Product Overview

NLSX5014: Level Translator, 4-Bit, 100 Mbps, Configurable Dual-Supply

For complete documentation, see the data sheet.

The NLSX5014 is a 4-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 configurabel 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 NLSX5014 offers the feature that the values of the VCC and VL supplies are indenpendent. 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 NLSX5014 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 NLSX5014 is that each IO_VLn and IO_VCCn channel can function as either an input or an output. An Output Enable (EN) input is avaialbe to reduce the power consumption. The EN pin can be used to disable both I/O ports by putting them in 3-state which significantly reduces the 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
- High speed with 140 Mb/s guaranteed date 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: 1.7 mm x 2.0 mm UQFN-12, SOIC-14, TSSOP-14
- 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_{CC} Min (V)	V_{CC} Max (V)	t_{pd} Max (ns)	I_O Max (mA)	Package Type
NLSX5014DR2G	0.476	Pb-free Halide free	Active	4	CMOS	0.9	4.5	11	0.02	SOIC-14
NLSX5014DTR2G	0.476	Pb-free Halide free	Active	4	CMOS	0.9	4.5	11	0.02	TSSOP-14
NLSX5014MUTAG	0.42	Pb-free Halide free	Active	4	CMOS	0.9	4.5	11	0.02	UQFN-12

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