

## DATA SHEET

# SENSORIA SMART SOCKS

## Description

Sensoria® Core is a modular, self-contained, easy to set up and use wearable sensor platform that provides highly accurate data for the monitoring and analysis of human kinetics.

Paired with textile pressure sensor infused smart socks, Sensoria® Core provides a versatile system for real-time meaningful and personalized data collection, remote cloud data storage and data analysis. It can detect and measure acceleration, motion range, rotation, magnetic field. In addition, can count steps and track balance, cadence, foot landing technique and the impact score generated as you walk or run.



## Applications

- Sport and Fitness
- Healthcare :
  - Remote Patient Monitoring
  - Fall Prevention
  - Rehab
- Research (combined with Sensoria SDK, sold separately):
  - Motion Capture
  - Data Analysis

## Scope of Delivery

- 2 x Sensoria Core devices and accessories
- 1 x Pair of Smart Socks (both left and right sock with pressure sensors)

## Sensoria® Core Datasheet



Part Number: SUA01E-STANDARD

### Dimensions

26 L x 28 W x 11 H mm

### Weight

6gr

Bluetooth Connection

9-axis MEMS

Up to 8 external sensors

System	
Architecture	Arm® 32-bit Cortex™-M4 CPU with FPU
Memory	Firmware storage and internal RAM only
Temperature Range	-20°C to 60°C Limited by Battery Specs

Connectivity	
Bluetooth	
Version	Bluetooth V5.0 Low Energy
Frequency range	2402 -2480 MHz
TX Power	Programmable +4..-20 dBm
RX Sensitivity	-96 dBm
TX distance	~8m
Antenna	Mid SMT Antenna, 3.0 dB max

Power	
Power Supply	
Battery	3.7 V, 55mAh Li-Po rechargeable, 55mAh
Current Consumption (with default settings)	
Standby	0.045 mA
Streaming @ 2Hz	1.56 mA
Streaming @ 50Hz	2.61 mA

User interface	
Led	RGB led Color coded status/activity indicator

Sensors	
Accelerometer	3-axis linear acceleration, measured in g (9.8 m/s <sup>2</sup> ) 10-bit or 16-bit resolution, ±16g range by default (configurable: ±2g, ±4g, ±8g)
Gyroscope	3-axis angular acceleration, measured in dps (degrees per second) 10-bit or 16-bit resolution, ±500 dps range by default (configurable: ±2000 dps, ±100 dps, ±245 dps)
Magnetometer	3-axis magnetic north reference, measured in Gauss 10-bit or 16-bit resolution, ±4 Gauss range by default (configurable: ±8G, ±12G, ±16G)
Analog Sensors	Up to 8 analog inputs for arbitrary sensors, application dependent
Sampling Frequency	1..120Hz depending on application

Peripherals and Accessories	
Sensoria® proprietary charger	Li-Po charger 42 mm L x 41.5 mm W x 12 mm H weight: 14 g
USB Charging cable	Micro-B, type A

Regulatory	
Bluetooth Declaration ID	D055206
FCC ID	2ASKE-SUA01E
FCC rules part 15 compliance	Operation is subject to the following two conditions: (1) this device may not cause harmful interference (2) this device must accept any interference received, including interference that may cause undesired operation
CE	LCS190401046AE
Battery	RoHS, IEC 62133
Product Safety	IEC 62368-1 2014ED2 - EN 62368 - 1:2014/A11:2017
Electromagnetic field exposure	EN 50663

Compatible Apps	
Data Collection and Research	
Sensoria Lab (iOS) Sensoria Workbench (Android)	
Consumer / Healthcare Apps	
Sensoria Run (iOS) Sensoria Walk (Android) Sensoria Mat (iOS/Android) Sensoria SKB (iOS/Android) Sensoria Smart Boot (Android Smart Watch)	
Compatibility	
iOS 13.0 or above iPadOS 13.0 or above macOS 11.0 or above with Mac M1 chipset or above Android 8 or above	

**Designed in Seattle, WA (USA)**

**Made in China**

## Sensoria® Smart Socks Datasheet



Sensoria® Socks	
Sock Composition	96% Coolmax Polyester 4% Spandex, Elastane
Pressure Sensor kit composition	TPU, Vinyl and textile materials
Sensor Location	Plantar area (Heel, MTB1, MTB5)
Care Instruction	Remove Sensoria® Core before washing Wash inside out in cold water Do not bleach Air dry only
Features	100% thin and undetectable textile sensors Cushioned plantar and heel area Moisture wicking yarn Mesh area for enhanced breathability
Sizes	Adult MD, Adult LG, Adult XL
Sensoria® Core dock	43.5 mm L x 43 mm W x 9 mm H weight: 8.75 g

**Designed and made in Seattle, WA (USA)**