Ranel

Bulk Data Converter

Version 0.10

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Why the Bulk Data Converter

The Bulk Data Converter (BDC) has been requested by someone who used an 8bit oscilloscope and made a recording of the screen in csv format. He encountered a problem with importing the file in excel, it was too much data.

The question was if the extra data could be removed and if samples could be combined by taking averages, this would also increase sensitivity of the signal.

When this was ready more questions/options were requested. Like the oscilloscope can also make a bin file (way faster and smaller), but this was not readable data, so can it be converted to csv or txt files? There was also an audio program used which could import/export different kind of data (more bits/bytes, (un)signed).

What can it do?

The BDC can open different file types like text based files or data files.

The retrieved data from the opened file is being displayed in a box and in a graphical way. So the user can see if the data is what he expects it to be, if not some options can be made like number of bytes, signed, endian. Only reload has to be clicked and the file will be reexamined.

In the graphical window there is a possibility to zoom in to examine the signal.

For the output you can choose how many samples should be combined and the rounding factor. You can preview the output or create a new file, you can try to reload the file and see the if the changes are correct or as expected.

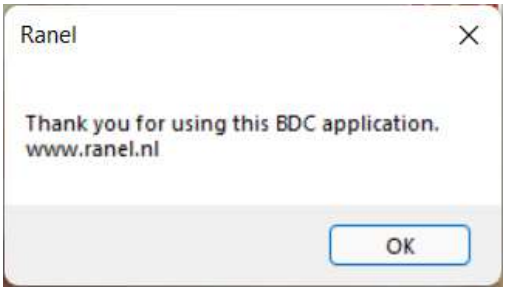
There are also special functions. Reduce data without modifying by selecting how many bytes to remove after each sample. Change the range from the input file, this can be useful if you have a signal (8bit goes from 0-255) and would like to have for example percentages. Graph becomes available when zoomed in, so this data is only being used.

First use

After downloading the BDC from www.ranel.nl/extra, you get a zip file in your download folder.

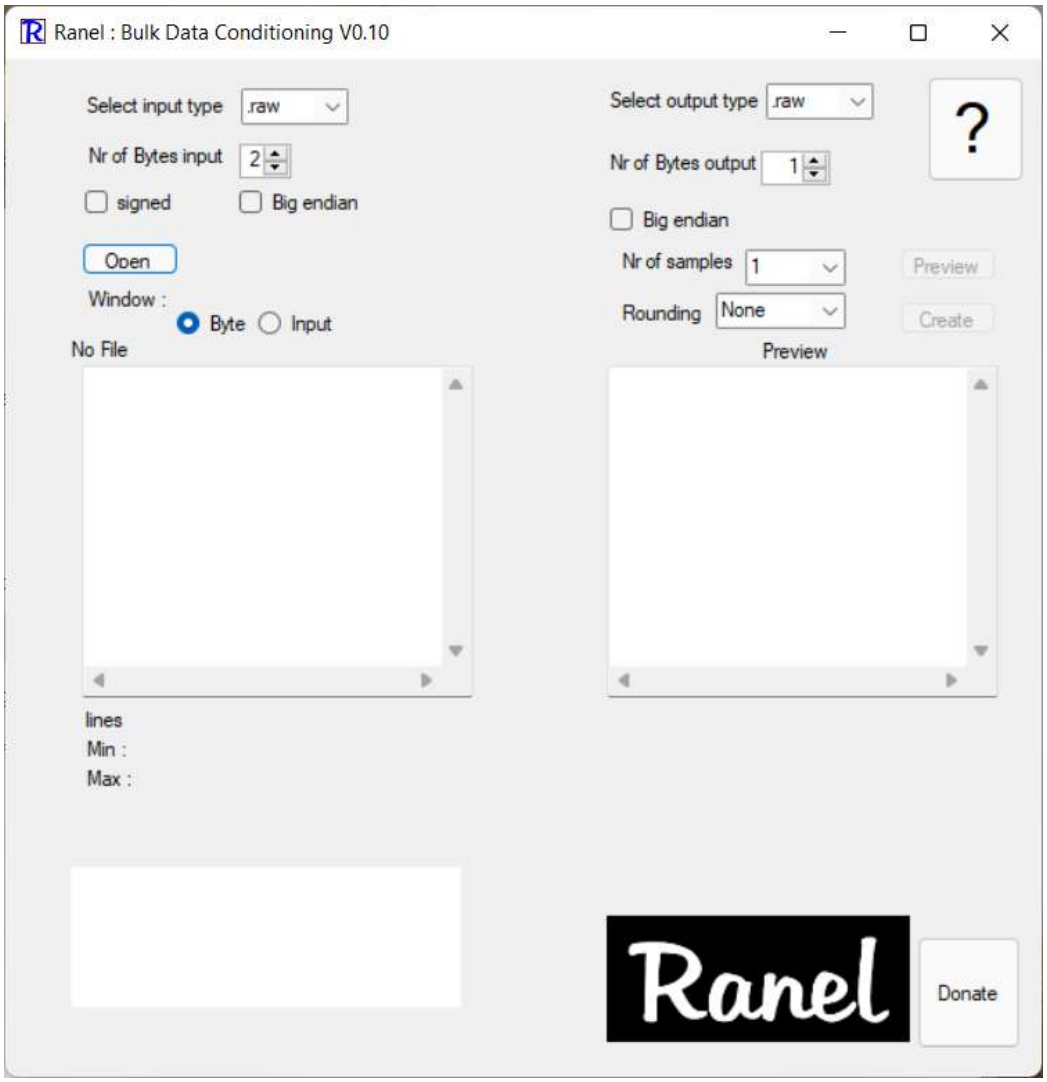
Open this file and unpack it by using the password “Ranel”.

