# 1. Original Microcomputer Board "ARGUS BOARD"

■ What is ARGUS BOARD?

The ARGUS BOARD is a newly developed, unique microcomputer board specializing in sensing. It offers high processing capability and a mounted FPGA that will support the development efforts of everyone from researchers to students working on sensing prototypes.
General sales are scheduled to begin summer 2019.
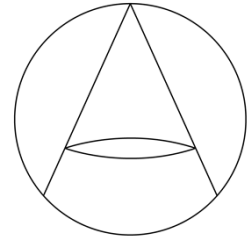
ARGUS

■ Main Features of the ARGUS BOARD

1) Microcomputer processing capability
Uses ESP32 (from Espressif systems) with high processing capability of 600 MIPS.

2) Connectable to A/D and D/A Converters
Easily connects to various high-quality converters.

3) Mounted FPGA
The mounted FPGA makes microcomputer programming and processing simple, with no need to worry about converters.

4) Advanced Security Features
The mounted FPGA and ESP32 provide advanced security features to prevent intrusion and data exploitation. All boards a unique ID as well as an encrypted code.

5) Protection Against Unlawful Duplication
Duplication of the board is extremely difficult with because the circuit program in the FPGA cannot be copied.

ARGUS BOARD

Produced by ● sensingnet
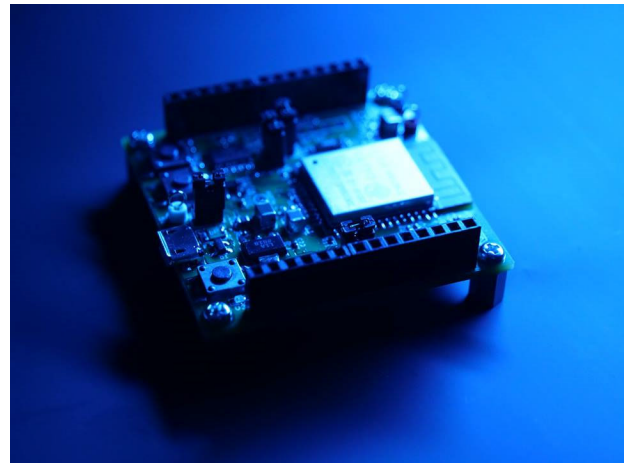
2. Sensing Chair "ARGUS BALANCE"

■ What is ARGUS BALANCE ?

