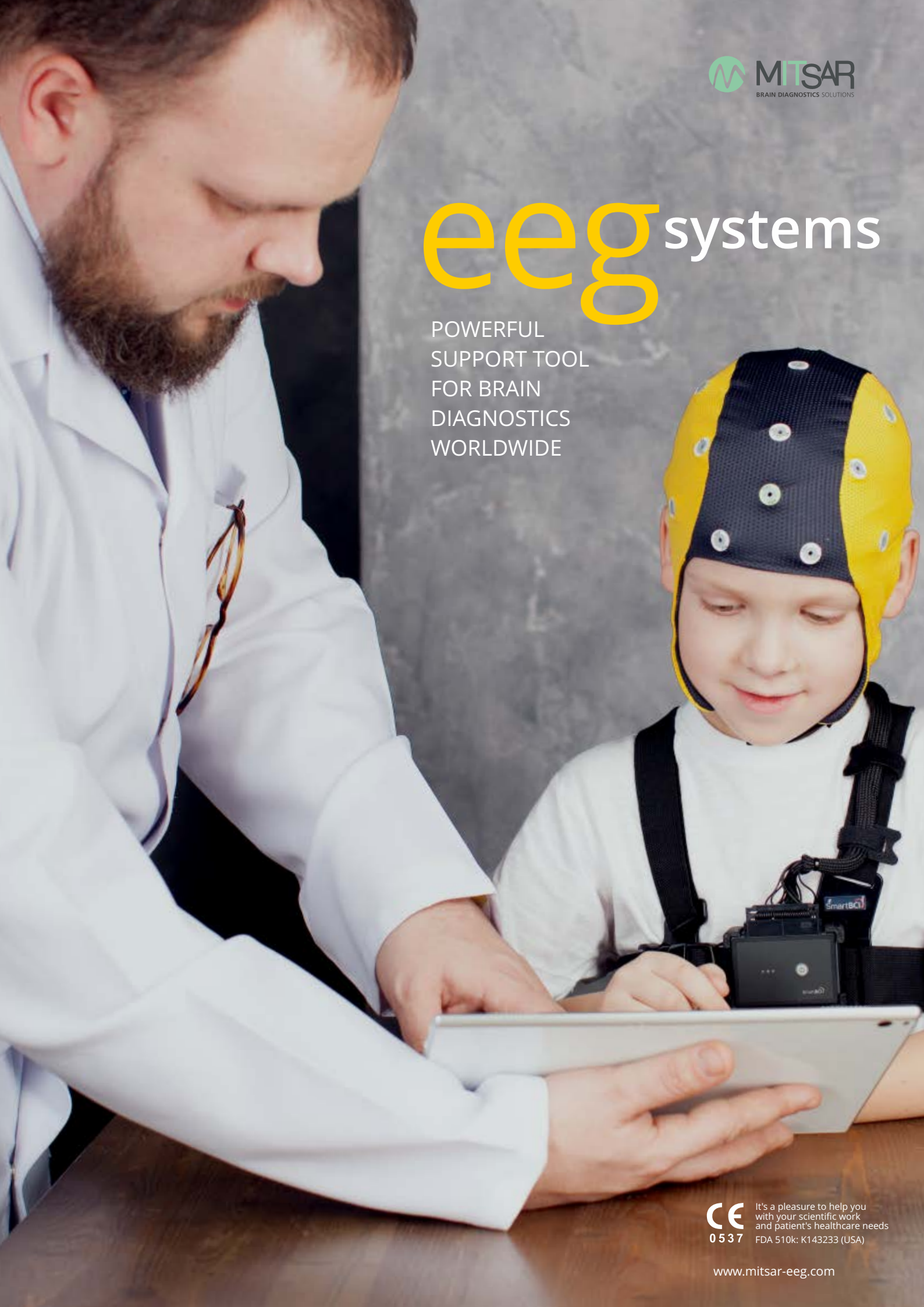