Start the program, the first time you use the program you will see the following screen :



Press the OK button and the program will start.

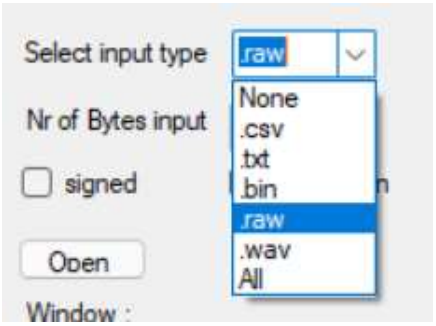
The following screen should appear :



Now you are ready to go!

Usage opening

Start by choosing the input file type :



If raw or bin have been selected the following options will be available :

Nr of Bytes input = Expected size of data unit.

Signed = check if expected data can be negative.

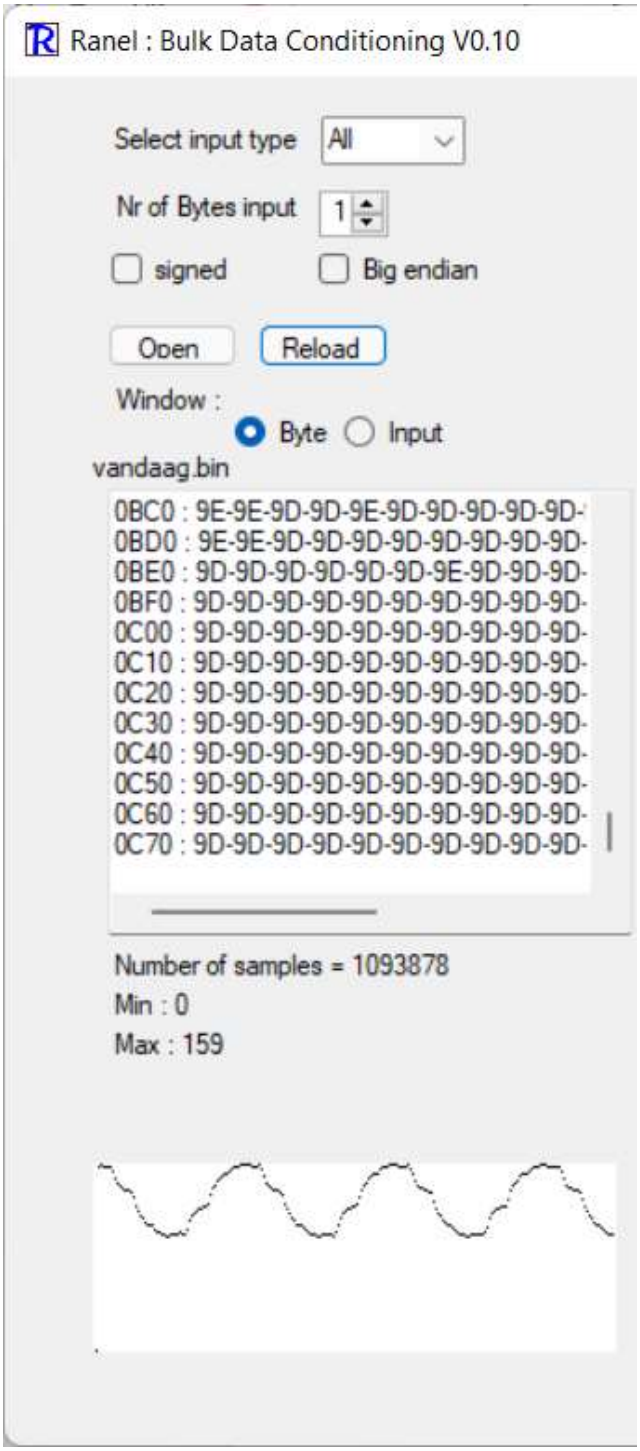
Endian = Check if expected data is big endian.

