Heraeus
Epurio

AI SILK

HAPTIC METAVERSE GLOVES WITH LEAD SKIN®

CONDUCTIVE POLYMER ELECTRODES

AI Silk® developed the innovative new conductive fiber/textile LEAD SKIN® through dyeing technology.

Clevios™, the pioneer and leader in PEDOT chemistry, is coated on the fibers and provides the material with excellent conductivity.

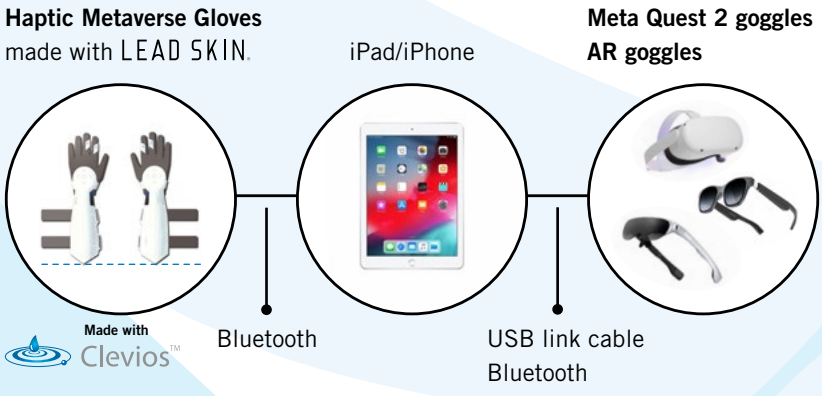
Utilizing the technology of applying special processing to silk and polyester to make electrodes, LEAD SKIN® is developed from conductive fibers that are smooth and soft to the touch.

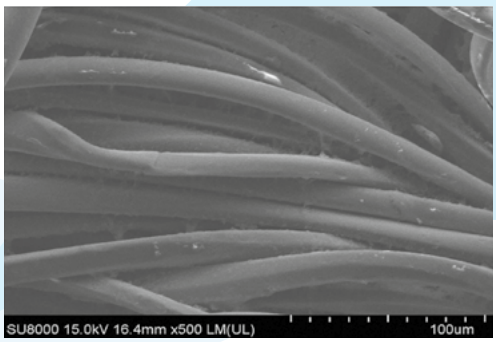
METAVERSE CHALLENGES:
Technologies to realize tactile sensations that create immersion are required

FEATURES OF LEAD SKIN

- **Soft to touch, comfortable to wear**
  - Superior moisture absorption and retention
  - Excellent washing/laundry durability
  - Highly conductive, usable as electrode for biological signal sensors and electrical stimulation
  - No corrosion, withstanding moisture and sweat
  - Obtained OEKO-TEX Standard 100 Class 1 certificate
- **Unique electrode manufacturing technology Media**
  - Developed through low-cost manufacturing process
  - Achieved sheet resistance 10 ohm/sq
- **Compatible with various materials and shapes**
  - An established coating technology for inexpensive polyester fiber
  - A developing technology for non-woven fabric and synthetic leather with exciting new applications in vehicles

