SparkFun Voltage-Level Translator Breakout - TXB0104

BOB-11771 | ROHS ✔

★★★★☆ 7

DESCRIPTION | FEATURES | DOCUMENTS

This is a breakout board for the Texas Instruments TXB0104 module. The TXB0104 is a 4-bit bidirectional voltage-level translator with automatic direction sensing.

This 4-bit noninverting translator uses two separate configurable power-supply rails. The A port is designed to track VCCA. VCCA accepts any supply voltage from 1.2V to 3.6V. The B port is designed to track VCCB. VCCB accepts any supply voltage from 1.65V to 5.5V. This allows for universal low-voltage bidirectional translation between any of the 1.2-V, 1.5-V, 1.8-V, 2.5-V, 3.3-V, and 5-V voltage nodes. VCCA should not exceed VCCB. We have broken out each pin on this module for you to easily access both the A and B ports.

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SparkFun Voltage-Level Translator Breakout - TXB0104 Product Help and Resources

SKILLS NEEDED

Core Skill: Soldering

This skill defines how difficult the soldering is on a particular product. It might be a couple simple solder joints, or require special reflow tools.

Skill Level: Noob - Some basic soldering is required, but it is limited to a just a few pins, basic through-hole soldering, and couple (if any) polarized components. A basic soldering iron is all you should need.
See all skill levels

Core Skill: Electrical Prototyping

If it requires power, you need to know how much, what all the pins do, and how to hook it up. You may need to reference datasheets, schematics, and know the ins and outs of electronics.

Skill Level: Rookie - You may be required to know a bit more about the component, such as orientation, or how to hook it up, in addition to power requirements. You will need to understand polarized components.
See all skill levels

COMMENTS 27 | REVIEWS ★★★★☆ 7

Customer Reviews

★★★★☆ 4.1 out of 5

Based on 7 ratings:

5 star		3
4 star		3
3 star		0
2 star		1
1 star		0

Currently viewing all customer reviews.

2 of 2 found this helpful:

★★★★★ I buy these in bulk for our lab

about 3 years ago by Red Mage ✔ verified purchaser

My team is constantly building prototypes which involve combining various off the shelf eval boards with our companies technology and various single board microcontrollers, and thus seemingly always in need of shifting levels between devices. After debugging and evaluating our prototypes, we commonly bring the TXB010X family of level shifters (typically in a smaller package and available in 1,2,4,6, or 8 bit) on to our custom boards which helps maintain consistency for debugging.

This board is a simple breakout board bringing the signals to 0.1" header holes while simplifying the OE connection with a solder jumper to VCCA, eliminating extra soldering work if you simply want this device always-on. In instances where power is critical or it is beneficial to appear as though a bus has been disconnected, the OE pin can be set high by a GPIO to shut down the device and the outputs will go to a high impedance state.

As the TXB0104 is primarily intended for push-pull signals rather than open-drain it works really well for UART and SPI bus applications, whereas for open-drain signals such as I2C, the BOB-12009 is a better option (which I also typically buy in bulk and stock in our lab).

2 of 2 found this helpful:

★★★★★ Good for SPI

about 3 years ago by Member #153082 ✔ verified purchaser

I tried level shifting an ADXL362 breakout board with resistors and only got garbage out of the board. Then I bought the TXB0104 slapped some header pins on it and installed onto my breadboard and was up and running in minutes. I was able to run my SPI_CLOCK_DIV all the way up to 2 on a 16MHz Arduino and get data from the ADXL362. Since I am going to incorporate the actual TXB0104 chip into a custom board I like the idea of having the four lines taken care of with a minimal foot print and parts compared to using separate BSS138s.

1 of 1 found this helpful:

★★★★☆ level shifter

about 3 years ago by Member #146622 ✔ verified purchaser

while it might be good, I got confused with level shifter that probably will work for I2C bus. The data sheet of the TI device indicates that this board can not be used for I2C bus level shifting.

1 of 1 found this helpful:

★★★★★ Handy device

about 2 years ago by Member #498483 ✔ verified purchaser

This is a handy and low-cost solution to a common problem. One problem I ran into--and it is a problem with the IC, not with SparkFun's breakout board--is that the IC will oscillate if the load on any output is too heavy. If you find that is the case, add a buffer IC downstream of the output.

★★★★☆ No Working

about 2 years ago by Member #760381 ✔ verified purchaser

I have not got it working

★★★★☆ This works well, but...

about 2 years ago by Rich10 ✔ verified purchaser

This product is easy to use and straight forward; however, TI makes a 6 bit and 8 bit version that should be available. I use this for converting quadrature encoder pulses, which have three signals when also using the index signal. Two encoders are used for a differential drive, meaning I need 6 signals. With this model, I must buy one for each encoder, wasting one bit per unit.

0 of 2 found this helpful:

★★☆☆☆ It didn't worked

about 3 years ago by Member #220387 ✔ verified purchaser

I tested but it didn't worked well, then I bought two 74AHCT125 to create an 8 bit level shifter and worked perfectly shifting levels from 3.3 v logic to 5 v .

> Single T replied on March 2, 2015:
> So sorry to hear that you had some issues with your item.

Downloaded from Arrow.com.