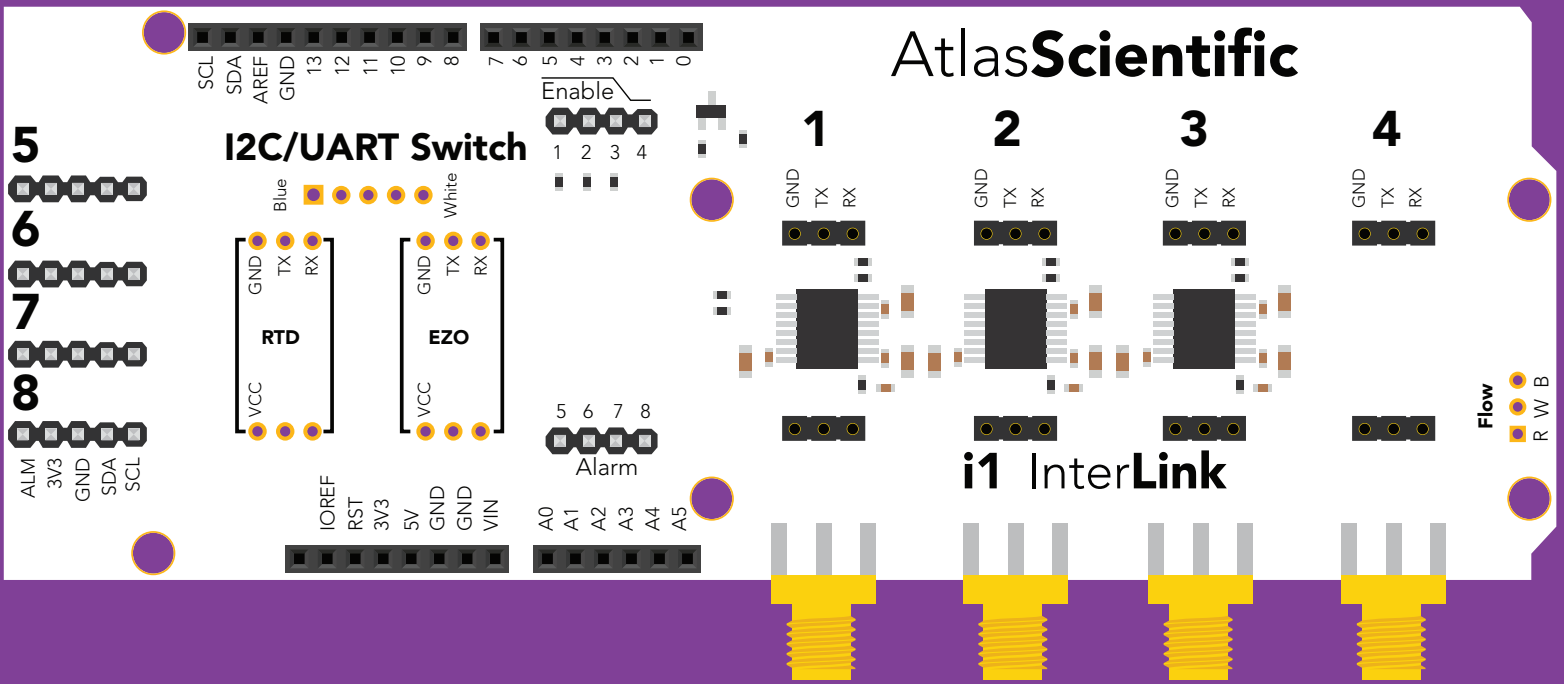


# i1 InterLink

Arduino Shield



Connect up to eight Atlas Scientific sensors to one Arduino Uno / Mega.

I2C mode only.

All Arduino pins still accessible through the i1 InterLink.