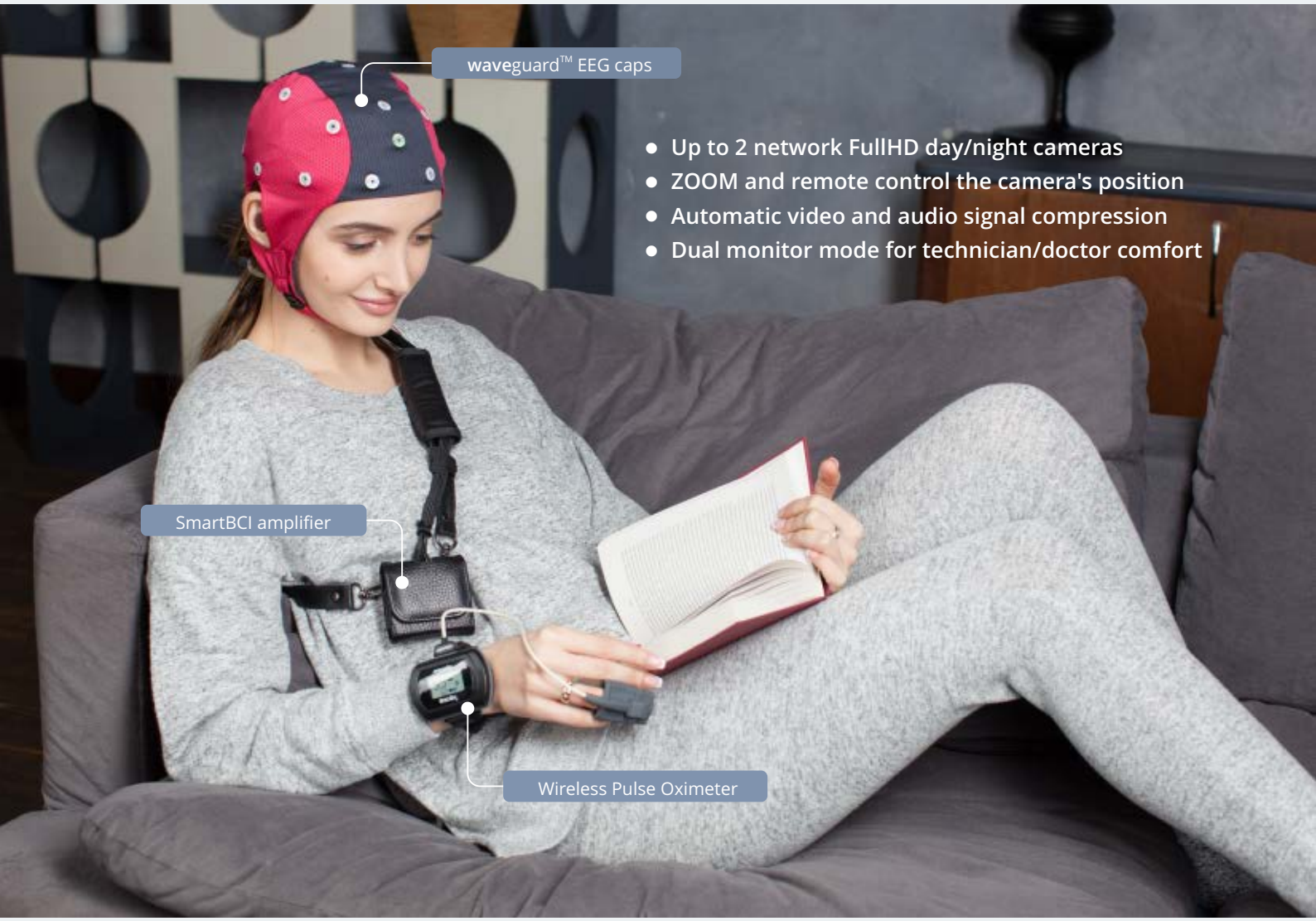

