

# Biological Nexus (BioNex)

**bi.ol.o.gy** [bahy-ol-uh-jee] –noun

Is the science of life.

**nex.us** [nek-suh s] –noun

A connection or link associating two or more things, the center or focus of something.

MindWare is proud to present the center of Life Science research: the BioNex desktop acquisition product line.

BioNex was designed to be the focus of your laboratory. It is flexible, powerful and completely upgradeable. It is designed to grow with your research and teaching. Its powerful acquisition, analysis and stimulus response capabilities and easy to use BioNex ACQ software allow you to get up and running quickly. It has applications in disciplines such as:

- Psychophysiology (ECG, EMG, GSC, Impedance, etc.)
- Bio Mechanics, Sports Medicine, Kinesiology (Goniometer, EMG, Blood Pressure, etc.)
- Neurology (EEG, EOG, etc.)
- Biology (bio-potentials)
- Life Science Teaching (bio-potentials, transducers, data analysis and display)
- ...and more

BioNex has a modular approach allowing any of its software programmable precision amplifiers and signal conditioning to be moved from one system to the next. Regardless of your needs BioNex has a module to fulfill your requirements. Three mainframes will be offered, multiple mainframes can also be cascaded to further expand your system.

- Model 3711-02: This product is ideal for teaching and entry level research. It is portable, light weight and is a great low cost solution for academic laboratories. It contains two card slots that can accept any combination BioNex hardware module allowing up to 8 channels of acquisition at the same time.
- Model 3711-08: This product was designed to as the workhorse of most laboratories. It contains 8 user configurable slots for up to 32 channels of custom signal conditioning using any combination of BioNex modules. It also supports high speed data acquisition, simultaneous digital input/output capabilities, stimulus generation and several triggering options.
- Model 3711-16: This product is the power house of the BioNex line. It contains 16 slots of user configurable slots for up to 64 channels of custom signal conditioning using any combination of BioNex modules. It also supports flexible data acquisition; simultaneous digital input/output, input and output triggering, stimulus generation and multiple mainframe cascading for up to 128 channels of acquisition power.



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The **BioNex** product line will ship with the new BioNex ACQ software. BioNex ACQ is a flexible easy to use software interface for the BioNex product line. BioNex ACQ allows flexible acquisition, display, analysis and recording of all your data. It has built in data acquisition, stimulus presentation, event recording, online filtering, transformations, scaling and support for synchronized video and audio collection.

## Modules (4 Channels per module):

- ECG, Z0, dZ/dt and GSC Module
- 3-Bio amplifiers and 1-GSC Module
- 4 General purpose Bio-Amplifiers Module (EKG, EEG, EMG, EOG, etc.)
- 4 Channel High Level Voltage Input Module
- 4 Channel Bio-Amplifier & Transducer Module (PLE, Skin Temperature, Goniometer, Load Cell, Force Plate, Accelerometer, etc)

## Features:

- Modular design allowing modules to be interchanged between units.
- Models 3711-08 & 3711-16 use 16 bit A/D conversion. Model 3711-02 uses 14 bit A/D conversion.
- Sampling Rate, 1Ms/s
- Communication via USB 2.0 high speed format.
- Digital input and output triggering (RCA jacks)
- 8 bit digital input and 4 bit digital output (DB 9-pin connector)
- $\pm 5$  volts @ 50ma and  $\pm 12$  volts @ 20ma available from back of unit (1/8" stereo jacks).
- User selectable independent channel gains through software.
- Synchronous event detection.
- Two independent analog outputs.
- Online filtering and transforms



## Specifications:

- Operating Temperature: 0°C to 50°C
- Relative Humidity: 0 to 95% non-condensing
- Communications Speed: USB 2.0 high-speed mode (480 Mbps)
- Subject isolation: >2.5KVdc
- External Power: 90-264 Vac, 47-63 Hz single phase