent. VL may be greater than, equal to, or less than VCC
- High 100 pF Capacitive Drive Capability
- HighSpeed with 140 Mb/s Guaranteed Data Rate for VCC, VL > 1.8 V
- Low Bit to Bit Skew
- Overvoltage Tolerant Enable and I/O Pins
- Nonpreferential Power Up Sequencing
- Power Off Protection
- Small packaging; UDFN-6 (1.45mm x 1.0mm) and (1.2mm x 1.0mm)
- These are PbFree devices

For more features, see the data sheet

### Applications

- Mobile Phones, PDAs, Other Portable Devices

### 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
NLSX5011AMUTAG	0.42	Pb-free Halide free non AEC-Q and PPAP	Active	1	CMOS	0.9	4.5	11	0.02	UDFN-6
NLSX5011AMUTBG	0.42	Pb-free Halide free non AEC-Q and PPAP	Active	1	CMOS	0.9	4.5	11	0.02	UDFN-6
NLSX5011AMUTCG	0.42	Pb-free Halide free non AEC-Q and PPAP	Active	1	CMOS	0.9	4.5	11	0.02	UDFN-6
NLSX5011MUTCG	0.336	Pb-free Halide free non AEC-Q and PPAP	Active	1	CMOS	0.9	4.5	11	0.02	UDFN-6

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