

# NEURON-SPECTRUM-AM

Ambulatory Wireless EEG/PSG Recorder



21 EEG channels



Full set of PSG channels  
(according to AASM  
recommendations)



Recording of exams to memory  
card and real-time data  
transfer via Wi-Fi



Ambulatory EEG and PSG  
recording (up to several days)



Long-term EEG monitoring  
to detect epileptiform activity



Control of electrode  
impedance during  
the acquisition

EEG

- PSG
- Video EEG

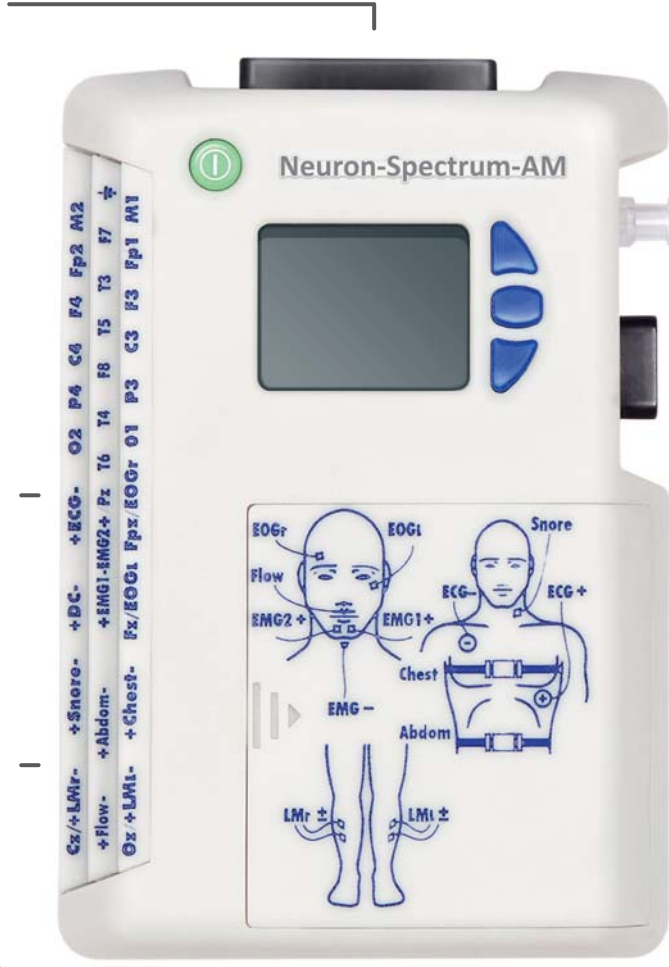


Neurosoft

# NEURON-SPECTRUM-AM



Connector for electrode cap attachment



Airflow channel



SpO<sub>2</sub> channel



Light sensor



Body position sensor



4 AA batteries



21 EEG channels for "10-20" system



Full set of PSG channels



SD memory card (up to 32 GB)

## POLYGRAPHIC CHANNELS

- ▷ 21 EEG channels
- ▷ ECG channel
- ▷ 2 EMG channels
- ▷ 2 EOG channels
- ▷ Channel for snoring sensor
- ▷ Channel for airflow thermistor sensor
- ▷ Channel for chest movement sensor
- ▷ Channel for abdominal movement sensor
- ▷ 2 EMG channels for limb movement recording
- ▷ Channel for airflow pressure sensor (cannula)
- ▷ SpO<sub>2</sub> and PPG (photoplethysmography) channels
- ▷ Direct current channel
- ▷ Built-in light sensor
- ▷ Built-in body position sensor

Neuron-Spectrum-AM, a lightweight and compact size EEG/PSG recorder, incorporates the most advanced technologies in acquisition, storage and wireless data transfer.

## USE NEURON-SPECTRUM-AM

### As Autonomous Recorder

Neuron-Spectrum-AM can be used as a fully autonomous device. It is a battery powered recorder with LCD display, control buttons and SD memory card for exam storage.

### As Wireless Recorder

Wireless Wi-Fi connection allows real-time data transfer from the device to any computer of the local network.

## APPLICATION

### Routine and Long Term EEG Exams

21 EEG channels with video EEG monitoring.

### PSG

Full set of PSG channels in compliance with AASM recommendations with possibility of synchronous video monitoring.

