

Technical Note

DSNU Compensation

Tips for DSNU compensation when changing frame rate / line rate

For some recent JAI Cameras, when the frame rate or line rate is changed, execution of DSNU (dark signal non-uniformity) compensation is required. This document describes a recommended method for DSNU compensation.

1. Background and Concept:

As cameras have continued to advance in speed and resolution, maintaining image quality for a variety of use cases has become more challenging. Some type of compensation is often needed.

For the following cameras, DSNU compensation is required after changing the following items:

Table 1: DSNU compensation is required

Camera	Changed item
SP-12000 series	Frame Rate
WA-1000D series	Line Rate
SW-4000 series	Line Rate
SW-8000 series	Line Rate

2. Method of DSNU Compensation

To ensure the best imaging performance in these cameras, the following DSNU process is recommended.

- Shut out the incoming light, for example, you can put a lens cap on the camera.
- Launch the JAI SDK and Control Tool.
- Start Acquisition with the targeted settings, such as frame rate, pixel format, etc.
- In the “JAI Custom Control” menu, execute the following steps (refer to figure 1 - you may need to be in “Guru” mode to access these controls):
 - Set “Dsnu Correct mode” to “User”.
 - Click the black-triangle mark next to the “Perform Dsnu Detect” -> “Push to Execute Command”
 - Click popup window showing “Execute ‘Perform Dsnu Detect’ Command.
 - DSNU compensation starts.
- The DSNU compensation will adjust for minor pixel-to-pixel noise variations to provide a cleaner, smoother-looking image.



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Video Process Bypass

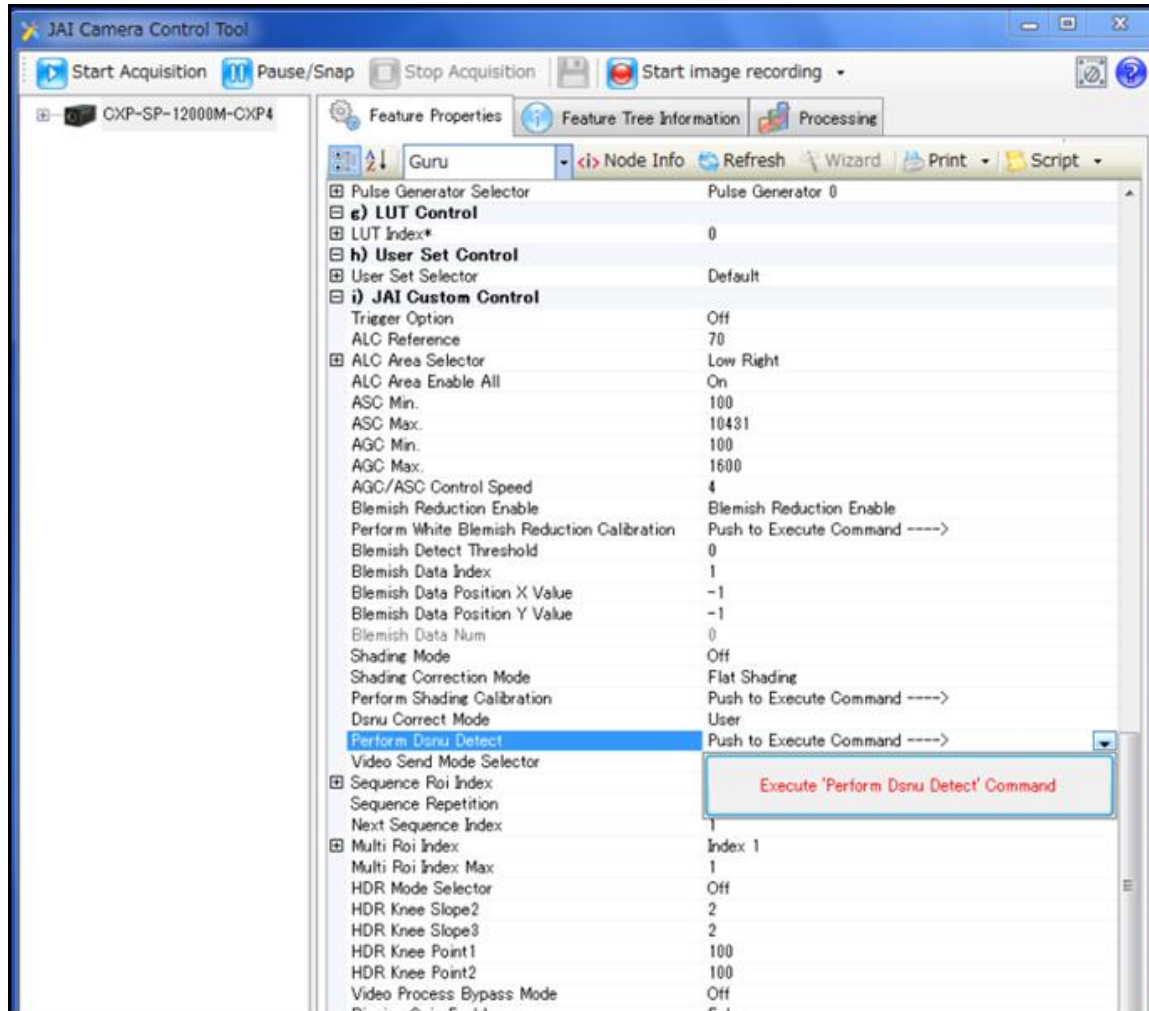


Figure 1: Execution of DSNU Compensation on JAI SDK Control Tool

End.