



Gen 2 Electrically Isolated USB EZO™ Carrier Board

The Gen 2 Electrically Isolated USB EZO™ Carrier Board Allows you to connect your Atlas Scientific circuit directly to your computer or Raspberry Pi, using standard USB drivers (for an FTDI device). Built in isolation ensures that your circuit will be protected from interference, ground loops, and harmful voltages.

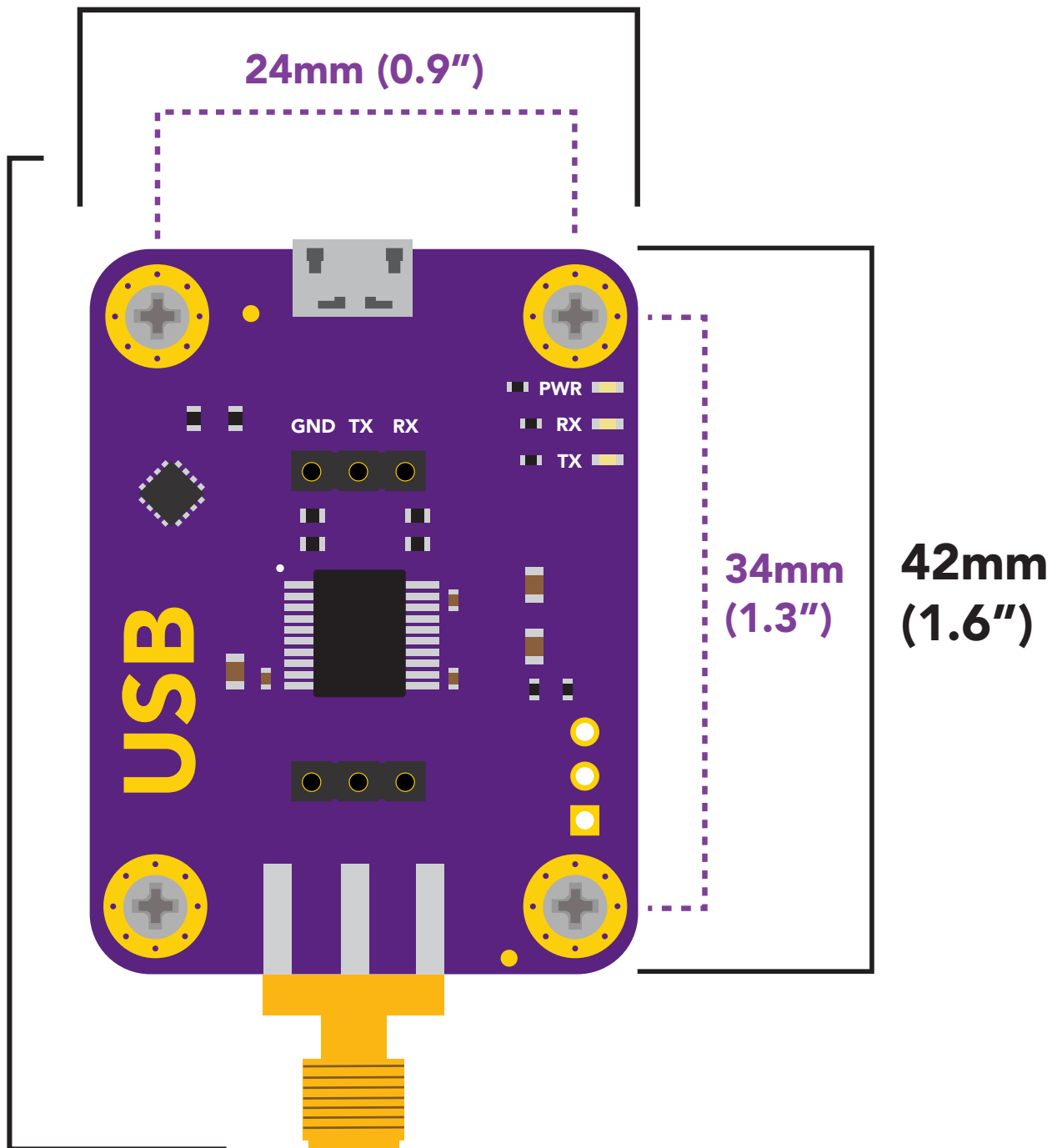
Power consumption

Circuit	5V
No Load	17mA
EZO™ pH	54mA
EZO™ ORP	54mA
EZO™ Dissolved Oxygen	52mA
EZO™ Conductivity	78mA
EZO™ Temperature	52mA
EZO™ Flow Totalizer	52mA