MITSAR
BRAIN DIAGNOSTICS SOLUTIONS
eeg systems
POWERFUL
SUPPORT TOOL
FOR BRAIN
DIAGNOSTICS
WORLDWIDE
CE
0537
It's a pleasure to help you
with your scientific work
and patient's healthcare needs
FDA 510k: K143233 (USA)
www.mitsar-eeg.com

video eeg

Mitsar-EEG LTM system is the best solution for clinical epilepsy video-EEG monitoring applications.

Continuous patient video and audio capturing synchronized with EEG is available both for all models of Mitsar-EEG amplifiers and wearable SmartBCI wireless amplifier.



- Up to 2 network FullHD day/night cameras
- ZOOM and remote control the camera's position
- Automatic video and audio signal compression
- Dual monitor mode for technician/doctor comfort

Portable FullHD camera

Wall or tripod mount
Built-in microphone and IR backlight
Powered over Ethernet (PoE)
Digital ZOOM

Wall mounted FullHD camera

Night mode
PTZ remote control
Powered over Ethernet (PoE)
Optical ZOOM

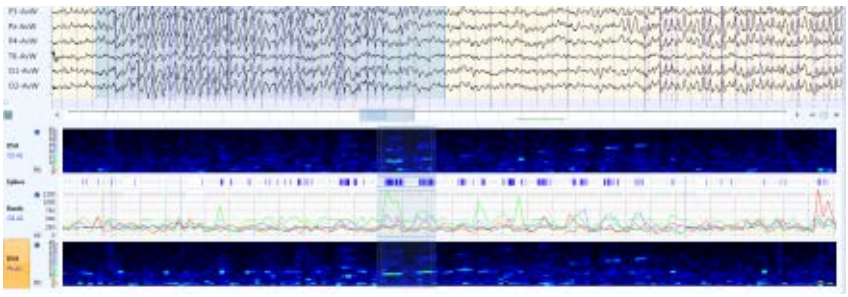
video

Software features

- Patient and recording management database
- EEG viewer software and data archiving solution
- Video clips creating for selected recording fragment
- Dual monitor mode for technician/doctor comfort
- Detailed event logging (event table)
- Trend graphs (aEEG, DSA, CSA, Power FFT, HRV, SpO2)

Compatible accessories

- waveguard™ electrode caps
- MCSCap electrode caps
- Cup electrodes with paste
- Subdural grid/strip electrodes
- Subdermal Needle Electrodes
- Wireless pulse oximeter



Spike Detection

The software performs automatic detection of spike, spike-wave, and bursts of fast or slow activity with quick navigation between seizure events.

Combination of DSA and spike trends allow easy determination of epileptiform-like activity.

