



# MOTION NODE



## POE IMU IP68

**Motion Node** is a waterproof, dustproof, crush-proof IMU with IEEE802.3af POE connectivity. Includes state of the art on-board sensor fusion, and fast output sample rate of up to 1000Hz. Visit [www.motionnode.com](http://www.motionnode.com) for videos and more.

- ✓ Designed and manufactured in the USA
- ✓ Lifetime software license
- ✓ Robust, rich data stream
- ✓ Free, open source SDK

## Live-stream and record motion takes

### IP68 Rated

Waterproof, dust-proof design for use in harsh environments.

### Gigabit POE

Single CAT5E cable for power and data.

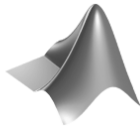
### MotionNode App

Live-stream and record using our free app.

# Free open source SDK

Live-stream and record using our free, open source SDK. Access all channels in the rich MotionNode data stream. Visit our github repository for the SDK and examples in popular programming languages.

[www.github.com/motion-workshop](http://www.github.com/motion-workshop)



## Sensor data

Read live measurement data from your MotionNode.

- Rotation
- Angular velocity
- Calibrated accelerometer, gyroscope, and magnetometer signals

Save data to standard file formats.

- Spreadsheet (Comma Separated Values)
- C3D Biomechanics Data Standard
- Autodesk FBX

Load MotionNode data into your favorite analysis software or custom app with our developer kit.

### Software

- MathWorks MATLAB
- National Instruments LabVIEW
- GNU Octave
- Microsoft Excel
- OpenOffice.org Calc

### Language

- C++
- Python
- JavaScript
- C#
- Java

# Technical specs

## Sensors

3-axis accelerometer, gyroscope, and magnetometer

## Sample rate

1000Hz update rate

Selectable output data rate

100Hz to 1000Hz

## Size

111 x 70 x 54mm

## Enclosure

Aluminum, with mounting flanges

## Connectivity

Removable, IP68 sealed RJ45 cable.

POE IEEE802.3af class

## Latency

1ms at 1000Hz

## Orientation

Drift free, 3D rotation

0.5° static accuracy

2° dynamic accuracy

Full 360° range for each axis

## IP68 Rating

Waterproof, dustproof for harsh environments

# Sensor specs

	Range	Resolution	Noise
Accelerometer	±8 g	0.18 mg	65 (µg/rt-Hz)
Gyroscope	±2000 °/s	0.06 °/s	2.8 mdps/rt-Hz
Magnetometer	±8 gauss	0.25 mG	0.4 mG RMS

# Requirements

## Operating System

Works on Windows, macOS, Linux

## Connectivity

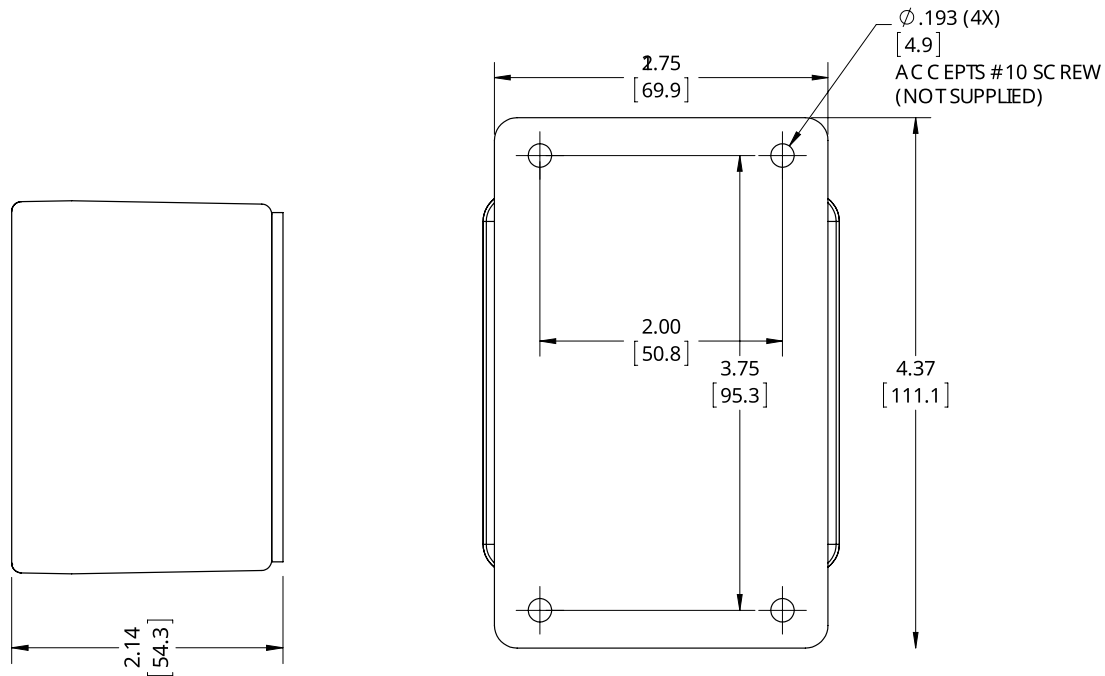
Requires a USB Standard-A port

## Internet access

Recommended for setup

# Technical drawings

## MotionNode POE IP68



Dimensions: Inch, [mm]

## Ordering Information

**NODE-POE-IP68**

MotionNode POE IP68

Please contact us at [info@motionnode.com](mailto:info@motionnode.com) to place an order.

# Trust our proven solution

Field tested by the best and brightest in companies, research labs, and academic institutions.



# Spec Sheet Version

Current Version: 1

<b>Version</b>	Date
1	February 25, 2025