### Cardiorespiratory Monitoring

Airflow channel, ECG channel, SpO<sub>2</sub> channel, snoring channel, body position channel, chest and abdominal movement channel.

Patients can be examined either CLINICALLY or AMBULATORY ensuring optimum comfort and care.



## MAIN FEATURES

- ▶ Full set of polygraphic channels for PSG recording.
- ▶ High-quality 21-channel EEG acquisition with up to 1000 Hz sampling rate.
- ▶ One battery charge is enough for more than 24-hour acquisition in the autonomous mode.
- ▶ Up to thousand hours of exams can be saved to SD memory card with up to 32 GB size.
- ▶ Synchronous video recording using both analogue and network cameras (including wireless ones).
- ▶ Fully autonomous recorder allows performing the exams with video monitoring ambulatory.
- ▶ Wireless connection to PC makes patients feel comfortable during the exam and allows EEG specialist to perform real-time EEG analysis.

## EXTRA FEATURES

- ▶ Continuous impedance measurement during the acquisition allows keeping proper electrode placement in good time.
- ▶ Control of recorded data with on-line detection of epileptiform activity and calculation of vital parameters (HR, airflow rate, SpO<sub>2</sub>).
- ▶ Warning message to notify when patient's parameters exceed the specified level is sent to preset e-mail. It allows EEG specialist to control patient's state all the time.
- ▶ The option of delayed start acquisition is intended to start or stop the acquisition at preset time. It is especially useful for PSG recordings.
- ▶ Battery hot-swapping during the acquisition allows performing long-term exams (up to several days).
- ▶ Neuron-Spectrum-AM creates a backup copy of performed exam on SD memory card to avoid information loss even if patients leave Wi-Fi zone. These data can be uploaded to any PC, tablet or smartphone via Wi-Fi.

## ADVANTAGES OF HANDHELD RECORDER

1

Patients feel comfortable and can move freely within the place the exam is performed.

3

Patients can be examined in comfortable environment (e.g., at home).

