AtlasScientific Environmental Robotics

Electrically Isolated USB EZO™ Carrier Board

Power consumption

Circuits	5V	3.3V
No Load	17mA	22mA
EZO [™] pH	61mA	89mA
EZO [™] ORP	62mA	88mA
EZO [™] Dissolved Oxygen	57mA	87mA
EZO [™] Conductivity	86mA	96mA
EZO [™] Temperature	63mA	88mA
EZO [™] Flow Totalizer	59mA	86mA







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



The Electrically Isolated USB EZO[™] Carrier Board works with all EZO[™] class devices.

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





Electrically Isolated USB EZO™ Carrier Board

This schematic shows exactly how we isolate data and power using the ADM3260 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 $4.7k\Omega$ 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 R,7) this produces a voltage of 3.7V regardless of your input voltage.

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



