

Currently available only in Japan.

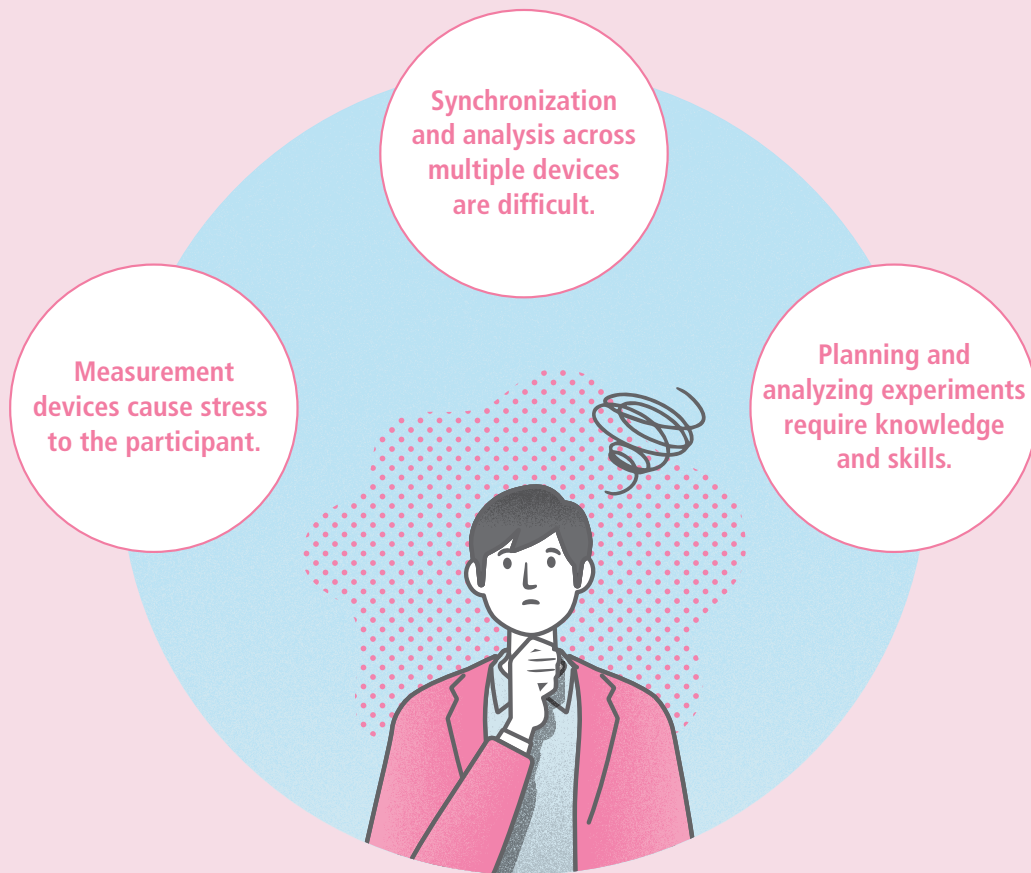
Multi-Device Physiological Measurement System

HuME

Human Metrics Explorer

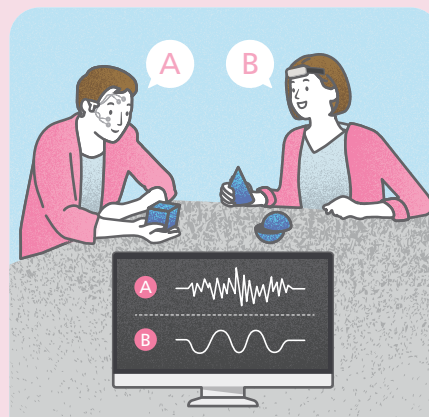


Overcoming the challenges of physiological measurement



Low-burden wearable devices

All measurement devices communicate wirelessly, making them easy to wear. Measurements can therefore be taken under natural conditions, without restrictions on the participant's movements. Sensor data is stored locally on the device, helping to prevent data loss.



Easy-to-use GUI for synchronization and analysis

Data from multiple measurement devices and a camera can be recorded with a single GUI. After recording, the data analysis software synchronizes and displays the signals and videos. Data can also be integrated with data from third-party devices that support external signal input.



Comprehensive software support from planning through analysis

Software is provided for each step, from experimental protocol design to measurement and data analysis. Commonly used protocols and analysis workflows are built-in.

