



THE SLEEP MAT DEV KIT 1.9

The Smartest Sleep Solution

PRODUCT SHEET

1- The Bedding Mat Platform

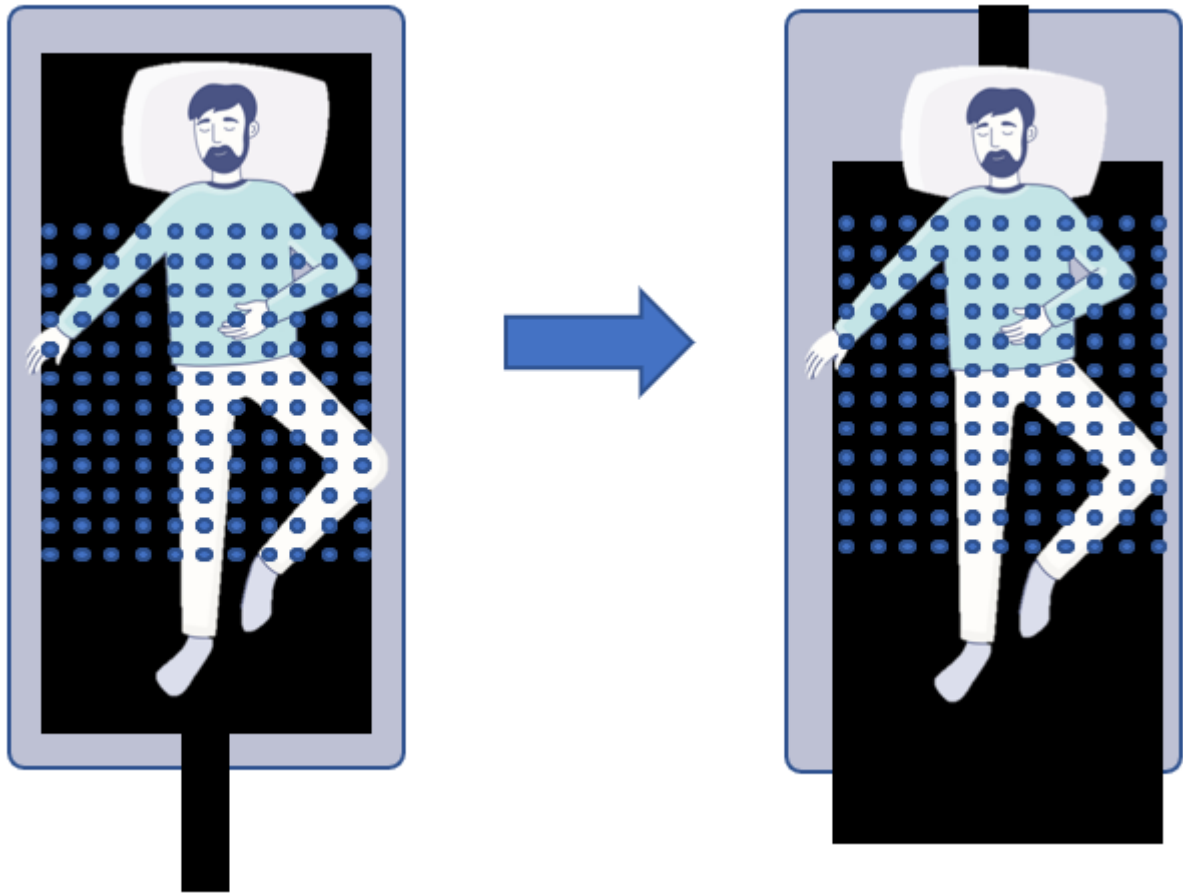


Bedding Mat is a platform based on Sensing Tex's Sensing Mat designed to utilize collected bed pressure mapping.

Bedding Mat Platform is a comprehensive solution for designing intelligent and connected products for data collection, and pattern recognition. Including action triggering based on patented stretchable printed electronic technology by Sensing Tex.

The Bedding Mat allows for a big number of other sub-applications including industries like healthcare, wellness etc.

