EDF FILE PREPARATION

EDF File Requirements

Please upload only a standard **European Data Format (.edf)** file. The EEG device brand is not important — NeuroMap can process EDF files from different EEG systems, provided the exported file follows the required technical structure. Files that open in other EEG software may still fail during processing if the EDF format, channel labels, sampling rate, scaling or montage structure is not compatible.

`.edf`	`≤ 50 MB`	`19 ch`	`≥ 128 Hz`
STANDARD FORMAT	MAXIMUM SIZE	10–20 MONTAGE	SAMPLING RATE

01 Minimum upload requirements

REQUIREMENT	REQUIRED FORMAT
File format	Standard `.edf` only
Maximum file size	50 MB
EEG montage	Standard 19-channel international 10–20 montage
Data type	Raw EEG recording
Processing status	Unprocessed
Sampling rate	Preferably 250 Hz or 500 Hz; minimum 128 Hz
Signal unit	Microvolts (μV)
Channel labels	Standard 10–20 labels only
Extra channels	Not accepted unless specifically requested

02 The required 19 EEG channels

The EDF file must contain the following standard 19 EEG channels. Use these labels exactly — avoid software-specific prefixes or suffixes such as `EEG Fp1`, `Fp1-REF`, `Fp1-A1`, `Fp1-Avg`, `FP1-LE` or `FP1-Linked`.

Fp1	Fp2	F7	F3	Fz	F4	F8	T3	C3	Cz	C4
T4	T5	P3	Pz	P4	T6	O1	O2			

MAPPING MODERN 10–10 LABELS

If your EEG system uses modern 10–10 labels, map them clearly before upload:

MODERN LABEL	NEUROMAP EXPECTED
T7	`T3`
T8	`T4`
P7	`T5`
P8	`T6`

03 Raw data only

The uploaded EDF must be raw and unprocessed. Do not apply any post-recording processing before upload:

- Artefact cleaning, ICA, or manual segment removal
- Re-referencing, average reference or linked-ear reference conversion
- Notch filtering, or additional high-pass / low-pass filtering
- Channel interpolation or synthetic channel creation
- Amplitude normalisation or spectral preprocessing

Hardware filters that are part of the device's native recording system are acceptable. Additional software processing applied after the recording should not be used.

04 Sampling rate

For best compatibility, record and export natively at 250 Hz or 500 Hz. The minimum accepted is 128 Hz. Avoid 100 Hz files: some NeuroMap steps apply a low-pass above 50 Hz, and a 100 Hz file has a Nyquist limit of 50 Hz, which may cause a processing error.

SAMPLING RATE	COMPATIBILITY
100 Hz	**Not recommended** — may fail during processing
128 Hz	Minimum acceptable
200 Hz	Acceptable
250 Hz	**Recommended**
500 Hz	**Recommended**
Above 500 Hz	Usually acceptable if file stays under 50 MB

05 Extra channels

Upload only the required 19 EEG channels unless our team specifically requests otherwise. The following should **not** be included, as they may interfere with automatic channel detection, montage matching and processing:

`A1` `A2` `FT9` `FT10` `Fpz` `Oz` `ECG` `EOG` `EMG` `Bio` `Trigger` `DTRIG` `VSyn` `ASyn` `LABEL`

Also exclude EDF Annotations and any auxiliary channels.

06 EDF structure & signal scaling

The EDF should be a standard EDF file, not EDF+C or EDF+D where possible. Annotation channels and non-standard EDF structures may cause upload or processing errors. The signal must be exported as standard scalp EEG in microvolts — do not upload DC-coupled biosignal exports or files with very large baseline offsets. The EDF header must contain correct physical and digital scaling.

SIGNAL QUALITY CHECK	REQUIRED STATUS
Physical unit	µV
Large DC offset	Should not be present
Saturated channel	Should not be present
Flat channel	Should not be present
Missing EEG channel	**Not accepted**
Synthetic channel	**Not accepted**
Incorrect physical / digital scaling	**Not accepted**
Excessive line noise	Repeat the recording where possible
Poor electrode contact	Repeat the recording where possible

07 Recommended export settings

Guidance for EEG technicians preparing the recording for upload.

SETTING	RECOMMENDED VALUE
Format	Standard EDF
Montage	19-channel 10–20 EEG
Sampling rate	250 Hz or 500 Hz
EDF record duration	Preferably 1 second
Unit	µV
Export type	Raw EEG · Post-processing: None
File size	Under 50 MB

08 Before uploading — checklist

- ✓ File extension is `.edf`
- ✓ 19 standard EEG channels are present
- ✓ Sampling rate is at least 128 Hz
- ✓ No extra ECG, EOG, trigger or annotation channels
- ✓ No synthetic or interpolated channels added
- ✓ File size is under 50 MB
- ✓ Channel labels are standard and clean
- ✓ File is raw and unprocessed
- ✓ No re-referencing or filtering after recording
- ✓ Signal is in µV with correct scaling

IMPORTANT COMPATIBILITY WARNING

Files may fail processing if they are 100 Hz, EDF+C or EDF+D, contain extra non-EEG channels, use non-standard channel labels, include large DC baseline offsets, contain incorrect physical or digital scaling, or have been edited after recording. If the EDF does not meet these requirements, please re-export the original EEG recording using the correct settings rather than modifying the file manually.

Cosmos healthcare Ltd

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