Trend Graphs: aEEG, DSA, CSA, FFT, HRV, SpO2

Export to: Persyst, BESA

ambulatory

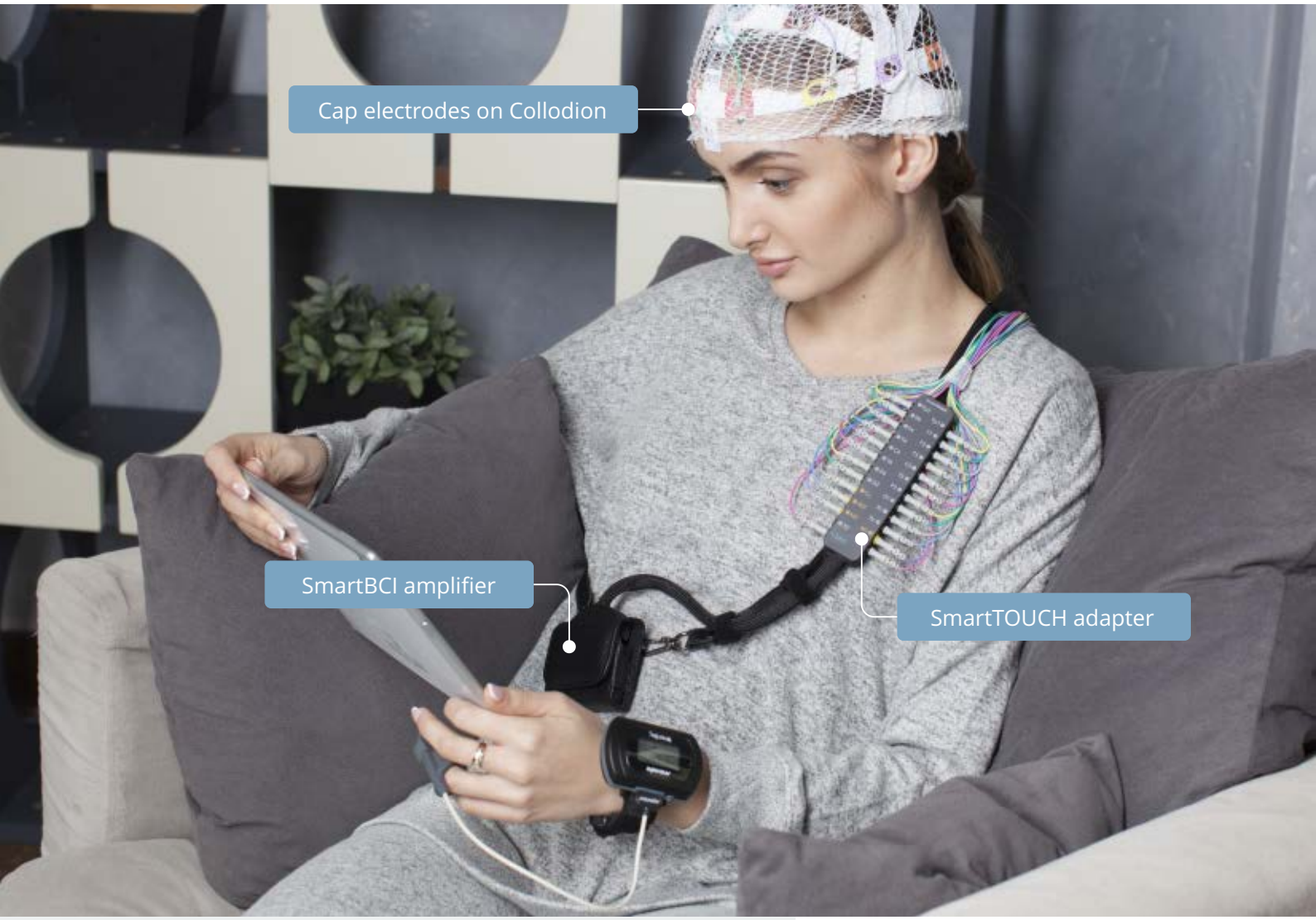
Ultra-small SmartBCI ambulatory EEG system provides accurate noise-free EEG collection, flexibility for the doctor, and better patient comfort both in the hospital and home environment.

Ambulatory EEG system includes wearable wireless Bluetooth SmartBCI amplifier ready for continuous EEG recordings.

Acquisition on internal storage as well as remote monitoring and recording to the desktop or laptop of:

- EEG and ECG* signals
- Electrodes Impedances
- Patient body position
- Pulse oximetry* data

* - depends on system configuration. Changes may apply.



SmartEEG

Android application for EEG acquisition and data transfer to Dropbox or Google Drive.

Highlights

- 24 or 32 EEG channels version
- Storage memory up to 32 Gb
- Operation on full charge up to 24 h
- Built in accelerometer

routine

Mitsar-EEG is mobile EEG solution ready for clinical routines

Mitsar-EEG Routine

Mitsar-EEG system for routine EEG procedures. EEG system is supplied on a rolling stand with EEG accessories basket and flexible gooseneck for photic simulator.

- Mobile rolling stand for EEG system
- LED bright photic simulator
- USB or wireless EEG amplifier
- Touch-proof electrodes comparable
- Connector for “10-20” EEG caps

EEG system by Mitsar is compatible with any type of modern laptop and allows you to be mobile and perform EEG investigations anywhere the need arises. All accessories and electrodes are supplied together with EEG system.