2- The Sleep Mat Dev Kit



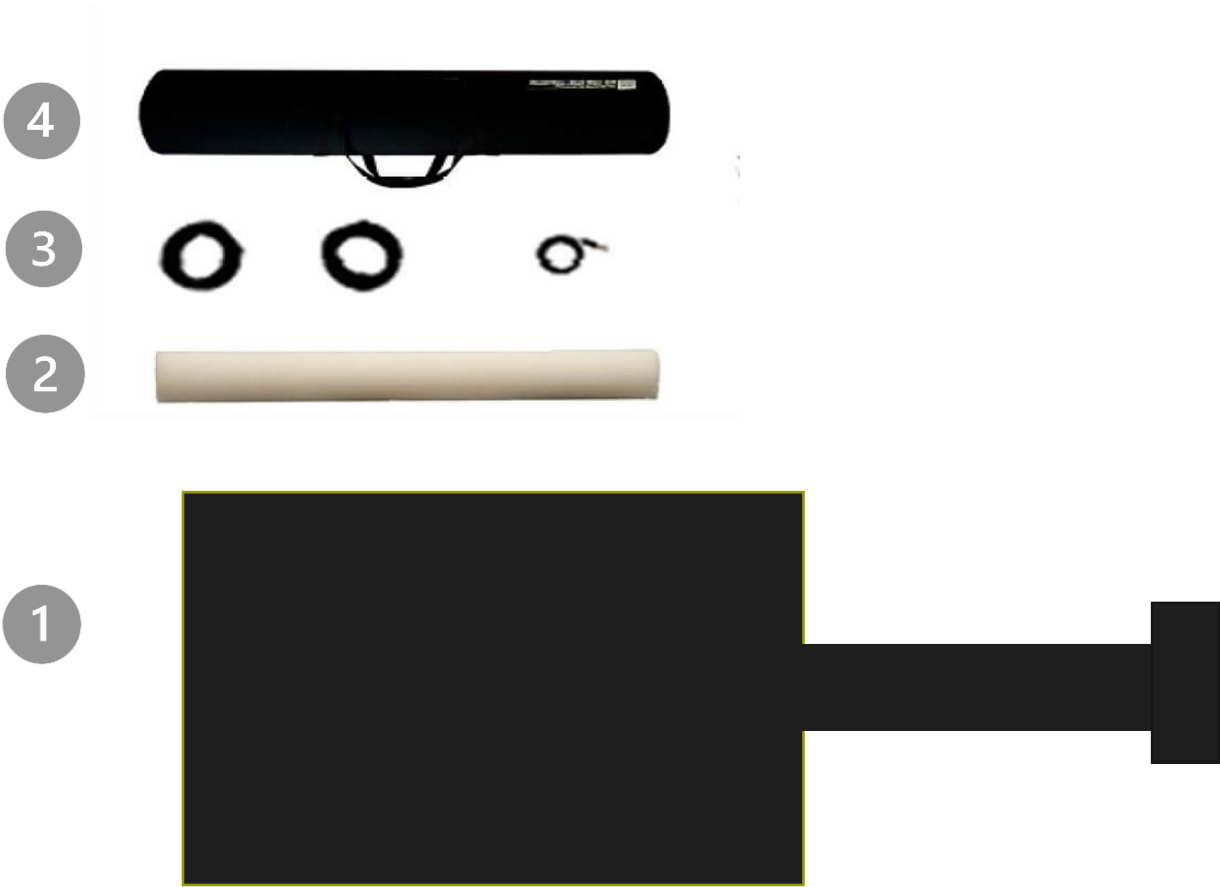
The Sleep Mat Dev Kit was created to provide all the hardware and software components needed to design smart bed and sleep tracking solutions. It will cater to clients in the consumer health and wellness industries.

With the Dev Kit, you can create many applications such as remote monitoring of presence, posture and movement, as well as biosignals in bed. By tracking biosignals the postures, movements, and pad can also evaluate patient comfort, determine postural analysis, actigraphy, and evaluate sleep quality. We deliver with this kit already AI postural analysis and actigraphy

