

Electrically Isolated

EZOTM Carrier Board

Data input

UART & I²C

Voltage input

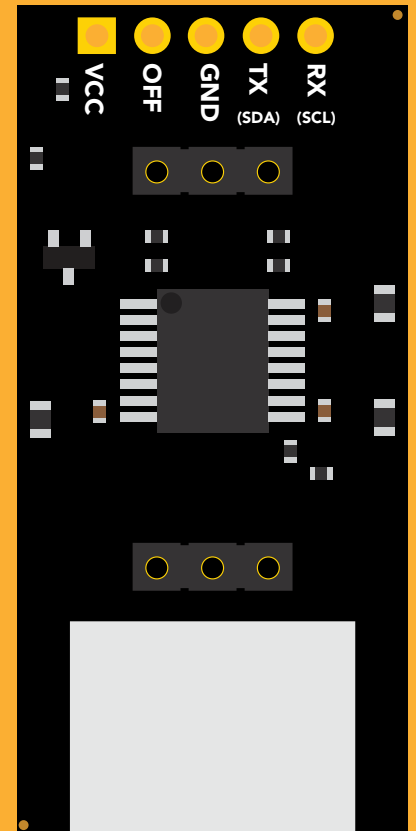
3.3V – 5.0V

Power saving

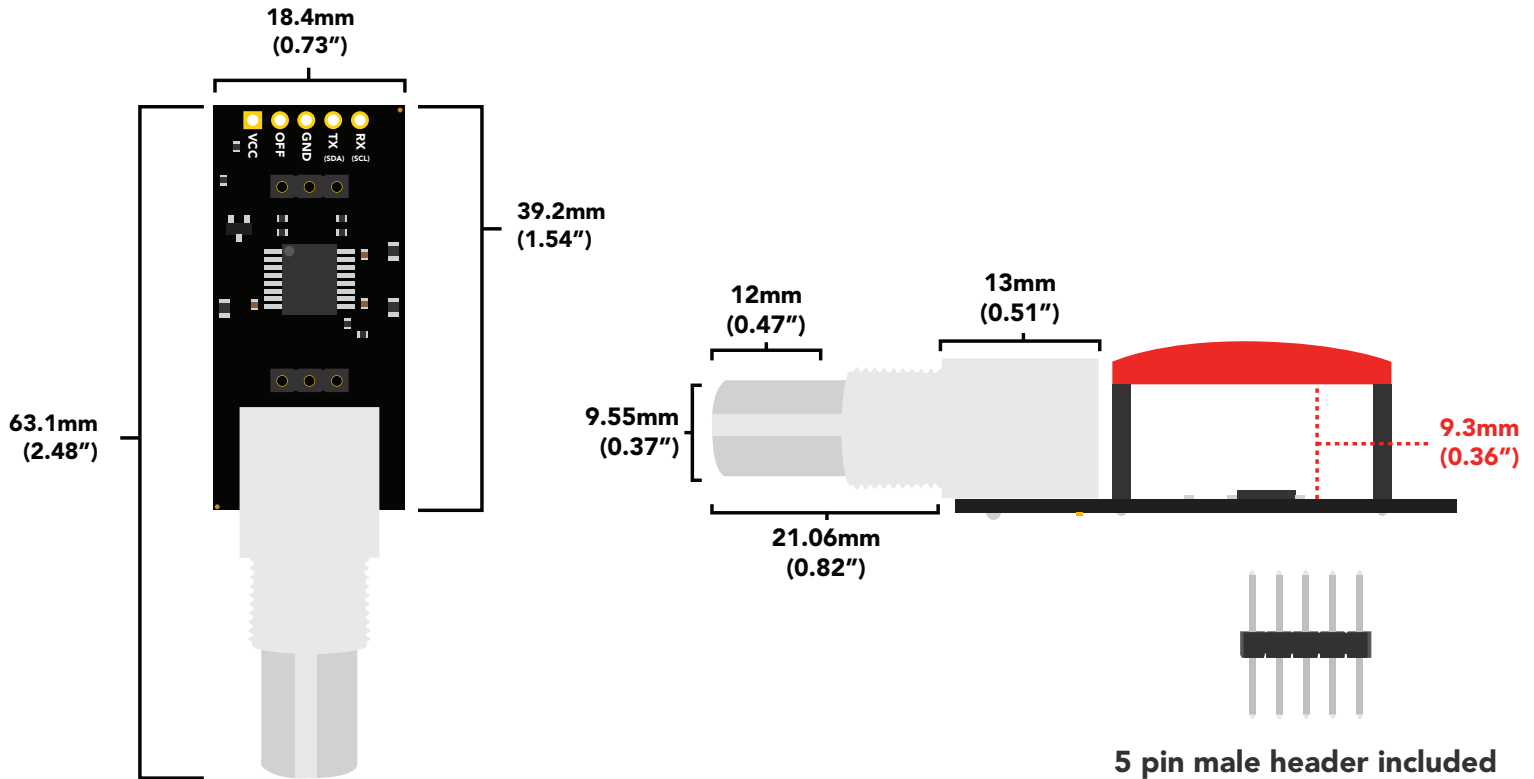
OFF pin

Current consumption

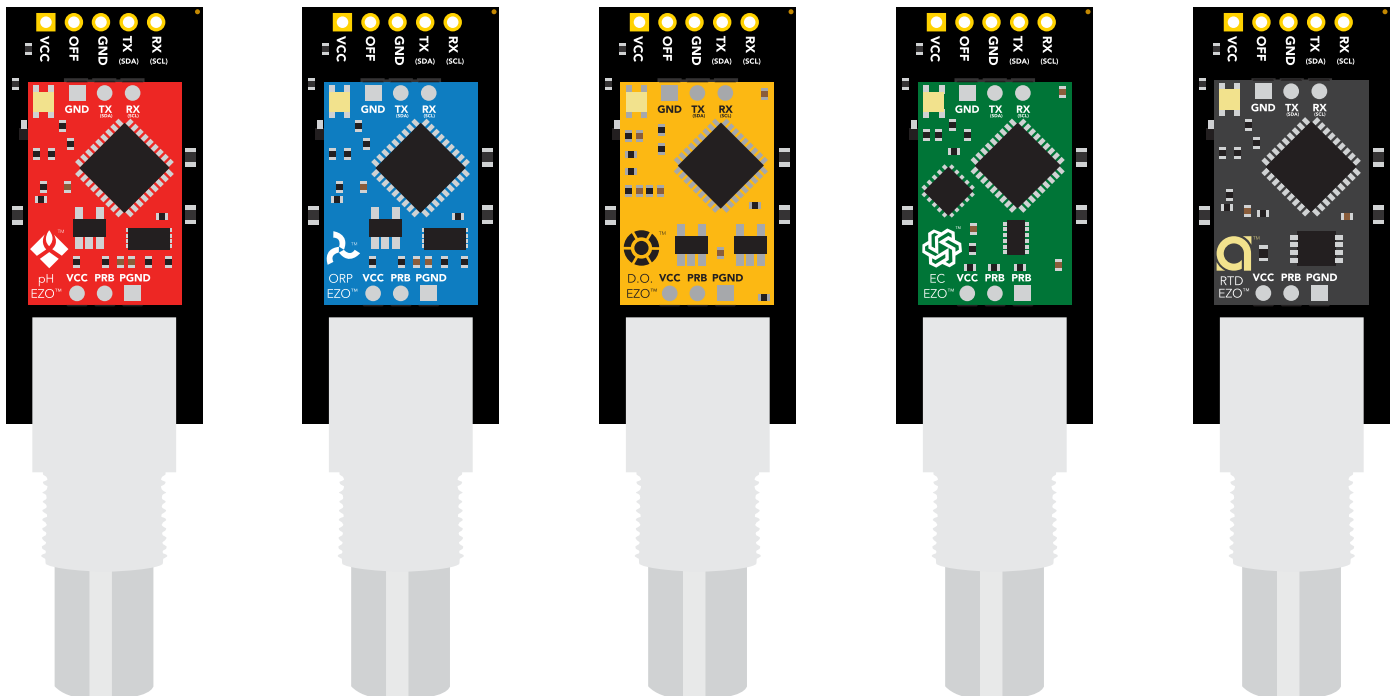
5V **15 mA**
