

The Izze-Racing Inertial Measurement Unit (IMU) measures acceleration and angular rate for all three orthogonal axes at a sampling frequency of 200Hz and outputs the data via CAN.



### SENSOR SPECIFICATIONS

Acceleration Measurement Range	±2g / ±4g / ±8g (default) / ±16g
Angular Rate Measurement Range	±245dps (default) / ±500dps / ±2000dps
Acceleration Accuracy	< 1% FS
Angular Rate Accuracy	< 1.5% FS
Package Temperature Range	-20 °C to 85 °C
Sampling Frequency	200Hz
Low-Pass Cutoff Frequency	80Hz

### ELECTRICAL SPECIFICATIONS

Supply Voltage, $V_s$	5 to 8 V Text
Supply Current, $I_s$ (typ)	25 mA
Features	<ul style="list-style-type: none"> <li>Reverse polarity protection</li> <li>Over-temperature protection (125 °C)</li> </ul>

### MECHANICAL SPECIFICATIONS

Weight	< 5 g
L x W x H (max)	36 x 18 x 3.5 mm
Protection Rating	IP64

**CAN SPECIFICATIONS**

Standard	CAN 2.0A (11-bit identifier), ISO-11898
Bit Rate	1 Mbit/s
Byte Order	Big-Endian / Motorola
Data Conversion	0.01dps per bit, 0.01g per bit, signed
CAN ID's (Default)	Angular Rate: 1260 (Dec) / 0x4EC (Hex) Acceleration: 1261 (Dec) / 0x4ED (Hex)
Termination	None

\*Bit Rate, Byte Order, and CAN ID's may be changed upon request

**CAN ID: 0x4EC**

Angular Rate, X-Axis		Angular Rate, Y-Axis		Angular Rate, Z-Axis		Unused	
Byte 0 (MSB)	Byte 1 (LSB)	Byte 2 (MSB)	Byte 3 (LSB)	Byte 4 (MSB)	Byte 5 (LSB)	Byte 6 (MSB)	Byte 7 (LSB)

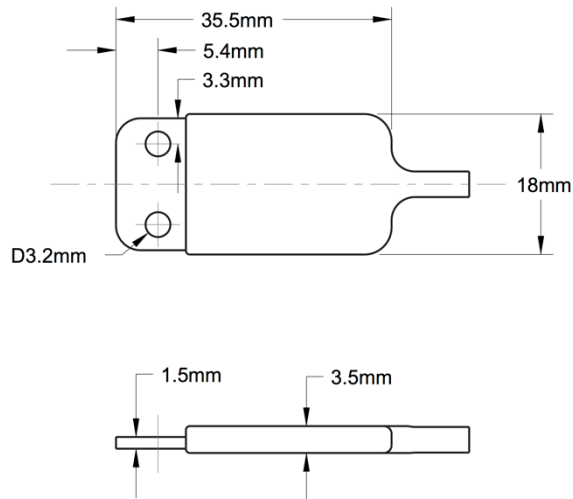
**CAN ID: 0x4ED**

Acceleration, X-Axis		Acceleration, Y-Axis		Acceleration, Z-Axis		Unused	
Byte 0 (MSB)	Byte 1 (LSB)	Byte 2 (MSB)	Byte 3 (LSB)	Byte 4 (MSB)	Byte 5 (LSB)	Byte 6 (MSB)	Byte 7 (LSB)

**WIRING SPECIFICATIONS:**

Wire	26 AWG M22759/32, DR25 jacket
Cable Length (typ.)	500 mm
Connector	None

Supply Voltage, V <sub>s</sub>	Red
Ground	Black (twisted)
CAN +	Blue
CAN -	White (twisted)

**DIMENSIONS:****ADDITIONAL INFORMATION:**

- Mount the IMU with Velcro or rubber bushings to attenuate chassis/engine vibration
- Avoid installing the IMU near hot objects or area's subjected to thermal transients. The IMU's z-axis acceleration is sensitive to thermal gradients and transients.

**WARRANTY:**

All sensors come with a 30-day return policy and have a 1-year warranty from manufacturing defects. If there is ever an issue, please contact us at [support@izzेरacing.com](mailto:support@izzेरacing.com)