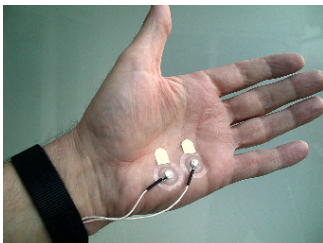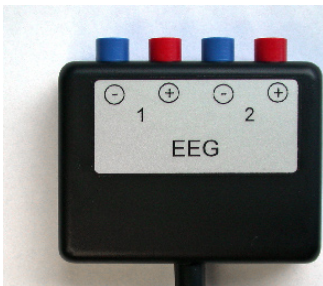The varioport recorder system is a very small and lightweight portable measuring system. It collects physiological, movement and environmental data over a time period up to one week.

The basic version has sixteen (optional 24) channels for any analog signal coming from pre-amplifiers or sensors. In addition there are digital marker/ trigger inputs as well as two special channels for battery monitoring.

The pre-amplifiers are integrated in the measuring cables or sensors. In addition to the advantage of having the amplifiers close to the electrodes this makes the recorder very flexible because each channel can be applied to any signal.

The recorder can be controlled by a serial connection ore wireless transmission with the VARIOGRAF software (preparation of measurement, online data control, data readout and display, data conversion etc.), available for PC or MAC.

Special versions of the varioport system are available for EEG holter applications, sleep research or activity monitoring.

*vario*port

PRE AMPLIFIERS

- ECG (Electro-Cardiogram)
- EEG (Electro-Encephalogram)
- EMG (Electro-Myogram), also Facial EMG
- EOG (Eye movements)
- EDA / GSR (Skin response)

SENSORS

- Breath Belt
- Temperature sensors (skin or ambient temperatures)
- Limb movement
- Acceleration (1,2,3-dimensional)
- Body position
- Breath flow (thermistor for mouth and nose)
- Microphones (speech activity, ambient noise, snoring)
- Light intensity
- Air Humidity
- Air pressure
- Oxygen saturation of blood (NONIN senors)
- Finger pulse sensor (blood flow)

TECHNICAL DATA

Dimensions	12 x 6,5 x x2,2 cm
Weight	170 grams (including memorycard and batteries)
Channels	16 analog inputs (optional 24) 2 digital marker inputs Serial marker/trigger input (256 codes) 2 channels for battery voltage + power consumption
A/D-conversion	Resolution 16 bits (65536 steps) Sample rate individually selectable per channel
Memory media	SD-Card (up to 4 GB)
Power Supply	Two AA-cells Power conspumtion from 1 mA (sleep mode) to 30 mA (full speed at all channels)
Operating time	up to 4 days (depending on number of channels recorded and processor duty)
Connections	Three connectors for analog and marker inputs Serial port to PC (up to 230 KBaud) Bluetooth module (optional) WLAN module (in preparation)

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