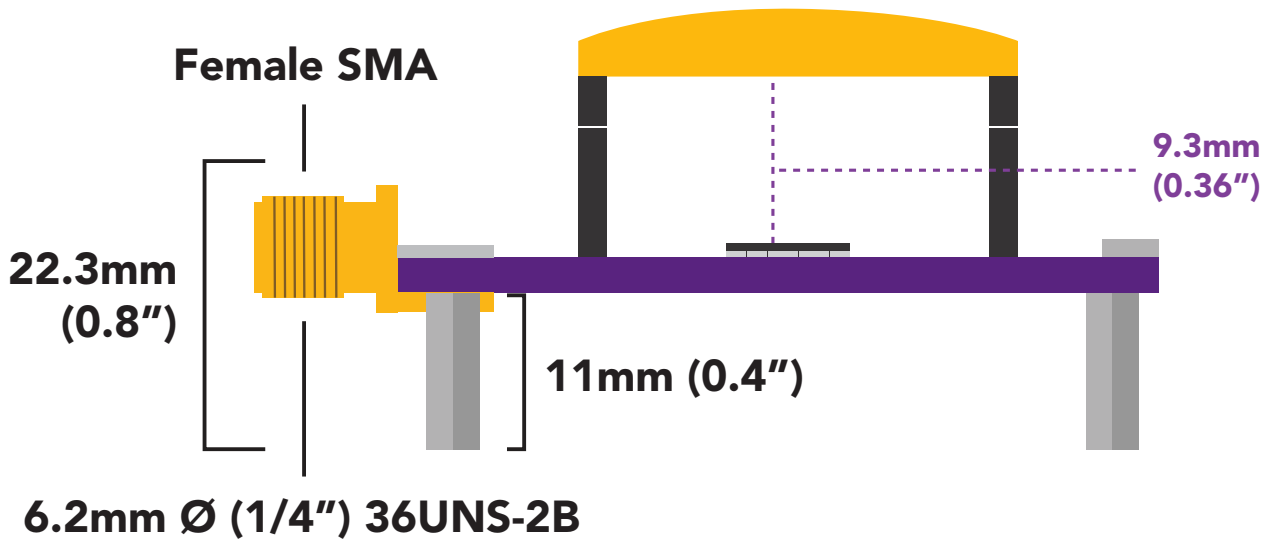
32mm (1.2")

24mm (0.9")

56.2mm
(2.2")

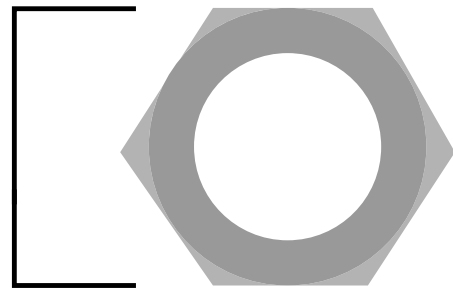


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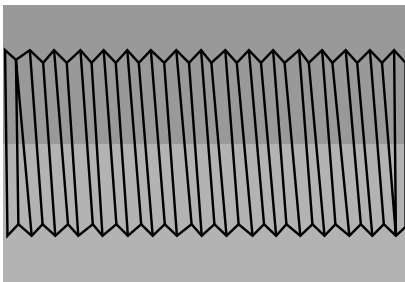


Standoffs

4.75mm
(0.1")



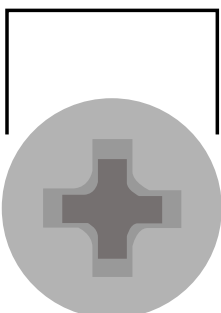
#4-40



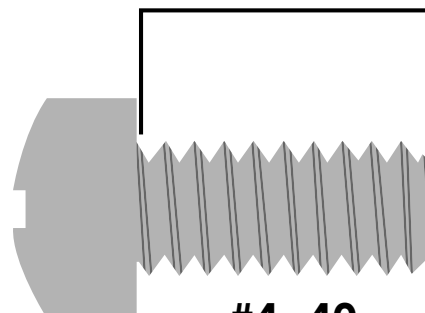
11mm (0.43")

Screws

4.6mm
(0.183")



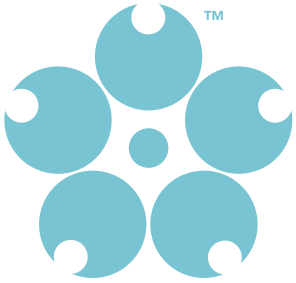
6.35mm
(0.25")



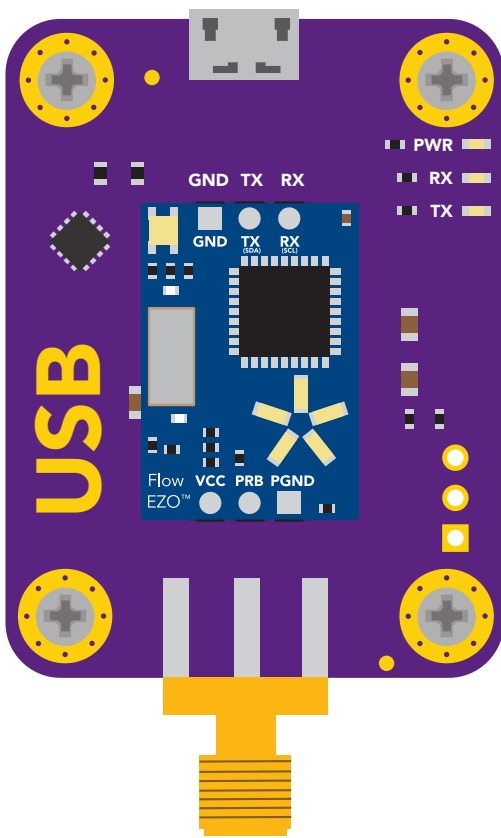
2.8mm
(0.112")