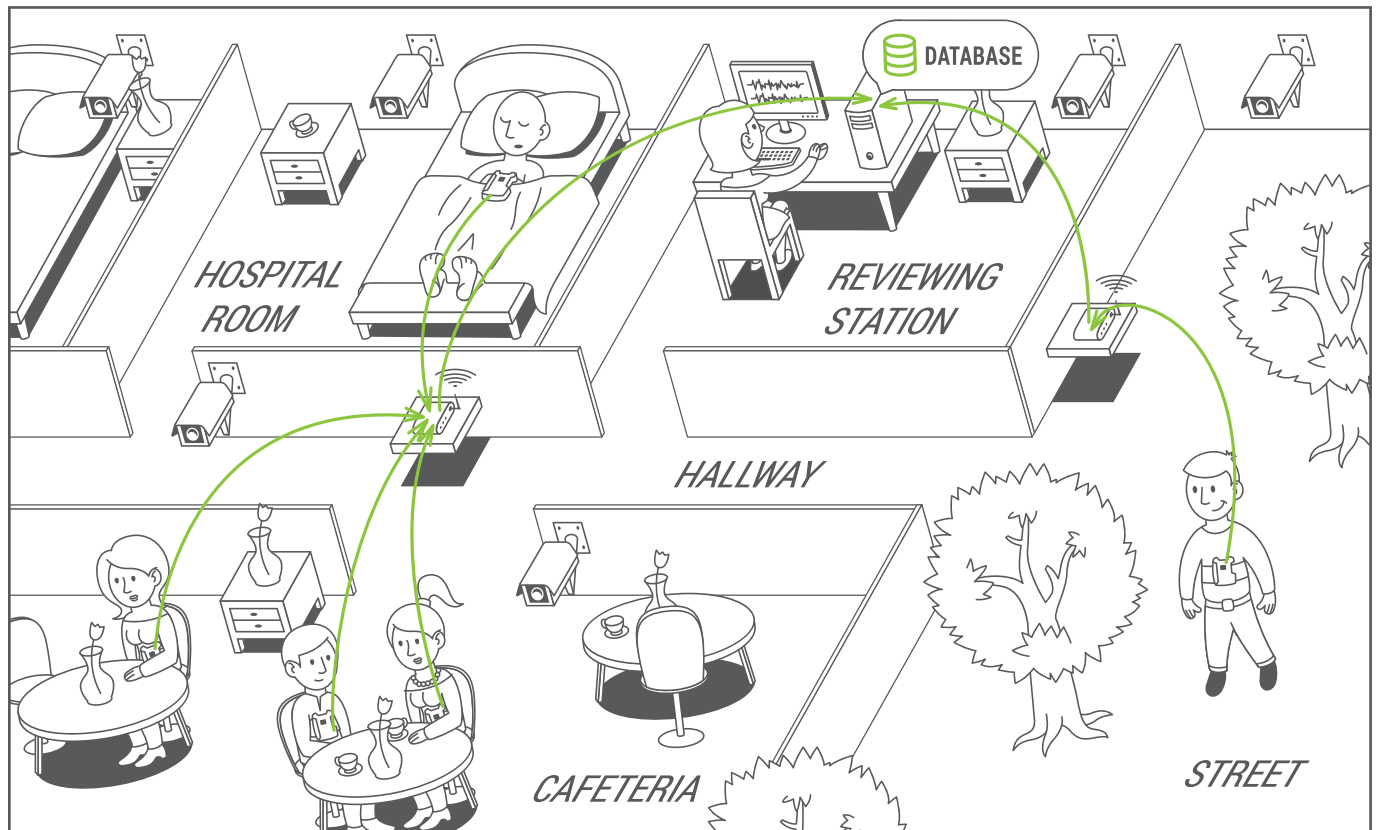
2

Long-term EEG recordings.

4

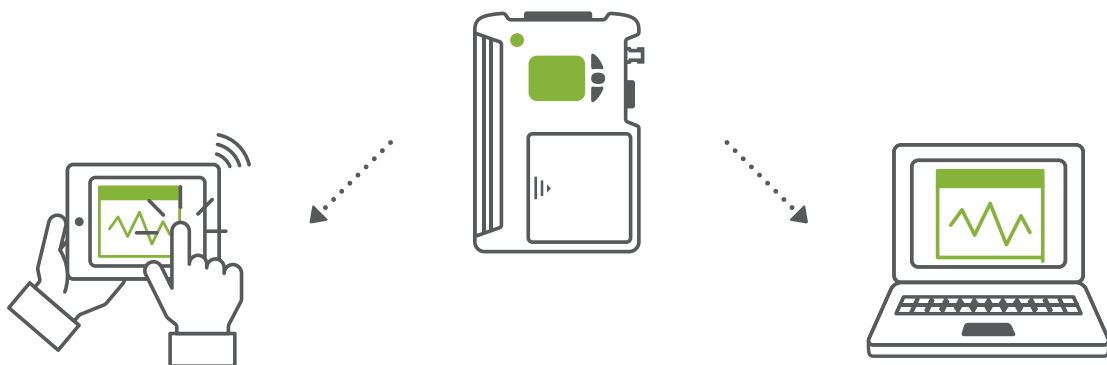
Continuous monitoring of the acquisition process.

## COMFORTABLE FOR PATIENTS



Clinical EEG system allows making several EEG/PSG recordings simultaneously. Patients can move freely during their exams. The exam monitoring is performed by EEG technician all the time.

## CONVENIENT FOR EEG SPECIALISTS



You can connect to any recorder from any computer of the local network, Android- and Windows-based smartphone or tablet to check the signal quality, measure the impedance or control the acquisition process.



# EEG Devices of Neuron-Spectrum Series

	EEG channels	Extra channels: EMG, ECG, EOG, etc.	Included techniques	Options	Connector for electrode cap attachment	Interface
 Neuron-Spectrum-1/2/3	8/16/19	1	EEG	Video EEG, LEP, aEEG	+	Wire: USB, LAN
 Neuron-Spectrum-4/P	21	4	EEG	Video EEG, LEP, PSG, aEEG	+	Wire: USB, LAN
 Neuron-Spectrum-4/EPM	21	8	EEG, LEP, EP	Video EEG, PSG, EMG, aEEG	+	Wire: USB, LAN
 Neuron-Spectrum-AM	21	9	EEG	Video EEG, PSG, aEEG	+	Wireless: Wi-Fi, SD card
 Neuron-Spectrum-5	32	8	EEG	Video EEG, LEP, EP, PSG, EMG, aEEG	+	Wire: USB, LAN

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