

## Data readers for BESA Research 7.1

BESA Research supports most major EEG and MEG file formats. This document gives an overview of all the data formats that can be imported in BESA Research 7.1. If your file format cannot be found in this list, please contact us via our support form: <https://www.besa.de/support/support-page/>.

### Supported EEG data formats

- BESA / FOCUS high compression format .foc .fsg
- BESA new data format .besa
- BESA ASCII (avr + multiplexed format) .avr .mul
- FOCUS (1.x binary), EEGFOCUS (2.x binary) .foc .fsg
  
- Alpha-Trace (alpha-trace medical software) .alp
- ATES \*
- BDF (BioSemi) .bdf
- Beekeeper64 (Telefactor) .eeg .dat
- Bio-logic (CEEGraph) \* .eeg
- BrainAmp / Brain Vision (Brain Products) .eeg .vhdr
- BrainLab (Schwarzer) .sig
- BrainStar (Schwind Medizintechnik) .eeg
- Cadwell \*\* .flex
- DCmes, PolyDC (MES) .dat
- Deltamed (Coherence) \* .eeg
- EBNeuro (Galileo.NT and Galileo.NET 3.5)\* .gnt, .set
- EDF (European Data Format) and EDF+ .edf
- EEProbe (ANT) .cnt
- Electrical Geodesics, Inc. (EGI) .raw .ses
- EGI MFF\* .xml
- ERPSS
- g.Tec (Guger Technologies) \* .hdf5
- Galileo (EBNeuro, installation required) \* .nt

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• Generic Reader (any simple binary or ASCII formats; see BESA Program Help)	
• Grass-Telefactor (TWinREF) *	.ref
• InstEP (installation of manufacturer software required) *	.c .is .ia
• Konstanz file format *	.raw .sum
• MANSCAN interchange format (SAM) *	.mbi
• Medtronic *	.wg1
• MEF (Multiscale Electrophysiology File 2.0) *	.xml
• Micromed *	.trc
• Neuralynx *	.ncs
• NeurOne *	
• Neuronic *	
• NeuroScan	.cnt .avg
• NeuroScan Curry 7 *	.rs3 .dap .dat .ce*
• NeuroScan Curry 8 *	.dpa .cdt .ceo
• NexStim	.nxe
• NicoletOne / Nervus (Nicolet Biomedical Inc., installation required) *	.e .eeg
• Nihon Kohden EEG 1100 / 1200 / 2100	.eeg
• Phoenix II (EMS) *	s*.0 s*.1 ...
• Stellate Systems (Harmonie, installation required) *	.sig
• Stellate Systems (Monitor)	.eeg
• Vangard (LaMont Medical Inc.) *	B****, no extension
• XDF	.xdf
• XLTEK	.eeg .erd

If files are in one of these formats, they can be read directly and conversion is not required.

BESA Research also has a new, flexible interface for importing ASCII files which can be used in conjunction with the ASCII export functions of your software.

Any EEG format can be converted to the compressed BESA binary format, ASCII format, EDF+ or simple binary format.

For more information, please submit your support request here: <https://www.besa.de/support/support-page/>.

\* Install this reader using [Install Additional Readers.htm](#) in the **Utilities\Additional Readers\** folder.

\*\* The Cadwell reader requires the installation of the Cadwell Arc API. If this API is not already installed on your computer, download it from the following link and install it on your computer:

<https://my.hidrive.com/link/PFh5kbFb>. The API must be installed in the suggested default path on your **C:** drive.

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## Supported MEG data formats

- ASCII
- BESA 2000 / FOCUS high compression format .foc .fsg
- CTF .meg4
- Neuromag .fif
- Ricoh \* .con
- Yokogawa \* .con

MEG format details can be provided upon request.

For more information, please submit your support request here: <https://www.besa.de/support/support-page/>.

\* Install this reader using **Install Additional Readers.htm** in the **Utilities\Additional Readers\** folder.