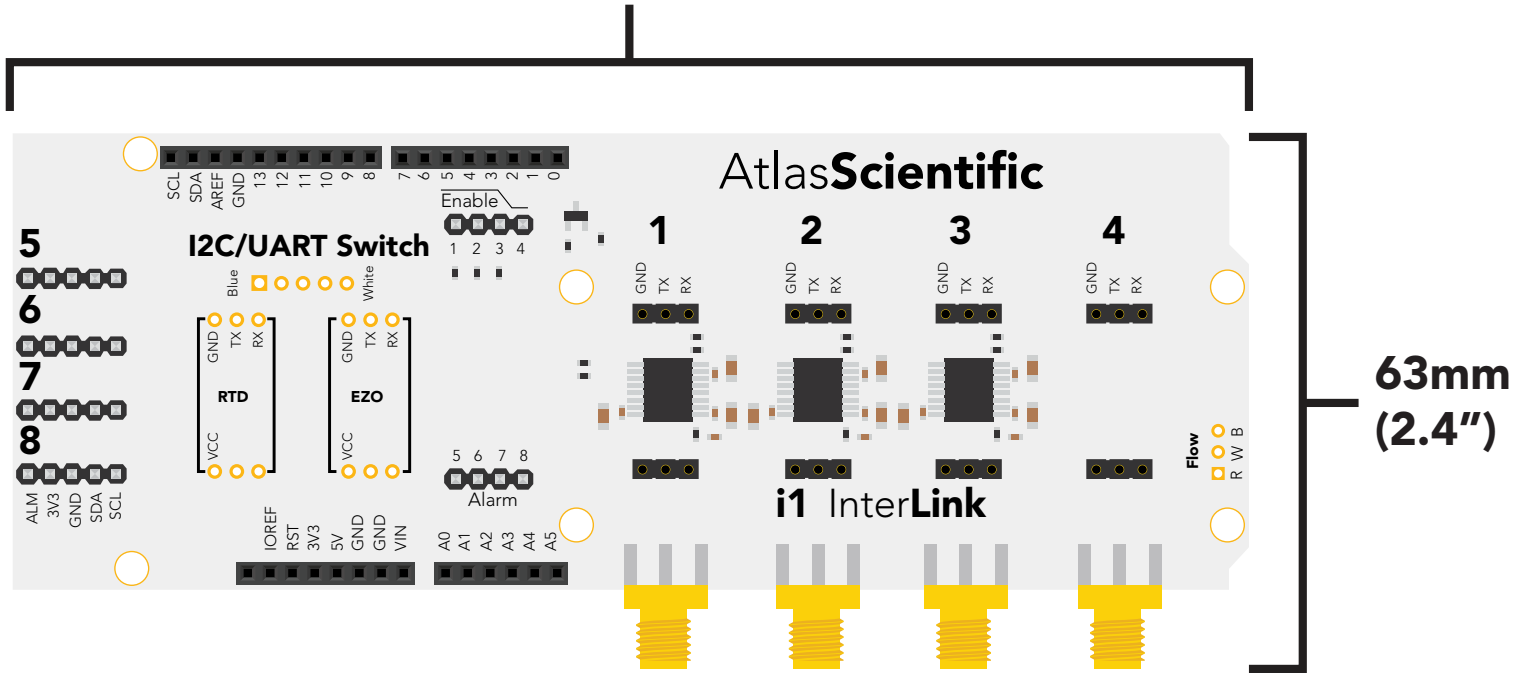
Comes fully assembled.

**i1 InterLink does not come with any EZO™ circuits or sensors.**

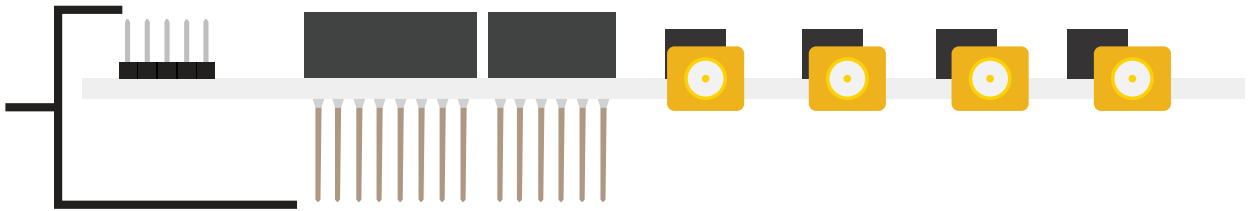


# i1 InterLink dimensions

147mm (5.7")