HuME Use Cases

Usability evaluation



Affective evaluation of eating and drinking



User experience evaluation

Data analysis using HuME

Event-based analysis (identifying changes)

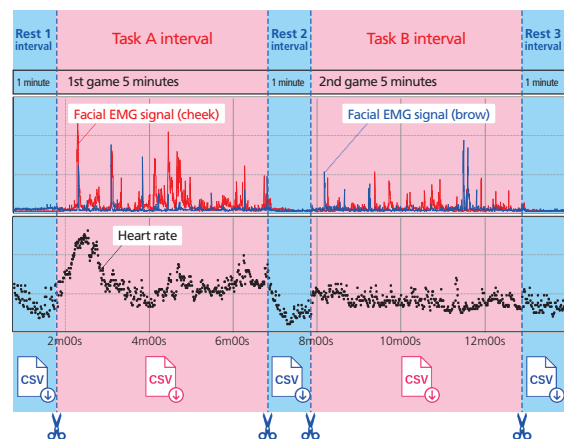
Physiological signals and video are displayed in sync, enabling researchers to review any point in the experiment. By identifying the points where physiological signals change and correlating them with other signals and video footage, researchers can better understand participants' physiological responses.



Comparisons of task intervals

Different intervals are automatically highlighted according to the plans in the experimental protocol planning software.

Physiological signals from each highlighted interval can be extracted and exported in CSV format, facilitating post-processing such as interval comparison and statistical analysis.



Easy-to-use measurement system

Each measurement device works with the HuME camera W, and the configuration can be arranged freely to suit experimental requirements. Using optional equipment, the system can be expanded to include third-party measurement devices and video cameras.



Facial EMG device

This is worn over the ear with electrodes attached above the cheek and brow muscles. Two-channel facial EMG signals are measured and recorded.



ECG device

Electrodes are attached to the chest to measure and record a single-channel ECG signal.



EEG device

Worn on the head using a headband. Two-channel EEG signals from the left and right sides of the forehead are measured and recorded.



HuME camera W

The camera is connected to the data-measurement PC via a USB cable. It operates in tandem with other measurement devices and records videos of the participant's behavior.

Options



Trigger sync adapter

Receives wireless trigger signals for data synchronization and outputs synchronization signals to all linked devices and the action camera mount.



LED Mount for Action Camera

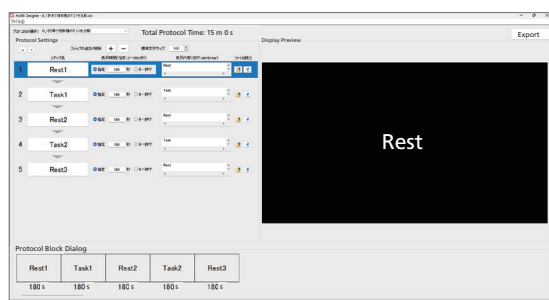
This mount is designed to be attached to specific third-party action cameras. It is used to capture video footage compatible with synchronized data analysis.

Comprehensive support from planning through data analysis

Software is available to support every step from experimental protocol design and measurement to data analysis. All operations are performed through the GUI, making the system easy to use even for a non-expert user. This significantly reduces complex operations and prevents the need to repeat experiments because of operator errors.

Planning

Experimental protocol planning software



Experimental protocols, including instructions to participants, as well as timings and procedures, are easily configured via the GUI. Templates for different objectives can be selected, enabling researchers to create experimental plans easily.

Attachment

Experimental protocol information

Signal measurement software



Multiple HuME measurement devices can be connected, with batch control of the starting and stopping of recording. Measured values and calculated indicators for each device are displayed in real time, allowing measurement signals to be checked immediately after the devices are attached. Instructions to participants can also be shown simultaneously, according to the experimental protocol created in advance.

Measurement

Rest

Set of measurement and protocol data
(Data consolidation software)

Data analysis software



Signals and video recorded by the measurement devices and camera are displayed in sync. This supports detailed analysis, including reviewing changes in measured values alongside specific scenes in the video. By importing protocol data, the system automatically assigns colors and labels to each predefined interval, enabling the physiological responses for each interval to be clearly visualized. Indicators such as Positive and Negative values derived from facial EMG signals, heart rate from ECG signal, and band power values from EEG signals can also be calculated and displayed.

Data analysis

Product specifications

	Facial EMG device	ECG device	EEG device
			
Number of Input Channels	2	1	2
Dimensions	Approx. 150 × 130 × 90 mm*1	Approx. 23.5 × 16 × 94 mm	Approx. 97 × 30 × 30 mm*2
Weight	Approx. 45 g*3	Approx. 28 g*3	Approx. 62 g
Sampling Rate	500 Hz		
Communication Method	Bluetooth® Low Energy, Specified low-power radio communication, USB 2.0		
Power Supply	3.7 V lithium-ion battery (non-replaceable) Continuous operating time: approx. 3 hours		

*1: Not including cables or snap fastener.*2: Not including headband or earlobe clip.*3: Not including electrodes.

Accessories

Dongle, HuME camera W, AC adapter, USB hub, communications and charging cable, bag, trial electrode, DVD (software and instruction manual)



OS	CPU	RAM/HDD	Display	Port
Windows11 Pro, Japanese edition	Core i5 or higher	16 GB or larger/256 GB or larger	Full HD (1920 × 1080) or higher	USB Type A 2 ports minimum

A computer is required to use this product.

This product is not a medical device.

Note that the appearance and specifications are subject to change without notice.

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