B-Alert®X24
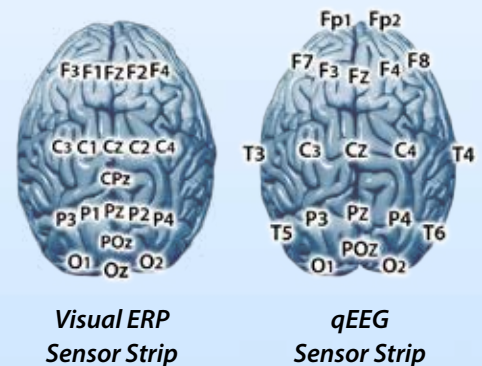

The B-Alert X24 combines power and flexibility for mobile neurophysiological monitoring offering two interchangeable, pre-configured sensor strips -- each of which assures individualized fit and accurate site placement across subjects. The lightweight headset delivers real-time EEG for use in quantitative analyses, LORETA, BCI, neurofeedback training, single-trial ERPs, and the validated B-Alert Cognitive State and Mental Workload Metrics. The included External Syncing Unit (ESU) offers further signal integration flexibility enabling precision millisecond synchronization across 3rd party systems. From biomarker development to neurorehabilitation applications, the B-Alert X24 is the most versatile medical-grade, wireless-EEG system available.

Visual ERP Sensor Strip

qEEG Sensor Strip

Product Features:

- 20 channels of medical-grade EEG, plus 4 optional channel for ECG, EMG, or EOG (24 Channels @ 256Hz)

- Comfortable and non-intrusive; sets up in about 10 minutes

- Automated wireless impedance checks

- Enhanced ESU with **Bluetooth**® wireless range up to 20 meters

- 8+ hour rechargeable battery life

- On-board accelerometer to quantify head movement & position

- Data quality monitoring and feedback

- Multiple options for data synchronization

- Sizing to fit adolescent through adult heads

- SDK fully compatible with MatLab, EEGLab, BCI2000, qEEG, and many neurofeedback packages

B-AlertLAB

The B-Alert X24 Wireless EEG Headset will pair with the B-Alert LAB Software Suite best suited to meet your needs

The ESU features serial and parallel inputs for precision syncing

Advanced Brain Monitoring

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advancedbrainmonitoring.com

HARDWARE

Channels	20 EEG with fixed gain referenced to linked mastoids 4 optional differential channels
Sampling rate	256 samples/second
Dynamic range	Fixed gain ±1,000 µV
Resolution	16 bit, CMRR 105 dB
Bandpass characteristics	0.1 Hz HPF, 100Hz 5th order LPF
Input impedance	100 GΩ
Noise	~ ±2 µV @ 10 Hz and 50 kΩ impedance
Head movement/position	Angles obtained with 3-axis 12-bit accelerometer
RF band	2.4 to 2.48 GHz (ISM band)
Transmission mode	Bi-Directional with B-Alert Bluetooth – USB dongle
Data transmission range	~ 10 meters, line of sight with onboard antenna
Transmission power	Bluetooth Class 2 +4dBm; ESU Bluetooth Class 1
System power consumption	~ 70 mA @ 3.7 V
Battery capacity	Standard 2 x Li-ION batteries - 460 mAH, 8-hours of continuous use Optional 4 x Li-ION batteries - 920 mAH, 15-hours of continuous use
Battery charging	Internally charged with custom cable and USB wall charger
On-line impedance monitoring	Initiated by host computer using bi-directional link
Head unit dimensions	Size: 5'(L) x 2.25" (W) x 1" (H); Weight: 0.11 kg with standard battery
User control	On/Off
Indicator LEDs	Green/Amber

SOFTWARE

Compatibility	Windows 7 and XP, PC with 2.0 GHz or higher processor 1 GB of RAM
File size per minute	~ 45 KB/min/channel

SENSOR HEADSET & ACCESSORIES

Visual ERP config sites Medical qEEG config sites	Fz, F1, F2, F3, F4, Cz, C1, C2, C3, C4, CPz, Pz, P1, P2, P3, P4, POz, Oz, O1, O2 Fz, Fp1, Fp2, F3, F4, F7, F8, Cz, C3, C4, Pz, P3, P4, POz, T3, T4, T5, T6, O1, O2
Sensor strip sizes	Ships with small & medium; inquire about other sizes
Electrode cream	Highly conductive electrolytes and preservatives in non-ionic, hypoallergenic base, buffered to skin pH