#4-40

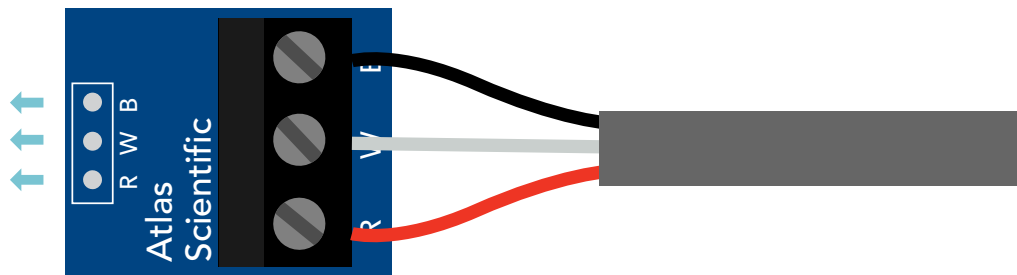
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Proper setup for use with the EZO™ Universal Flow Meter Totalizer

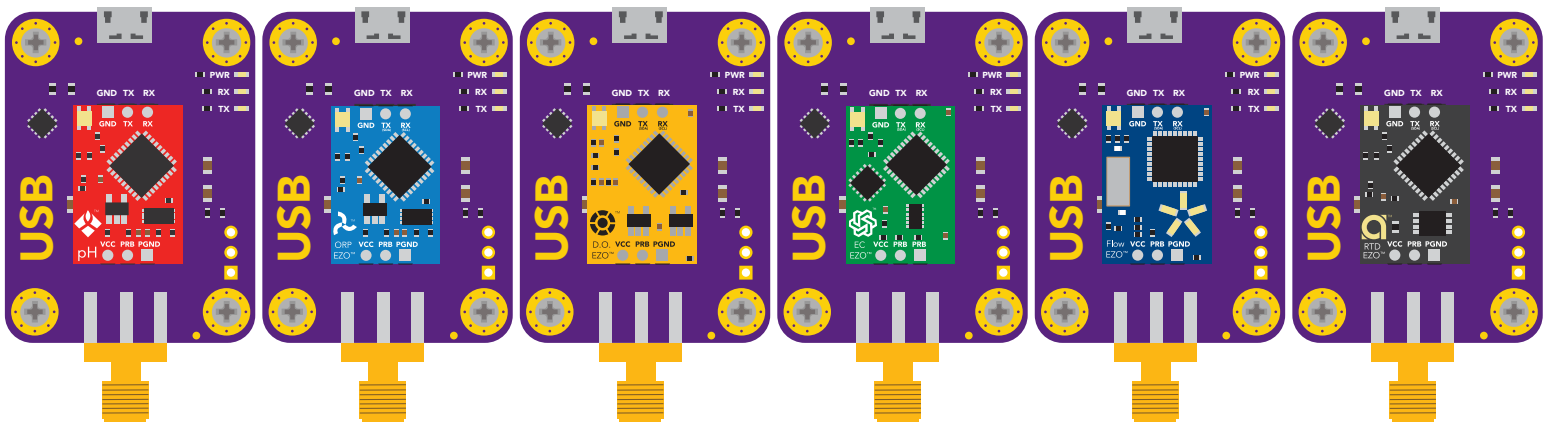


Connect Flow breakout board
to the carrier board.



The Gen 2 Electrically Isolated USB EZO™ Carrier Board works with all EZO™ class devices.

The Gen 2 Electrically Isolated USB EZO™ Carrier Board does not come with EZO™ class devices.



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This schematic shows exactly how we isolate data and power using the and a few passive components. The ADM3260 can output isolated power up to 150 mW and incorporates two bidirectional data channels.

This technology works by using tiny transformers to induce the voltage across an air gap. PCB layout requires special attention for EMI/EMC and RF Control, having proper ground planes and keeping the capacitors as close to the chip as possible are crucial for proper performance. The two data channels have a 4.7kΩ pull up resistor on both the isolated and non-isolated lines (R1, R2, R3, and R4) The output voltage is set using a voltage divider (R5, R6, and R7) this produces a voltage of 3.9V regardless of your input voltage.

Isolated ground is different from non-isolated ground, these two lines should not be connected together.

