Event data delays (overflow)

About this book

SilkyEvCam BothView comes with a Python-based sample code（viewer). Event data delays may occur with the event camera during operation. This document explains the causes of this phenomenon and how to respond with it.

Structure of this document

This document includes the following.

1. Causes of the delays
2. How to respond to event data delays
3. How to set event rate thresholds

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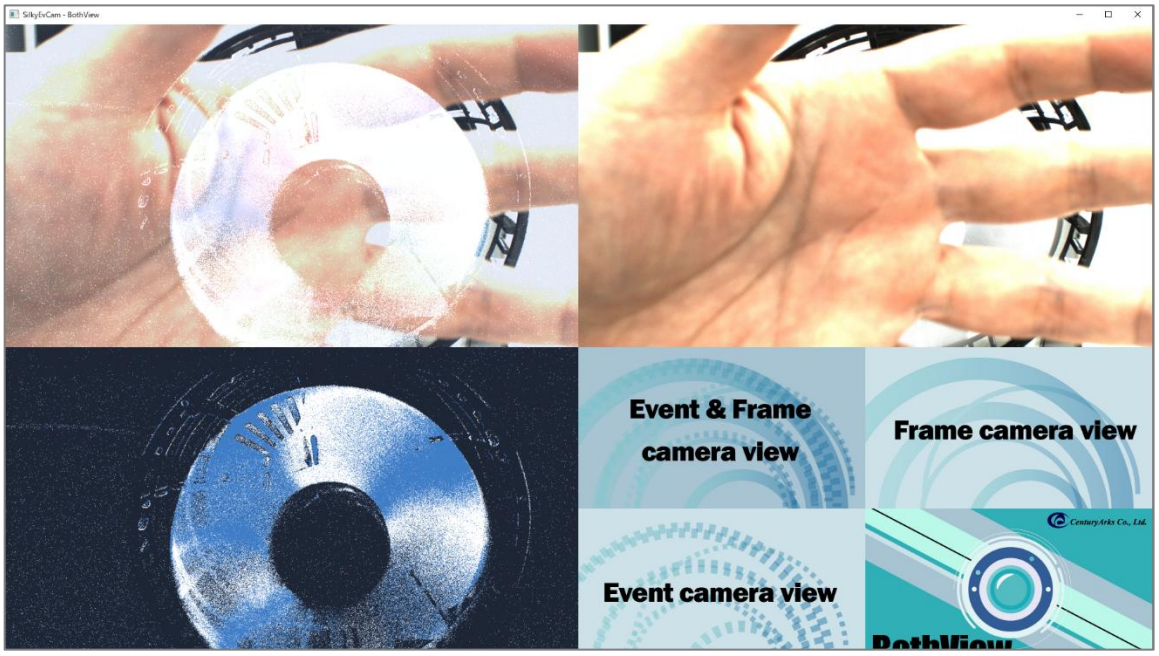
Event data delays (overflow)

1. Causes of the delays

Event data delays occur when the event rate is constantly high, such as when the subject is moving continuously at high speed.

When event data delays occurs, as shown in the screenshot below, there will be a delay in the viewer display of the sample code, and the real-time display will not be able to keep up. (The screenshot shows an example of a tabletop fan and hand movements.)

In addition, while display delays are occurring, delays may also occur in the raw data of the recordings, which may result in trigger events being missed. (Event data delays cannot be detected by the system.)



The following section describes how to respond when event data delays occur.

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2. How to respond to event data delays

If event data delays occur on the viewer, it is often due to lack of processing resources on the PC. Adjust the event rate thresholds.

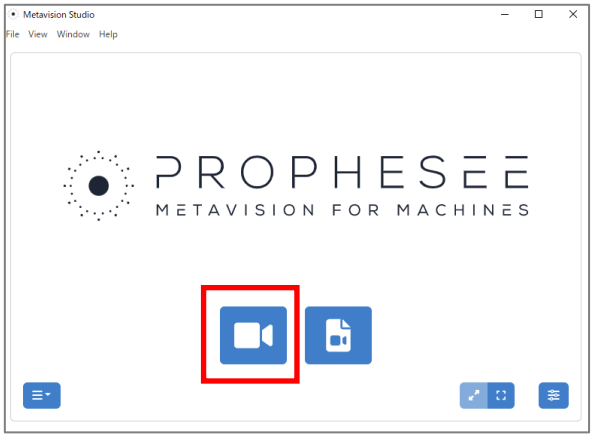
However, even before the issue of insufficient PC processing resources, the event camera has a data rate limit. This is a restriction due to the data transfer specifications from the camera sensor to the circuit board.

