

5.21.2. SSD Options

Os cameras are equipped with 8 GB RAM (DDR) and onboard solid state disk (256 or 512 GB). The images may be recorded into RAM and/or SSD in the modes listed below.

OFF: the SSD is not used and the camera acquires images in the DDR like any other IDT camera without SSD.

Backup: the DDR is used as a temporary buffer. The images are acquired in the DDR and, when recording is done, the images are transferred to the SSD asynchronously. The camera can record at any frame rate but the maximum number of frames that can be recorded in each acquisition is limited by the DDR size.

Streaming: In SSD streaming mode, the DDR is used as a temporary buffer. The images are acquired in the DDR and synchronously transferred to the SSD. Since the write to disk speed (in frames per second) is fixed and the write to DDR speed is configurable, the maximum number of frames that can be recorded depends on the difference between those two numbers. The “Streaming fps” is the frame rate that corresponds to the write to disk speed.

If the frame rate is lower than streaming fps, the max number of frames that can be acquired is limited by the SSD size.

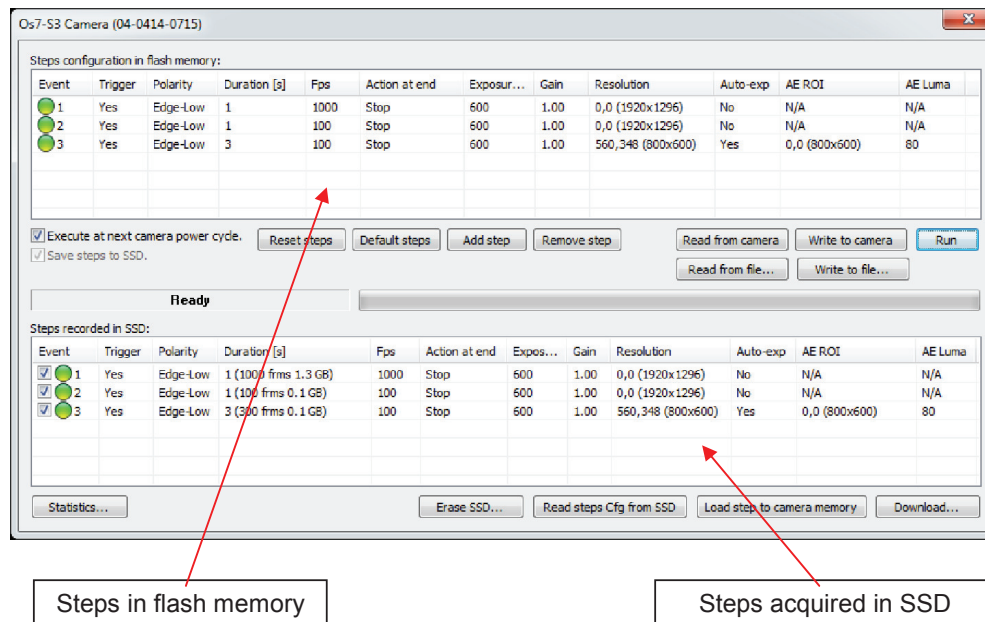
If the frame rate is larger than the streaming fps, the max number of frames is variable and it's calculated assuming that the record mode is normal. If the record mode is circular and you wait too long before triggering, you may receive a disk overrun error message.

Mission: in mission mode, the DDR is used as a temporary buffer. For more information, see the topic below.

5.21.3. SSD mission mode

The mission mode has been designed to acquire images when the camera is disconnected from the computer. The SSD may be divided into segments, called steps; each step may have different parameters such as exposure, frame rate, region of interest. Each step is recorded in normal mode and the recording start may be automatic or generated by the trigger.

The picture below shows the interface.



To configure the camera in mission mode:

- Click “Reset Steps” to clear the upper list.
- Click “Add step” as many times as the required number of steps.
- Edit the parameters by clicking on the corresponding field in the list. If a step need to be automatically executed after the previous one, select “Auto advance” in the “Action at end” column of the previous step, otherwise, select “Stop”.
- Select the “Execute at next camera power cycle” to enable the execution of the mission when the camera is powered up.
- Click “Write to camera”
- Exit the program. The next time the camera will be power cycled the steps will be automatically executed and the image stored in the SSD. Once the mission is executed once, the camera may be power cycled more times, but the images will not be overwritten.

To display images acquired during the mission:

- Run Motion Studio and select the SSD mission mode.
- If the steps have been recorded and stored in the SSD, they will be listed in the lower list of the mission dialog.

- Highlight one of the steps of the list and click “Load step to camera memory”. If the step size is larger than the camera memory, a drop down menu will appear, showing a list of segments. Select one of them to load the images.

To save images acquired during the mission:

- Check or uncheck the boxes on the left side of each step and click Download. The images will be downloaded in RAW format.

The steps may be saved on the hard disk (Write to file...) and loaded (Read from file...).