

Fitness Mat Dev Kit

*The best solution to develop
your personal trainer*



Data Sheet

What is the Fitness Mat?

The platform has been developed from scratch based on the patented technology of Sensing Tex to measure pressure patterns. It allows the user to measure pressure from different points of view such as Movement Analysis or Postural Detection.

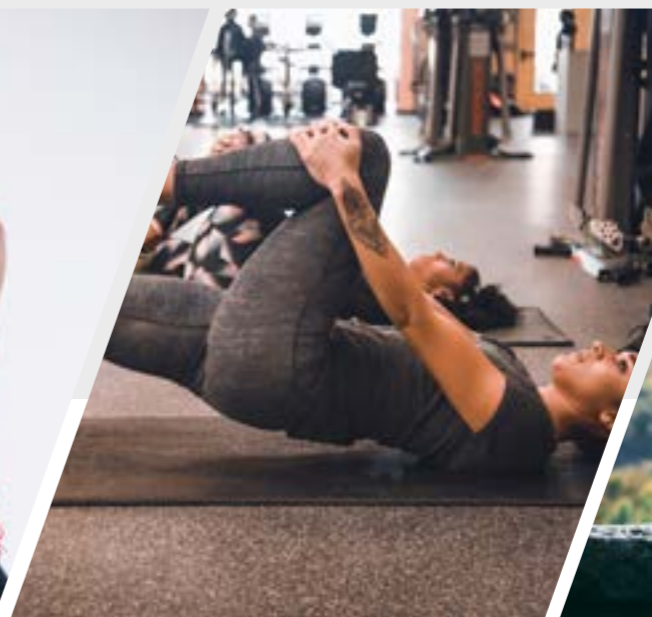


Applications

The range of applications that the product can offer is very wide. It has multiple applications in the fields of Sports and Wellness. Our goal is provide real time data to the client in order to improve the exercises involved in each application.



Exercise counter



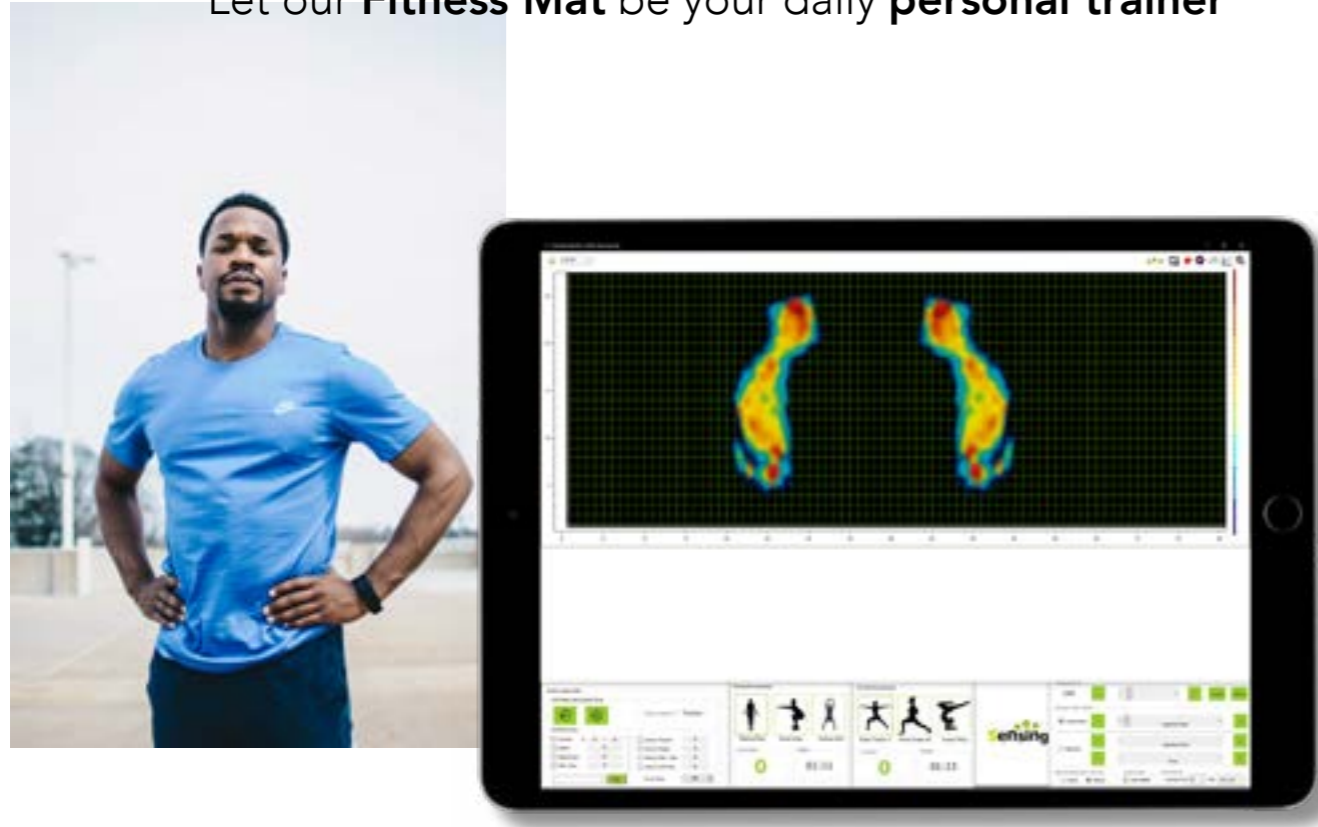
stretch



yoga postural correction

and much more!