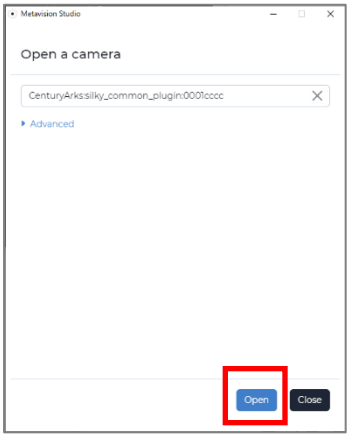
3. How to set event rate thresholds

The sample code set includes a file called “settings.json” that describes the event camera settings. Change the settings as needed. The following explains how to make changes.

1. Start metavision_studio

   Connect BothView to your PC and launch “metavison_studio”.





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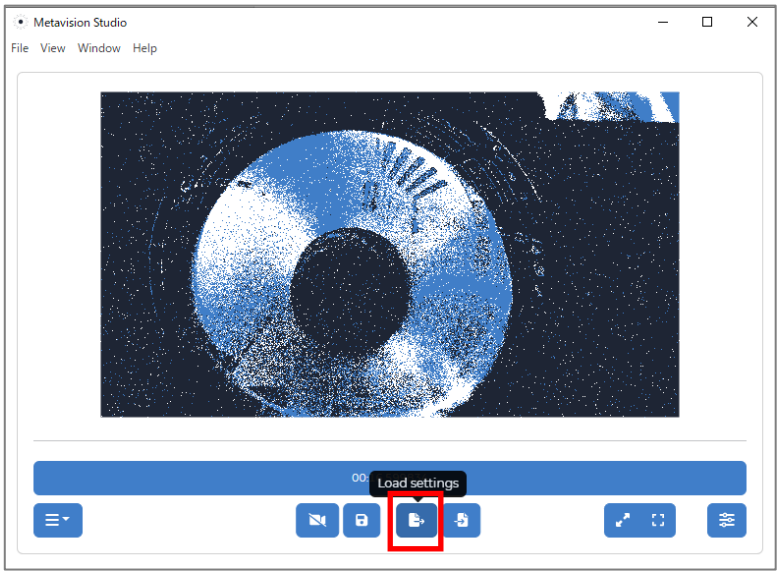
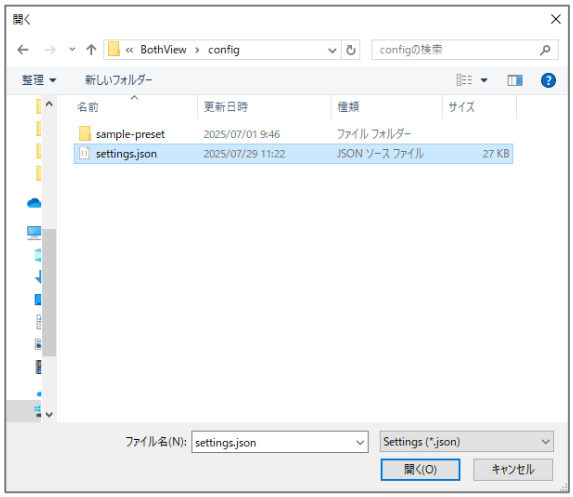
3. How to set event rate thresholds