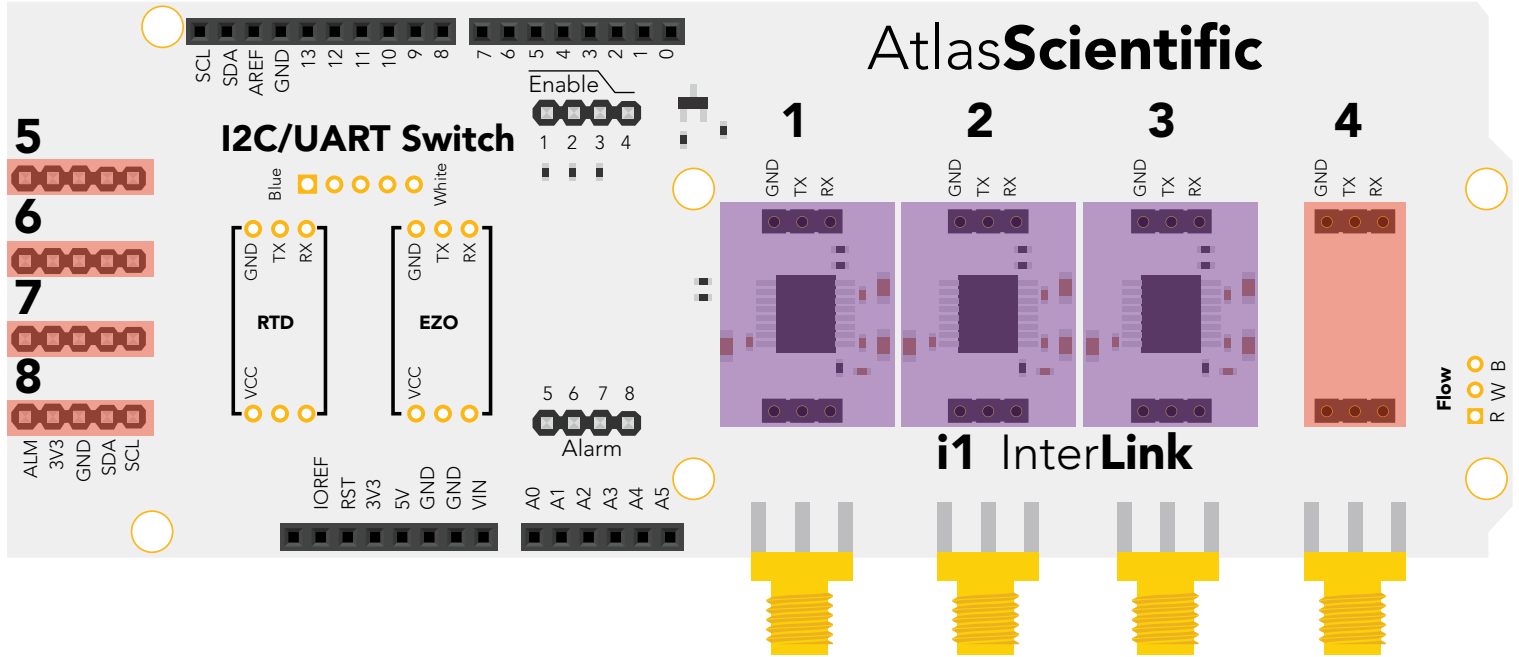


23.2mm  
(0.9")



# i1 InterLink isolated slots

The i1 InterLink has 3x isolated EZO™ circuit slots, 1x non-isolated EZO™ circuit slot and 4x non-isolated connectors for 5 pin EZO™ data cable sensors/devices.



