MOTION NODE

USB IMU IP68

Motion Node is a waterproof, dustproof miniature IMU with USB connectivity. Includes state of the art on-board sensor fusion, and fast output sample rate of up to 1000Hz. Visit **www.motionnode. com** for videos and more.

Available with or without mounting holes.

✓ 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.

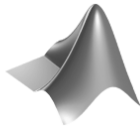### Low Latency
1ms latency at 1000Hz.

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

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

Connectivity

Permanently attached
3 meters, USB-A connector

Size

40 x 21 x 12mm

40 x 40 x 12mm
(with mounting holes)

Mounting options

VHB tape

Hook and loop (Velcro)

40x40mm version with M3 holes

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

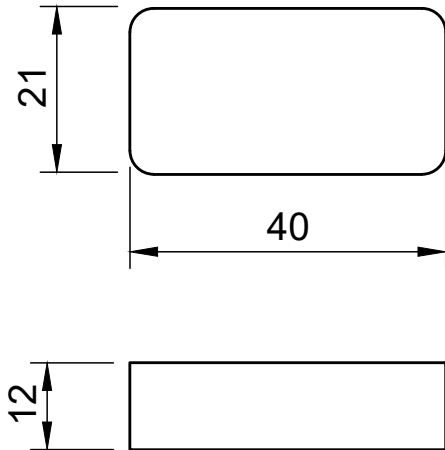Works on Windows, macOS, Linux

Connectivity

Requires a USB Standard-A port

Internet access

Recommended for setup

www.motionnode.com   info@motionnode.com
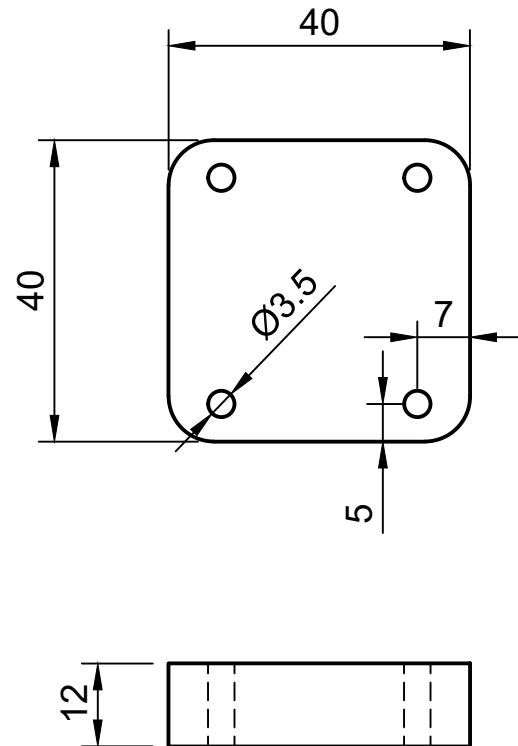
Technical drawings

MotionNode USB IP68

**MotionNode USB IP68
(with mounting holes)**

All dimension in mm

Ordering Information

NODE-01-IP68   MotionNode USB IP68

NODE-01-FL-IP68   MotionNode USB IP68 with mounting holes

Please contact us at 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.

QUALCOMM   SAMSUNG   B/E AEROSPACE   SHARP   HYUNDAI   ERICSSON

Google   Microsoft   MOTOROLA   intel   at&t   iRobot

Disney Research   Kodak   SONY   ESPN   IBM   NASA

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Spec Sheet Version

Current Version: 1

Version	Date
1	February 25, 2025