



# SmartCardia

## SmartWearable® Technology








SmartCardia's platform combines medical wearable technology with Artificial Intelligence (AI) to provide unique insights into a patient's health. SmartCardia SA (Switzerland) have developed SmartNeuralNet®,

a world-leading machine learning technology that powers these medical wearables. Their mission is to empower the millions of patients with chronic conditions, with actionable insights to improve their health.



## Monitoring Capabilities

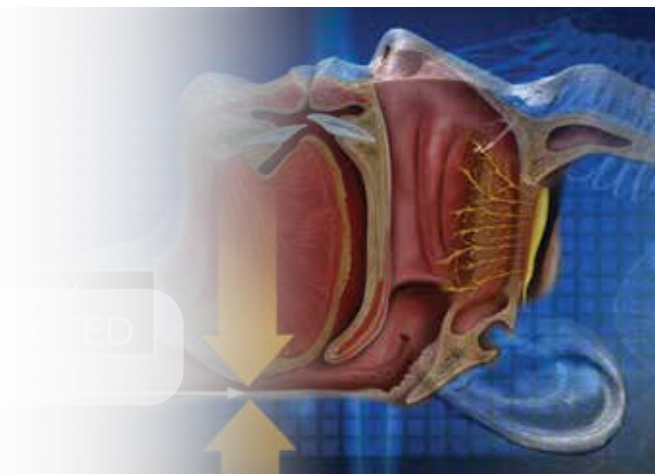
### Measurements - Cardiovascular

-  Heart Rate <sup>5,12</sup>
-  Echocardiogram (ECG) <sup>2,5,12</sup>
-  Impedance Cardiogram (ICG) <sup>3,7</sup>
-  Non-Invasive Blood Pressure Estimation <sup>3,7</sup>
-  Myocardial Infarction Detection <sup>10</sup>







### Measurements – Sleep Disorders




-  Dyspnoea <sup>1</sup>
-  Obstructive Sleep Apnoea (OSA) <sup>11</sup>



## Measurements – CNS monitoring

-  **Emotional State Monitoring** via ECG, Electromyogram (EMG), respiration and skin <sup>7,8</sup>
-  **Stress Levels** <sup>6</sup>
-  **Psychomotor agitation** <sup>9</sup>
-  **Alzheimer's Disease (AD)** - detected events, periodicity, severity, etc. The system could alert and send alarm messages to caregivers or relatives or relatives. <sup>9</sup>

## Measurements - Additional

-  **Emergency Medicine Applications** - vital signs, including temperature, pulse, blood pressure, blood oxygen levels, cardiac rhythm and cardiac electrical activity (*A Wireless Patch for Monitoring Emergency-Room Patients*. ECN, Mar 9, 2018) <sup>4</sup>
-  **Fitness Level Monitoring for Health & Wellness Programmes** – accurate heart rate, blood pressure, respiration and activity level <sup>5</sup>
-  **Clinical Trials** i.e. measure and monitor cardiac output in pharmaceutical drug and technology trials e.g. cardiac pacemakers.

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MADE IN  
SWITZERLAND



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SmartCardia SA is a Swiss medical device company with focus on clinical quality data and validation. They are an ISO 13485 and ISO 9001 certified medical device manufacturer and meet strict quality control standards for their solutions. The company is also ISO 27001 certified for data security and privacy. Moreover, the SmartWearable® device is CE-marked as Class IIa medical device.



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Reg no: 2016/159555/07

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