**Isolated**

EZO-pH    EZO-ORP    EZO-DO    EZO-EC

*The i1 InterLink does not come with any EZO™ circuits or sensors.*

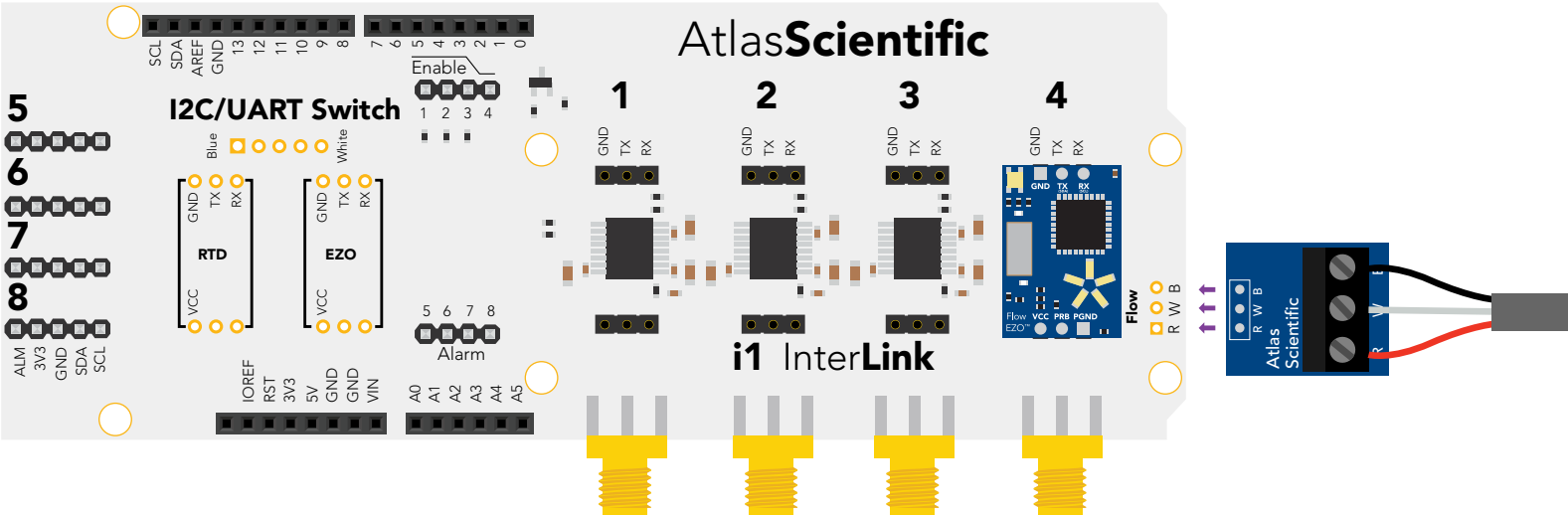
**Non-isolated**

EZO-FLOW    EZO-RTD    EZO-HUM    EZO-HUM    EZO-RGB    EZO-CO2    EZO-O2    EZO-PRS

EZO-PMP    EZO-PMP-L    3/8" Flow Meter    1/4" Flow Meter    1/2" Flow Meter    3/4" Flow Meter

# Connecting a flow meter to the i1 InterLink

The i1 InterLink is fully compatible with the EZO™ Universal Flow Meter Totalizer and our line of flow meters. Make sure to place the Totalizer in the non-isolated slot marked "4".

