

# CFM

LONG-TERM BRAIN  
FUNCTION MONITORING



EEGDigiTrack®

ELMIKO  
aEEG/CFM  
SYSTEM  
NIRS/SpO<sub>2</sub>

**el miko**  
*Create to Help*

# CFM

ICU - SUGGESTED CLINICAL APPLICATIONS



## Monitoring

PATIENTS UNDER SEDATION  
AND PHARMACOLOGICAL COMA

## METABOLIC AND TOXIC encephalopathies



## TBI

TRAUMATIC BRAIN  
INJURIES



## Assessment

OF PROGNOSIS IN  
UNCONSCIOUS PATIENTS



## Epilepsy

(INCLUDING STATUS EPILEPTICUS  
AND NON-CLINICAL SEIZURES)



## Monitoring

THERAPEUTIC HYPOTHERMIA  
TREATMENT

## HEPATIC encephalopathy



## CPR

RESUSCITATION  
/ CARDIAC ARREST



## Disorders

OF CONSCIOUSNESS OF  
UNCLEAR ETIOLOGY



## Monitoring

ANTIEPILEPTIC THERAPY AND  
ITS EFFECTIVENESS



## Create to Help

THE ELMIKO aEEG/CFM SYSTEM PROVIDES SOLUTIONS FOR:



DIAGNOSTICS



THERAPY



SCIENCE



## WHAT IS CFM?

**CFM stands for Cerebral Function Monitoring - a technique that enables long-term assessment of brain bioelectrical activity in adult patients in critical condition in intensive care units.**

In adult intensive care, CFM is used for:

- **Assessing brain function** in comatose patients or after cardiac arrest (e.g., OHCA)
- **Early detection** of seizures (both visible and subclinical)
- **Monitoring** brain activity during sedation
- **Evaluating treatment effectiveness** (e.g., hypothermia, neuroprotection)
- **Supporting therapeutic decision-making** in critical conditions



## CHARACTERISTICS OF CFM DEVICES

**CFM devices:**

- Display brain activity as **clear trend graphs**, facilitating interpretation
- Allow integration with monitoring of basic parameters:
  - Oxygen saturation (**SpO<sub>2</sub>**)
  - Heart rate (**HR**)
  - **EEG brain activity**
- Enable customized **alarm functions** tailored to patient-specific needs
- Support continuous monitoring with options for data recording and **archiving** for later analysis

- Feature **intuitive user interfaces** for easy clinical operation



## APPLICATION OF THE ELMIKO CFM SYSTEM

**The ELMIKO CFM system is intended for intensive care units (ICU), who need continuous and objective monitoring of brain function in critically ill patients.**

**ELMIKO CFM System main areas of application:**

- Intensive care units (**ICU**)
- **Stroke units**
- **Neurosurgery** clinics
- Emergency hospital departments (**ED**)
- **Postoperative neuro-monitoring** of neurosurgical patients

**Key features of the ELMIKO CFM system:**

- Continuous **neurological condition monitoring** for patients in comas, after surgery, or with brain injuries
- **Optimizing treatment** for critically ill patients
- **Quick neurological assessment**
- **Supporting** therapeutic decision-making
- **Reducing** the need for more invasive or expensive methods





## ADVANTAGES OF THE ELMIKO CFM SYSTEM

- Intuitive and comprehensive multimodal **long-term trend monitoring**, covering EEG, HR, SpO<sub>2</sub> in a single display
- **rSO<sub>2</sub> signal recording** capability on up to 4 channels
- Option to expand with **video module** (1 or 2 cameras)
- Unique feature for **automatic color marking** of EEG traces depending on brain activity level (signal amplitude)
- **Personalized alerts** for saturation, heart rate, brain bioelectrical activity, or electrode impedance
- Unique **aEEG trend visualization** with shadowing, dynamically presenting average, minimum, and maximum EEG values to facilitate real-time signal trend analysis
- Advanced measuring strip dedicated to **trend and signal analysis**



- Possibility of **custom EEG display configuration**, including time scale and visualization parameters tailored to user needs
- Advanced EEG signal analysis methods, including **FFT, mapping, TPM, DSA, CSA, BSI**, and other techniques for assessing brain bioelectrical activity



