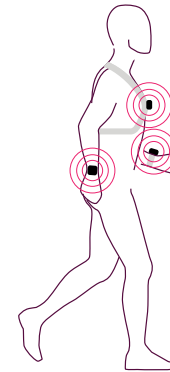


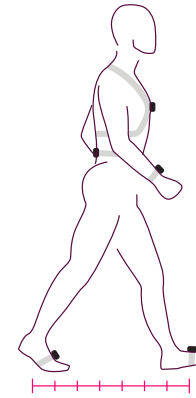
OPAL



Motion Studio

Raw movement data

An inertial data acquisition and visualization system



Mobility Lab

Gait and balance analysis

Assess functional mobility anywhere



Moveo Explorer

Full-body kinematics

Break outside the lab to explore full-body kinematics

CLARIO.

OPAL

A research-grade wearable sensor solution for motion analytics



Device Characteristics

Dimensions: 50 x 40 x 14 mm

Weight: 26 g

Material: Polycarbonate, glass

On-board Memory: 8 GB storage (~450 h of recording)

Battery Life: Up to 12 h streaming at 128 Hz

Low Gyroscope Drift: 4°/h

IP64: Water resistant and dust tight

Wireless Characteristics

Time Synchronization: Sync up to 24 Opals in one wireless network with precise time synchronization

Synchronization Resolution: 1 ms resolution between Opals in a network

Transmission Range: 30 m line of sight

Streaming Latency: 300 ms (typical)

Wireless Protocol: Proprietary mesh network

Frequency Band: 2.40-2.48GHz ISM band, adjustable

Data and System Information

Raw Data Output: Accelerometer, Gyroscope, Magnetometer, Barometer, and Orientation

Data Format: Binary (HDF5); export to plain text (CSV). Compatible with MATLAB™, Java, C, Python and more

Supported Operating System: Compatible with Windows, Mac, and Linux

Accessories

Adjustable Straps: Head, Sternum, Upper Arm, Wrist, Hand, Lumbar, Upper Leg, Lower Leg, Foot

Docking Station: Recharges battery and transfers data

Access Point: Enables wireless data streaming to computer via USB

Wireless Remote / Embedded Buttons: Easily annotate data or log an event

External Sync Box: Synchronize with ECG, Forceplates, Gait Mats, Optical Systems, and more

	Accelerometer	Gyroscope	Magnetometer	Barometer
Axes	3	3	3	1
Range	+/- 200 g	+/- 2000°/s	+/- 8 Gauss	300 - 1100 hPa
Noise Density	5 mg/√Hz for > 16 g 120 µg/√Hz for ≤ 16 g	0.025°/s/√Hz	2 mGauss/√Hz	1.3 Pa
Sample Rate	20 - 128 Hz	20 - 128 Hz	20 - 128 Hz	20 - 128 Hz



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V2R Products: Motion Studio, Mobility Lab, and Moveo Explorer



APDM Wearable Technologies, A Clario Company
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