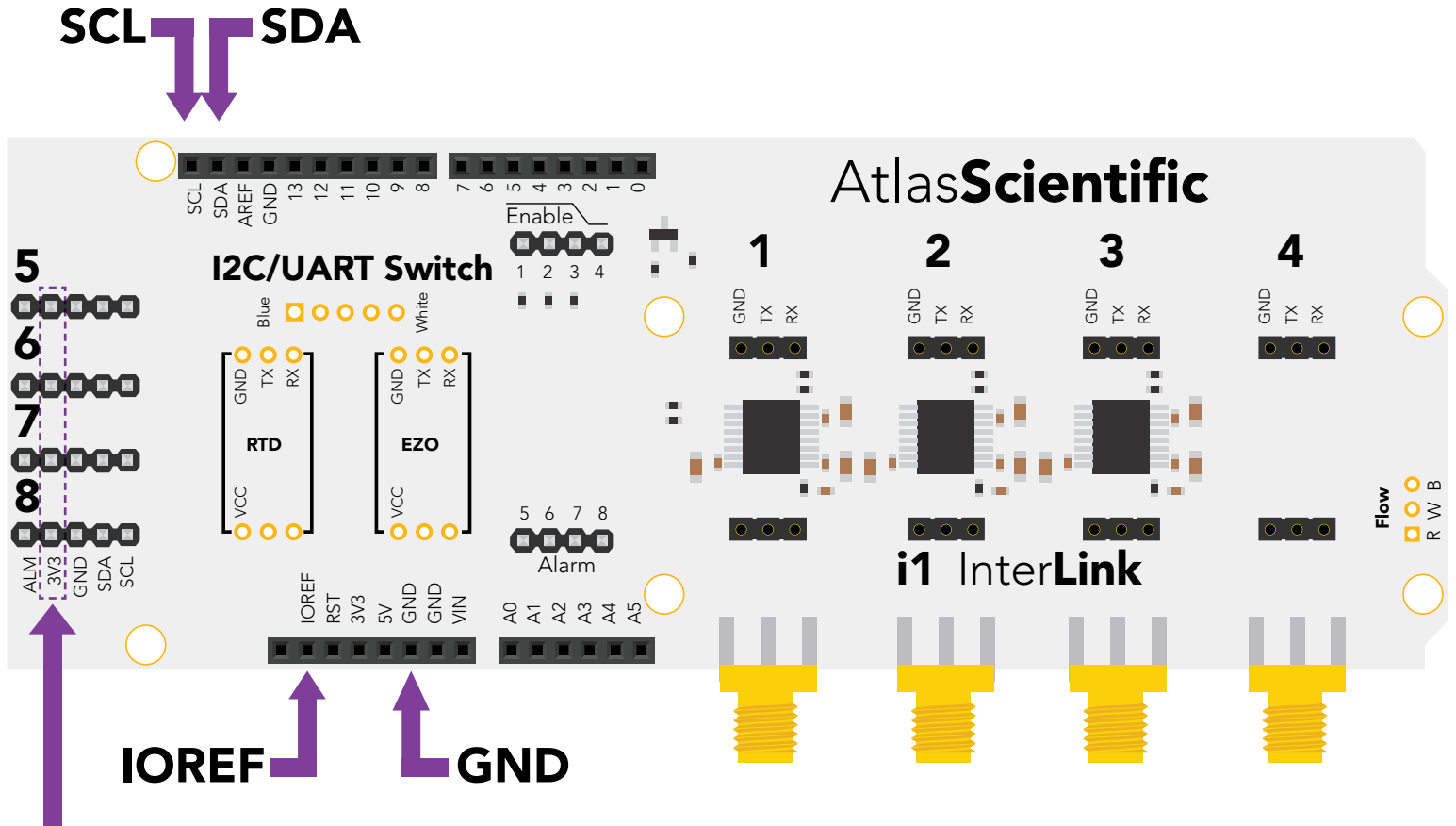


Attach your flow meter to the flow breakout board, then connect the flow breakout board directly to the i2 InterLink via the flow port.

# Arduino pins

The i1 InterLink uses these Arduino pins

SCL  
SDA  
GND  
IOREF



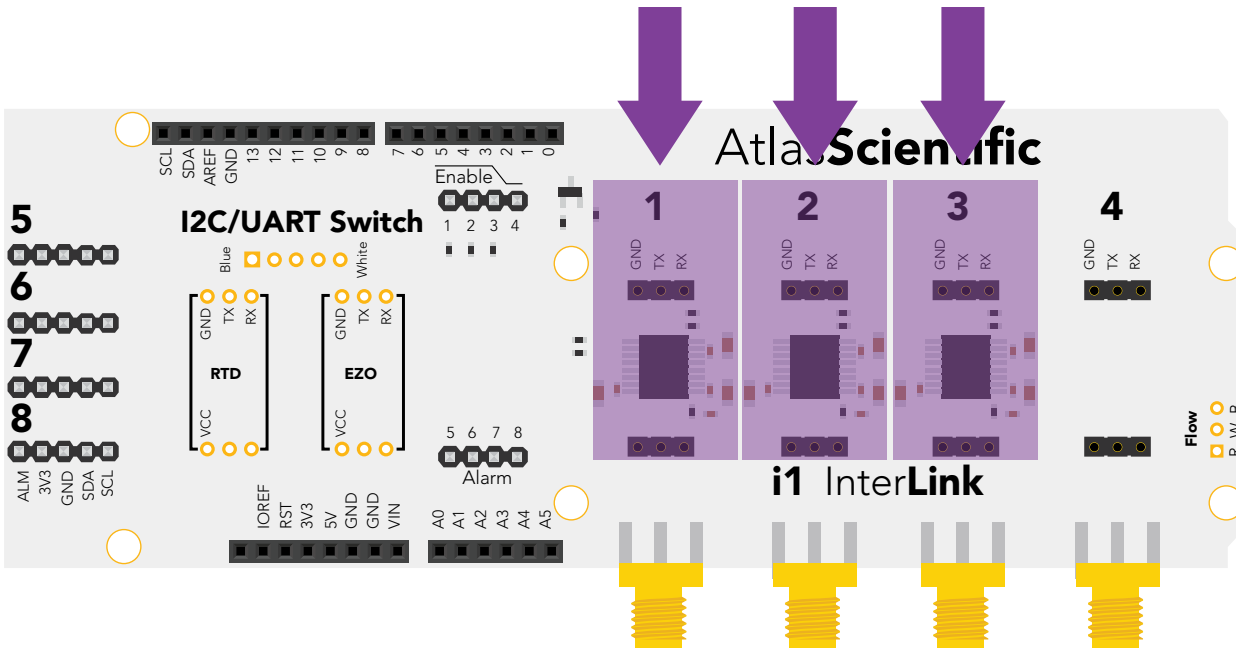
The i1 InterLink board's voltage is supplied from the **IOREF** pin on the Arduino, depending on the Arduino type you are using, this voltage could be either **3.3 volts** or **5 volts**.

