

EEG Headcap (Electrode Cap System)

General Description

The EEG headcap shall be a reusable multi-electrode cap designed for rapid and reproducible electrode placement according to the International 10–20 system. The cap shall support clinical and research-grade EEG acquisition.

The system shall be compatible with standard EEG amplifiers and head boxes used in clinical and research laboratories.

Electrode Configuration Options

The cap shall be available in the following configurations:

- 32 channels (pediatric)
- 64 channels (pediatric)

Electrode layout shall conform to:

- International 10–20 system

Cap Material & Construction

- **Fabric Type:** Stretchable medical-grade elastic fabric
- **Material Composition:** Nylon/Spandex or equivalent
- **Breathable and washable**
- **Latex-free**
- **Skin-friendly and hypoallergenic**

The cap must:

- Provide uniform electrode pressure
- Prevent movement artifacts
- Allow stable long-term recording (2–8 hours minimum)