Let our **Fitness Mat** be your daily **personal trainer**



- Cost Effective
- Development Kit
- High Resolution
- Stretchable
- Customizable
- Large Area
- Patented Technology

Measurements

- Center of balance
- Pressure Range
- Calibration
- Adjustable Threshold

Others

- Custom properties
- Connection with phone or tablet
- Interface set-up
- Portable

Take control

The Fitness Mat is compatible with your smart device, whether mobile or tablet. Be able to visualize your exercise in real time on your favorite device.



Trust the mat

The Mat knows you even better than yourself.

By monitoring your habits, you know when you do things right or wrong. With the stored data, the Mat can offer which is the best exercise for the correlation of the position in the case that the exercise is not in force.



Main features

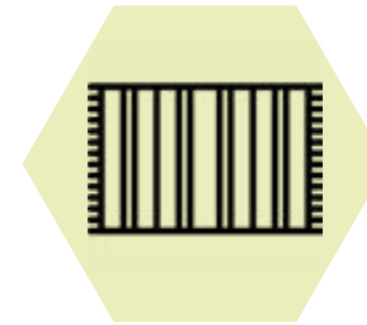
1. Pressure Sensor

Element	Unit	Value
Number of sensors	#	2352
Sensor distribution (rows x columns)	#	84x28
Sensing area (width x length)	mm	560x1680
Individual sensor area	mm	12x16
Maximum distance between sensors	cm	2
Maximum reduction of sensor routing resistance	mΩ/	< 50
Sensor response time	%	< 3
Accuracy	%	4 – 8
Drift	%	< 10
Repeatability	%	< 5
Measure range	mmHg	5 – 300
Hysteresis	%	±5

- Relation between pressure and mmHg
- Isotropic sensor topology
- Good response on pseudo-dynamic linearity resistance vs pressure

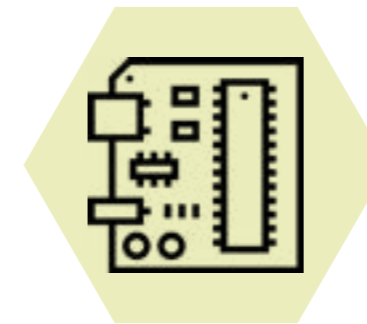
Main features

2. Textile system



- Non elastic
- Yoga mat made with TPE material: non-slip.
- Humidity range: 5 – 70%
- Temperature range: 15 – 45 °C

3. Electronic hardware system



- Bluetooth connectivity: Yes.
- iOS, Windows and Android compatible
- 12 bits resolution.
- Scanning frequency: 4/6 Hz.
- A/C circuit with module multiplexing for Cross-talk reduction and fast processing.
- Built-in rechargeable battery.

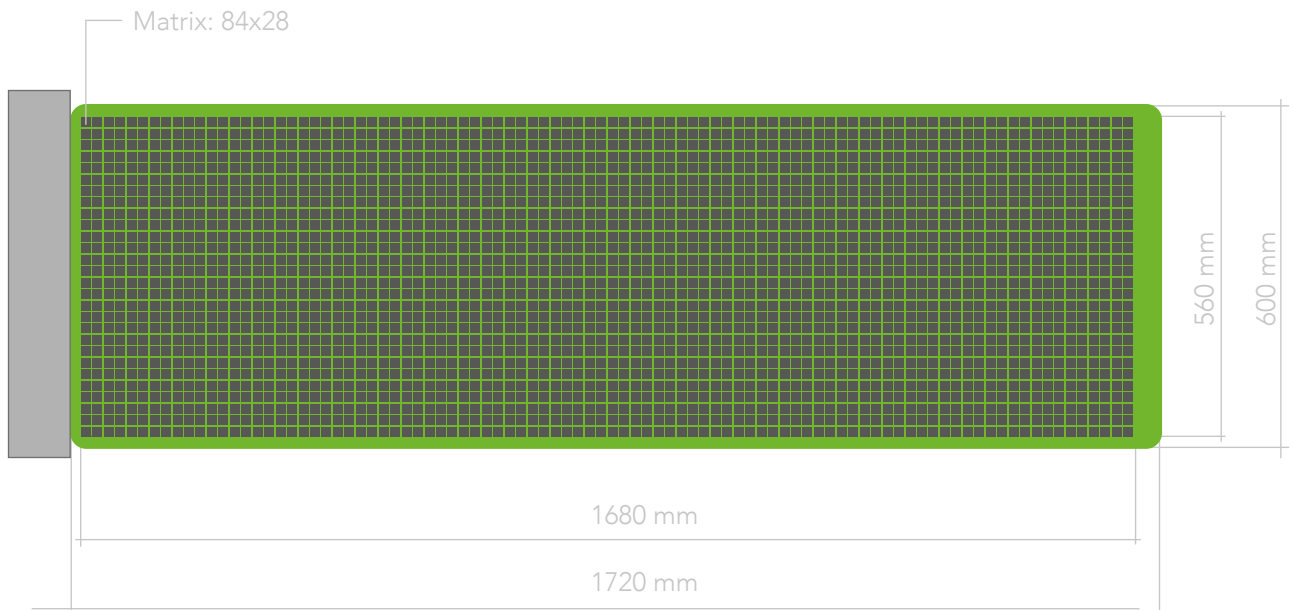
4. Software & Firmware system



- Demo software to see pressure mapping in real time.
- CSV exportation data.
- Simple algorithms for Center of Pressure analysis
- Simple algorithms for counting exercises (i.e. Jumping Jacks)
- Easy-to-use software.
- Software gives independent pressures value for each sensor pixel, without cross-talk affectation.
- Software for PC, Android and iOS.

Main features

5. Pad diagram



- Effective Surface: 1680x560 mm
- Dimensions: 1720x600 mm