2. Load the setting file

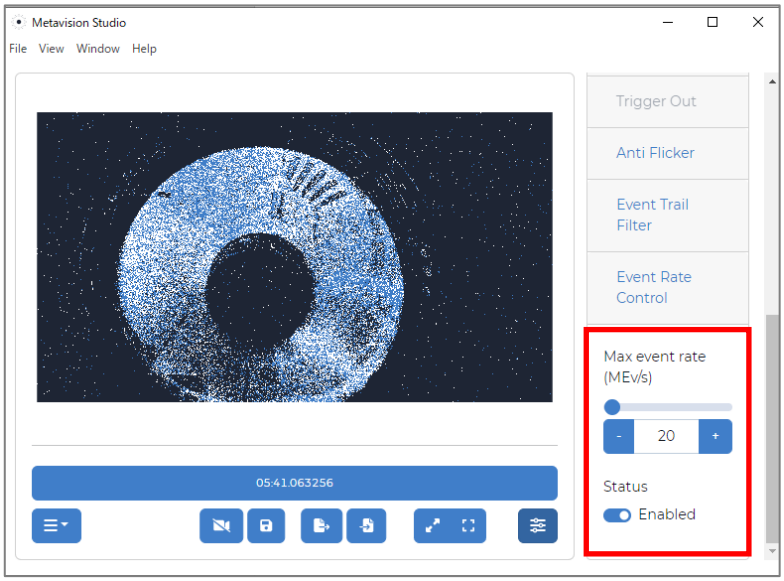
Once metavision_studio has launched, click the “Loading settings” icon at the bottom center of the window, select the existing setting file (settings.json) in the config folder of the sample code, and load it.





3. Chang the event rate thresholds

Open “Event Rate Control” in the right pane of the window, reduce the value of “Max event rate (Mev/s)”, and turn “Enabled” in “Status” to ON.



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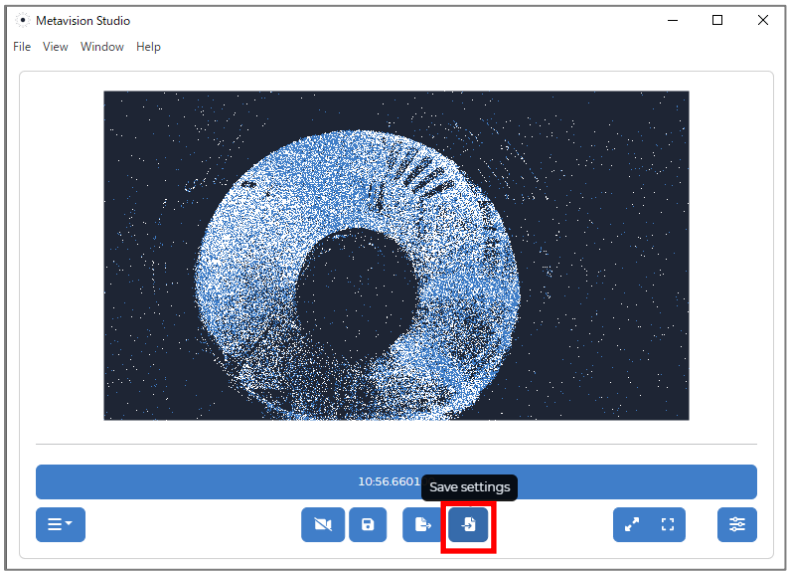
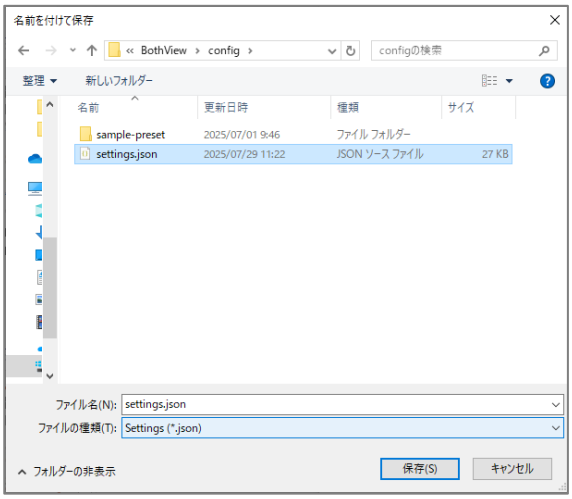
3. How to set event rate thresholds

4. Save the setting file

Click the “Save settings” icon at the bottom center of the window and save it.





5. Confirm operation with sample code

Start the sample code and confirm that there is no delay in the viewer when displaying the subject that was experiencing the delay.

[Note] The number of events detected varies depending on the lighting conditions of the shooting environment and/or the F-number (aperture) of the lens.

[Note] In the Python coding environment, it has been confirmed that the threshold for event rates that cause delays in the viewer is lower than in metavision_studio.

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