MCSCap

waveguard™

Compatible caps

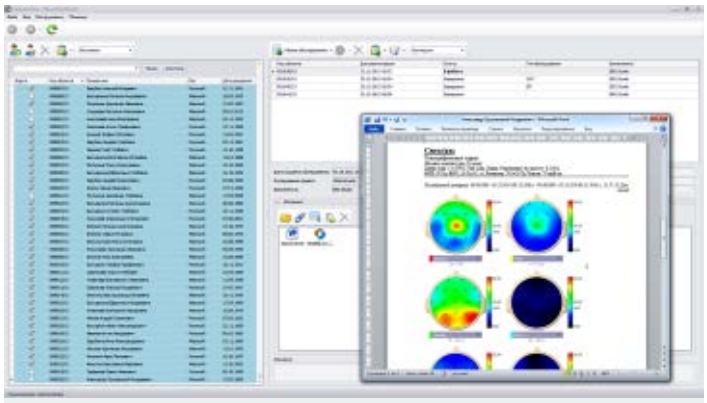

Electro-Cap

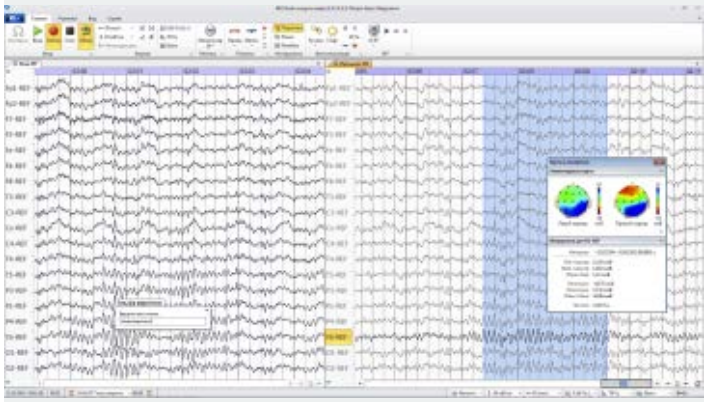
Mitsar-EEG Workstation

The Mitsar-EEG Workstation is a fully equipped EEG station installed on a trolley cart that allows the unit itself to stay in place while moving between all hospital divisions to provide clinical EEG assessment for all of your patients.

- Mobile trolley cart
- LED photic stimulator
- Arms for amp and photic

software





EEGStudio

Applications for EEG acquisition and post-hoc processing. EEGStudio includes patient management system, acquisition and processing modules that fit all requirements of clinical routines.

Export

EDF+/LORETA/BESA®/PERSYST®.

Patient management

Database of patients information and recordings

- Storage and management of patient's data
- Easy search for any variables of data
- Support of different user accounts
- Access rights for doctor and technician

EEG Acquisition

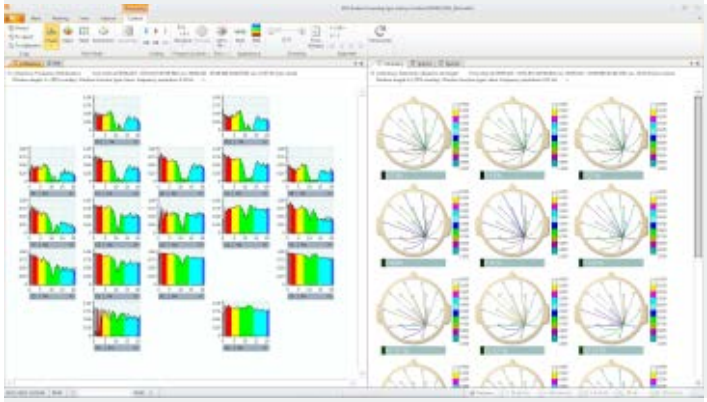
Recording of EEG and other biosignal signals