Get in touch with our team for more info:

info@sensingtex.com

3- The Hardware

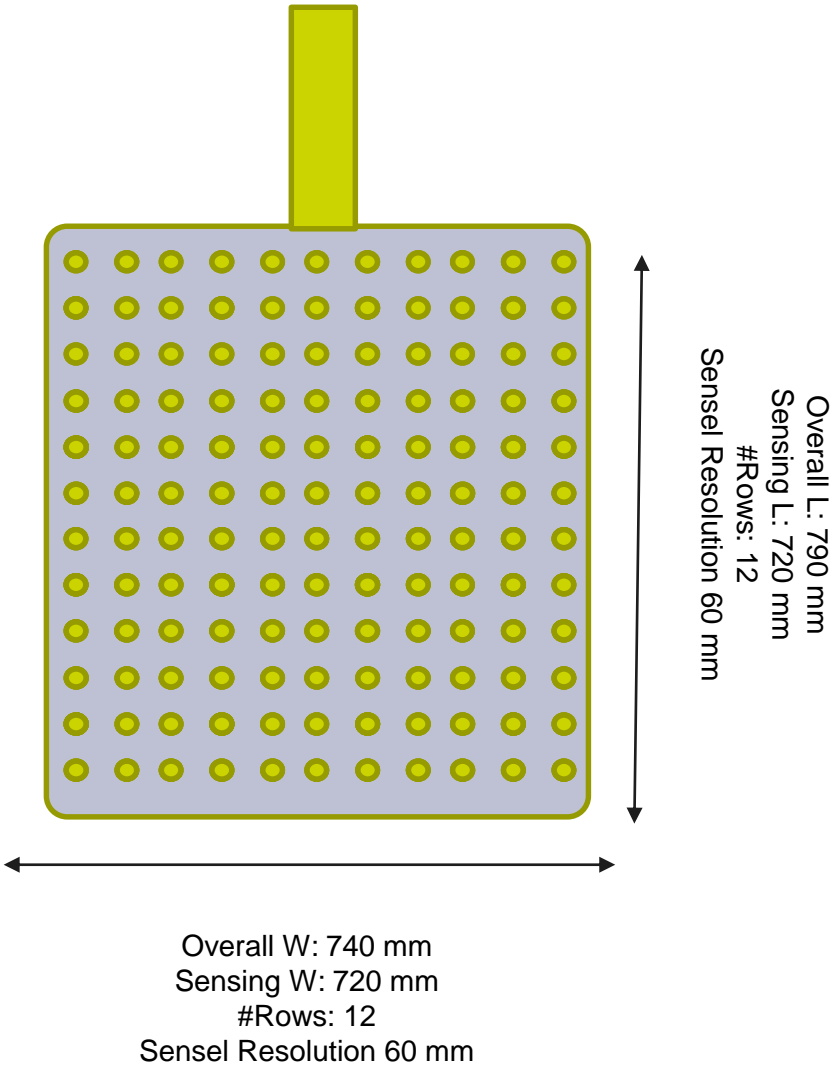


- 1- Sensing Mat & Electronic Box
- 2- Protective Foam
- 3- Cables and Straps
- 4- Transportation Bag