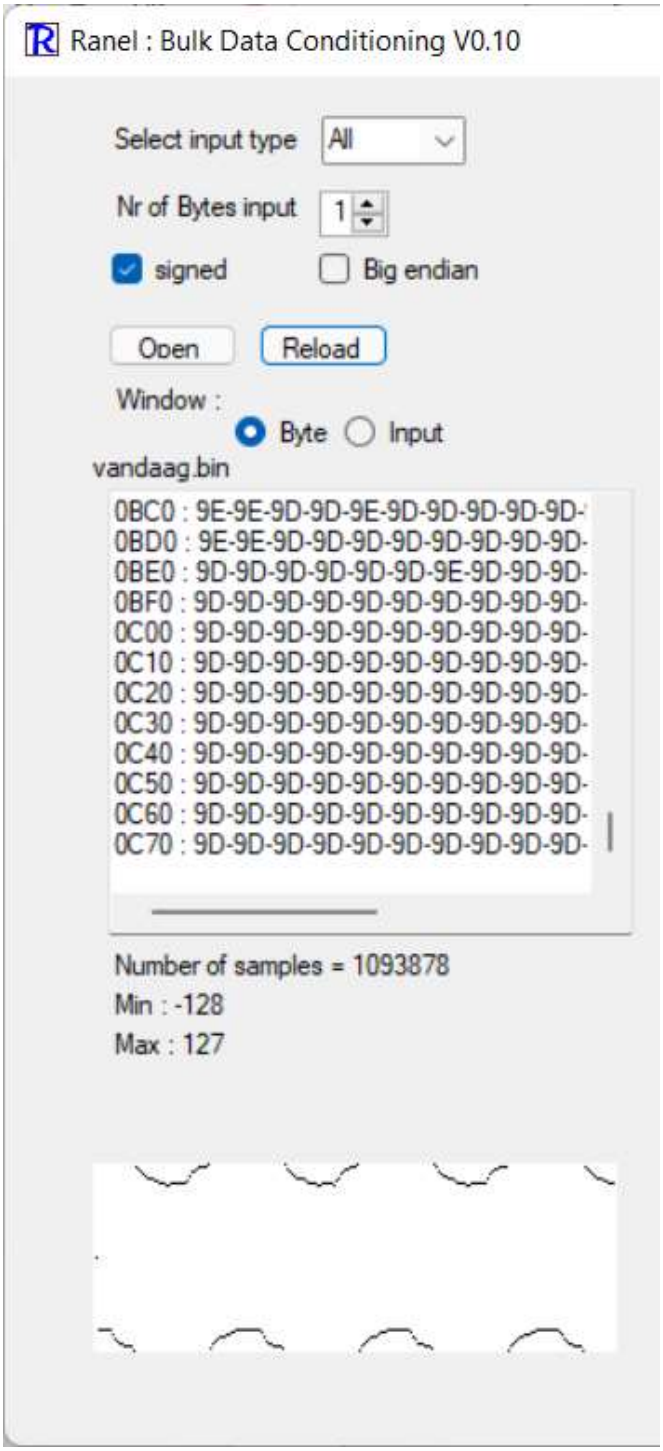
Click on open to open the file or drag a file to the preview window.