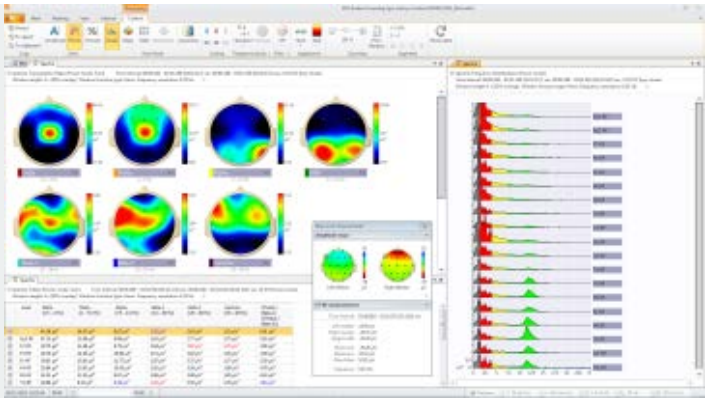
- Automatic recording scenarios
- Real time EEG re-montaging
- Doctor labels and comments
- Programs for photic stimulation
- Automatic EEG storage
- Scroll back while recording
- Acoustic stimulation programs

Montage library

Contains number of editable world-recognized montages

- Add new or edit library montages
- Graphical preview of created montage
- Set individual parameters for any channel
- Rename and color any channel





Report creation

Make your final reports in MS Word using templates

- Doctor report creation in MS Word
- Unlimited templates for final reports
- Copying of any data into the report
- Easy printing out of EEG screen

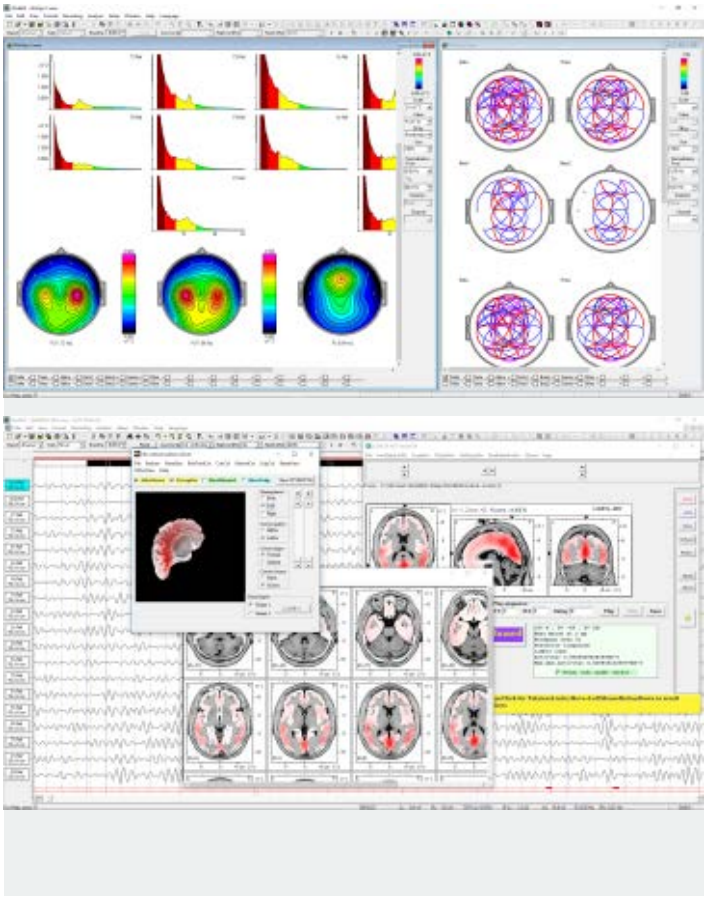
research

Quantitative EEG • QEEG

Research software for advanced QEEG processing provides a lot of options for post-hoc EEG processing including FFT Power Spectra with asymmetry and band rations mapping, Coherence with interaction diagrams, Independent Components Analysis and more.

Rapid re-montaging and pre-processing of raw data including artifact correction based on IC decomposition for suppression of eye blink, horizontal eye movements and cardioballistic artifacts as well automatic search and marking of other type of events based on its amplitude frequency characteristics.