## FUNCTIONALITIES OF THE ELMIKO SYSTEM

- Modern EEG head **enabling operation on 3 or 5 channels** (including 2 or 4 dedicated to EEG signal recording), with upgrade options to full 32-channel clinical systems, depending on needs
- Continuous impedance measurement ensures **high signal quality** and accuracy
- **Lightweight, durable, and damage-resistant** design for safe clinical use
- **Stable and reliable** USB communication
- Possibility to work with **a mobile therapy station** - system can be installed on a mobile medical cart or integrated into stationary units
- **aEEG trend visualization with color coding**
  - allows for easy interpretation of brain activity
- Integration of EEG signals with SpO<sub>2</sub> and rSO<sub>2</sub>
  - supports early **identification of hypoxia and ischemia**
- **Intuitive user interface** enables quick data interpretation and real-time reaction
- System complies with data protection regulations (**GDPR**)



The **ELMIKO CFM system** stands out with its ability to provide long-term, color-coded monitoring of EEG trends along with additional vital signs—all in one system.

An ideal solution for ICUs where quick reaction and accurate patient assessment are crucial.

## INNOVATIONS THAT MAKE A DIFFERENCE

- **CCFM - CFM color trend**

A unique color-coding function for the aEEG/CFM trend graph that automatically assigns colors to brain activity patterns (normal, depression, high, burst suppression), significantly simplifying interpretation and enabling rapid assessment of the patient's neurological condition.

- **SpO<sub>2</sub> and rSO<sub>2</sub> correlation with CFM trend**

Simultaneous display of oxygen saturation (SpO<sub>2</sub>) and regional saturation (rSO<sub>2</sub>) parameters alongside the CFM trend graph allows users to assess whether a drop in brain activity is due to hypoxia or other circulatory-respiratory disorders—or, conversely, whether there is brain inactivity without signs of oxygen deficiency.

- **vCFM - Video CFM**

An optional video module allows real-time patient image recording synchronized with CFM data. This increases clinical insight and enables the documentation of critical events.

## ADDITIONAL OFFER

- Professional **training** in aEEG/CFM data interpretation
- Assistance with **offer and tender presentation** preparation
- **Technical support** (on-site and remote)
- Wide range of **accessories**: caps, gels, electrodes



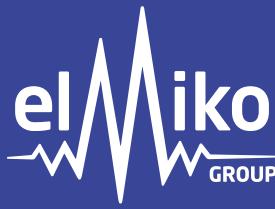
## CFM SPECIALIST

A CFM specialist is a person with a medical or technical background, trained in:

- **Interpreting** aEEG/CFM data (e.g. seizure detection, depth of sedation assessment)
- **Operating** the monitoring system and integrating other parameters (SpO<sub>2</sub>, rSO<sub>2</sub>)
- **Applying the CFM system** to monitor patients in comas or with brain injuries

- To become a CFM specialist in an ICU setting, one must:
- Have **medical qualifications** (doctor, nurse, medical technician)
- Undergo **training** in CFM operation and data interpretation (e.g. via AKSON Education Center)
- Have **practical experience** with intensive care patients





## Create to Help

The **ELMIKO GROUP** is a Polish brand with extensive, international experience, providing interdisciplinary support to clinicians and therapists in neurology and related fields. Together, we provide high-quality equipment and modern diagnostic methods, while simultaneously training specialists and focusing on patient well-being.



## Our brands



**ELMIKO** is a manufacturer and distributor of cutting-edge medical apparatus and innovative solutions for neurology and neurotherapy, including systems for EEG, CFM, EEG Biofeedback, tES, TMS, and EMG.

The **AKSON Education Centre** organizes and conducts training in neurodiagnostics and neurotherapy for physicians, medical technicians, psychologists, educationalists, and therapists, including EEG, EMG, QEEG, EEG Biofeedback, tES, TMS, and others.

**NEURODIAGNOSTYKA**, a centre for neurological diagnostics and neurotherapy, provides services to individual patients. It offers services on-site, in neurological clinics and at the patient's home, as well as providing diagnostic services and equipment leasing in hospitals and clinics.

**ELMIKO VET**, a manufacturer of veterinary neurological equipment. It offers advanced solutions that support veterinary clinicians in the field of animal neurology and neurotherapy, including EEG diagnostics, and pain management and treatment.



**ELMIKO BIOSIGNALS**  
Sp. z o. o.



### Find us:

Jeżewskiego 5c/7  
02-796 Warsaw  
Poland



### Call us:

+48 22 644 37 37  
+48 600 37 37 90



### Email us:

elmiko@elmiko.pl



### Follow us:



@elmikobiosignals

