

**Voltage Level Translator 2-CH Bidirectional 8-Pin DSBGA
T/R**

Images are for reference only

[Inquiry](#)**Manufacturer:** [Texas Instruments, Inc](#)**Package/Case:** DSBGA-8**Product Type:** Logic ICs**RoHS:** RoHS Compliant/Lead free **Lifecycle:** Active**General Description**

This two-bit non-inverting translator is a bidirectional voltage-level translator and can be used to establish digital switching compatibility between mixed-voltage systems. It uses two separate configurable power-supply rails, with the A ports supporting operating voltages from 1.65V to 3.6 V while it tracks the VCCA supply, and the B ports supporting operating voltages from 2.3 V to 5.5 V while it tracks the VCCB supply. This allows the support of both lower and higher logic signal levels while providing bidirectional translation capabilities between any of the 1.8-V, 2.5-V, 3.3-V, and 5-V voltage nodes.

When the output-enable (OE) input is low, all I/Os are placed in the high-impedance state, which significantly reduces the power-supply quiescent current consumption.

To ensure the high-impedance state during power up or power down, OE should be tied to GND through a pull-down resistor; the minimum value of the resistor is determined by the current-sourcing capability of the driver.

Key Features

No Direction-Control Signal Needed

Maximum Data Rates
24 Mbps (Push Pull)

2 Mbps (Open Drain)

Available in the Texas Instruments NanoStar[®] Package

1.65 V to 3.6 V on A Port and 2.3 V to 5.5 V on B Port ($V_{CCA} \leq V_{CCB}$)

VCC Isolation Feature: If Either VCC Input Is at GND, Both Ports Are in the High-Impedance State

No Power-Supply Sequencing Required: Either VCCA or VCCB Can Be Ramped First

Ioff Supports Partial-Power-Down Mode Operation

Latch-Up Performance Exceeds 100 mA Per JESD 78, Class II

ESD Protection Exceeds JESD 22

A Port:
2500-V Human-Body Model (A114-B)

250-V Machine Model (A115-A)

1500-V Charged-Device Model (C101)

B Port:
8-kV Human-Body Model (A114-B)

250-V Machine Model (A115-A)

1500-V Charged-Device Model (C101)

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When the output-enable (OE) input is low, all I/Os are placed in the high-impedance state, which significantly reduces the power-supply quiescent current consumption.

To ensure the high-impedance state during power up or power down, OE should be tied to GND through a pulldown resistor; the minimum value of the resistor is determined by the current-sourcing capability of the driver.

Recommended For You

TXB0102YZPR

Texas Instruments, Inc

DSBGA-8

TXB0102DCUR

Texas Instruments, Inc

VSSOP8

TXS0104EDR

Texas Instruments, Inc

SOP14

TXB0108PWR

Texas Instruments, Inc

TSSOP20

TXS0104EPWR

Texas Instruments, Inc

TSSOP14

TXS0102QDCURQ1

Texas Instruments, Inc

VSSOP8

TXS0104EQPWRQ1

Texas Instruments, Inc
TSSOP14

TXB0104QRGYRQ1

Texas Instruments, Inc
VQFN14

TXB0104QRUTRQ1

Texas Instruments, Inc
UQFN12

TXS0102DCTT

Texas Instruments, Inc
SSOP8

TXS0102DCUT

Texas Instruments, Inc
VSSOP8

TXB0104QPWRQ1

Texas Instruments, Inc
TSSOP14

TXS0104ED

Texas Instruments, Inc
SOP14

TXB0101DRLR

Texas Instruments, Inc
SOT563

TXB0101DBVR

Texas Instruments, Inc
SOT23