- Group analysis and grand average files
- Automatic processing of EEG files batches
- Import of EDF or EDF+ files from other systems
- Export of raw/processed data to ASCII or EDF(+)
- Full compatibility with NeuroGuide software

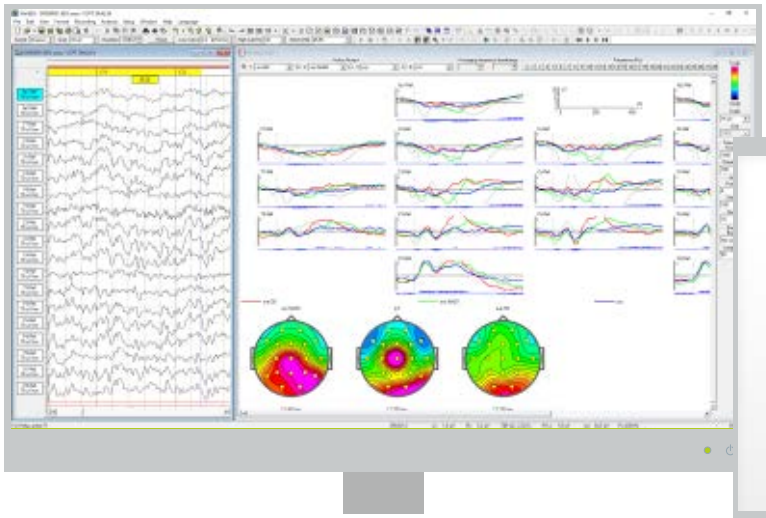


FFT Power Spectra, Coherence / interaction diagrams
LORETA and sLORETA source localization

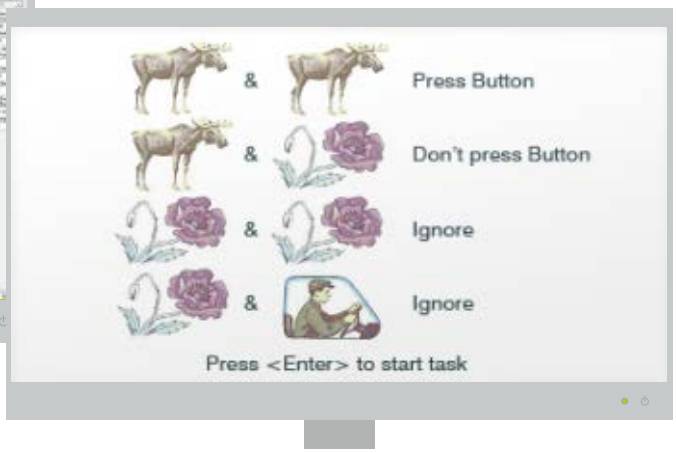
Event related potentials (ERP)

Long-latency Event-Related Potential option allows to perform a wide range of cognitive and auditory ERP tests. Our test library includes several world-recognized tests like P300, MMN, Oddball, Stroop, Emotional and other. Clinicians can create their own tests in built-in editor.

- Event-Related Potentials and Event-related De/Synchronization
- Wavelet band power and coherence computation
- Independent components analysis (ICA) of ERP's
- ERP components localization in LORETA and sLORETA
- Mapping of event-related dynamics
- Task performance calculation



Clinician's computer



Stimuli presentation computer

neurointerfaces

- 8/24/32 channel wireless amplifier
- Synchronization with eye tracking
- Lab Streaming Layer outlet and inlet
- Data streaming to iMotions application
- Public SDK for developers

neurointerfaces

SmartBCI

Wireless SmartBCI is a wearable EEG system ready for BCI and neuromarketing. Support of LSL technology and TTL in/outputs for synchronization with third-party devices and stimulation software allow to perform ERP research and design custom BCI and neurofeedback applications.

SmartSYNC

Multimodal trigger module with digital IR interface for connection to SmartBCI amplifier.