All Arduino pins (including the ones used by i1 InterLink) are still available to you.

# Current consumption

The baseline current consumption for the i1 InterLink shield is 84mA. This is because each isolated channel consumes 28mA continuously. Adding an EZO™ circuit to an isolated channel will increase the current consumption.

The table below shows how much current will be consumed when an EZO™ circuit is connected.



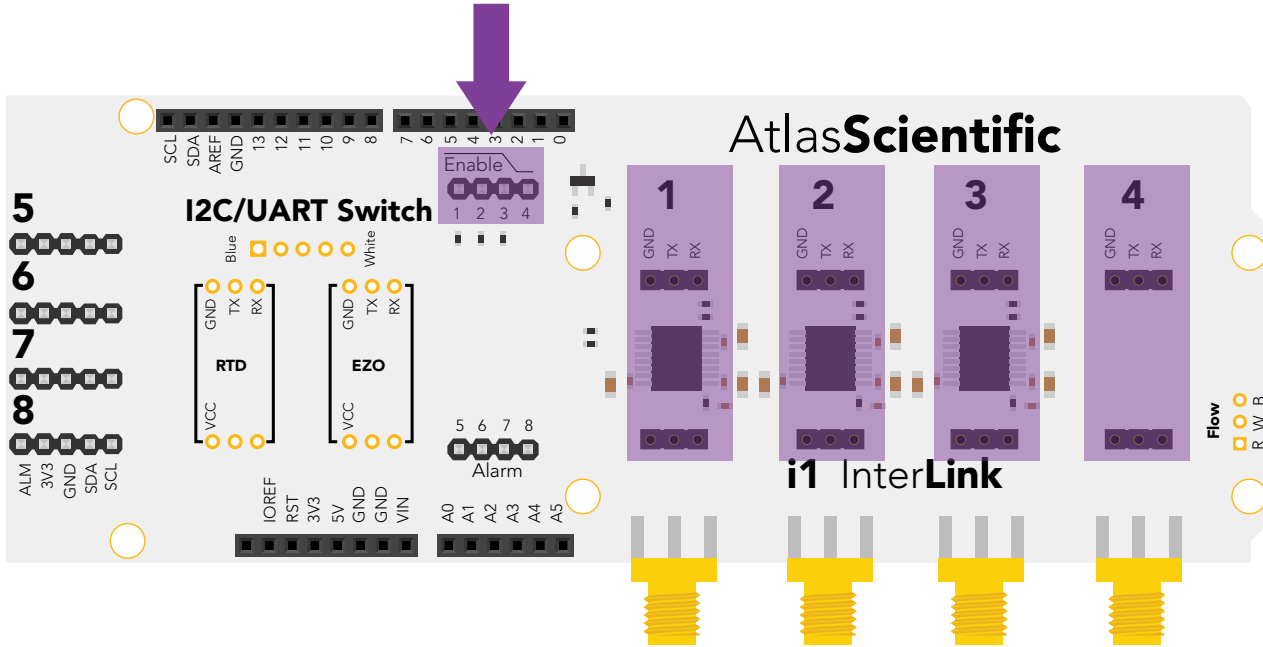
<b>Channel 1 = 28mA</b>	<b>Channel 5 = 0mA</b>
<b>Channel 2 = 28mA</b>	<b>Channel 6 = 0mA</b>
<b>Channel 3 = 28mA</b>	<b>Channel 7 = 0mA</b>
<b>Channel 4 = 0mA</b>	<b>Channel 8 = 0mA</b>

## Isolated Channels 1, 2 & 3

No Load	28mA
EZO™ pH	44mA
EZO™ ORP	44mA
EZO™ Dissolved Oxygen	44mA
EZO™ Conductivity	55mA

