

NCMIR Detector and IVEM Automation Plug-ins for SerialEM

The NCMIR research cameras of the 4k x 4k and 8k x 8k camera have been integrated into the software package SerialEM. SerialEM is a popular software program that has been in use for many years for acquiring tilt series in an automated fashion. SerialEM is a software package that runs only on a Windows operating system. Currently only the commercial version of the 4k x 4k CCD camera known as the "LC-1100" is supported for downloading and using SerialEM with it. If you have purchased the LC-1100 then you will most likely have installed the necessary configuration files and property files necessary for running SerialEM. If you are planning to use any camera other than a NCMIR developed camera then it is advisable that you contact Boulder Labs directly.

Contents

Download

The Latest Download of the software package can be found here: <ftp://bio3d.colorado.edu/pub/SerialEM/>

Note: The software package is hosted by Boulder Labs The package you select will depend mainly on the microscope that you have. If you have a JEOL microscope then select the latest package with an "_JEOL.exe" as the suffix. If you have an FEI microscope simply select the ".exe" with no JEOL suffix.

Installation

Please read [this](#) before beginning to install.

Once downloaded you simply have to double click on the ".exe" file you selected to start the program. No other required compilation or installation is required.

USING SERIAL EM

The most helpful thing you can do before beginning is to read the very detailed explanation of the software package found here: <http://bio3d.colorado.edu/SerialEM/SerialEMhelp.pdf>

The pdf file will explain all the detailed functionality of SerialEM. It explains the way to proceed with performing proper calibrations along with how to acquire tilt series. The software package also supports the use of energy filters, low dose mode, and mosaicing.

If you are an absolute beginner to using SerialEM then you should also go over the very helpful powerpoint presentations that have been put together by various groups.

See: <http://bio3d.colorado.edu/SerialEM/>

At the very bottom of the page are the links one should take a look at. The links are also provided here for convenience:

- [Introduction to SerialEM](#)
- [Low dose, Navigator, Energy Filtering](#)
- [Macros, Camera issues, Setting up the program](#)
- [Optimizing Plastic Section Tomography](#)
- [Making Navigator Maps and Setting up Low Dose](#)
- [Strategies for Cryoelectron Tomography](#)