3.3V **20 mA**



Carrier board dimensions

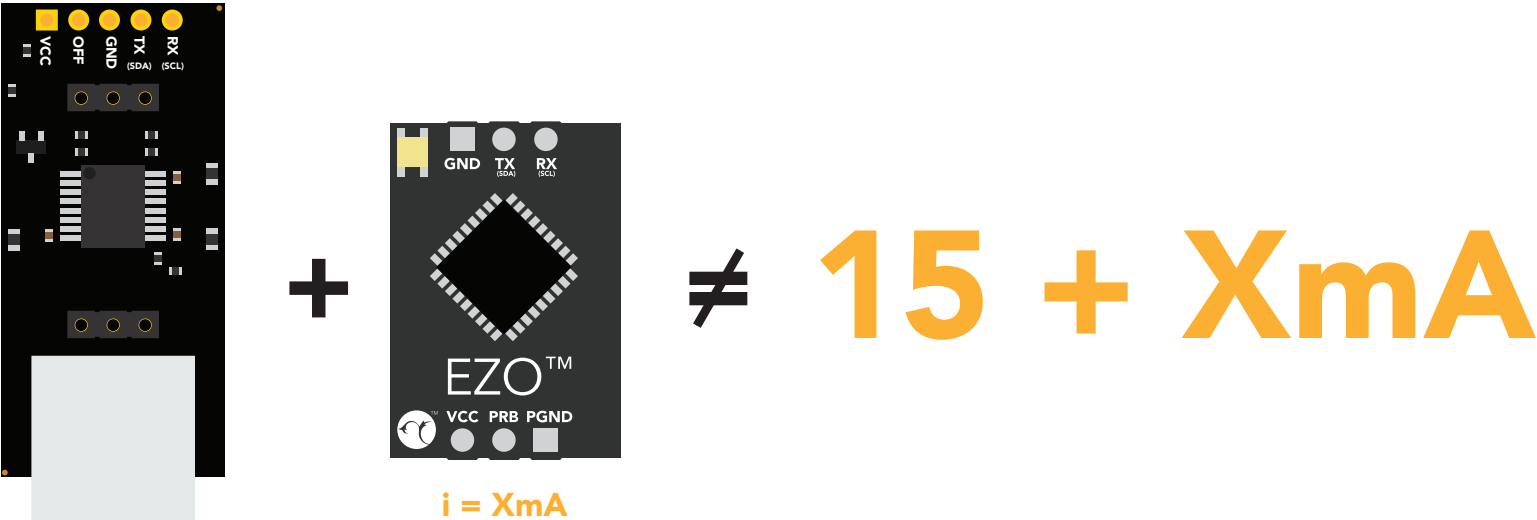


The Electrically Isolated EZO™ Carrier Board works with almost all EZO™ circuits, except the **EZO™ Universal Flow Meter Totalizer**.



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