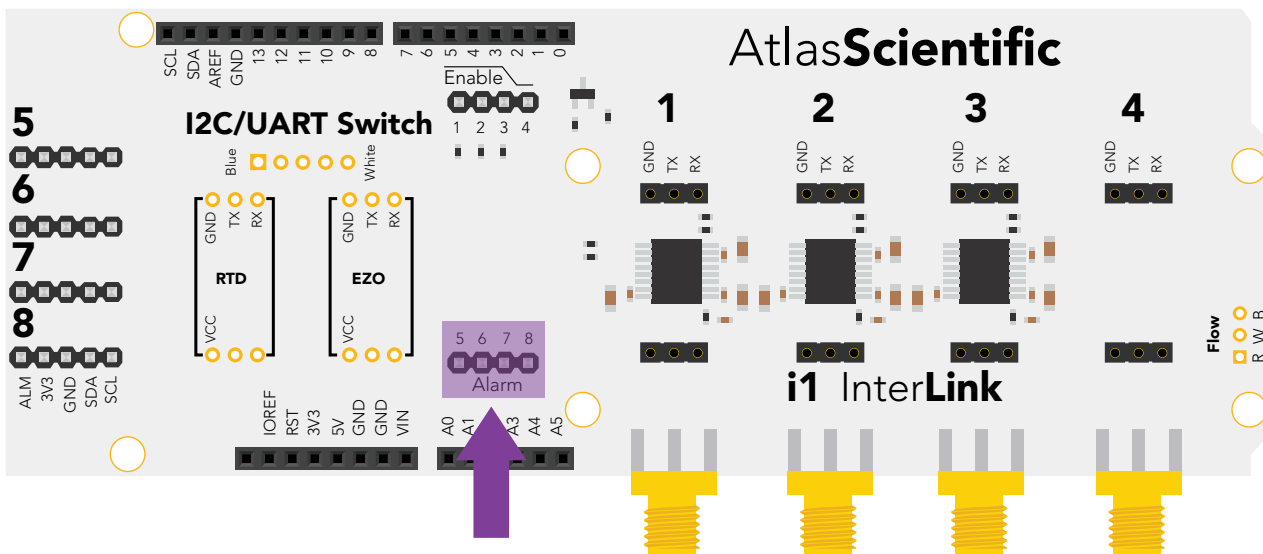
# Disabling channels

The i1 InterLink channels (1 – 4) can be disabled by using the enable pins (1 – 4). The isolated channels (1 – 3) can be disabled, by setting each channels corresponding pin high. The non-isolated channel (4) can be disabled by setting enable pin 4 low.



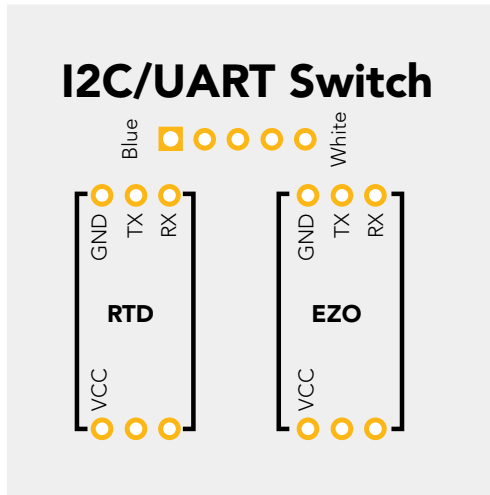
# Alarm pins

Connecting the i1 InterLink alarm pins (5 – 8) to an interrupt pin of your choosing, will detect if an alarm has been triggered. The Alarm function is one of the pinouts from a sensor that connects to the alarm pins such as an EZO-CO2™ sensor.