The ARGUS BALANCE is a "smart" sensing chair that measures your heart rate, respiratory rate, and stress level by using highly sensitive piezoelectric sensors built into the seat to detect minute movements of your body. It uses chaos theory* to analyze your levels of stress, relaxation, fatigue, and responsiveness.
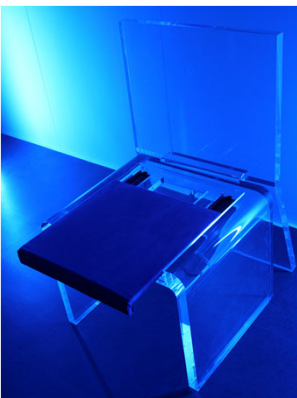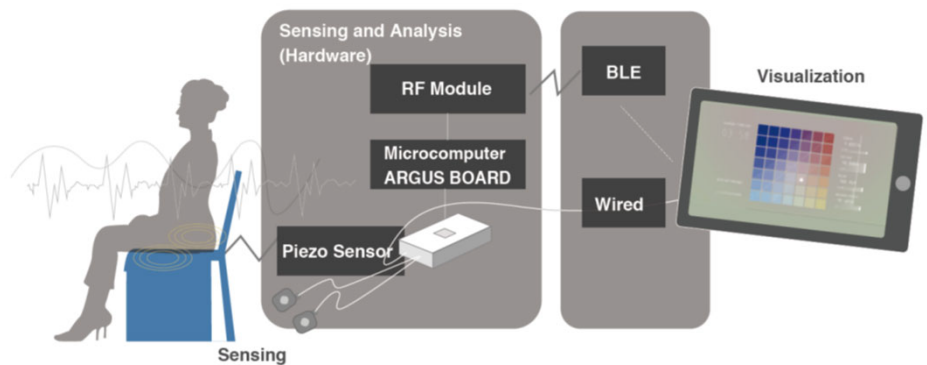
This model is the third version in the series since it was developed in 2017, and its two sensors make the data it collects even more accurate. Its breathing algorithm also makes it possible to provide a visualization of your respiratory rate and strength.
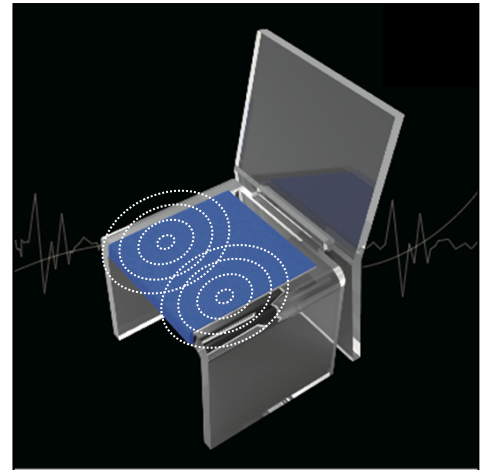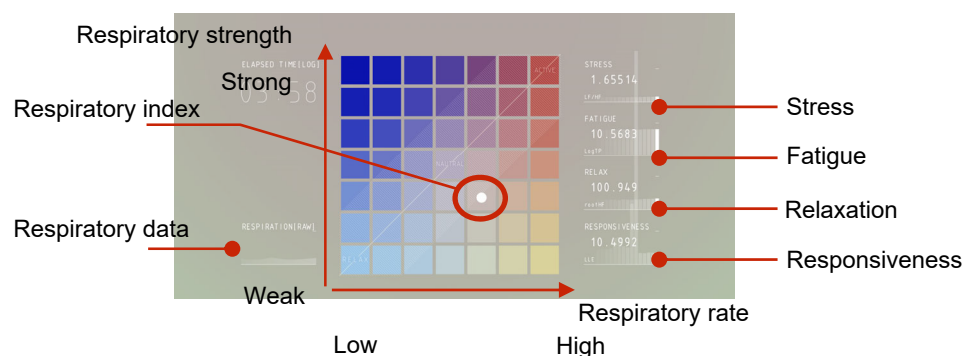
■ Design & Technology
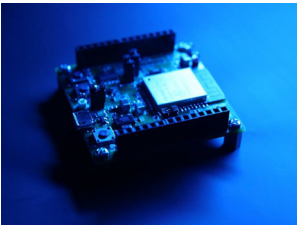
Equipped with microcomputer with ARGUS BOARD

THK's FBL56H+305LS slide rails built in to facilitate sensor mounting.
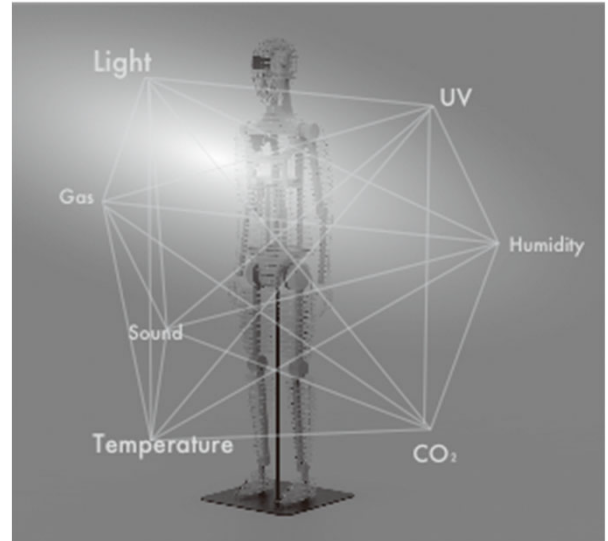
DATA VISUALIZATION

*Chaos theory deals with phenomena that display complex behavior and are deemed unpredictable due to rounding errors during calculation.
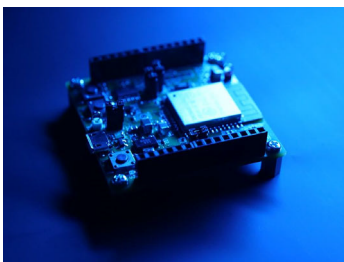
3. Sensoroid ATMOS II

■ What is Sensoroid ATMOS II ?