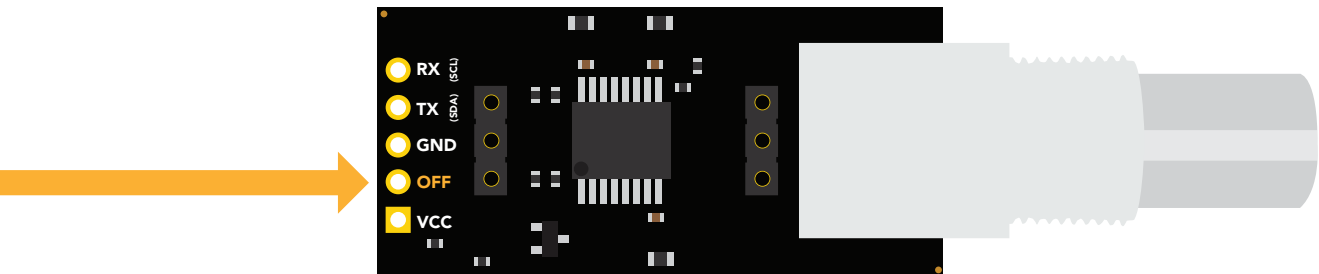
Current consumption



The current consumption for the Electrically Isolated EZO™ Carrier Board is non-linear. The table below shows how much current will be consumed when an EZO™ circuit is connected to the Electrically Isolated EZO™ Carrier Board.

