

MatDeck document evaluation and deploy techniques

We can run MatDeck in two modes:

- AutoEvaluation On
- AutoEvaluation Off

The chosen mode will affect the way the document evaluation is done. To set the mode of your MatDeck document, go to the Math tab and from the Settings group, choose the mode with the Auto Evaluation button.



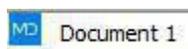
In AutoEvaluation On mode, every time you type in new content into a document or you just click the mouse buttons in any section of document it will trigger a recalculation of the whole document. Document calculations starts from the first row of the document and continues downwards. The main advantage of this mode is that you can see the effects of your work as you type.

In AutoEvaluation Off mode, you enter content into a document without causing any calculations to be performed. When enough content is inserted and you want to calculate everything in the document and see the effects of your work, simply press the Evaluate button from Math tab. There is an alternative, you can use the **Ctrl + E** command that will evaluate the document as well.

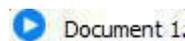


This mode is very convenient if you are using a large number of formulas in a document or simply your calculation is time consuming and you want to prevent a recalculation from occurring every time a change in the document is made.

Bellow we show the indicator which tells you if the calculation of the document is in progress.



Document in
noncalculating state



Document while
calculating

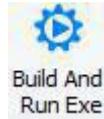
For time consuming algorithms and algorithms that demand a large percent of processing time, there are ways to make the calculation even faster.

The first one is to use the Build And Evaluate version of evaluation, from Math tab.

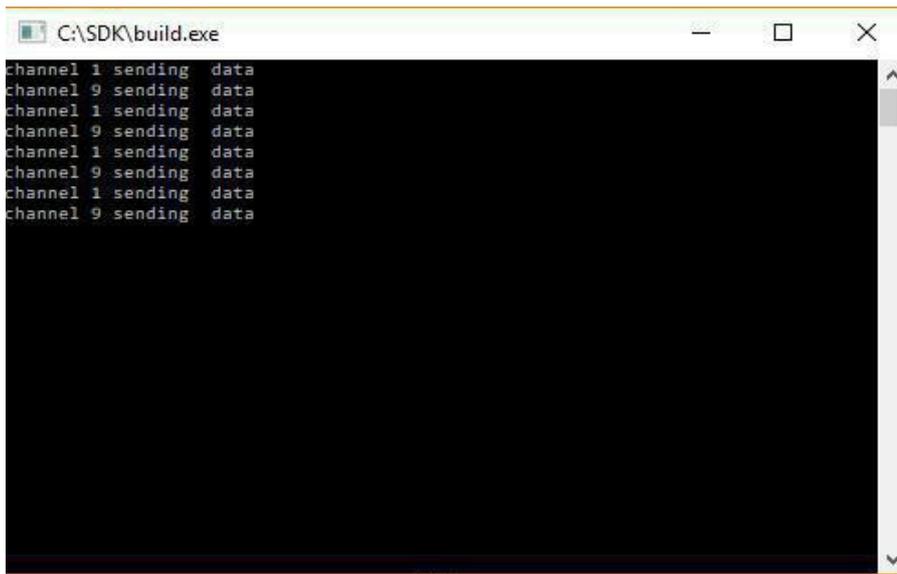


When you press Build And Evaluate, the calculation starts in a separate thread, providing a higher calculation speed for the whole document.

If there is a need for even greater calculation speed, you can use Build And Run Exe from the Math tab.

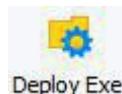


It will start the document calculation in a separate console window, at a speed comparable to the execution speed of the programming language code.



There are some limitations in this type of document calculation. In the Build And Run Exe console you can only calculate functions and scripts that you have used in the document without any graphical elements, text or pictures. It's designed for high speed calculation and it can't display a document the same way as it is displayed in a MatDeck document.

There is also an option to generate a standalone executable file from your document. To do so, use the Deploy Exe option, from Math tab.



It will create a new folder, with the same name as the document from which you are building an exe file, with a standalone executable file and a few dll files. This deploy has the same limitations in the display such as graphical elements and text, like we mentioned earlier for Build And Run Exe.

It also has the fastest calculation speed, so it can be used for calculations of the most demanding processes and algorithms.

Executable files can be run without the necessity of MatDeck being installed on your computer, as long as you have the whole deploy folder with all the supporting dll files.