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# Import and export data with EDA

## Revision History

Date	Version	Description
06/11/2019	1.0	First version of document



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## Supported data formats

EDA is meant to load and navigate data recorded using EDR3. For this reason all data files must be accompanied by an Elements Data Header file (.edh) in order to be loadable by EDA. For this reason, all exported data files will be accompanied by .edh files as well.

Supported formats for data files are .abf, .dat and .csv.

### Abf format

Axon Binary Files (.abf) version 2 can be loaded by EDA.

### Dat format

Binary files in .dat format must consist of a continuous series of IEEE 754 single-precision binary floating-point values, with no header. The data must be arranged in groups of CurrentChannelsNumber+1 values. Each group consists of CurrentChannelsNumber current samples (ordered by channel number) followed by 1 voltage sample corresponding to a given time instant. Groups are arranged in temporal order.

E.g. for a 4 channels device the values will be:

IChan1Sample1, IChan2Sample1, IChan3Sample1, IChan4Sample1, VChanSample1,  
IChan1Sample2, IChan2Sample2, IChan3Sample2, IChan4Sample2, VChanSample2,  
and so on.

### Csv format

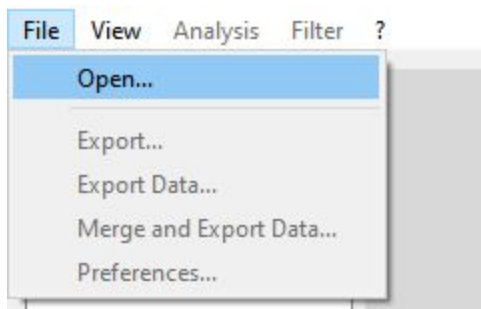
Comma Separated Value files must consist of CurrentChannelsNumber+1 columns of numbers expressed in ASCII code separated by commas. Each row consists of CurrentChannelsNumber current samples (ordered by channel number) followed by 1 voltage sample corresponding to a given time instant. Rows are arranged in temporal order.

E.g. for a 4 channels device the file will look like this:

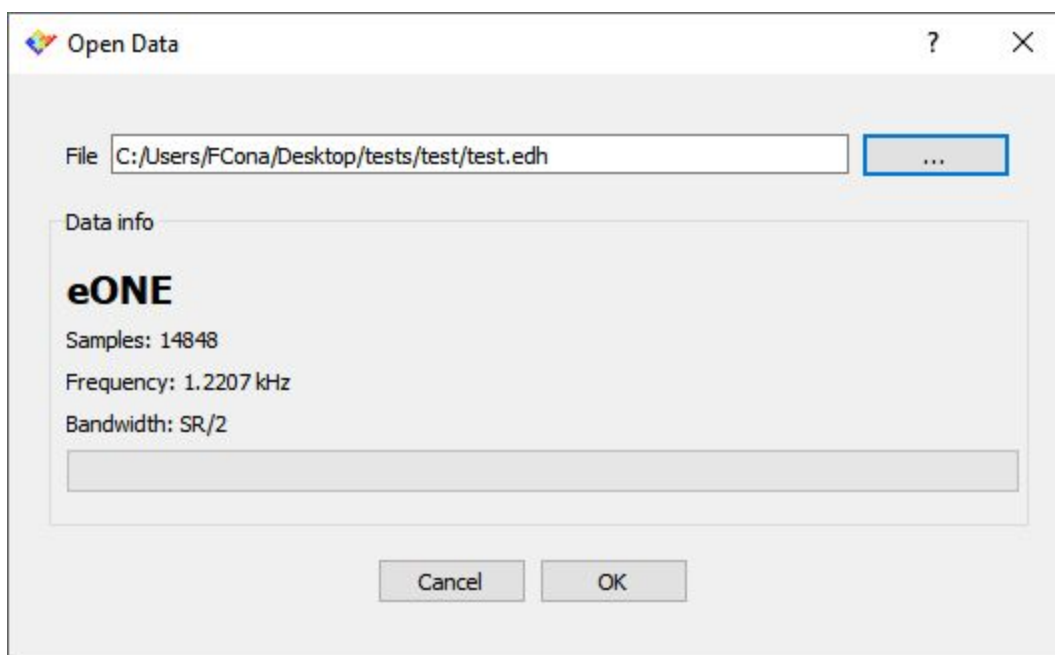
IChan1Sample1, IChan2Sample1, IChan3Sample1, IChan4Sample1, VChanSample1  
IChan1Sample2, IChan2Sample2, IChan3Sample2, IChan4Sample2, VChanSample2  
and so on.

## Import data

In order to import data select the Open option from the File menu.

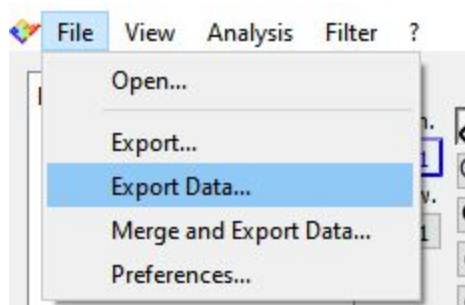


In the window that will appear click the button with 3 dots to browse to the .edh file of the dataset you want to load and then click ok to load the data.

