BRAINVISION engineering actiCHamp

actiCHamp and PyCorder

Take your neurophysiology research to the next level!

actiCHamp: Brain Products first amplifier designed for research only is now available at an unbeatable price!

actiCHamp is the latest revolutionary development of the company Brain Products, a leader in the market of neurophysiology research for decades.

actiCHamp (Product similar to picture)

The actiCHamp (active channel amplifier) is a **24-bit battery-supplied** amplifier that can be used with **32, 64, 96, 128 and 160** EEG channels. **Additional 8 AUX** inputs are integrated in the basic module of the amplifier and can be used with a full range of biosignal sensors, such as GSR, respiration, acceleration, temperature, blood pulse, etc.

Thanks to its amazingly **high sampling rate** (up to **100 KHz** for 16 channels – **50 kHz** for 32 channels) and **wide hardware bandwidth**, the actiCHamp sets new standards for neurophysiology research amplifiers. Furthermore a simple **plug and play** concept makes it extremely easy to **increase number of channels** by adding modules of 32 channels each up to a maximum of 160 channels.

Upgrading your amplifier with additional channels has never been so easy!

actiCAP* electrodes

The electrodes used to record ExG signals with the actiCHamp are the famous actiCAP's active electrodes. The state of the art active electrode system from Brain Products allows:

1. Impedance indication and display at each electrode by using 3-color LEDs.
2. Plugging electrodes into the cap before the cap is placed on the subject.
3. Mounting the cap very fast. A slit in the electrode housing allows to inject gel and minimize the impedances while the cap and the electrodes are already in place.
4. Easy exchange of faulty electrodes.

** US patent pending*

BRAINVISION engineering PyCorder

PyCorder: python™-based open source acquisition software free of charge!

The PyCorder is a real open source acquisition program for setting up the BrainVision actiCHamp amplifier and storing data based on the python™ programming language.

The PyCorder software offers users unlimited control of the running processes. Users can intervene at any point in the data acquisition step and configure the PyCorder according to their scientific requirements.

The PyCorder not only allows the provided base modules to be modified, but also permits user-defined modules to be integrated depending on the given research application.

Indeed, the source code is available to every customer, so that the acquisition software can be improved and adapted to meet individual needs.

PyCorder integrates **seamlessly** with the **BrainVision Analyzer 2** software, making it very simple for you to read and process data with the most popular analysis software for neurophysiology research. Not only that, it is also possible to analyze data in realtime using any RDA client (e.g. BCI2000).

Please note:
actiCHamp and PyCorder are intended to be used for research applications only and are not sold, designed or intended to be used as medical devices as defined in EU Directive 93/42/EEC, nor are they intended to be used for other medical applications such as diagnosis or treatment of disease. The entire software is open source and the hardware is freely configurable. Brain Products shall not be liable for any use other than pure scientific and research applications. The actiCHamp hardware has been tested and certified as per the relevant EMC and electrical safety standards. A non-medical CE certificate is available on request.

CE

BRAIN VISION LLC
Solutions for neurophysiological research

BRAIN PRODUCTS
Solutions for neurophysiological research

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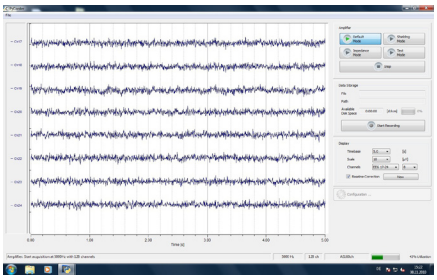
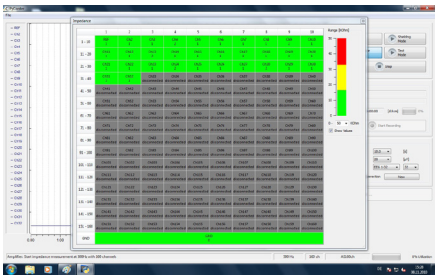
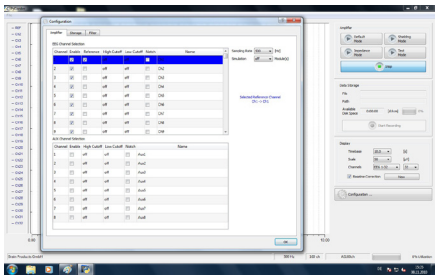
BRAIN VISION engineering actiCHamp

BRAIN VISION engineering PyCorder







PyCorder Screenshots

Technical Specifications for actiCHamp

Sampling Rates (in combination with PyCorder)	100 kHz (16 channels) 50 kHz (32 channels) 25 kHz (64 channels) 10 kHz (160 channels)
Number of Channels	32, 64, 96, 128, 160
Number of AUX channels	8
Max. Bandwidth	DC - 8000 Hz
Digitization	24 bit, one converter / channel
Input Noise	≤ 3 µV p.p. (DC - 35 Hz)
Input voltage range	+/- 400 mV (EEG)
Common-mode rejection (CMR)	≥ 100 dB
Trigger Input	8 bit
Trigger Output	8 bit
Warranty	3 years
Active Electrodes	yes
Impedance Measurement	yes, 3 Colors, displayed via LEDs

Technical changes can be made without prior notification.

System Components actiCHamp:

- actiCHamp base module (with eight AUX inputs)
- up to five 32-channel modules (expansion cards that are inserted into the base module)
- rechargeable battery and charger (including all required connection cables)
- USB2 cable and trigger cable
- up to five actiCAP electrode branches (each with 32 EEG electrodes and a ground electrode)
- replacement electrodes
- two fabric caps
- starter set (gel, nozzle, adhesive rings)
- sensor adapters for AUX inputs
- operating instructions

System Components PyCorder:

- Open Source Software (GPL) „PyCorder“
- user manual

System requirements and minimum computer configuration for PyCorder

Operating system: Windows® 7, 32-bit or 64-bit
Intel® Core™ 2 Quad processor, 2.4 GHz or compatible
3 GB of RAM
Graphics adapter with 1280 x 1024 pixel resolution and at least 512 MB internal memory
Windows® 7 overall performance index › 5.0

actiCHamp user prices (US$) for US customers:

acti32CHamp (32 EEG + 8 AUX)	25,500
acti64CHamp (64 EEG + 8 AUX)	36,500
acti96CHamp (96 EEG + 8 AUX)	47,500
acti128CHamp (128 EEG + 8 AUX)	58,500
acti160CHamp (160 EEG + 8 AUX)	69,500

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Further information can be obtained from your local distributor Brain Vision LLC or directly from:

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