**CE CERTIFICATE
EU DECLARATION OF
CONFORMITY**

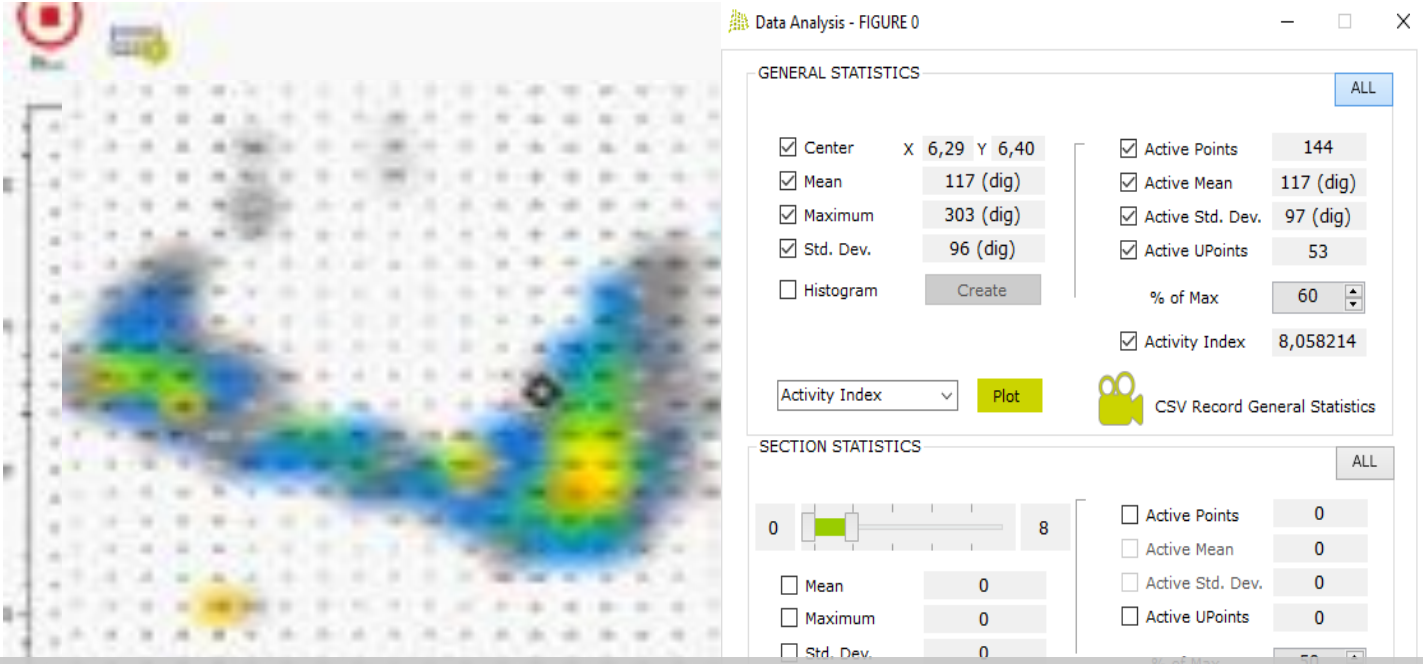


3- The Sensor Layout



This sensor arrangement was created to allow the use of the most up-to-date data analytics and artificial intelligence in all areas of the bed, making postural, body part, body movement, and bio signal analysis much easier.

4- The Demo Software



Sample Images For Illustration Purposes Only



Posture Recognition Data Set

Presence Detection: **Present**

User_Name:

Posture: **Flat**

Confidence: **98.15%**

<input type="button" value="Absent"/>	0
<input type="button" value="Supine"/>	0
<input type="button" value="Left Lateral"/>	0
<input type="button" value="Right Lateral"/>	0
<input type="button" value="Left Fetus"/>	0
<input type="button" value="Right Fetus"/>	0
<input type="button" value="Prone"/>	0
<input type="button" value="Seated"/>	0

4- The Demo Software

Data Analytics Sensing Mat software



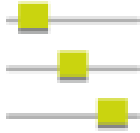
Import/Export



Analysis



Calibration

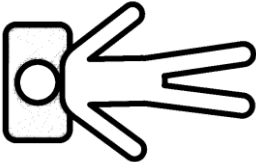


Representation

- ✓ Configure the visualization of the raw data
- ✓ Calibrate it in relative pressure units
- ✓ Play with raw data and analytics: statistics and data sets for Machine Learning ML
- ✓ Export to JSON and CSV files

THIS SOFTWARE IS FOR DEVELOPMENT PURPOSES

OEM Software Sleep Tracker Solution



Postural Analysis

AI Detection of 6 different Positions: Absence, Seating, Lying Flat (supine and prone), Lying Lateral both Right and Left. **Above 95% Accuracy**



Actigraphy 2D

micro and macro movements correlated with Sleep Phases
Above 95% Accuracy
Sleep Phases

THIS SOFTWARE PACKAGE IS FOR OEM SLEEP TRACKERS

Future Option when updated by Sensing Tex: Respiration Rate

Sensing Mat Features	
Overall Area (L x W) [mm]	790 × 740
Sensing Area (L x W) [mm]	720 × 720
Number of Sensor Elements	144
Matrix Topology [R x C]	12 x 12
Sensor Element Resolution [mm]	60
Sensor Element Shape	Round
Sensor Element Size [mm]	10
Cover	Lyca Fabric
Pressure Sensing Features	
Linearity Coefficient	0.99
Accuracy	10%
Pressure Range	20-5000 mmHg*
Hardware Features	
ADC Resolution	12 bits
Scanning frequency [Hz]	1-100**
OS & Platforms Compatibility	Windows, Linux, OSX, IoT, Android
Standard Connectivity Hardware	USB Serial, BT and WIFI
Standard Connectivity Enabled	USB Serial, BT and WIFI
Connector Power	Micro-USB
Built in Battery	No
Software Features	
Demo Software	Windows, Postural Analysis & Actigraphy
Software Support	Software Developer Guide Provided & Technical Assistance

**Varies depending on the communication settings*

***Varies depending on the communication, data compression, and receiving device*



Sensing·Tex

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