

## Brain Activity Monitor Device Hb133

**Low-priced version!**

**Better fit with the stretchy bandana!**

**Ultra-light weight (100 g)**

**2 channels on frontal lobe**

**rSO<sub>2</sub> (%), Oxy-Hb (mM), Deoxy-Hb (mM)**

**Acceleration (X, Y, Z)**



Display screen image of the measurement program



- Sensor: 2 channels
- Weight: 100 g (Ultra-light weight)
- Astem original stretchy bandana (made in Japan)
- Measurement items: Regional Oxygen Saturation (rSO<sub>2</sub>: %), Oxyhemoglobin (Oxy-Hb: mM), Deoxyhemoglobin (Deoxy-Hb: mM), Acceleration (X, Y, Z), max. 2G
- Bluetooth-LE (MBN52832)
- Sampling rate: Max. 10 Hz (0.1 sec)
- Measurement display program: Windows

# Hb13 Series Brain-NIRS System

## Specifications

Model	Hb133
Measurement technology	NIRS (Near-infrared Spectroscopy), SRS (Spatially-Resolved Spectroscopy)
Light source	2 colors of LEDs Average power: 1 mW or less Peak wavelength: 770±10 nm, 830±10 nm
Light detectors	Photodiodes
Sensor board	FPC (Flexible Printed Circuits) NOTE: Inappropriate handling may damage the circuits.
Number of channels	2 channels (fixed)
Output data format	CSV format
Sampling rate	0.1, 0.2, 0.5, 1.0 (sec)
Measurement items	Regional Oxygen Saturation (rSO <sub>2</sub> : %) Oxyhemoglobin (Oxy-Hb: mM) Deoxyhemoglobin (Deoxy-Hb: mM) Triaxial acceleration (X, Y, Z, max. 2G)
Power source	2 AAA batteries, 3V The faster the sampling rate is, the faster the battery will be eaten up.
Wireless connection	Bluetooth-LE (MBN52832) Within 5 m Foreign certificates: CE (Europe), FCC (US), IC (Canada), KC (Korea)
Measurement program	Windows Hb133.exe
Supported OS	Windows 8.1, 10
Accessories	Bandana (2 sizes: L/M and M/S), SD card
Weight	Approx. 100 g (including batteries)
Included software	NIRS Data Analysis program



Product name	Model	Price(JPY/unit) (tax included)
Brain Activity Monitor*	Hb133	198,000
Bandana (2 sizes: L/M, M/S)	Hb-b	4,400

\*Includes accessories

- In a bright environment, it may not be possible to measure correctly due to the influence of external light.
- Attach the sensor firmly to the skin. Hair between the sensor and skin interferes the measurement.
- Bandanas are available in two sizes.
- The program and other information will be provided with SD card.



**astem**

## NOTES

- This device cannot be used for medical treatment.  
If you wish to use it, please obtain approval from the ethics committee of the university or hospital.
- You can use this product to develop and sell the application.  
We will provide the necessary information free of charge, so please feel free to contact us.
- The light measurement and correction algorithms for this product are based on technology owned by Shizuoka University and implemented by us under an exclusive license.

## Manufacturer/Distributor

Controlled medical devices marketing licenss holder  
Highly controlled medical devices marketing license holder  
rental business

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