When the file is loaded a representation of the data is made in a data window and in a graphical way. Minimum and maximum are given as well as the amount of data. In the graphical window the minimum and maximum are used to draw the representation, so keep this in mind, it can look different than expected.

Check if everything looks like expected, else you can change the input parameters and simply press reload. This can come in handy if you have a data file and do not know in which type it has been stored.

Below example of changing signed :



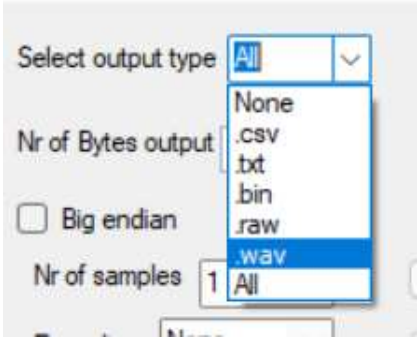


In the graphical area the following options are included :

- Use the left mouse button to zoom in horizontal on the clicked point.
- Use the left mouse button when ctrl is being pressed to zoom in vertical on the clicked point.
- Use the right button to reset all.

Usage exporting

You can choose the export file extension.



Give in how many samples should be combined to make the average.

In case of bin or raw give the parameters for the output file.

In case of csv or txt there is a option to remove header or unwanted data(check in preview window).

Rounding Factor option, choose one or type in.(this is for .csv and .txt files).

Use preview button/window to see what to expect for output.

Create gives you the option to save your new file.

Special functions

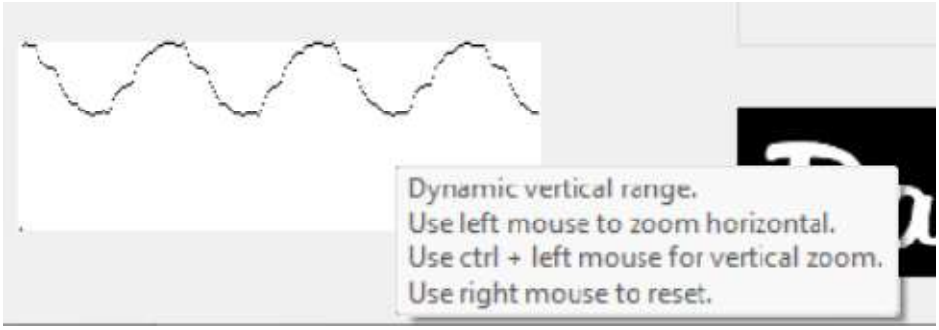
Once a file is loaded special functions are available.

Reduce function : This button gives you the opportunity to reduce the size by removing values. Give number of values to skip after each taken value. First gets copied, then skips wanted and takes next. This function does not change the data it just removes data. For example if there is a datalogger which gives temperature every second, but it can do with just a minute, then remove 59 samples.

Range function : This button gives you the opportunity to convert the complete range of all the values. Choose the minimum and maximum you want to convert to. Handy to convert bigger values to lower or to adjust to a percentage.

Graph function : This button gives you the opportunity to cut selected data of the input values. What is displayed in the graphical display will be used, remark the next drawing in this screen after pressing can look strange, since it gets the new minimum and maximum for drawing

See graphical area explanation on selecting.



Disclaimer

Ranel takes no responsibility for using this program.

The BDC is as it is, not all functions with all parameters have been tested.

Always keep your original files save by working with copies.

For now this is a free of charge program.

Please do not misuse the program or alter it.

You can report problems or ask questions, no guarantees on solving or reply.

Good luck, hope you enjoy this program!

Ranel

Software developed by S.F. de Vries