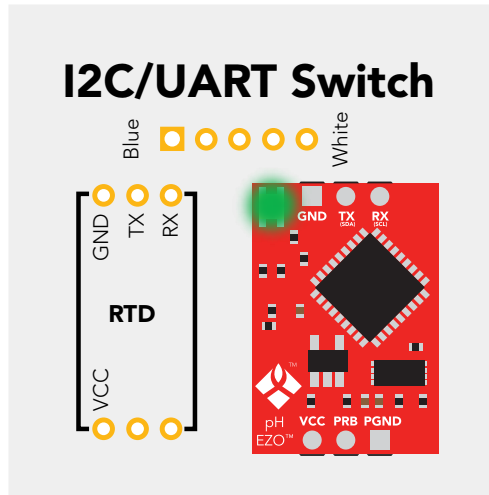


# On Board I2C/UART Switch

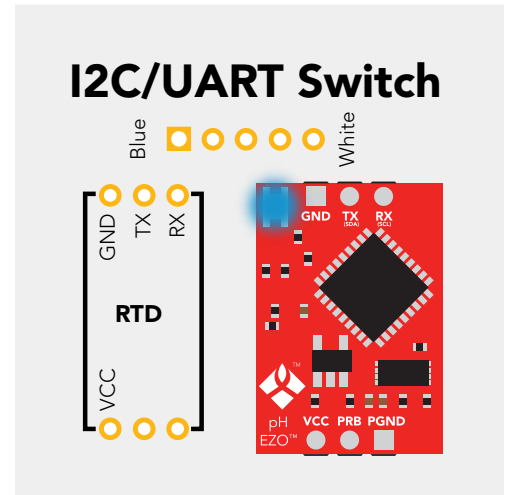
The i1 InterLink has a built in protocol toggler which can be used to switch each of the circuits / sensors between I2C/UART modes. (The i1 InterLink operates in I2C mode only)



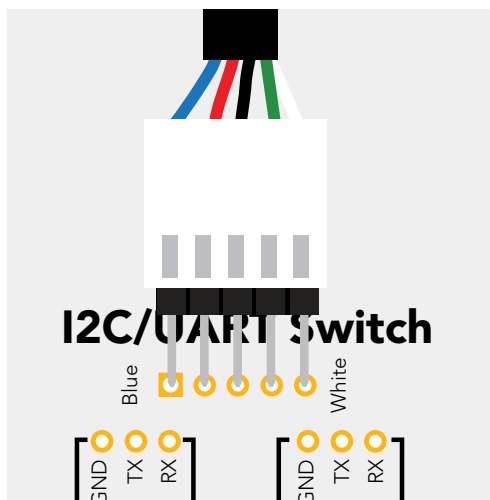
Place an EZO™ circuit onto the I2C/UART switch pins.



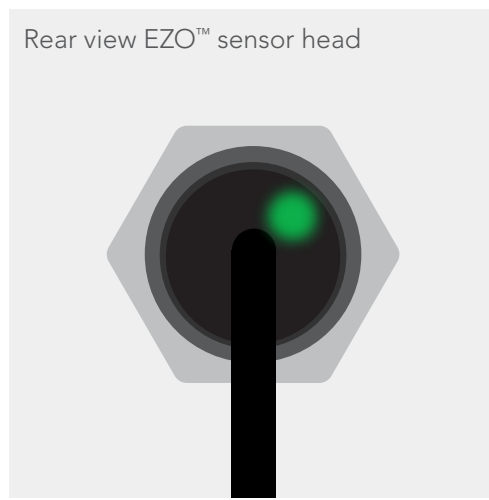
The EZO™ circuit in UART mode...



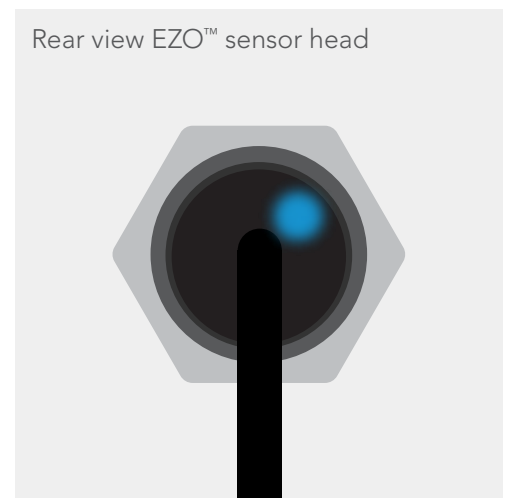
...is now in I2C mode.



The same can be done with our EZO™ sensors with data cables, using a 5 pin male header



The EZO™ sensor in UART mode...



...is now in I2C mode.

It is important to keep in mind that all Atlas Scientific EZO™ circuits and sensors default to UART mode. When adding a new EZO™ circuit or sensor, it must first be put into I2C mode. Refer to the component's datasheet for instructions on how to switch it over, or use the on board protocol toggler mentioned above.