

# IamaPLC: Signal level converters

## PCA9306 I<sup>2</sup>C Voltage Level Translator

When the supply voltages are mismatched, the best option is to use a dedicated device to bridge them.

Allows voltage level translation between:

- 1.0V Vref (1) and 1.8V, 2.5V, 3.3V or 5V Vbias (ref) (2)
- 1.2V Vref (1) and 1.8V, 2.5V, 3.3V or 5V Vbias (ref) (2)
- 1.8V Vref (1) and 3.3V or 5V Vbias (ref) (2)
- 2.5V Vref (1) and 5V Vbias (ref) (2)
- 3.3V Vref (1) and 5V Vbias (ref) (2)

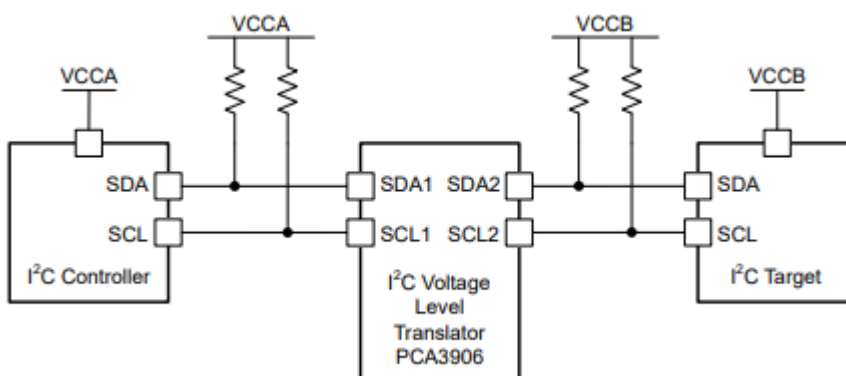


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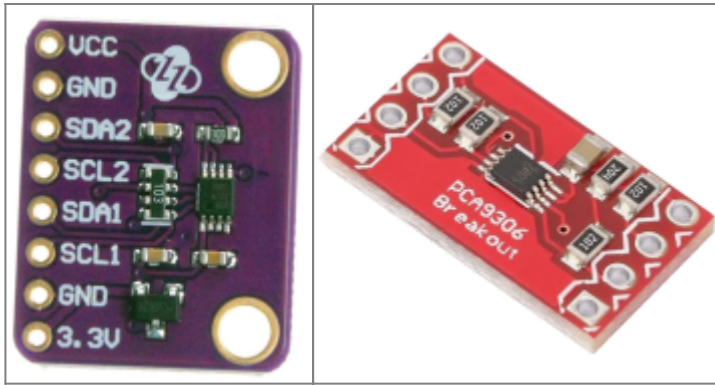
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The next image shows an example of using an I<sup>2</sup>C voltage-level translator to bridge communication between two different supply voltages. There are two sets of pullups, one for each voltage level. As a common voltage translator, the PCA9306 enables communication between different supply levels:



Application of PCA9306 for I<sup>2</sup>C communication: [here](#).

Several manufacturers produce compact modules using the PCA9306 IC. The picture below shows DollaTek's module (for example, you can find it on Amazon):



## I2C topics on lamaPLC

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<ul style="list-style-type: none"> <li>• <a href="#">lamaPLC project: Sension SCD CO<sup>2</sup> measurement module</a></li> </ul>	2026/04/15 19:34	scd30, scd40, scd41, iaq, ndir, sensor, i2c, arduino code
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