- TTL inputs and outputs
- Built-in audio stimulator
- LED glasses photic stimulator
- Response buttons
- Pattern sensor

- Neuromarketing
- Peak Performance
- Brain-Computer Interface
- Neurorehabilitation

amplifiers

Mitsar-EEG-BT

USB
Bluetooth
24 bit
580 g

Wireless version
Bluetooth and USB interfaces
Battery or USB powered

Lite version
USB interface
USB powered

CE 0537

EEG channels	23
Poly channels	4
Input range	± 300 mV
Input noise	< 1,5 µV peak to peak
Frequency band	DC(0) – 70 Hz
Storage Rate	250 Hz
Sampling rate	2000 Hz
Impedance measurement	Real time
Dimensions	185 • 135 • 45 mm

Mitsar-EEG-202

USB
24 bit
550 g

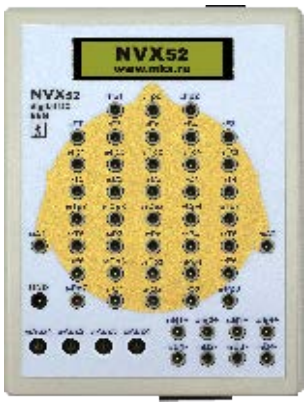
Up to 41 EEG channels
USB powered
Electro-Cap compatible

CE 0537

EEG channels	up to 41
Poly channels	8
Input range	± 500 mV
Input noise	< 1,5 µV peak to peak
Frequency band	DC(0) – 500 Hz
Storage Rate	500 or 2000Hz
Sampling rate	2000 Hz
Impedance check	Yes
Dimensions	185 • 135 • 45 mm

NVX-52

USB
24 bit
620 g



Powerful research tool
Multichannel recordings
TTL input/output

Number of channels	48 EEG • 4 Poly channels
Frequency band	DC – 500 Hz
Sampling rate	2000 Hz
Input impedance	> 100 Mohm
Noise	< 0,9 µV peak to peak
Input range	± 400 mV
Photostimulator	LED
Cap plug	60 pin
Dimensions	200 • 150 • 35 mm

SmartBCI

24 bit
Android
Bluetooth

Wireless connection
ANDROID application
Memory inside

CE 0537

24 hours recording	12 hours recording
70 g with battery	55 g with battery
67 • 45 • 19 mm	67 • 45 • 15 mm

EEG channels	24 or 32
Accelerometer	X-Y-Z motion sensor
Input range	± 300 mV
Input noise	< 1,5 µV peak to peak
Frequency band	DC(0) – 70 Hz
Storage Rate	250 Hz
Sampling rate	2000 Hz
Impedance measurement	Real time
Power supply	Li-ion battery

Mitsar Co. Ltd.

About company

Founded in 1996 by four Russian engineers, Mitsar Co., Ltd. has developed a number of medical devices for functional diagnostics and scientific research. At present, Mitsar is one of the leading companies manufacturing medical equipment for functional diagnostics and neurophysiology.

With its production facilities located in Saint Petersburg, Mitsar has developed powerful hardware and software for clinical application and research. Our professional team of electrical engineers and EEG software programmers in cooperation with medical researchers from Laboratory of Neurobiology Action Programming of Institute of Human Brain RAS allows Mitsar to take a leading position on the Russian market of Digital EEG systems.

Since 2004 Mitsar Company has been involved in international trade and successfully exports Mitsar-EEG system to America, Europe, Asia and other regions worldwide. Due to the high quality EEG amplifier and excellent abilities of software Mitsar-EEG system has merited authority among its customers.

Mitsar. Co. Ltd. quality management system is certified to be in compliance with the European standard for medical devices ISO 13485:2016. The EEG systems and biofeedback device comply with the requirements of Annex I of the European Council Directive 93/42/EEC and are CE marked.

Quality system

Mitsar. Co. Ltd. quality management system is certified to be in compliance with the European standard for medical devices EN ISO 13485:2016.

Mitsar products have been classified as Class IIa devices and are in conformity with requirements of Annex I of the European council directive 93/42/EEC and are CE marked.

Mitsar-EEG device has been issued the 510K (K143233) from the US FDA to be marketed and distributed on the territory of US.

Warranty

The warranty period is 24 months for all Mitsar-EEG systems.

Mitsar Co. Ltd.

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