The Sensoroid ATMOS II is a humanoid sensing object capable of measuring various environmental conditions. By embedding sensors all over this object, you can visualize the environmental conditions an actual person would experience.
The second version is an improvement upon the first model released in 2018 and is equipped with our original microcomputer ARGUS BOARD.
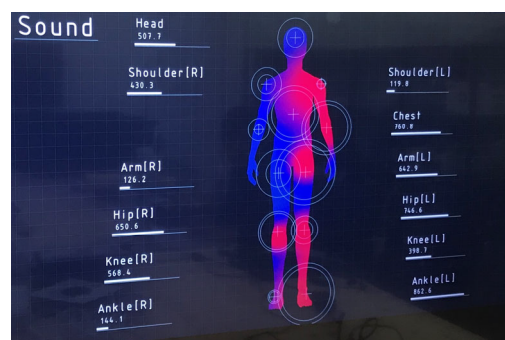

■ Design & Technology

Equipped with microcomputer with ARGUS BOARD

Data Visualization

THK's FBL27D slide rails are used in the ATMOS II's chest to allow a microcomputer to be installed. THK's RF77F cross-roller ring is also used in the waist.
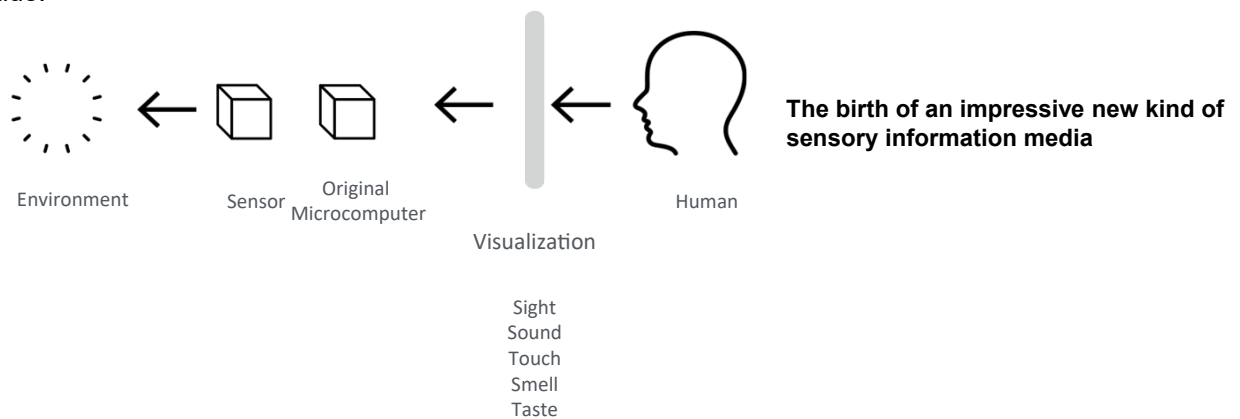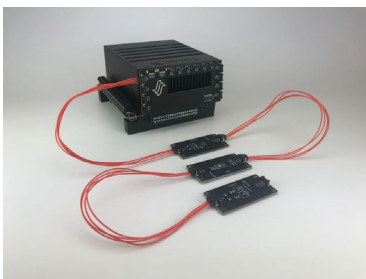
4. Sensing Data Visualization System Sensing Scape Studio

■ What is the Sensing Scape Studio?

The SENSING SCAPE STUDIO is a data visualization technology that uses an original microcomputer board and algorithm to convert data collected from the surrounding environment—such as sound, light, and temperature—into a form of expression that we can experience with our senses. It opens a new world of sensing technology-based new media art and generates market value.

