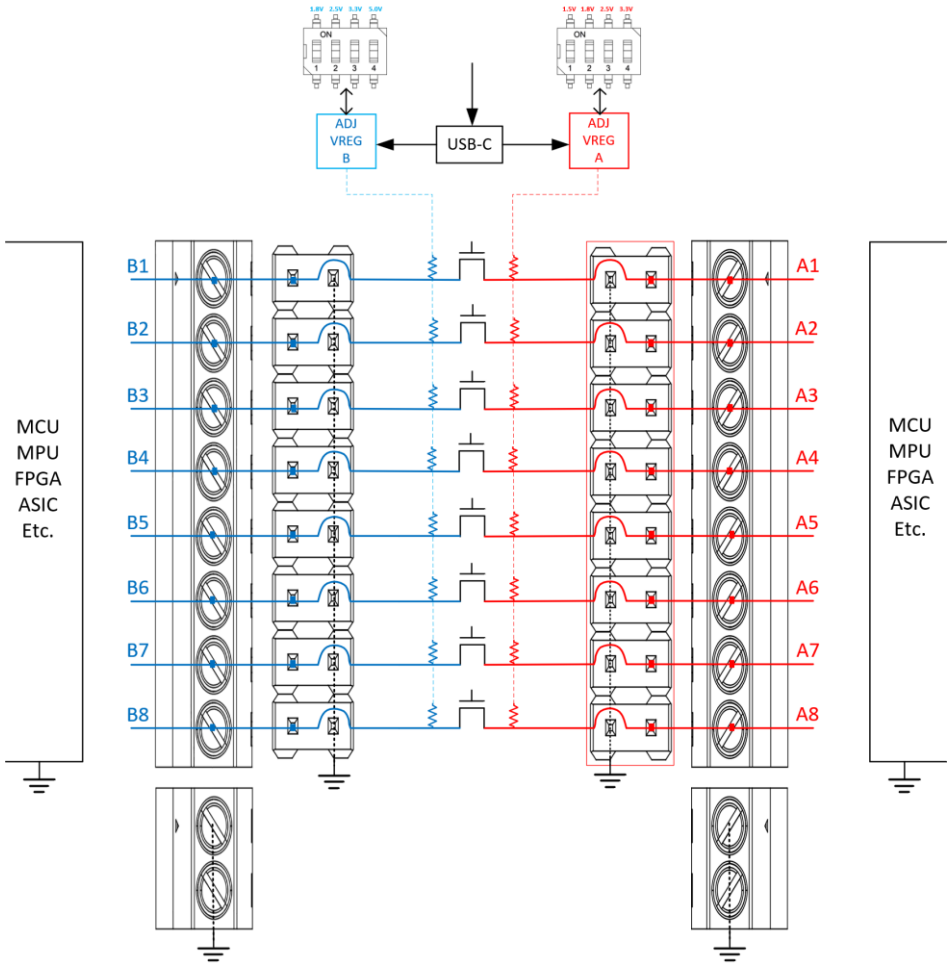
8ch 100Mbps Bidirectional Push-Pull / Open-drain Voltage Translator, Level-Shifter Adjustable from 1.5V-5.0V



Applications

- TTL level shifting
- CMOS level shifting
- SPI/UART/CAN/etc. level shifting
- I2C / I3C level shifting

Description

The 8ch translator is an 8-bit non-inverting level shifter/translator. The translator is capable of push-pull speeds up to 100Mbps or open-drain to speeds of 2Mbps. The "B" side of the translator can be set from 1.8V to 5V. The "A" side of the translator can be set from 1.5V to 3.3V with the DIP switches on the board. Signals can be applied to the pin headers and/or the terminal post.

Operation

Plug in any USB-C cable capable of supplying 5V with at least 100mA of current capability. (most USB interfaces can provide this with no issue). The blue LED near the USB connector will light up to indicate the board is powered. The possible switch configurations for the various voltages are shown below in *Table 1*. It is always required that **Bank B** side of the translator always have its voltage set equal or higher than **Bank A** side of the translator. Device will not be damaged if set wrong, just will not work properly as a translator.

Bank B Switch				
ON	OFF	OFF	OFF	1.8V
OFF	ON	OFF	OFF	2.5V
OFF	OFF	ON	OFF	3.3V
OFF	OFF	OFF	ON	5.0V
1	2	3	4	

B >= A

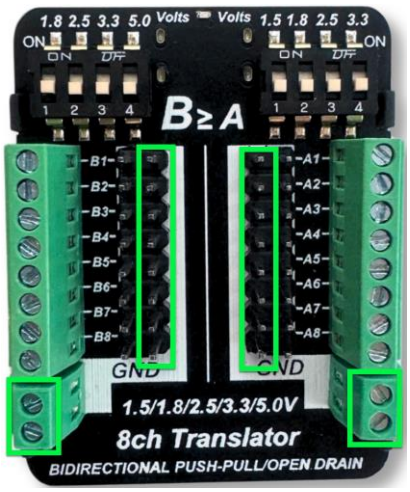
bank B voltage must be equal or higher than bank A voltage

Bank A Switch				
ON	OFF	OFF	OFF	1.5V
OFF	ON	OFF	OFF	1.8V
OFF	OFF	ON	OFF	2.5V
OFF	OFF	OFF	ON	3.3V
1	2	3	4	

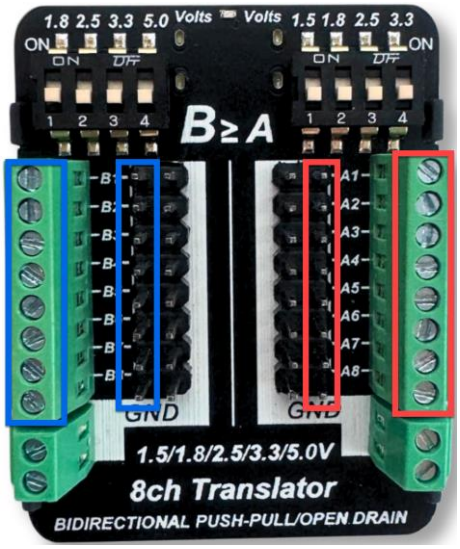
Table 1. Switch Settings

How to Interface

Ground can be connected to the following pins either the terminal screw block or the 0.1”/2.54mm pitch headers circled in **GREEN** below. Terminal block can accept wires from 18-24 AWG.



Bank B and **Bank A** signals can be connected to either the header or terminal screw block.



Specifications

Electrical characteristics can be found in the datasheet for Part Number: TXS0108E Manufacturer: Texas Instruments	
Weight	0.73oz / 21g
Dimensions	1.93x1.48x0.68"
	48.9x17.7x17.3mm

Mechanical Dimensions