Electrically Isolated EZO™ Carrier Board		5V	3.3V
	No Load	15mA	20mA
	EZO™ pH	57mA	87mA
	EZO™ ORP	58mA	84mA
	EZO™ Dissolved oxygen	53mA	84mA
	EZO™ Conductivity	82mA	97mA
	EZO™ RTD Temperature	59mA	87mA

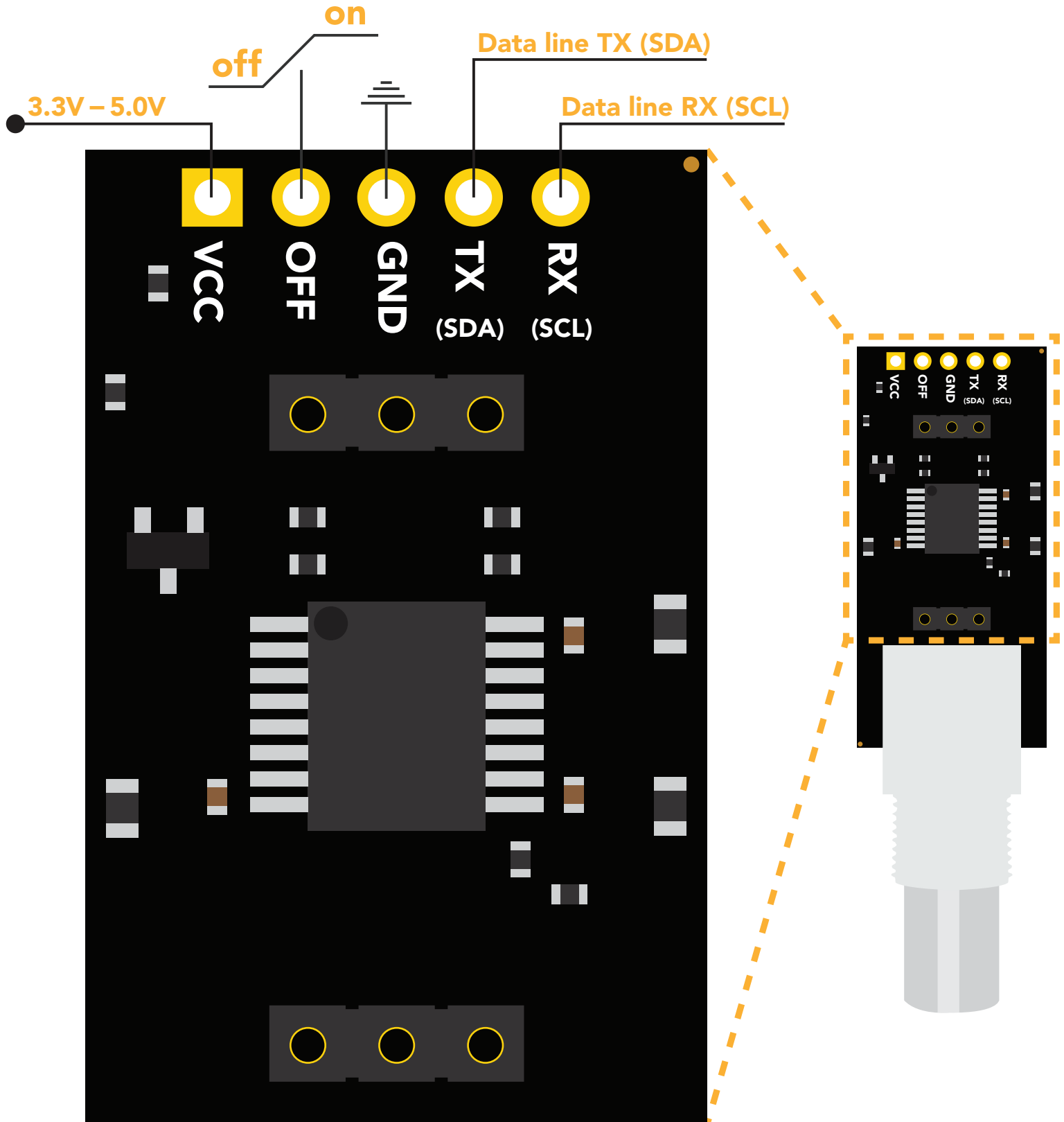
Setting the OFF pin to low will turn off the Electrically Isolated EZO™ Carrier Board, along with the connected EZO™ circuit. The current consumption will be reduced to **3.8 mA**.



Pin out

Setting the OFF pin to low will turn off the Electrically Isolated EZO™ Carrier Board, along with the connected EZO™ circuit. The current consumption will be reduced to 3.8mA.

If the OFF pin is not used, leave it unconnected or pull to VCC.



Data isolation

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 4.7kΩ 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 (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.

VCC = 3.0v – 5.5v