SYSTEM CONFIGURATION



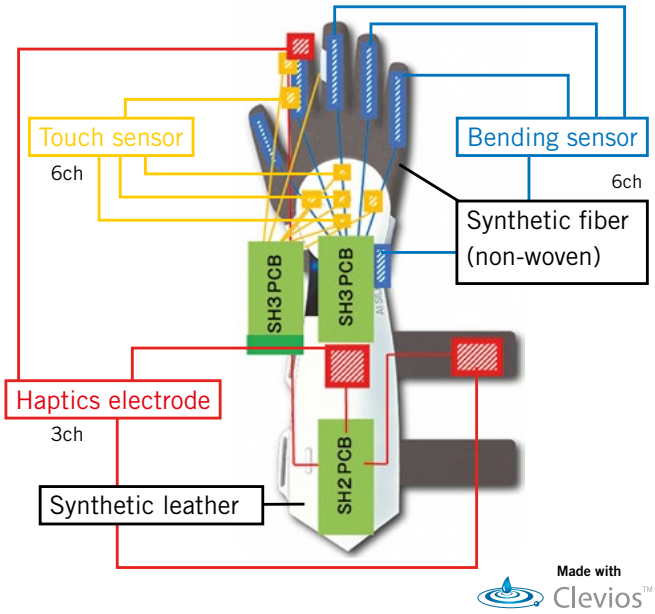


LEAD SKIN

HAPTIC METAVERSE GLOVES WITH SENSOR CONFIGURATION IMAGE (RIGHT HAND)

Functions

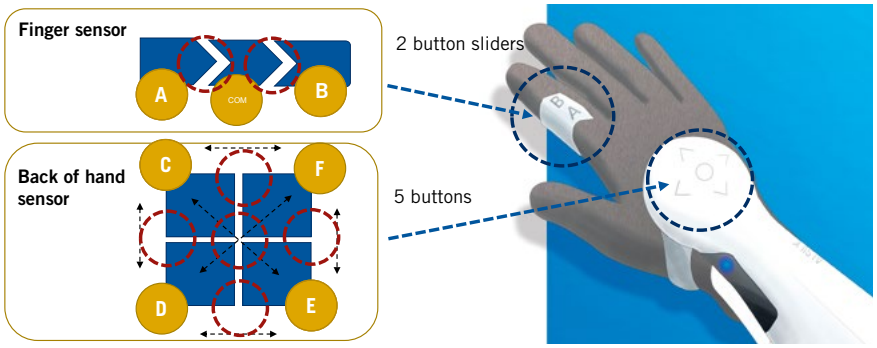
- Senses the bending of five fingers
- Haptics by electrical stimulation of the index finger and two parts of the arm
- Creates a sensation of a 'click' when you press the button, and a feeling of weight as if an object was being held
- Six touch sensors (substitute for controller)



GLOVE STRUCTURE OF THE TOUCH SENSOR

Soft and large-area patterns (Conversely, fine patterns are unsuitable)

LEAD SKIN



AD5940 measures C component for each channel (A to D)

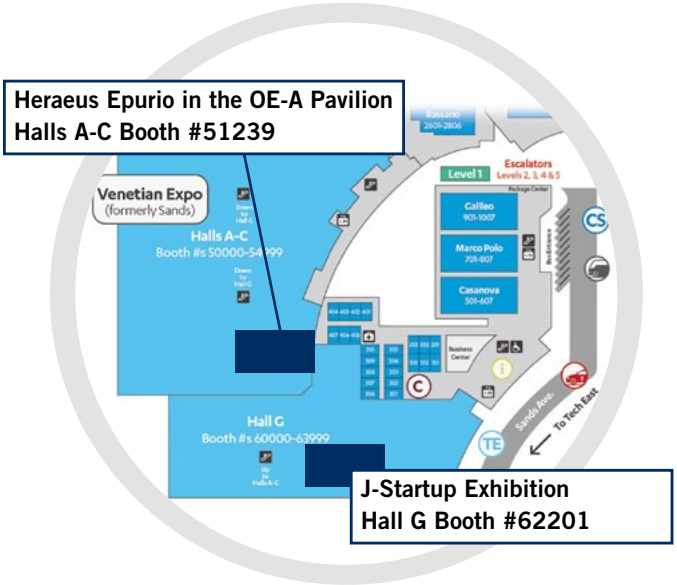
*A total of 12 channels are realized using the impedance measurement function of the AD5940.

(1) Finger: 2ch
(2) Back of hand: 4ch
(3) Finger bending: 5ch
(4) Wrist: 1ch

Made with Clevios™

WHERE TO FIND US AT CES 2023

LAS VEGAS, NEVADA, USA



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