Environment   Sensor   Original Microcomputer   Visualization   Human

Sight
Sound
Touch
Smell
Taste

The birth of an impressive new kind of sensory information media
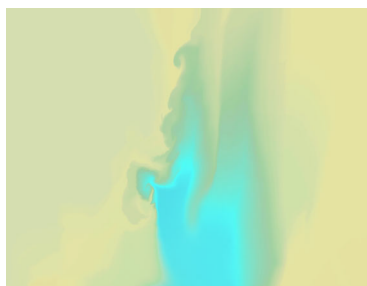
■ Design & Technology

Sensing Scape Studio Board

Our original Sensing Scape Studio Board specializes in visualizing large volumes of sensing data.At CES 2019, we visualize sound, light, and temperature data collected through sensors.
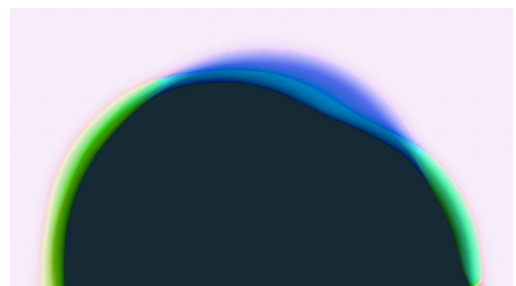
Data Visualization

Sound

Temperature

Light

5. Micro Energy Harvesting Board
REGEN BOARD

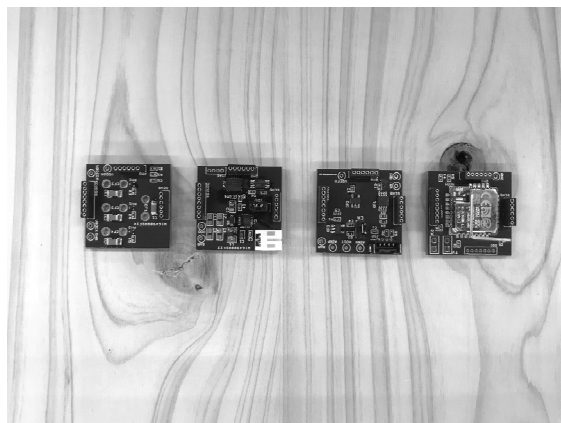## ■ What is the REGEN BOARD ?

The REGEN BOARD is our own uniquely developed board system that enables energy to be gathered from micro power sources in the natural environment and boosted to a practical voltage. We aim to create a system that can provide enough power for sensing and data transfer processes in a variety of environments for the rapidly evolving IoT industries of the near future.
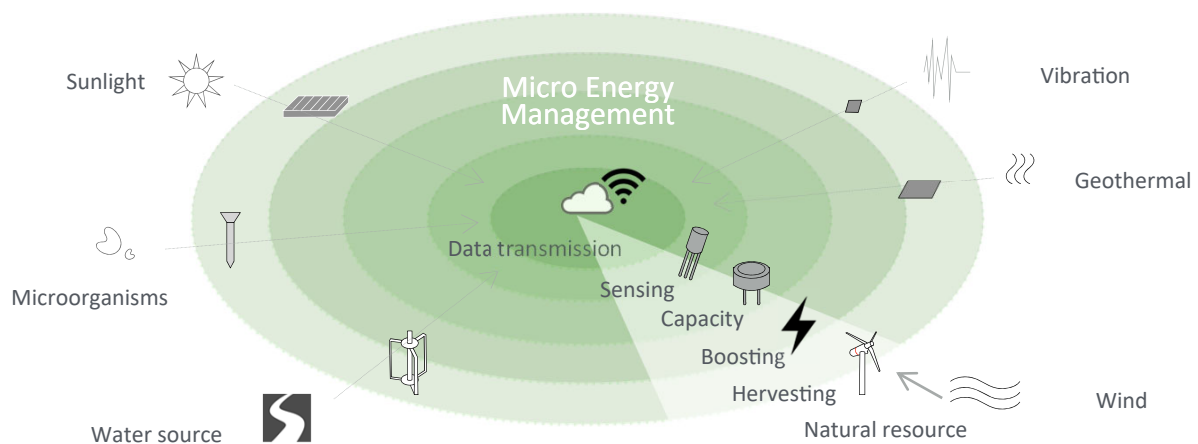
■ Design & Technology

＜Natural Energy＞

Solar
Wind
Water
Thermal
Bio
Microbial

REGEN BOARD