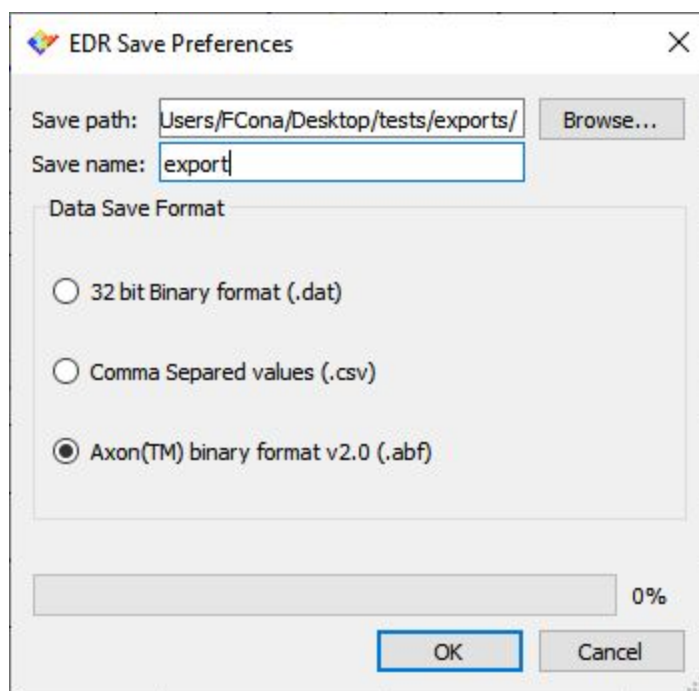


## Export Data

EDA allows to export the loaded data to any of the compatible formats described above. In order to do so select the Export Data from the File menu.




In the window that will appear select the path where you want to export the dataset, the filename of the exported dataset and its file format. Then click Ok to export the data.



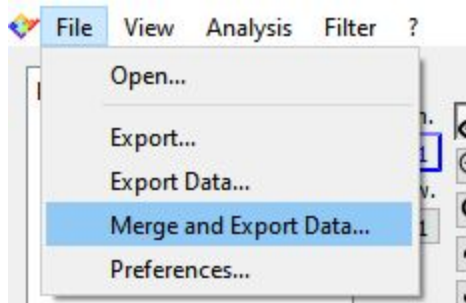
## Merge and export data

EDA offers a further export option that allows to merge several imported dataset and to export them as a single dataset. In this case, the merged dataset will have a number of current channels equal to the sum of the current channels of all the of the source datasets, and it will inherit a single voltage channel from only one of the source datasets.

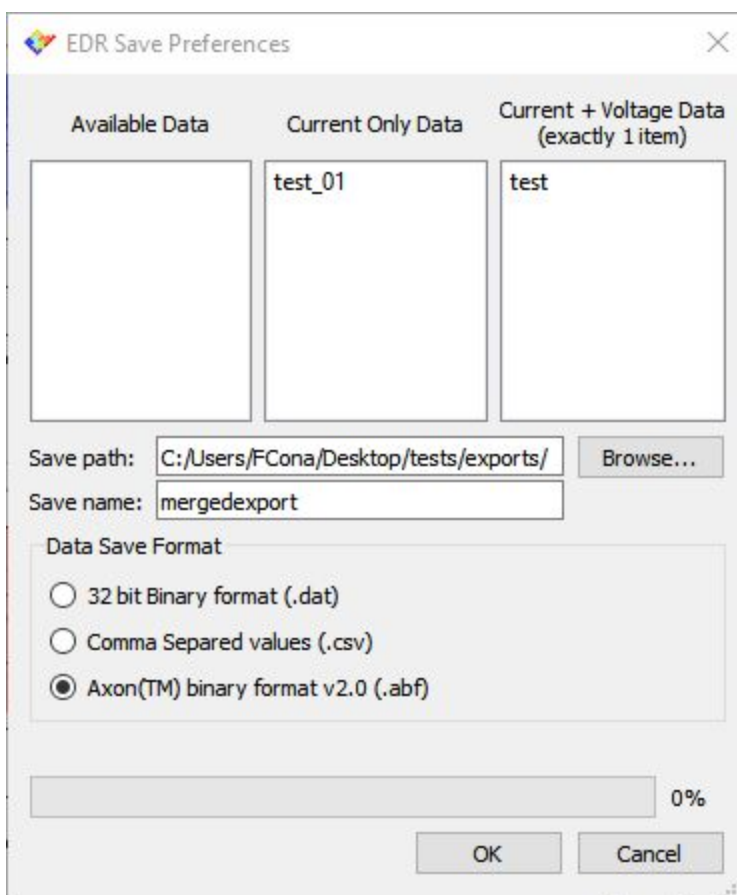
In order to use this feature a preliminary step is required to provide a common time axis since the source datasets might not be synchronized or even have the same length: for each source dataset place the leftmost cursor to an easily recognizable mark point (for example the start of a voltage protocol) and click the save button  on the right of the cursors (see EDA GUI and basic commands).



After this procedure has been repeated for all the source datasets click the Merge and Export Data from the File menu.



In the window that will appear select the source datasets by dragging them from the Available Data panel to the right panels. Doing this remember that you have to select exactly one dataset to inherit voltage data from. Then, as for the regular export select the path, the filename, the file format and click ok.



The document at this [link \(website page\)](#) provides a practical example of how to use this feature.